War in the East 2

Living Manual 1.16

(patch 01.02.41)

Note to ease searching for changes from the published manual search for ‘Errata’, this will mark any alterations whether they are clarification of the original text, a new feature or a rules change.

In addition section 43 lists the changes (not bug fixes) introduced in each patch. Note that some patches are not listed as they introduced nothing that amended the existing manual.

Any changes from the original manual are in this font.

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Part 2: The Playing Environment

1. GETTING STARTED

[100.jpg]

Focus:

This section explains how to install and set up the game.

Key Issues:

- An overview of how this manual is laid out;
- Technical Game specifications;
- How to install the game;
- How to access technical help;
- How to access information provided by other players of the game

Part 2: The Playing Environment

The aim of the Getting Started section is to provide basic background information and instructions to take you from starting the game on the desktop to preparing to make the first actions as a player.

The section describes the game and its support, the Main Menu, available scenarios and an explanation of Victory Conditions.

1.1. HISTORICAL BACKGROUND

On 22 June 1941 Germany launched Operation BARBAROSSA, the invasion of the Soviet Union. The subsequent conflict was the most savage, brutal and costly clash of arms in modern history. By the time that Berlin fell, and the Germans surrendered in May 1945 the struggle between the two regimes had caused the deaths of an estimated 20 million people.

1.2. THE GAME

Gary Grigsby's War in the East 2 is a turn based simulation of the Eastern Front in World War Two from June 1941 to August 1945. As the Soviet or Axis player, you take the role of the military High Command to use the forces available to you to execute the conflict at the strategic and operational levels of war.

The game is an "Alternate History Creator" that focuses on simulating the logistic and command and control problems that the historical commanders on the Eastern Front had to deal with. It will allow players to explore many of the strategic and operational "What ifs" that have been discussed by historians and armchair strategists for many years.

Due to the game focus, there is little or no ability to alter factors such as economic production or research of the two sides.

The game scale is weekly turns, with a hexagonal map area representing ten miles per hex. Some regions are covered by abstracted Theatre Boxes.

Ground units range from Corps and Divisions down to battalion level support units and air units are represented at the squadron and group level.

Units are all controlled through a series of Headquarters units, each with individual leaders, which represent the chain of command up to the High Command (OKH and Stavka) level.

Combat is conducted through an automated tactical system that models the action down to the individual aircraft, Armoured Fighting Vehicle, and infantry squad.

1.3. THE MANUAL

This manual provides a detailed description of the game's rules, functions and user interface.

Part 2: The Playing Environment

For ease of reference the Manual is broken down into nine main sections. Each section starts with an explanation of the aim of the section and an overview of the section's layout. These are:

1.3.1. Setting Up the Game (Chapters 2-4)

This section provides basic background information and instructions to get you ready to start playing the game.

In addition, the chapter on Basic Gameplay (see Chapter 4) provides instructions on how to get playing the game with the minimum of fuss and bother. This section is in three parts:

- A very brief overview of the main game concepts and how the game works (4.3);
- Sufficient information on these aspects to allow you to start playing the game;
- A walk through of the introductory Velikie Luki scenario (4.19-4.23)

Chapter 4 also includes, where relevant, full page guides which show in cartoon strip format step by step guides to support basic game play. A separate printable pack of these guides is located in Manuals folder if you wish to print separate copies.

If you have previously played War in the East 1, we strongly suggest you also read the first part of the Players Notes (especially 30.1.1) as this provides a quick overview of the major changes between the two games. Equally if you have previously played War in the West, then we suggest you read over section 30.1.2 as that indicates some changes between the two games.

In general, Appendix A should be helpful to both new and returning players as it places the detailed rules into the context of how they affect game play.

1.3.2. The Playing Environment (chapters 5-7)

This section provides detailed information on both the game's graphic user interface and the map on which combat is conducted.

1.3.3. Game Concepts (chapters 8-15)

This section provides information on the weather system in WiTE2 and how weather influences ground and air combat and supply operations. It also gathers together information on either the specifically in-game conventions or the special rules for certain turns or unit types.

1.3.4. The Air War (chapters 16-19)

This section provides detailed information on how to handle air forces and the associated rules.

1.3.5. The Ground War (chapters 20-23)

This section provides detailed information on how to handle ground forces and the associated rules.

1.3.6. The Naval War (chapter 24)

This section provides detailed information on how to handle naval forces and the associated rules.

1.3.7. Logistics and Production (chapters 25-28)

This section covers both the detailed rules for logistics (supply and replacements), reinforcements and production of material essential to conducting the war.

1.3.8. Winning and Losing (chapter 29)

This section covers the victory conditions for the various campaign games and for the shorter scenarios

1.3.9. Appendices (chapters 30-41)

This section groups together reference material and information not included in the other sections to help readability.

1.3.10. Accuracy and Future Changes

Clearly the manual aims to be as accurate as possible but the game will develop through patches after release. For practical reasons the text and images in this version were prepared using a late version of the beta test releases. As such, some things may well be changed between this and the release version.

For that reason a variant of this manual (called the Living Manual) will be prepared and kept up to date with patch changes. That version will not contain any images and will clearly identify where the rules have been altered in subsequent patches.

1.3.11. Conventions used in this Manual

Cross referencing of applicable sections has been included so, for example, (14.1.2) refers to section 14.1.2 in the manual.

The manual presents information at different levels of detail. In particular, Chapter 4 is designed to be read as a stand-alone guide for new players (including those with experience of other Gary Grigsby War in the … games).

Part 2: The Playing Environment

The goal is to present all the information a player might need when playing the game. This includes explaining how to undertake actions (such as air missions or ground combat) and how to interpret the results of those decisions.

Where appropriate, the formulas underlying the game functions are provided. In some cases, knowledge of specific formulas was deemed to allow overly “gamey” behaviour, or is too complex to detail, so they are kept “under the hood”.

1.4. SYSTEM REQUIREMENTS

1.4.1. Minimum Specs:

OS: Windows 7/8/10

CPU: 1.5 GHz+

RAM: 4GB

Video Card: 256MB DirectX 9+ Compatible

Sound Card: 16 bit DirectX 9+ Compatible

Hard Drive Space: 4 GB Free

DirectX 9.0c or higher

1.4.2. Recommended Specs:

OS: Windows 10

CPU: 2.0GHz+ (or multi-core equivalent)

RAM: 8GB

Video Card: 1GB DirectX 9+ Compatible

Sound Card: 16 bit DirectX 9+ Compatible

Hard Drive Space: 4 GB Free

DirectX 9.0c or higher

1.5. INSTALLATION

Please ensure your system meets the minimum requirements listed above. To install the game, either double click on the installation file you downloaded or insert the DVD into your DVD-ROM drive. If you have disabled the autorun function on your DVD-ROM or if you are installing from a digital download, double-click on the

installation archive file, then double click on the file that is shown inside the archive. Follow all on-screen prompts to complete installation.

1.6. UNINSTALLING THE GAME

Please use the Add/Remove Programs option from the Windows Control Panel or the Uninstall shortcut in the games Windows START menu folder to uninstall the game. Uninstalling through any other method will not properly uninstall the game.

1.7. PRODUCT UPDATES

In order to maintain our product excellence, Matrix Games releases updates containing new features, enhancements, and corrections to any known issues. All our updates are available free on our website and can also be downloaded quickly and easily by clicking on the Check for Update link in your Game Menu or by using the Update Game shortcut in your Windows START menu folder for the game.

We also periodically make beta (preview) updates and other content available to registered owners. Keeping up with these special updates is made easy and is free by signing up for a Matrix Games Members Club account. When you are signed up, you can then register your Matrix Games products in order to receive access to these game-related materials. Doing so is a simple two-step process:

Sign Up for a Matrix Games Members Club account – THIS IS A ONE TIME PROCEDURE; once you have signed up for a Matrix account, you are in the system and will not need to sign up again. Go to www.matrixgames.com and click the Members hyperlink at the top. In the new window, select Register NOW and follow the on-screen instructions. When you're finished, click the Please Create My New Account button, and a confirmation e-mail will be sent to your specified e-mail account.

Register a New Game Purchase – Once you have signed up for a Matrix Games Member account, you can then register any Matrix Games title you own in your new account. To do so, log in to your account on the Matrix Games website (www.matrixgames.com). Click Register Game near the top to register your new Matrix Games purchase. If you purchased your game while already logged in, it will be automatically registered for you.

We strongly recommend registering your game as it will give you a backup location for your serial number should you lose it in the future. Once you've registered your game, when you log in to the Members section you can view your list of registered titles by clicking My Games. Each game title is a hyperlink that will take you to an information page on the game (including all the latest news on that title). Also on this list is a Downloads hyperlink that takes you to a page that has all the latest public and registered downloads, including patches, for that particular title.

You can also access patches and updates via our Games Section (http://www.matrixgames.com/games/). Once there select the game you wish to check updates for, then click the Downloads link at the top of the game page. Certain value content and additional downloads is restricted to Members Club members but it is easy to sign up there.

Remember, once you have signed up for a Matrix Games Members Club account, you do not have to sign up again and at that point you are free to register for any Matrix Games product you purchase.

Thank you and enjoy your game!

1.8. GAME FORUMS

Our forums are one of the best things about Matrix Games. Every game has its own forum with our designers, developers and the gamers playing the game sharing information and their experiences. If you are experiencing a problem, have a question, want to share your game experiences or just an idea on how to make the game better, post a message there. Go to http://www.matrixgames.com and click on the Forums hyperlink.

1.9. NEED HELP?

The best way to contact us if you are having a problem with one of our games is through our Help Desk. Our Help Desk has FAQs as well as a dedicated support staff that answer questions within 24 hours, Monday through Friday. Support questions sent in on Saturday and Sunday may wait 48 hours for a reply. You can get to our Help Desk by going to

http://www.matrixgames.com/helpdesk.

1.10. TUTORIALS

Included with the game are some video tutorials to help get you started. These can be accessed from the game launcher menu or can be found in the Manuals Folder.

We recommend players start by watching the video tutorials, followed by playing the introductory Velikie Luki scenario (from the Soviet side). After this it is suggested to play the Road to Minsk scenario (as the Axis player) and then some of the smaller scenarios.

Players should focus at first on just moving and attacking with their on-map units before exploring other parts of the game. There's so much to learn in terms of both the interface and rules that it can be overwhelming, although much of the detail is not needed to play the game "out of the box".

Instead much of that detail can be absorbed in stages as the player becomes more experienced. The bottom line is that players shouldn't feel they need to learn everything in order to start playing the game.

At its most basic, if you have read the 'Getting Started' portion of the game manual and the Players Notes (Appendix A) and review the various 'one page guides', you should be able to play the game and enjoy yourself.

1.11. EDITOR

The Game has a comprehensive editor (Section 41) which was used to create all the scenarios. This can also be used to change various game parameters such as movement costs, weather effects and the OOBs for the various scenarios and campaigns.

1.12. SYSTEM SCALING

Errata Patch 01.01.03 and 01.01.07

This allows players some control over scaling their display in-game. Note that when this version is first used, the system will automatically reset all preferences to default and attempt to set a scaling percentage that is best given your windows display settings.

Players can change the scaling percentage by hovering over the value in the preference screen and selecting from the dropdown list.

The game will only allow the player to select scaling percentages that fit their current display. When you change the scaling percentage, it is necessary to exit the program and restart in order for the new setting to take effect.

Added in-game scaling for all right side panels (factory navigation, turn summary, Air Directive creation, right unit bar) and for supply details window.

At this point, all parts of the game except for the top bar area are impacted by the display scaling percentage preference item.

Note that you will see issues with these right side changes in the editor if you are running at over 100% (best to use the editor at 100%).

2. SETTING UP THE GAME

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Focus:

This section explains how to load a new scenario, save a game and play against either the computer AI or another human player.

Key Issues:

- How to load the game;
- How to set up a fresh game (and the differences if you are playing a human opponent);
- How to load an existing game;
- How to change the game options (and a brief guide to what these mean in terms of gameplay);
- The detailed procedures for the two modes of multiplayer play that WiTE2 can support

Part 2: The Playing Environment

This section will talk you through how to load the game and the implications of the various set up options.

For a first game, we suggest using the set difficulty levels (easy or normal) and accept the default settings for other variables.

2.1. THE LOADING SCREENS

When you load Gary Grigsby's War in the East 2 you will be presented with a series of loading screens.

The first two are the standard Matrix games video and then one showing scenes from the war. If you want to skip these, just press 'esc' on your keyboard.

The game will then show the Main Menu once it has completed loading.

2.2. THE MAIN MENU

The main menu screen allows access to the game set up functions.

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This screen is made up of 10 clickable buttons and will show the version of the game in the bottom right hand corner.

This section will very briefly describe the options but if you are new to WiTE2 it is suggested that you accept the default settings as far as possible.

It is important to note that the procedure for setting up a game, and what you can later change while playing a game, is different if you are playing against the computer or another player.

The ten options are:

- Set the Axis side as either human or computer played;
- Set the Soviet side as either human or computer played;
- Difficulty level;
- Game Options;
- Preferences;
- Pick Scenario. Next to this is the button PBEM, depress this if you intend to play the game by sending save files to another human player;
- Load Saved Game.

- Multiplayer – this is different to PBEM in that you will use the Matrix server to save and access game files
- Credits
- Editor.

2.3. SETTING UP A NEW GAME

Section 2.6 below will explain in more detail what the various options imply (even more information is in appendix G, section 36.17), this section simply covers which buttons to select to commence a new game.

2.3.1. Against the Computer

To set up a new game against the computer, proceed by:

- Select your side (Axis or Soviet);
- Set the Difficulty level (cycle through easy, normal, challenging, hard or impossible);
- Set any desired Game Options;
- Set any desired Preferences (see section 2.6 for a summary of these options and the consequences);
- Pick Scenario. Clicking this will open the list of available scenarios;
- Mouse over the scenarios, as you highlight a line the colour will change;
- If you click on a scenario, the text will change to green and on the right hand side a scenario briefing will appear. At the bottom of the screen will appear a little disk icon click on this to 'load the scenario';

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On the right hand side you will see a summary of the scenario, setting out the number of turns, a brief overview, a short guide as to how to win and the number of Administrative Points (4.3.12 and Chapter 9) allocated each turn;

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- The scenario will load and suggest a title for the folder where it will save the game (all the saves for different games are in their own folders). Accept the suggested title and the game will open.

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If the side you have chosen does not have the first turn, the game will immediately commence with the AI running its turn. This is why it is important to have set difficulty levels and other options before selecting a scenario.

Once it is your turn, you can alter any of the options you originally chose at any stage of the game.

2.3.2. Against a Human Opponent

The procedure is similar to that above but there are some differences.

There are two main options. One is PBEM where the players transfer the save turns to each via email or some other file sharing software.

In this case, the player who will move second must set up the game. This will be the Soviet player in any scenario starting on 22 June 1941 but will vary in scenarios starting later in the war.

The steps are:

- Set both sides to 'human';
- Select the difficulty level and game options;
- Select any preferences;
- Click 'PBEM' (note this will now have a red background);

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- Pick Scenario
- Accept or change the suggested folder;
- Set your password (this means your opponent cannot open your game files) – when they receive the file they will be prompted to do the same for their game files;
- Send the generated files to your opponent.

The other option is to use the Slitherine server. In this case the save games are held on the server and updated as the player(s) make moves and save the game. At the end of the turn, your opponent is notified that it is now their turn. The procedures for playing using the Slitherine server are covered later in this chapter (2.8.2). You access this option via the 'Multiplayer' button.

In either case, once you have generated the set up files you cannot change the difficulty level or the game options including whether or not you will use the automated AI air assistance (2.6.2).

And, to risk stating the obvious, do not forget the password you choose or you will be unable to open the game files from your opponent.

2.3.3. Playing Solitaire

If you opt to make both sides Human controlled but do not select the PBEM option the game can be played solitaire with you controlling both sides in turn. At any time you can change one side to AI control.

2.4. LOADING A SAVED GAME

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If you wish to load a game you started earlier, click on Load Saved Game.

Note the procedure to save an ongoing game is covered in section 2.7.

You will be presented with a list of all the folders of the games you have created. The list will be different if you have the PBEM box ticked or not.

The game you have played most recently will be at the top of the list. Click on this and you will be presented with a list of all the save points for that game (again the most recent is at the top).

Select the save you want to use and the game will load and you can carry on playing.

Note that when you open the game the map display options will be the same as when you last closed it.

2.5. MOUSE CONVENTIONS

In WiTE2, left clicking will select a tab, allow you to change a value in a box or confirm a desired action.

When playing the game, left clicking will select a unit and right clicking will tell it to execute the orders (move or attack).

Right clicking on any hex (when no unit is selected) will open up a menu that allows you to change the map settings or access other game information (see chapter 7 for more information about this).

In the manual, where you are told to ‘select’ an option, that means to left click with the mouse.

2.6. GAME SET UP OPTIONS AND CHOICES

When first playing WiTE2, some of the information in this section may appear unclear. Not least the impact of your chosen settings on game play will take some time to understand.

We strongly suggest reading chapter 4 before playing a game and following the suggested opening turn described at the end of that chapter (4.19).

2.6.1. Difficulty Level

There are five general difficulty levels, Easy, Normal, Challenging, Hard and Impossible. The difficulty level is set by varying the percentage of five different factors; morale, fortification building speed, supply, transport, and administrative points.

If you are playing the Computer, the difficulty levels either give the human side an advantage (easy), are neutral (normal) or give the computer (the AI) advantages.

Level	Morale Setting	Other Settings
Easy	120/90	120/80
Normal	100/100	100/100
Challenging	100/110	90/110
Hard	100/125	80/125
Impossible	90/150	70/150

If you wish you can modify these to reflect different values for the various categories when setting up a game. If you are playing the AI, these values can be amended at any time.

Note that at 110 morale the AI gains additional significant advantages in movement. It gains further combat bonuses at values of 120 or higher.

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2.6.2. Game Options

Below are listed the options available to the player to set up how the game is played.

Note that some game options will be locked and unchangeable after the set-up of PBEM and Multiplayer games. These options will be greyed out in the screen once that type of game is started. Select (left click with mouse) inside the applicable box to change the setting.

The screens are described in more detail in section 36.17 and players are recommended to read that section if they want to change any of the more detailed options.

Note that there are three columns. The first changes the relevant value for the Axis side, the third for the Soviet side. Options in the middle column apply equally to both sides.

The notes below are designed to give a new player an overview of the more important options and how this might affect game play:

Computer Controlled: On/Off for each player; on is AI control, off is human control. By default this will mirror the choices you made on the main loading screen.

Fog of War (FOW): On/Off for each player. If checked on, human players are limited by FOW rules (10.1). The default setting is FOW off.

Movement Fog of War: Only displays when FOW is enabled and can only be used in conjunction with FOW. The values are On/Off for each player. Using Movement FOW will limit multi-hex moves in enemy territory (10.1.2)

Lock HQ Support: On/Off for each player, when on player's HQ's have their HQ Support Level Locked at start. The default setting is lock HQ support on. No matter how this option is set, once the game begins, individual HQs can have their status changed according to your wishes using the Commanders Report (36.8) or the detailed HQ unit tab (21.11).

Automate AI Air Assist. If this is selected then the AI assistance will be in use and will create air missions and move your air force on the map when you press the F12 key (4.6 and Chapter 17). Note that if you leave this unchecked you can still use the AI-assistant to help (see sections 4.6 and 17.1.2).

Enhanced Player TB Control. If this is selected then the player(s) gain far more control over the assignment of units to and from the various off-map Theatre Boxes used to represent the wider war than that between the Soviet Union and Nazi Germany (13.1).

General Difficulty Level: Cycles through Easy, Normal, Challenging, Hard, and Impossible play levels (36.17).

By default this will mirror the choice you made on the main loading screen but you can change any of the numbers here – and produce what is called a customized

difficulty level. If you change any of the numbers the general difficulty level will be described as 'CUSTOM'.

At the moment, you can assume that increasing the score on one-side gives that side a growing advantage in game play. Remember that in a game against the AI you can change any of these settings at any time.

Morale Level: This is probably the most important factor in WiTE2. Raising this above 100 will impact on combat performance, unit morale and even the cost of movement into enemy territory. In effect, the basic morale of each unit is multiplied by the value you set here.

> ***For the moment, just note this setting will give the AI substantial advantages. If you want a challenging game against the AI, adjusting the relative morale levels will ensure a better AI performance. This is particularly important if the chosen scenario starts with the AI on the offensive. Once you feel you have a basic grasp of the game, you should put the attacking AI on at least 110 morale.***

In general, if you want a challenging game, always give the AI a bonus. If the AI is to undertake the bulk of the attacking (say as the Germans in a 1941 scenario or the Soviets in Vistula to Berlin), you might want to increase this more to improve its performance.

Reset to Default: Selecting this button will return all Game Options to their default settings.

Again note, if you are playing the computer you can change any of these values at any time. You can access them either from the loading screen or when playing the game.

2.6.3. User Preferences

The User Preference settings can be used to customize aspects of the interface. Many of these settings can be changed at any time during the player turn, but some require the player to exit the game and reload prior to the change taking place.

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Again, these options are described in detail in appendix 36.17.1. It is suggested that you simply adopt the default settings for your first games.

The exception to this is the **Show Move Animation.** When this is enabled by selecting the check box to the right of the "Show Move Animation" text, friendly units will be shown moving from hex to hex on the map, accompanied by their respective sound effect. You might find that watching every unit trace out its movement path (rather than simply move to the destination hex) slows the game substantially.

Reset to Default: Select the check box to the right of the “Reset to Default” text to return all map preferences to their default settings. Note that there is a separate default reset for both the user and map preferences section of the preferences screen.

2.7. SAVING AN ONGOING GAME

If you are playing against the computer, and have selected Auto-Save Game then the game will automatically generate two saves for each game turn. This will be the save used to run the AI turn and the save you use for your own turn.

It is a matter of choice if you wish to make additional saves but it is recommended if you intend to leave the game running for some time or if you need to close the game before completing your turn. For a PBEM game you have to make manual saves to send to your opponent.

The save option is within the administration menu tab toolbar (36.19) displayed on the main map screen.

When you go to save a game it will, by default, attempt to save it in the folder that you created when setting up the scenario.

There are three buttons at the bottom left side of the screen as follows:

- Save a New Game: Prompts the player to type in a name to create a new save game.
- Save over Current Marked Game: Overwrites the save game that is currently selected and highlighted in green.
- Delete this Saved Game: Deletes the save game that is currently selected and highlighted in green.

2.8. MULTIPLAYER

There are two different ways in which Gary Grigsby’s War in the East 2 can be played against another human opponent.

2.8.1. Play be Email (PBEM)

PBEM allows two human players to play by exchanging turn files by e-mail in a manner that inhibits cheating. Selecting the PBEM button either here or in the Load Saved Game screen toggles PBEM on or off. A check will appear in the PBEM box if PBEM is enabled. The default setting for PBEM is disabled. To start a PBEM game, the second player to move in the chosen scenario (e.g. the Soviet player in the

1941-45 Campaign or the Axis player in the Red God of War scenario) enables PBEM, sets the agreed upon Game Options and then selects the scenario.

Note that there are no auto saves during PBEM.

Thus you will need, at the least, to manually save the turn before sending it to your opponent.

The second player will then be prompted to create their password. Once a password has been created, the second player will be taken to the PBEM Save Game screen, where they will create a save game, which will be saved as a .psv file in the /data/save directory. The second player will then be automatically taken back to the main menu.

The second player will then e-mail the save game file to the first player, who will transfer the file into their /data/save directory.

They will then enable PBEM, load the save and then will be prompted to create their own password. The first player will then take their turn, saving whenever they want. Once the first player has finished their turn and selected the end turn button (F12), the computer will conduct the next Logistics phase and the Amphibious phase during which the map display will be blank, then prompt the first player to save the game so it can be e-mailed to the second player to continue the PBEM cycle.

2.8.2. Multiplayer

Multiplayer (MP) allows human players to play the game over the internet through a server based system hosted by Slitherine Ltd. Players can log on to the server, post and accept game challenges, and conduct their turn in any scenarios they are currently playing. An internet connection and a Slitherine account will be required to utilize the multiplayer system.

If the player does not have a Slitherine account, then they will select the register button, which will bring up the account registration screen. Here they will be prompted to enter a username, password and e-mail address to obtain a Slitherine account.

Before you log in you will be presented with a screen like this (once you have entered your details it will remember them for future log ins):

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Once you are logged in, the screen is divided into a section that will show any games you are currently playing, one that shows any challenges you have created and where there are games you can offer yourself as an opponent.

210

To create a challenge, select that option, select the scenario you wish to play and amend the settings as you wish. If you password protect this then only someone you give that password to can take up the game:

211

Remember that the settings you select, including about how to manage the air war (chapter 17) and Theatre Boxes (chapter 13) are then fixed and cannot be modified during play.

At that stage the game will appear in the 'my challenges' screen.

212

Once an opponent accepts your challenge it will be shown in the 'My Games' section as:

213

If desired, the player may use the 'Resign" button. 'Show Completed' and 'Show Resigned' buttons on the screen can be used to filter the game list. Upon completion and selection of the end turn button (F12), the scenario listing will be updated to reflect that it is the other side's turn.

Hovering the mouse over the games in the games and challenges lists will display text providing additional information about the listed games.

Any available challenges will be shown as:

214

To open an ongoing game, click on the yellow title such as:

215

Click on this and then select play.

When playing a multi-player game it will only automatically save when you press F12 to end the turn and trigger your opponent's logistic phase. At this stage you will be returned to the main game menu. In addition you can save manually at any time you wish.

2.8.3. Multiplayer Messaging

There is a messaging capability built into Multiplayer. You can use this when setting up a Multiplayer game, to better describe the Challenge and also to communicate

with your opponent each turn without needing an e-mail address or other contact information.

Messages can be up to 255 characters in length and will be visible to all players in a Multiplayer game. When setting up a challenge, note that you can click on the text box near the bottom right of the screen and enter a message of up to 255 characters. Press enter after completing the message, and the message will appear in the message section of the screen. This will show the most recent messages from all of the players.

While you are making your turn, you can create up to two messages to send. This can be accessed when you press F12 either when you run the air directives (5.3.2) or when you end the ground movement phase and complete your turn (5.2).

When you start your turn, you may see a message that you have an unread message from your opponent. F12 will bring up the message interface. If your Slitherine account is linked to your email account, such messages will also be sent to your email account.

Up to eight messages will be saved on the server and you can also filter these messages. Players can also filter the messages displayed in their list by player or by turn.

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2.8.4. Intended Changes

It is intended to make several changes to the on-line multiplayer options before the game is released (or as soon afterwards as possible). This will allow up to four players to take on a given side (it will be up to them to create a command structure and rules for which one carries out which functions). In addition, if a player withdraws then the intention is to allow a new player to take their place (or for the others to carry on).

3. SCENARIOS

300

Focus:

This section explains the differences between campaign games and other scenarios.

Key Issues:

- Rules for a campaign game scenario;
- How these might vary for a shorter scenario;
- List of available scenarios;
- How to set up a game;
- Detailed rules for setting up a multi-player game (and the various options)

3.1. SCENARIO LIST

Scenario Name	Start Date	Length (turns)	First Player	Campaign	Map Area
1941-45 Campaign	22 June 1941	215	Axis	Yes	Full
Road to Leningrad	22 June 1941	16	Axis	No	Partial
Introductory scenario 2: Road to Minsk	22 June 1941	2	Axis	No	Partial
The Destruction of South Western Front	22 June 1941	17	Axis	No	Partial
Operation Typhoon	30 Sept 1941	14	Axis	No	Partial
Introductory scenario 1: Velikie Luki 42	17 Nov 1942	10	Soviet	No	Partial
Red Army Resurgent 42-43	17 Nov 1942	17	Soviet	No	Partial
Stalingrad to Berlin	19 Nov 1942	137	Soviet	Yes	Full
Red God of War	24 Nov 1942	11	Soviet	No	Partial

Vistula to Berlin	13 Jan 1945	20	Soviet	Yes	Full

01.01.00:

Errata

Added a new scenario that is a modified version of the 1941 Campaign (1941 Campaign – No Early End). The only difference between this and the 1941 campaign is that the no early end version does not make checks for Sudden Victory or Sudden Loss. There is still the check at the end of 1944 re the Soviet HWM needing to match the Axis HWM (or Allied control of parts of Germany). This scenario will always contain the latest 1941 campaign changes unless otherwise noted in the scenario update notes.

3.2. LEARNING THE GAME

When first learning the game, it is recommended to play the Velikie Luki introductory scenario as the Soviets against the Axis AI (see 4.19 – 4.23 for a detailed discussion and a play through of the first few turns). After that you may want to repeat this at more challenging settings, try to defend with the Axis or move on to play the Road to Minsk scenario as the Axis against the Soviet AI.

Even if you have played WiTE1 or WiTW you may find these short scenarios useful as a means to explore the concepts that are completely new in WiTE2 and to give you some practical experience to test your understanding of the information presented in the manual.

Beyond that, Road to Leningrad is a low density, fairly quick to play scenario that might help you understand the feedback between early turn decisions and the combat effectiveness of your army later in the scenario. In turn, the Destruction of the South Western Front might help you understand the special T1 rules in the Ukraine and the overall difference in fighting in the relatively open terrain south of the Pripyet marshes. Operation Typhoon is a good chance to explore the impact of the autumn rains and then winter weather on operations.

While it is inevitable that most players will want to start the 1941 Grand Campaign as soon as possible, the later start dates offer both interesting gameplay and insights into key game mechanisms. In particular, taking the Soviet side in Vistula to Berlin will introduce you to the challenge of how to supply a large army, with substantial mobile assets, that is advancing rapidly.

3.3. SCENARIO TYPES

There are two types of scenarios included in the game. Campaign scenarios cover the entire Eastern Front from a specific start date, use the full map area and use the campaign victory conditions (29.1), while non-campaign scenarios are shorter and use less of the map.

3.3.1. Campaign Scenarios

The impact of the rest of the war in North Africa, the Balkans, Arctic, Western Europe, the Caucasus and the Far East is represented in all campaign scenarios using Theatre Boxes.

Depending on the options chosen, both sides will have the option to reinforce or weaken these fronts but doing so may have significant effects on overall game progress. Alternatively these Theatres will be handled with historical deployments and through the in-game event system (13.1).

3.3.2. Non-Campaign Scenarios

Non-campaign scenarios are normally of a shorter length, do not necessarily use the full map area and have specific victory conditions (29.2). In most, the only Theatre Boxes in play will be those that are used for the respective National Reserves (13.2).

Any short scenario can be set up so that if one side captures all of the objectives of both sides, the scenario will immediately end. Scenarios that have the possibility of an early end have this noted in their scenario description text on the Load Scenario screen.

Points will be awarded as if the player held the objectives for all of the rest of the turns of the scenario and will score end game objective points as well. In addition, all units deemed isolated on the side that does not hold an objective will be destroyed and counted in the victory point casualty count.

3.4. SCENARIO SET UP RULES

As noted in the sequence of play (Chapter 5) the first turn of any scenario does not have a logistics phase. Equally sometimes the Axis player will not have a first turn meaning the game commences with the Soviet air planning phase.

This means that at start depots and supply states are all set by the scenario designer and, in all scenarios, the first player's units MPs are pre-determined and may be less than the theoretical maximum.

Equally many scenarios will start with some units frozen for a number of turns.

The number of wins/losses recorded for units at the start of a scenario will always be zero.

You should also read Chapter 11 as that details the special rules in place for all the scenarios that begin on 22 June 1941.

4. BASIC GAMEPLAY

400

Focus:

This section provides an overview of the key game play concepts in WiTE2. Our aim is that you can play the game by reading this chapter and will start to use the rest of the manual and appendices as you find you need more information.

Having said that, reading the Player's Notes may also be very helpful as they are designed to place the detail into a broader context.

Key Issues:

- A short summary of all the main game concepts;
- Where you can find Information when playing the game;
- The basics of planning air operations and ground unit movement and combat;
- The basics of supply production and delivery to combat units;
- How weather works in WiTE2
- How to access and use the off-map Theatre Boxes;
- A walk through of the first turns of the Velikie Luki scenario

4.1. AIM

The aim of the Getting Started section is to explain the basics of WitE2. The later sections of this manual re-examine all the topics and describe how everything works in considerable detail.

As part of picking up the core concepts of the game we also suggest reading the Player's Notes in Appendix A (section 30). These provide short summaries of how WiTE2 differs from the original WiTE1 and WiTW, set out the key rules and provide some tips for play. In combination with this chapter, that should give you a good grounding in the overall game design and how the various sub-systems slot together.

This chapter also provides links to other sections in the manual where the particular topic is discussed in much more detail.

4.2. STRUCTURE OF THIS CHAPTER

The Basic Gameplay Chapter has been split into three main parts.

- The first part covers the very basics of the game (4.3)
- The second part covers the main game concepts. This is sections 4.4 to 4.18
- The third part (sections 4.19 to 4.23) provide a relatively detailed discussion of how to play the first turn of the basic scenario of Velikie Luki and then some broad ideas about how to play the later turns.

A number of Full Page Guides are interspersed throughout this chapter as graphic aide memoires in comic strip style.

4.3. OVERVIEW OF THE GAME

This section covers all the basic concepts in WiTE2. At a minimal level, by the end of this section you should have some idea how the game is designed to be played and manage one or two turns of experimental gameplay.

4.3.1. Outline

WitE2 is a turn based simulation of the Eastern Front in WW2 from June 1941 to August 1945. A player represents either the High Command of the Soviet or the Axis Forces. Players can either play against the Computer AI or another Human opponent (equally the game can be set up to enable solitaire play with the player taking both sides).

The Game is played on a hex based map. Each hex is 10 miles across. The precise area covered by the map depends on the scenario chosen.

Each Turn lasts one week.

WitE2 is an IGO-UGO game with the players taking turns to make their moves (like Chess or Backgammon). Each Turn is further subdivided into a number of phases where either the Player is able to make a move or effect a change or the Computer carries out relevant calculations impacting gameplay.

All these issues are summarised overleaf in the one page guide:

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4.3.2. Game Concepts

WiTE2 uses a number of game concepts that have a particular meaning or role within the rules. The references in this section are to any further discussion in this chapter and to the main body of the rules.

The combat value (CV (23.1) of a unit is a vital piece of information that shows the aggregate combat power of a unit. However, this can then be further modified by leadership, terrain, supply and the allocation of support units. It can also be inaccurate (for enemy units) due to the Fog of War (10.2).

So it is, at best, a rough guide to combat efficiency. If, at the end of a battle, the attacker has a 2-1 (or greater) CV advantage, they will win and the defender will retreat, rout or be destroyed.

Administrative Points (AP) (Chapter 9) represent the limited time and other constraints that affected both sides. AP are used to replace commanders, build depots and airfields, build certain unit types and to disband units.

Combat Preparation Points (CPP) (23.2) are one way the game reflects the importance of building up before launching an offensive. Units can have between 0-100% CPP depending on how well rested they are. The immediate effect is that CPP increases the CV of attacking units (in other words well rested units are more effective on the offensive) but it also improves the ability of defending units to draw on supporting artillery.

Units with a high CPP are also likely to have more movement points as a result.

Combat Units (CU) (21.3) are any on-map (or within a Theatre Box) ground unit counter apart from the various types of rail repair units that may also be in play.

Support Units (SU) (21.5) are any unit that is held off map. These can be attached directly to combat units, to a HQ (21.5.2) or a city or airfield and will be allocated to combat, or to support tasks such as digging entrenchments, as required.

Multi-Role Units (MRU) (21.4) are units that can either be on map (i.e. acting as a Combat Unit) or off-map (i.e. acting as a Support Unit) depending on the player's wishes.

Air Operational Groups (AOG) (4.6 and 16.3) are the main way you manage your individual air units and assign them to combat operations.

4.3.3. Main Turn Phases

WiTE2 splits the game turn into four main sub-sections. In two of these the player is active and in the other two the computer either runs through the logistics and supply routines or executes the orders for the air phase.

Thus the first part of the turn is where the computer runs the supply, production and logistics phase. The player has no direct involvement at this point but has a variety of tools, available during the player controlled phases, to set supply priorities and to ensure that certain units are allocated new equipment and replacements.

The second part of the game turn is for generating the orders for the air phase. There are various levels of automation available to ease the demand on the player but you will need to make some overall decisions about allocation and focus of operations.

The player can take a varying degree of direct control including detailed allocation of air groups (16.4) to Air Operational Groups (16.3) or even manually selecting the precise weapon/fuel load of each air squadron. Alternatively the bulk of the air war can be conducted using the AI-assistance routines (4.6 and 17.1)

Once this is completed, the computer will then resolve the third phase – conducting all air missions apart from ground support, the air transport of supplies and any airborne operations (these all occur in the land phase).

Finally, the player will move the land units in the ground phase. WiTE2 uses the concept of combat as movement so in this phase units may move or attack as needed (as long as they have sufficient movement points to carry out the desired actions). Equally units may move longer distances by rail or by ships.

If the ground phase involves combat, it is possible that aircraft will also be committed (ground support) as ordered in the earlier air phase. Air drops and air transportation of units and supplies occur in the ground phase. Equally as units move they may encounter the results of the earlier air phase such as needing to move through enemy interdiction air attacks.

4.3.4. User Information

WiTE2 is a complex game and a variety of information displays are available. These can include:

- Changing the on-map display to show different information;
- Changing how the counters are displayed;
- Accessing information using the tabs at the top of the game screen;
- Accessing information about a given hex using the top of the game screen (if the hex has a named location such as a town, an airbase or a depot);
- Hovering your mouse over a hex will bring up an information display that can be used in place of changing the map display; and,
- Right clicking on a hex will bring up information about that hex and also enable the player to move onto a variety of display screens.

A very important source of information for players is the Commander's Report. This is discussed in some detail later in this chapter but players are strongly advised to refer to appendix F for more information about how to access and interpret the information available. It is daunting at first sight but you will soon become aware of how to find information you consider to be important.

Further information on how to use the UI is provided later in this chapter (4.4) and in chapter 6.

4.3.5. Changing unit status

In addition to moving units (and attacking) on the map, WiTE2 allows you to set specific roles or criteria for each unit. Options include setting modes such as ready, refit (the unit is more likely to be reinforced or to upgrade to new equipment) or reserve (the unit may join in a battle – either defensively or in support of an attack). You can also set a unit so that it does not take on 100% of its notional equipment.

These options can be done variously using the Commanders Report (very useful if you want to set a number of units to the same status), the on-map counter or using the detailed unit view that you can access via the on-map counter.

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The image above shows three views on the same unit. Image A is how the counter appears on the right hand screen when you select it. Here you can change mode from 'Refit' by clicking to the right of the counter. Image B is an extract from the detailed unit tab (37.3), here you can change the mode from 'refit' by clicking on the box below the counter image. Finally, Image C is an extract from the Commander's Report (for all the divisions in the 33 Army), you can change mode in the 'Status' column either unit by unit or by using the ability to carry out large numbers of changes at once (35.2.3).

4.3.6. The map

The main playing area is a detailed representation of the terrain and physical resources (cities, train lines, major roads) in the region from east of the Urals to the Rhine in the west and from the Arctic to the Black Sea. In many scenarios not all this potential region is in play.

Each hex is coded according to both the terrain and any human improvements. So, for example, a hex might contain clear or swamp terrain and either can have a rail line running through it.

403

This shows a portion of the Western Ukraine. Hex ‘A’ is rough terrain, hex ‘B’ is a city hex with dual track rail line and level 2 airbase, hex ‘C’ is clear terrain with a good road (you can make the roads easier to see by altering the map view, see chapters 6 and 7), hex ‘D’ is clear terrain and a dual track rail line and hex ‘E’ is clear terrain and a single track rail line.

Some areas are represented by ‘Theatre Boxes’ where combat is abstracted. These represent regions where the Axis powers are directly at war with the Western Allies (so in June 1941 this happens in North Africa), regions where the Axis faces a substantial partisan war (both the Balkans and within the Soviet Union as the Axis forces advance), regions where the Axis powers and the Soviets are in conflict (the bulk of the Finnish front) or where the Soviets needed to retain a substantial garrison (such as the Far East).

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Finally both sides have a ‘national reserve’ Theatre Box where fresh units form up, can train and be subsequently deployed to the main map. Equally you can send badly damaged units to the reserve to refit. Here they will have a priority for manpower and equipment.

4.3.7. Map modes and displays

Different filters and displays can be applied to the map to display a variety of information. To control the clutter the player can switch these options on or off according to their needs.

It is thus possible to show enemy controlled hexes, hexes that have been captured this turn and hexes that were friendly controlled at the start of the turn. Other displays that can be turned on or off include the weather graphics, the depot network, newly repaired rail lines and the fortification levels of individual hexes.

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The image above shows three different views of the roughly the same map area. A shows a recent German advance into previously Soviet held territory (the hexes in the darker grey-green). B shows the logistics network behind the German lines, showing 2 depots and the usage on the main rail line. Image C shows how much of the rail network behind the German lines has been repaired and can be used (the hexes with the green track symbol).

Other options include displaying battle sites or the mission zones of planned air directives.

You can also opt to remove the counters from the display – which can be very useful if you want to check on map information such as the usage of rail lines and the location of your depots.

Hovering your mouse over a hex will also bring up a display box that summarises the information available from the various map display options.

4.3.8. Game Options

WiTE2 can be played in a variety of ways and customized to suit the players. Options include whether the game is between a player and the AI or between two players (note that in this case the game can also be played using Slitherine's servers). Other options include if either side will have advantages or challenges (game difficulty), whether or not the fog of war will affect the game and how the game will be saved.

4.3.9. Air Units

In WiTE2 air bases are permanent fixtures on the map. Over the game, more can be built or existing ones can be expanded, and, of course, they may switch ownership.

Air Commands are represented on the map with counters and are used to organise your air force (if you are using the AI-assistance routines). Depending on the map display option chosen, the rough location of the Air Operational Groups are shown (this is shown roughly in relation to the airbases in use). These are labels with no actual on-map presence but are used to ease a lot of the procedures associated with air war management.

When you first open a turn, you will see the rough allocation of the Commands and AOGs on the map, as:

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The nature of what is shown will vary according to how the map display is set up (from zoomed out where you will only see the Air Commands to zoomed in where you will see information about each AOG on the relevant information tab).

Air Commands and AOGs may each have planes based at more than one airfield and may share airfields with another Command or AOG.

Air units, as such are not shown on the map. Individual planes are organised into air groups (of different sizes) which have a primary role (fighter, recon etc.) and contain one type of plane. In turn, these air groups are assigned to both an Air Operational Group (AOG) and an Air Command. In some instances these are the same but mostly a given Air Command will have one or more AOGs assigned to it.

More information on controlling your air units is in section 4.6 below and then in chapters 16-19.

4.3.10. Land Units

WiTE2 is based on a very detailed representation of the forces available to the Axis powers and the Soviet Union. The basic building blocks are individual tanks, guns and planes and squads of infantry, engineers and support troops. For practical purposes these appear in the game as air groups (of different sizes) and ground units (some appear on the map as counters and others are 'attached' to either other combat units or to the various Headquarters).

Combat units are shown with an estimated 'combat value' (CV) which is an aggregate of the combat power (23.1) of all the constituent elements within that particular formation.

Ground Units. WiTE2 is basically a divisional level game but contains combat units that range in size from Corps to Companies. In addition to combat units, the game represents the various headquarters that controlled the two armies throughout the conflict.

Combat and Support Units. Ground combat units in WiTE2 reflect the main combat power of both armies. There are two basic types of combat unit. Some can only appear on the map and others never appear on the map. In addition some units can be in either mode (called 'multi-role' units).

On map units (also called Combat Units – abbreviated to CU) can be shown in a variety of ways depending on the player's choices. Options are to show the counters with the two main numbers as the attack value and the movement points or the attack value and the defensive value (the enemy will always be shown with this option).

If the player is using the 'fog of war' option this information may not always be shown for the enemy and may not be accurate.

Off map units (also known as Support Units – often abbreviated to SU) include the various specialist artillery, anti-tank, anti-aircraft and engineering assets that both armies deployed. They also include units that were too small to operate independently such as early game Soviet tank brigades.

Some units are also designated as multi-role units (again this is often abbreviated to MRU). These include Soviet rifle brigades and various Axis brigades that appear throughout the game. These can be 'on map' or off map as support units depending on player choices.

Off map support units are always assigned to another unit. All can be assigned to a Headquarters unit. If this is the approach chosen, they are then allocated to combat or to other functions (such as building fortifications) by the computer (the chances of this happening are modified by the relative competence of the commander of the HQ) when units attached to that HQ engage in combat.

Others (such as infantry, armour, anti-tank, combat engineers and anti-aircraft) can also be directly attached to a particular on-map combat unit. In this role they will always take part in any combat that involves their parent unit but are not available for other purposes.

Headquarters. In addition to combat units, WiTE2 represents the command structure of both armies by on-map Headquarters units. These range in size from Corps to Army to Army Group (or Soviet Fronts) to the High Command (such as the German OKH or the Soviet Stavka). Headquarters can directly command combat units and have various off map support units attached.

HQs should be organized in a logical hierarchy. For the Axis powers, the usual organization will be to have combat units reporting to a Corps HQ, these in turn reporting to an Army, a group of Armies then report to an Army Group. After their initial defeats in 1941, the Soviet structure will alter so that most combat units report to an Army and those are then organized into Fronts.

Note that each HQ has a command limit. You can exceed this but then the commander will be less effective due to the excess demands on their time and HQ resources (such as staff officers, signalling units and field hospitals).

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This shows the German 6 Army HQ. All the information on the counter is discussed later (4.7.4) so for the moment note that it currently reports to Army Group South, it is set to level 3 for supply priority (4.10.12), it has just over 25,000 men directly attached and it uses 23 out of its potential 27 command capacity (4.7.4).

Controlling your order of battle, and ensuring an appropriate command structure, is very important when playing WiTE2.

Leaders. Each Headquarter is assigned a leader. The game includes almost all the commanders available (who either commanded a corps or higher command, or could have) and each is rated according to their competence on seven factors. Some of these factors directly influence combat performance and others logistics and movement. For the moment, what matters is the higher a value, the better a commander is.

Corps (or Soviet Army) commanders can only influence the performance of units under their direct command but do so up to their full notional value. Army (or Soviet Front) commanders and above influence all the units under their indirect command but at a reduced value. Their rating is reduced according to both their distance in the command chain (so the leader of OKH will have some influence on almost every unit on the Axis side but this is relatively limited) and physical distance on the map (see Chapter 15 and especially section 15.5 for more information as to how this works).

So there is a trade-off between having your best commanders in the most senior roles and ensuring that key formations have competent direct leadership.

4.3.11. Supply and Depots

The supply system in WiTE2 is complex – but mostly happens 'out of sight' as the computer handles all the calculations.

Primarily, supply is moved along rail lines to depots and from there to the combat units. Trucks are often essential to moving supply from depots to HQs and can be drawn from your overall pool or the unit's own organic truck allocation (this in turn will reduce the number of trucks available to the unit for its own movement).

Even at the basic level, there are a few key features to keep in mind.

First, the capacity of each rail line is limited (the most obvious aspect of this is whether or not a rail line consists of dual or single tracks). This capacity is not just used for the transport of supply and replacements but also to move combat units over long distances. Thus a given rail line can supply only a limited number of units (25.4).

Second, depots are crucial to both store and distribute supply. For the moment, remember that depots have three characteristics. Their type (most in the game are railway depots but some are designated as National Supply Sources or as ports), their size (which is related to the size of the railyard in the hex) and their priority (from 0-4) set by the player.

> ***You as a player directly control the priority and location of the depots and the deployment of your HQs. As an aside, you can fully automate the creation and changing the priority of your depots to the computer.***

Finally each HQ can be given a supply priority (from 0-4) by the player. All HQs (above 0) will be allocated a minimum level of supply and the priority setting will influence the maximum amount of supply that particular command will potentially claim (so a corps set to level 3 will take more supply than one set to level 2 - if it is available) but all commands will gain a basic minimum, if enough supply is available (25.8).

Note that in the example of the 6 Army headquarters above it is set to 'supply priority 3'.

HQs will try to draw supply from nearby depots but sometimes will seek supply over a substantial distance.

Airbases also are allocated supply priority (from 0-4) by the player. In this case an important difference is an airbase set to level 0 will receive no supplies at all.

> ***Note that setting a high priority for a given HQ does not guarantee receipt of that supply if insufficient supply stocks are available in the local depot network.***
>
> ***Lack of supply, ammunition or fuel will seriously hamper the combat power of your units.***

Railyards. These are a very important aspect to WiTE2. As above, the size of the railyard in a hex will have a direct impact on the size of the depot in that hex. They also contribute to the overall rail stock that each side has. Finally railyards make it easier to load or unload units onto trains for strategic movement.

Ports. Like Railyards, Ports are both part of the supply distribution model and enable strategic movement. For supply purposes, ports can be designated to either send out supply (to other ports in the same sea zone) or receive supply from other ports.

Before moving on, let's put some of this information into context.

- You can access most of the in-game information in a variety of ways;
- You can amend the displayed game map to show different information;
- You can amend the on map counters to show different information;
- Supply really matters and involves transportation links (trains, trucks and horse drawn carts), depots and the relative priority you set for various combat commands;
- Organizing your order of battle, and leadership, is really important.

4.3.12. Administrative Points

These are used to represent limited command capacity for both sides during the game. Most of your allocation is from the per-turn limit for that particular scenario (3.3), some come from particular events (40.12) or by doing better in one of the off-map Theatre Boxes (4.14). You spend them to create depots, new units (this varies according to the unit type and game period) and swap commanders. Review the table in section 9.2 for a full list of the relevant actions and how much each will cost you.

4.3.13. Ending a Phase or a Turn

Once you have completed all the actions for a given phase (i.e. issued all the air commands or land movement orders you wish), click on the end phase button on the right hand side of the top tab.

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Depending on where you are in the overall game turn this will either commence the phase where your air commands are carried out or end the game turn. In this case, the game will move onto a logistics phase for your opponent (5.3.1).

4.4. FINDING INFORMATION

This Topic provides a basic overview of the Player Interface and the Map. As discussed above, WiTE2 provides a lot of information to help players and this section will show you how to access it and some basic guidance as to how to interpret it. Further information can be found in chapter 6, where appropriate in the manuals and the various appendices discuss how to read the tables and displays in detail.

The one page guide overleaf summarises the information in this sub-section.:

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4.4.1. Basic Principles

The various information tabs work on one of five principles:

- If you click on the tab, then you can carry out certain actions, as an example, clicking on the rail mode movement button will enable that option (in this case you can move units that meet the criteria by rail):

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- If you click on the option, the information will be shown on the map. An example of this is the ability to show the level of fortifications in each hex:

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- If you click on the option, it will open a more detailed screen allowing you to make other changes or review something in more detail. An example of this is the Order of Battle (36.1) tab, click on this and that detailed screen will open;

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- If you click on the option, you can amend the values. An example of this is the depot indicator (again top left hand side), hovering your mouse over this allows you to set the priority for that particular depot;

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- If you click on the option, a drop down box will appear, you can select from this list and that will alter the map or unit display accordingly. An example of this is the battle site indicator tab (6.8.2) where you can select between showing all combats, just those involving land units or just those that occur solely between air units.

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4.4.2. Using the Menu Tabs

Most of the interface is accessible using the toolbars at the top of the screen. There are four broad areas:

Menu Tabs. Across the top of the playing area are various toolbars that allow you to access key information.

- Mode Toolbars. These fill up the left and centre of the area. The top row options will change according to which of the three tabs (map information, info screens or administration) you select. The bottom row options will change depending on if you are in the air planning or ground phase (note the phase will be shown on the middle of the screen).

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Some tabs may appear in more than one of these displays if they are still relevant, so for example, setting air superiority missions (18.1) is only available when setting the air orders (17.4) but the option to display battle sites is available both when setting air orders and during the ground movement phase (Chapter 22).

- General Information Box. This is on the top right hand side and shows key information such as the Date, Turn Number, City Name (if applicable), and available administrative points (Chapter 9). The City Name Box is particularly important as clicking on the name accesses the City Information Screen (this can also be accessed via the map). Depending on what is in the hex, this may also show information about any depot or airfield that is present and can be used to create a new airfield or change the priority of a depot.

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- At the left side of the Info Box is the Soft Factors Tab. This toggles various Soft Factors which indicate information about on map units by a colour coded tab on the top left corner of a unit counter. A good example is if the supply factor is chosen, then a red tab shows a unit with less than 41% of the supplies it needs.

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In addition, also almost all this information can also be accessed if you right click on any map hex.

More information about these options will be provided later in the manual but note that you can use this method to create a new air base (or increase the size of an existing one), alter the importance of the depot (or create a new one), access the city screen (Vladimir in this case) and access a range of other options.

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The rest of this chapter will talk you through how to use and interpret the information provided. More detailed information is available in Chapter 6 and the contents of all the secondary charts and tables are described in the relevant appendices.

A full list of all the various menu buttons can be found in section 6,2.

4.4.3. Changing the Map Display

The WitE2 Map can be set to one of five zoom levels (you can shift views either by the mouse or by using the zoom-in/zoom-out tab) and is based upon a 10 mile hexagonal grid. Each hex has its own terrain, weather and perhaps human structures such as railways, roads or towns. Thus the map sets the basic playing environment for WiTE2 and presents information on:

The Geographical Terrain. Each hex has a specific Terrain Type. The terrain impacts directly on the movement and combat that occurs in or through the hex. Additionally hex sides can represent terrain features such as rivers which also impact on movement and combat or may even be impassable. More information can be found in chapter 7.

Weather. WitE2 models both air and ground weather conditions. These weather conditions can be seen on the map by toggling the Show Weather Button (Hotkey-W). Weather affects both combat and movement (see chapter 8 for details). The weather model is dynamic with fronts (of high or low pressure) moving into the game area and in turn generating weather effects, such as rain or clear skies. As the air weather shifts to rain or snow, ground conditions will change to mud or snow.

> ***The ground weather only affects ground operations and the air weather only affects air operations.***

Man Made Facilities. Some are always visible like Ports, Airbases and Rail lines. Others can be toggled on/off using the Show Industry, Roads, Fortifications or Logistics Info Buttons. Most of these man made amendments to the map are critical to the logistic model.

Roads are important during poor weather turns and in terrain such as forests, mountains or sand where off-road movement is often slow (especially for vehicles).

Unit Counters. Units are shown on the map as square counters. If you left click on a unit you may see all the movement options (if you have the hex control option displayed) and a more detailed unit box will appear on the right hand side of the screen.

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In this case the Soviet 1st Guards Rifle Corp has been selected on the map and unit display is now on the right hand edge of the map. Note that other Soviet units now

are outlined in yellow, indicating they too belong to the 54 Army). This will be described in more detail in section 4.7.4 below

Selecting a unit. To select a unit to move or fight, left click on the unit(s) – you can move a complete stack at the same time if you wish, and then right click on the destination (whether this is to move or to attack).

Unit Movement. To move a unit(s), left click to select and then right click to select the planned move or attack. Note that you can select all the units in a stack to move together. Also it is important to bear in mind that in WiTE2, combat is a specific form of movement costing Movement Points (MP) to conduct.

You do not have to use up all the available MP at once, so you can order a partial move and return to that unit or stack later in the movement phase.

In the example below, the Soviet 55 Rifle Division has been ordered to move from its starting position (bordered in black) towards the Volga. Note that the hex south-west of the unit shows the Movement Points that would be left if the unit moved onto that hex. The unit is weaker after the move as it is now slightly fatigued (4.8.3 and 22.2)

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Some aspects of the way that units and the map interact are obvious – you need to be on a ship to cross sea hexes. Other elements are less so – Armoured Units are better at attacking in Open terrain. Infantry Units defend better in close terrain like heavy woods.

Hex Control. Hexes are either friendly, enemy or pending friendly (these are hexes that have been taken during the current turn and will switch ownership at the end of the player's turn).

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This shows how the map changes when a unit is selected to move. The light hexes were all Axis controlled at the start of the turn. The darker coloured hexes (to the east of the Romanian 2-3 infantry regiment), have been occupied by another Axis unit this movement phase. The light brown hexes are still Soviet controlled but you know they are empty of Soviet units. The dark brown hexes either are known to contain Soviet units (or you lack sufficient information to be sure).

The ownership of a hex has an impact on movement and logistics and the fatigue that units will build up as they move into that hex. If you can, only move in hexes that were friendly at the start of the turn as this is faster and costs less fatigue.

Hex Pop Up. If you hover the mouse over a hex the pop up will show you considerable additional information.

4.4.4. Combat Resolution Information

One important option is how you set the combat resolution level. This will affect both the amount of information you see as the game plays and the speed of play.

The combat resolution level is set when creating a game (36.17.1) and can be changed at any time. By default, when you start a new game or load an existing game it will be at the level you last chose.

You can change the combat resolution either via the user preference screen or by pressing the number keys (from 0 to 7). If you do this, a pop-up message will briefly appear:

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If you chose level 0, there will be no delay as the combat will be processed automatically. Once it is resolved you can carry on moving and fighting. At level 1, the combat information screen (37.1) will appear for a short period giving you an overview of the combat and the outcome. By the time you select level 5 you will see considerable detail (down to the interaction of individual elements) as the combat is resolved. In this case, you can close the pop up at any time you wish and the final result will be shown.

When resolving air directives, the combat outcome screen will only be shown if you have a delay of greater than 1.

Detailed resolution can be informative if you wish to understand how the combat engine works but will significantly slow play. Note you can cancel the display process at any time by clicking on the cross in the top right hand corner.

Usually you can set the delay to 1 or 2 and review the outcomes afterwards by accessing the battle site indicator on the map. In this case the battle shown above ended in the surrender of the Soviet unit so the battle indicator is displayed as a white flag in a black border (the border indicates that this was an attack by the Axis side).

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Information on how to interpret this particular screen can be found in 23.10 and 37.1 but it will show you the outcome, how many men, tanks and planes took part and the reasons for any losses.

4.5. INTRODUCTION TO THE AIR PLANNING PHASE

This Topic provides an overview of the Air Phase and explains the Auto Air Directive Creation function. The Air Phase is the first active part of the Player's Turn.

In your early games we strongly suggest you use the AI-assist routines (4.6) before moving onto manual control (if that is what you wish to do).

4.5.1. Purpose of the air war

In WiTE2, both the Axis and Soviet air forces were primarily structured to support the operations of the main armies rather than conduct independent strategic bombing campaigns. Their approaches to both doctrine and plane design has implications for how you can use airpower in the game.

> ***One practical example is that most Soviet fighters have very short ranges. This means it is important for them to be based close to the front lines or planned area of operations. It also makes the longer ranged lend-lease planes very valuable in certain situations.***

This focus affects how you manage your air commands and the type of missions that are available to a given air command.

While you can conduct the full range of air operations, including bombing factories and cities, you are most likely to use the air force in one of the following roles:

- Ground Attack - Interdiction, this mission is flown in the air combat resolution phase and will inflict losses on any enemy unit that moves through those hexes (and possibly raise the cost of leaving such a hex). It can be used to target supply lines, reserves, or where the enemy is likely to advance or retreat as a result of combat.

  Interdiction missions can only be flown over enemy controlled hexes;

- Ground Attack - Unit, this mission is also flown in the air combat resolution phase and aims to disrupt or destroy enemy ground elements. As such it is often better used when aimed at a hex(es) you intend to attack later in the turn;

- Ground support, this mission is ordered in the air phase but not conducted until the ground phase. In this case bombers and fighters will support offensive or defensive ground operations adding their effect to the fighting between ground units (4.8);

- Air superiority, this mission is ordered in the air phase and will be conducted both in the air combat resolution phase and the ground movement phase. Fighters assigned to this mission will seek to engage enemy planes that come into a set area.

  A variant of this is that fighters with no other mission will always try to intercept enemy planes that come close to their airbase.

The impact of airpower on ground units is often indirect. Most times, air attacks will not destroy many ground elements but will disrupt and damage elements or increase movement costs. Damaged ground elements will not take part in any combat until they have the chance to recover (in a subsequent logistics phase) and are more likely to be destroyed in the course of any ground combat. Disrupted elements will recover at the end of that battle but at a cost of adding fatigue (and thus reducing the combat effectiveness) to the attacked unit.

Thus airpower will tend to reduce the enemy's mobility and weaken their ability to win battles. It will not tend to inflict substantial direct casualties by itself (although this can sometimes happen).

4.5.2. Understanding air units

There are seven elements to each Player's Air Forces:

Air Commands. Air Commands (16.2) are the HQ Units that command Air Operational Groups and Air units Both sides have a hierarchy of air commands and may have lower level commands (such as a Luftflotte) report in turn to a supreme air command (such as the German OKL).

Leaders. Who are assigned to each air command. Their relative competence will influence the speed at which damaged aircraft are repaired and the numbers of planes that actually take part in a given mission.

Below this level, air units are organised at two levels (16.3):

Air Operational Groups (AOG). These represent combinations of Air Groups and are the main way in which you will manage your air force.

Air Groups. Air Groups are the Squadrons and Groups of Aircraft that fly air missions. Air Groups are assigned to both AOGs and Air Commands (16.3).

In addition, your air assets include:

Airbases. These are fixed locations on the map where Air Groups can be based (16.6).

Pilots. Each pilot is rated for morale and skill and the morale and skill values shown for the air unit is the average of these individuals (16.7).

Planes. Your air force is built up of individual planes and these are allocated to air groups. Each air group can only have one type of plane and you can ensure that obsolete planes are no longer in use by your combat formations.

The types of planes that can be used is determined by the unit type and training (so a formation trained to use level bombers can only be equipped with some type of level bomber).

Over the length of the game, planes will become obsolete or particular models may be in short supply. You can set up air units to automatically upgrade in which case they will switch plane type to a more modern version (or an older one if there is a shortage) or handle this manually. If you do this manually you will need to check for the arrival of new models of planes.

Each type of plane has a mileage available. This will be used up carrying out missions. Once a plane has used up all its mileage it cannot fly again that turn. Usage so far in a turn is expressed as a % of the potential total miles.

4.5.3. Air Commands

As with the HQs that control your ground forces you will often find there is a hierarchy of Air Commands. The principle role for the Commands is to assign leaders to your air force and to organise your Air Operational Groups.

4.5.4. Air Operational Groups

These are the main method by which you manage your air force in WiTE2. The One Page Guide (overleaf) shows the main ways in which they are displayed in the game and how they can be accessed.

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4.5.5. Types of Air Directives

There are seven different types of air directives but not all are available to every air command to reflect the various doctrinal differences between the Soviet and Axis forces.

Ground Support – Provides ground units with direct air support during ground attacks. This mission will actually take place during the ground movement phase.

Ground Attack – This focuses on a map area and slows & interdicts enemy ground units, limits their capacity to resupply, attacks their airbases, rail network or ports.

Ground attack missions can only target enemy held hexes, if the air directive box (17.4) includes friendly hexes these will be ignored for allocating the actual missions.

There are several variants to this mission. One (interdiction) will seek to hamper enemy movement but will do relatively little damage to static units (note this will attack supply convoys etc.). A unit attack will directly attack enemy units but will also create some interdiction.

Finally missions can target rail usage, enemy airbases, enemy rail yards or ports (18.1.4).

Strategic Bombing / Bomb City – Used to bomb production facilities & manpower in cities. Again, there are various options within this mission so you can be precise about the intended targets (18.1.5).

Air Recon – Used to increase the detection level of enemy ground units in the target area. Recon missions can be designated as Tactical or Strategic. Strategic recon will gather information on the types of targets that can be attacked using the strategic bombing mode (18.1.6).

Recon missions can only target enemy held hexes.

Air Superiority – Fighter units fly to an area and try to disrupt enemy missions in that area (18.1.7).

Note that in addition, fighters not assigned to any Air Directive will try to intercept enemy planes that come close to their base (18.1.7). Defensive Interception of Enemy ADs are automatic and do not require an AD to be set as the fighters will fly both in your Air Phase and your opponent's Air Phase.

Naval Patrol – The units will attempt to create naval interdiction points in the target area. Naval interdiction can both disrupt (and possibly block) enemy naval movements (including naval supply) or protect and allow your own naval operations (18.1.8).

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Air Resupply. This is a special type of mission that can only be flown during the ground movement phase. The AI-assist will use the air transport assets to send supply to combat units of the relevant command. You can over-ride this by setting it to prioritise air bases used by air groups under that command.

The manual process is set out in section 18.1.9 but basically you open the F9 tab and select a target hex. Usually a suitable sending air base and collection of air groups will be automatically selected for you.

Air resupply missions can only be carried out during the ground movement phase not when creating air directives.

If you are controlling the air war manually, then each of these mission is set up by selecting one of these tabs (shown during the air planning phase). If you use the AI-assistance, then suitable AD will be created for you.

Play tip. If you can, target a friendly controlled airbase – even one you have just captured – as more supply will be delivered this way.

4.5.6. Air Directive Creation

Auto AD Creation.

To use the automatic AD creation process, refer to the one page guide 'Using AOGs with AI Control'.

Manual AD Creation. This option is not recommended for new players and the strong advice is to use the AI routines until you understand the basics of the air war. If you want to move onto manual creation of Air Directives, allocation of planes or selecting the load-outs of your planes then read chapter 18 of this manual.

4.5.7. Executing Air Directives.

Once you have completed the process of setting your air directives (whether this is automated or manual) you will need to press the F12 key.

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This will commence the process of resolving your air directives. The speed and amount of detail shown will be determined by the level of detail you have selected for viewing combat resolution (4.4.4).

At the lowest level of resolution, you will simply see a small box in the lower right hand corner of the screen and a summary of missions and losses.

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More information on how to interpret this screen can be found in section 37.16.7.

At higher levels of resolution you will see the routes taken by planes (including enemy interception where this is not obscured by the fog of war). You can opt not to see certain types of missions and by default reconnaissance missions will not be shown.

Selecting a combat resolution level above 1 will also mean you see the actual combats that occur. At higher levels this can make resolving the air phase time consuming and you can usually double check on key incidents by reviewing the combat results once the air phase is completed (37.1).

The air phase will end with the summary screen displayed (37.16.8). You can close this and move on or use it to examine aspects of the air resolution phase. In addition all the details that were shown briefly as the air phase was resolved can be found in the Logistics Log (36.9).

Once complete you are ready for the Ground Phase.

4.5.8. Airbases

Airbases. Airbases are fixed installations on the map of three different sizes – 1, 2 & 3 (which is the largest). As only one airbase is permitted in a hex some airbases may represent a number of historic airbases and the size is adjusted accordingly.

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All the airbases in the above image are owned by the Axis side but currently unoccupied. You will notice other colour combinations and these are discussed below where relevant and summarised in section 6.4.7.

New airbases can be built in any non-mountain hex. They can be built in mountain hexes if that contains a town, city or an existing depot. A successful naval invasion will create a level 2 airbase in any targeted hex.

Airbases can be built using the top of the screen, unit detail for a location or by right clicking on the desired location.

In the example below, Pavlovo has been selected to show how you can build a new air base, the same process would work if you selected Gorky and decided to expand that airbase from size 2 to 3.

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In this case, the first approach uses the tab at the right hand of the top row (6.2.2), the second is the list that pops up when you right click on the hex and the third is information that appears when you access the city display (37.13) by clicking on the name bar at the top of the screen.

It will take some time for a new airbase to become operational and this can be speeded up if the computer can allocate a spare engineering Support Unit to the hex.

> ***Keeping a stock of construction engineering units either in your High Command or Front/Army Group HQs can be useful to speed the building of new airbases as these can be allocated by the Computer to most hexes on the game map.***

Level 1 and 2 airbases can be expanded in size. Expansion is slower in bad weather and terrain, especially from size 2 to 3 and this will also demand a substantial allocation of supplies so will be slow unless you have well stocked depots nearby.

Airbase TOE. Although Airbases are fixed they are still Units. They have a TOE representing the ground crew that provides support and defence. When an airbase is captured the TOE drops to 0% and will recover as support squads move to that location. Airbases will gain and reduce their TOE depending on how many planes

are at the base. If you order an AOG to move to the base, if it lacks sufficient support units it will gain these in the logistics phase so that the base is operational (17.3.5).

If you remove all the planes from a given base, then its TOE will revert to 0.

Airbase Support, Supply & Capacity. The effectiveness of an airbase (in terms of supporting combat missions and repairing damaged aircraft) depends on both the level of support (i.e. sufficient ground crew) and sufficient supply.

The capacity of the base depends on the size and the type of planes present (16.6.6). There are penalties for having too many aircraft at an airbase. An over capacity airbase is shown by a red ring around the airbase. The % capacity is shown in the hex pop up.

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The logistic priority of airbases can be set individually or collectively using the tools in the Commanders Report. Airbases with a supply priority 0 receive no supply.

Bombing Damage to Airbases and Airbase Repair. Air Groups at damaged Airbases suffer more operational losses and fly less sorties. As airbases become more crowded then aircraft on the base are more likely to be hit if it is bombed.

When using the AI-Assistance routines (17.1), the AI will expand existing airfields when it feels this is necessary but players will have to manually establish new level 1 airfields if they feel these are needed.

4.6. MANAGING THE AIR WAR

You have two options for managing your AOGs. You can use the AI assistance and in this case your main input is to assign the AOG to a ground command and set the relative number of planes that the AOG will have. This will then generate air directives and redeploy your air force according to the priorities you set.

On the other hand you can either opt for full manual control or mix using the AI-assist routines with manual interventions.

4.6.1. AI Air Assistance

There are two levels to this. One means that you can only use the AI routines and that air orders and redeployments are executed when you press end phase for the air orders and after land moves (i.e. the F12 key). If you chose to do this, in a PBEM or server based games this option cannot be subsequently changed.

The alternative still allows you to rely on the AI assistance if you wish but you can also manage your AOGs manually. In your first games, it is suggested that you use

the AI assist as you can use the AI to allocate planes to your AOG, create suitable air directives and redeploy your planes to new air bases.

The basics of using the AI assistance are set out overleaf on the one page guide.

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4.6.2. Allocating Air Operational Groups to Ground HQs

Even if you decide to use the AI-assistance, you will still need to determine which ground unit HQs (17.1) the AOG is going to support, how many planes will be allocated to that AOG and the types of air missions you wish to support. The one page guide 'Using AOGs with AI Control' sets out the key concepts.

Axis AOGs can be assigned to follow either an Army or Corps HQ, Soviet AOGs must be assigned to follow a Front or Military District. Soviet AOGs will be automatically assigned to the same front as their controlling Air Command (17.1)

4.6.3. Allocating Air Units to AOGs

This is set out in the one page guide 'Using AOGs with AI Control'. In effect, you set the relative priority of each AOG and air command and the air units will be assigned to match the relative spread of responsibility (17.1).

If you opt to take manual control then you can directly determine which air groups are assigned to an AOG and redeploy your AOGs so that the planes move to new air bases.

4.6.4. Stances and AI Assistance

If you opt to use the AI assist, you still need to set the following variables:

- Stance (17.2);
- HQ allocation (the AOG/Air Command will usually 'follow' this HQ as it moves on the map;
- Naval operations (whether you wish the AOG to generate naval patrols);
- Asset priority (how much of your available air force will be assigned to this AOG or Air Command)
- Supply priority

In addition, the player will have to build or expand airbases, decide if you need to build depots to support your air force and whether or not you want your air units to upgrade automatically or control this manually (16.5).

> ***Note that the AI will use your air doctrine settings (17.4.3) when creating missions and this will affect issues such as the height of the mission, the day(s) it is carried out and the relative intensity of the mission. If you find the results of your air campaign are unexpected (little effect or very high losses) you may want to check this screen and amend some of the variables.***

A major part of using the AI assistance is setting the stances of your AOG. Your choices will determine how, and when during the turn, the AOG allocates its assets and whether or not it will move to follow the HQ it is assigned to.

There are four stances:

- Flexible
- Hold
- Retreat
- Advance

During the Air Planning Phase (or at the end of it if using Auto AI air assist) an AOG in a flexible stance may:

- Send air groups to the reserve (if they are deemed to be too weak to be capable of combat operations)
- Acquire air groups from the reserve
- Gain air groups from other AOGs (this is based on asset priority and the transfer can include a complete AOG if that is appropriate);
- Transfer air groups to other AOGs (depending on priorities);
- Follow move, the AOG will redeploy to the location of the HQ they are following.
- Carry out Naval Ops against a port, the AOG will redeploy to operate against the target port

During the Air Planning Phase an AOG in a hold stance may:

- Send air groups to the reserve (if they are deemed to be too weak to be capable of combat operations)

- Acquire air groups from the reserve
- Gain air groups from other AOGs (this is based on asset priority and the transfer can include a complete AOG if that is appropriate);

During the Air Planning Phase an AOG in a retreat or advance stance will undertake no particular actions but will still generate Air Directives as appropriate.

During the Movement Phase (and at the end of the turn if this is automated), an AOG in a flexible or hold stance will:

- Air supply units (if following a HQ)
- Air supply airbases (if not assigned to follow a HQ)

During the Movement Phase (and at the end of the turn if this is automated), an AOG in a retreat or advance stance will:

- Send air groups to the reserve (if they are deemed to be too weak to be capable of combat operations)
- Acquire air groups from the reserve
- Gain air groups from other AOGs (this is based on asset priority and the transfer can include a complete AOG if that is appropriate);
- Transfer air groups to other AOGs (depending on priorities);
- The AOG will redeploy to the location of the HQ they are following during the ground movement phase
- Air supply units (if following a HQ)
- Air supply airbases (if not assigned to follow a HQ)
- Carry out Naval Ops against a port, the AOG will redeploy to better operate against the port

Transport AOGs will usually try to resupply units of the command they are attached to. If they have no linked HQ, they will seek to resupply airbases connected to their air command.

An AOG can be set to follow a HQ (as normal) or conduct Naval Operations around a port, not both. If set to Navel Ops, the AOG will try to gain control of the sea hexes near the port. In this case, the AOG may have a different focus (naval patrol) to its controlling air HQ. For the Soviets, only named naval air commands (most likely either the Baltic or Black Sea commands) can carry out naval operations.

There are further notes on how to use the stances in section 17.2 but in general use 'Flexible' when the front line is basically stable as this allows air units to adjust their size and deployment but broadly within the current geographical area. Advance and Retreat should be chosen when you are looking for your air force to redeploy as the front line shifts. 'Hold' will keep your air force deployed at their current bases (which can be efficient in terms of the demand for support squads and supply).

4.6.5. Redeploying Air Units

If you use the AI assistance, then your air units will redeploy according to the rules above. In addition this will manage the transfer of air units to and from your national reserve (13.2).

4.6.6. Manual Control

The one page guide 'Manual Control of AOGs' sets out the basics of how you can manually control your AOGs. In addition you should read the key sections in chapters 16-18 as they explain how to create and amend your own air directives, how to bring air groups to the map and how to redeploy your air force.

You are strongly advised to keep to the AI-assistance for the air war for your first few games. You may well find that against the AI it has the effect of simplifying the game, while producing perfectly adequate results, thus speeding game play considerably.

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4.7. UNDERSTANDING GROUND UNITS

This Topic provides a basic overview of the various game units and how to see information about them. The one page guide overleaf sets out the main issues covered in this section:

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4.7.1. Unit Structure

Units are made up of various Ground Elements (21.2) and the precise makeup of a Unit is based on its Table of Equipment (TOE) (21.2.5). A unit at 100% TOE has all its required Ground Elements.

Ground Elements vary according to the unit type but will typically include manpower (organised into squads), individual vehicles and guns and other weaponry. They also include the support squads that backed up the combat elements (signals, first aid, logistics etc.) and the trucks used to move the unit.

The number of Ground Elements, their Morale, Experience and Fatigue all impact on the ability of the overall unit to attack and defend.

Units can lose Ground Elements due to combat, attrition and movement. As this happens, a unit's TOE will fall as elements are damaged or destroyed. New Ground Elements, produced by factories (4.10 and 26.1), can be received as replacements to maintain TOE level.

As the game progresses, you will notice that the TOE changes. This reflects the use of more modern equipment as well as the various changes that both sides made to the composition of their combat units. Thus a Panzer division in 1941 will be based around a mixture of Panzer I/II/III/IV tanks (though some actually will use captured Czech or French tanks), by 1944 the same division will be using a mixture of Panzer IV/V tanks.

Note that if a unit cannot access its preferred element (such as a Panzer IV as its medium tank) it may substitute a similar element, including those captured from the enemy. Thus a Soviet 1944 armoured formation will seek to use the T34/85 as its basic medium tank but may use lend lease Sherman Tanks instead. A German Panzer division may make use of captured Soviet T34s.

4.7.2. Unit Types

There are five types of ground unit in the game:

- Combat Units (CU). CUs are units that appear on the Map as counters and can fight, such as an Infantry Division. Many CUs can breakdown into three smaller units to cover more ground (21.3).
- HQ Units (21.11). HQs appear on the Map as counters. They cannot fight. Most HQs provide command and control for either air or ground units. Some HQs provide Rail Repair or Amphibious capacities.
- Support Units (SU). SUs are smaller units including artillery, anti-tank, anti-aircraft, engineer, assault guns, and construction units. Most SUs do not appear on the map. They are attached to HQs & CUs and their

'support' is provided automatically. SUs can be moved between parent units as required (21.5).

- Engineering & Construction SUs will appear only when they are repairing a rail hex, otherwise they are attached to the city, depot or airbase they are repairing.
- Multi Role Units (MRU). MRUs are mostly brigade sized units (but note that not all brigades are MRUs) that can either be off map (attached to a combat unit or HQ) or on map as a Combat Unit in their own right (21.4).

To convert a MRU to a SU it must be in the same hex as its controlling HQ and have at least 1 remaining MP. In the example below, the 46th Mech Bde is in the same hex as its controlling HQ (the 39 Army), open the detailed unit window and click on 'Convert Unit'.

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Once off map, they can then be re-assigned like any other SU. To convert a MRU to the map, there must be a space in the HQ's hex for the MRU to reappear on the map.

To reverse the process, open the detailed tab for the relevant HQ, select the unit (in this case the 86th Rifle Brigade) and click on 'Multi-Role'. The unit will now appear on the map with 1 MP.

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4.7.3. Building up and Breaking Down Units

German divisions and Soviet Corps can be broken down into three smaller units. If you want to recombine these, then the original units need to be in the same hex (and each part with at least 1 MP). The original division or corps will be recreated with an average of the morale, experience and fatigue of its component parts.

4.7.4. HQs and Leadership

In WiTE2 HQs provide the chain of command for your ground units up to the Supreme HQ for that particular nationality such as the Soviet Stavka or the German OKH. Each ground HQ has an allocated leader with certain characteristics (15.3) and these leaders can be changed using your Administrative Points (9.2) but can also be killed in action or removed by the computer routines (this may happen if they have a relatively low political value). In the case of death or dismissal, a new commander will be appointed (and, in turn, you can change this).

The role of leaders (Chapter 15) and HQs (Section 21.11) are discussed in detail later in this manual and it is suggested you read those sections once you feel you understand the basics of gameplay.

For the moment, note that HQs and leaders affect the performance of combat units in different ways:

- In order to allocate Support Units to help out in combat the controlling HQ **must be within 5 hexes** of the combat unit (23.6);
- In order to provide Support Squads (think of these as representing staff such as radio operators, field hospitals, cooks, mechanics etc.) to a combat unit, different types of HQs have different ranges as:

HQ Unit	Command Range (in Hexes)
High Command	90
Army Group/Front	45
Army	15
Corps	5
Air	90

The various leader ratings affect combat performance (23.8), movement capacity (22.1) and a variety of issues connected to the allocation of supply and replacements (25.1).

The effectiveness of leaders is affected both by their position in the command hierarchy and the distance between the HQ and the combat unit. The actual operation of these rules is complex depending on exactly how the command chain is structured, so once you have the basics clear we strongly suggest reading section 15.5.

4.7.5. Information about the relationship between Units

WiTE2 relies on the creation of an efficient chain of command between your units and HQs. To assist with this you can access information about unit Relationships. Although Command and Control will be covered in more detail in Chapter 15 and Section 21.11 it is worth at this stage highlighting the display functionality of Unit Counter Border Colour which shows Unit Relationships.

This functionality appears when a Unit is selected on the map. The different border colours are: PURPLE=Unit that you have selected; ORANGE=Selected Unit's HQ;

YELLOW=Other Unit directly commanded by the same HQ; BLUE=Subordinate Unit in Range; and, RED= Subordinate Unit out of Range.

In addition, a line will appear on the map of the appropriate colour showing how the unit/HQ is linked to other formations.

In some cases this line may be drawn to the edge of the visible display, indicating the relevant HQ is some distance. This will commonly happen if the HQ/unit reports to one of the Supreme HQs such as the German OKH.

In the example below, the selected division (the 12-11) is outlined in purple, all other units reporting to the same HQ are in yellow and the orange line indicates the connection between that unit and its direct HQ.

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In this case the HQ is selected (surrounded in purple) and the units in blue are subordinate formations in command range, the one in red is out of command range (4.7.3 and 15.5.4). Note the blue lines between the HQ and the units it commands. In addition, the army HQ that controls the selected corps is highlighted in orange (and there is an orange line showing the connection). Finally, other corps HQs that share the same Army HQ are in yellow (as, in this case, they share the relationship of directly reporting to the same HQ.

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4.7.6. Selecting and moving units

The basic step is to left click on a unit. You will see the detailed unit box appear on the right hand side of the screen and other on-map units will become highlighted. If you want to move more units in the same hex together, simply click on the additional unit boxes that appears on the right hand side (selected units will be bordered in white) or double click to select the entire stack.

If more than one unit is in a given hex then repeatedly left clicking will alter the order of those counters bringing a new one to the top (and thus ready to move) each time.

Once you have selected your units, right click on your desired destination (this can be a move or an attack). See One Page Guide 6 for more information about selecting units and different types of movement and attacks.

4.7.7. Unit Information

To help you manage your Units, WitE2 provides significant detail. For ease of understanding this can be considered in three levels – shown On Map, the Unit Bar and the Unit Detail Screen.

Shown On Map. The on-map Counter is the first level of detail. The colour of a Unit Counter shows Nationality or type (e.g. German SS and Luftwaffe and Soviet Guards units have a different background to other German or Soviet units). The symbol on the Counter shows the Type of Unit and its designated Size (34.1, 34.2 and 34.3).

The numbers at the bottom of the Counter can be varied to show the Combat Value, Movement Points or Defensive CV. Equally, if wished this can be used to display the unit title instead.

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If Soft Factors (6.5) are selected then you may see information on Supply, Fuel, Morale etc. on the top left hand side of the counter. These are covered in chapter six but enable you to have a quick 'at a glance' view of those units in your army with supply problems or that have high morale.

Unit Bar. Selecting an On Map Counter with a left mouse click will activate the Unit Bar on the right hand side of the game screen. The Unit Bar reproduces the same information as the On Map Counter and provides more detail. For CUs this includes the Parent HQ, Supply Details, Strategic Movement Points, Preparation Points, Mode and Unit Strength in Manpower, AFVs and Guns.

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Using this view you can change the 'mode' (from ready to refit or reserve status) and click on the HQ (here XXXIX Mot Corps) and the display will shift to show the HQ.

HQs show slightly different information, including their own higher HQ, Strategic Movement Points, the Command Capacity and current supply situation. You can also change the supply priority of the HQ (25.8) and access the relevant information in the Commanders Report.

This shows 2 German HQs, the 2nd Army and Army Group Centre.

HQs have no intrinsic combat value so the numbers are always 0-MP. As with the Combat Unit you can see the name of the HQ it, in turn, reports to but other parts of the display are very different.

If you click on the image of the leader, the box with all the relevant details will appear on the screen (37.7). Below the leader, you can alter the Supply Priority (these are currently 1 and 3 respectively) or access the Commander's Report (4.17). Note that as the 2nd Army HQ is an Axis Army it can be set to assault status (this is discussed below in 4.13.3).

Below the counter on the left is the available Strategic Movement Points and strength in the unit (this will include any men, guns or tanks in Support Units directly

controlled by this HQ). On the right is the usage of command points and how many are available (these are 12/27 and 80/108 respectively) and then the % of supply and fuel in the unit.

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Unit Detail. This can be accessed by selecting the Unit's Name in the Unit Bar with a left mouse click, or a right click anywhere within the Unit Box. This is discussed later in the manual (21.2) and all the information is explained in appendix H (37.3).

4.7.8. Unit Modes

Unit Modes are an important concept in WiTE2. These allow you to change either how a unit takes on replacements or might support other units in combats. There are five possible modes that can be chosen by the player.

The default is READY which can be seen as the general purpose status for a unit.

REFIT provides a greater chance at receiving replacements (4.11.1 and 25.8) and of upgrading to a new TOE when this becomes available.

RESERVE allows units to be committed in support of combat even if they weren't selected to actually take part (this can happen both for the attacking and defending side) (23.7)

Placing a unit in STATIC Mode saves on vehicles but reduces mobility (21.8).

IN FORT is a special status that allows units to exceed the stacking levels and increase the defensive strength in major cities (20.6).

In addition, units may have several involuntary states. They may be routed, depleted, unready or isolated.

4.7.9. Re-assigning Support Units

This section discusses the two methods of moving SU between HQs and/or combat units. See section 21.5 for more detail on how to assign them to cities.

This can be done automatically or manually. You can choose to do it manually when you 'lock' HQ Support in the set up screen (2.3 and 4.19.1) for a new scenario (in a game against the AI you can do change this at any stage – 36.18).

Automatic Re-assignment.

To use this option, you need to set the 'Support Level' for your HQs and you can do this either using the individual unit counters or the Commander's Report.

440a

440b

The value can be anything between 0-9 (21.5.6) and this will determine how many of each type (so for example all artillery SU are treated as a single type) that will be assigned to that HQ. Construction Engineer SU follow slightly different rules (again set out in 21.5.6).

So a German corps with a level of 4 will try to have 4 AT, artillery, armoured and anti-aircraft SU attached (assuming enough are available). One at level 0 will have none of these attached (and any that start attached will be returned to a higher level HQ).

Manual Re-assignment.

In this case, you must lock the HQs in the set up screen or the game options screen. You can also do this in the Commander's Report.

This allows you to choose which Support Units are assigned to which HQ or Combat Unit (21.5.7 and 21.5.8).

To assign a Support Unit to a new HQ, left click on the HQ on the map and then right click on the HQ display on the right hand side. Open the 'Assigned' tab and you will see something like this:

440c

Select 'ASSIGN SUPPORT UNITS' and a screen like this will appear, showing all the eligible support units in the chain of command above the HQ you are using:

440d

Click on a desired unit and it will be removed from the list and assigned to the 6 Army HQ.

You can also move Support Units from a HQ or Combat unit.

In this case, select the unit from the HQ tab (say the 767 Howitzer Battalion), this will open the unit tab (37.4), click on the HHQ text (this will be yellow if the unit can be re-assigned, grey otherwise) and you will see:

440e

Click on any of those commands and the artillery unit will be redeployed. Note this allows you to send the SU to another army command, back to AGS or to any corps that is within range (so not just those that directly report to 6 Army).

Assigning a SU to a Combat unit uses the same 'ASSIGN SUPPORT UNITS' function on the unit tab (37.3.3). To detach a SU from a combat unit, click on the [x] on the unit tab as:

440f

4.8. BASIC MOVEMENT AND COMBAT

This Topic provides an overview of ground movement and combat. In combination these are the main activities you will carry out in any game of WiTE2.

4.8.1. Basics of Movement.

To move any unit, first left click on the unit. At that stage the map display will change to show the hexes that unit could possibly move to in the turn:

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In this case a Hungarian cavalry brigade has been selected and the map now has five different colours all indicating information about the movement options:

1. These hexes are Axis controlled and within the movement range of the unit;
2. These hexes are Axis controlled but outside the movement range of the unit;
3. These hexes are Soviet controlled and are either occupied by a Soviet unit or you lack sufficient detection (10.2) to know. In effect the unit can move adjacent to these hexes but will probably have to fight a battle to actually enter the hex
4. These hexes are Soviet controlled and known to be unoccupied. In this case the unit can enter these hexes (but at extra movement costs (22.2);
5. These hexes are dark shaded for a very specific reason. Hungarian units are not allowed to stack with Rumanian units (and vice-versa) so these hexes are blocked even though they are within the movement range of the selected unit (14.2). You will find similar issues if you try to move Hungarian and Rumanian units into each other's country or too far north on the game map.

You can then trace out a possible movement path by simply holding the mouse and moving it to a desired hex. For each hex in the selected path (and by default the lowest cost path will always be chosen), you can see the MP that will be left if the unit stops in that hex. Note the final hex in the path (next to the Soviet 4-5 division) has a red ring around the path indicator. That tells you will enter a hex that is currently Soviet controlled. Note also that as this is a brigade, it pays a movement penalty for entering a Soviet controlled hex (which is why the last hex costs 3 MP).

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Right click on the desired destination hex. Depending on how you have set up the game (36.17.1), the unit will then either automatically move to the indicated destination hex or the move will be shown as it happens hex by hex.

This shows the situation now the unit is in the chosen hex. It can still move to a friendly controlled hex or other Soviet controlled hexes. The hex it has entered is now shown as a light grey to indicate it has changed ownership this turn.

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This process applies whether the movement is of a single hex or a long redeployment using the rail system or to attack an enemy unit.

Equally, you can move more than one unit at a time by selecting the first unit then holding down the shift key. Left click on any extra units in the same hex and they can move as a block (and attack together). Double clicking on a stack will select all the units present.

The process for ordering an attack with units in more than one hex is covered in section 4.8.2 below.

The potential move distance will be shown for the slowest unit in the stack but you can usually move faster units again later in the ground movement phase.

There are two broad types of movement for ground units: tactical and strategic. You choose the mode by selecting from the tool bar at the top of the game screen.

Tactical movement (conducted when the F1- Ground Movement tab is selected) is from ground hex to ground hex and costs Movement Points (MP). Combat also costs MPs. Units that also use strategic movement have their Tactical MPs reduced proportionally to the expenditure of Strategic Movement Points (SMP) and equally moving using Tactical MP (say to a rail yard) will reduce the available SMP.

For movement purposes, there are four unit types: HQs; infantry; cavalry; and, motorized.

Cavalry receive a movement bonus over infantry units but are treated as non-motorised when considering the cost of entering certain hexes and for combat. Some cavalry units contain substantial motorised or armoured assets (such as the German 1 Cavalry Division in the early game or a Soviet Cavalry Corps in the late game) but these are still treated as cavalry for the purposes of movement and combat.

Note that it is possible to motorize (temporarily or permanently) any infantry unit at a cost in trucks and administrative points. Such units then are treated as motorized both for movement point allowance and costs.

At the start of each turn your units are allocated MPs. The number of MPs allocated is variable but the key factors involved are:

- Unit Type. Motorized and HQ Units receive more MPs than Infantry Units – but also pay a higher costs for some terrain types. Cavalry units are between infantry and motorized units in terms of overall mobility;
- If the unit was attacked in the last phase (either directly or because it responded as a 'reserve') then its MP may be reduced according to the intensity of combat and the outcome (22.1.3);
- Leader Checks. Failed morale and administrative checks reduce MPs.

  Combat Preparation Points are very important in this regard as the more you have, the more likely you are to pass such leader checks. This is one of many reasons why it is important to try to preserve these as the game progresses (see section 22.2.2).

- Fatigue & Fuel. Units with fatigue and shortages of Fuel (motorized) or Supply (non-motorized) lose MPs.
- Trucks in the unit. Every unit has a notional level of trucks it needs to be fully mobile. A shortfall in the available number of trucks will lead to a reduction in movement points.
- Even if trucks are available to the unit they may need to be used to find supply if the local depots are too limited. In this case, the MP available will be reduced (22.1).
- Temporary Motorization. You can increase MPs if trucks are available by motorizing a unit.

  Note that cavalry units cannot be motorized as the bulk of the manpower will still move at the speed of a horse not a truck.

As units move and fight they consume MPs. The MPs consumed depend on a number of factors:

- Terrain & Weather. It costs more to move through difficult terrain and cross rivers.

- Zones of Control. ZOCs represent the ability of all on-map CUs to exert control over the map area in their vicinity. Moving in/out of a ZOC costs additional MPs (22.2.4).

- Rear Area Movement (also called Administrative Movement). Moving in hexes you controlled at the start of your turn is quicker, and produces less fatigue, than moving into hexes that were originally controlled by the enemy. Note that administrative movement cannot be used in a hex with any level of enemy interdiction (22.2.1).

- Combat Movement Delay. When an attack occurs in a hex a cost maybe placed on the hex to slow further movement through that hex during the turn (22.2.7).

  Note that the suggested movement path adopted by the computer will always be the path that has the lowest cost. If you want to move in a different sequence of hexes you may need to break down your planned move into smaller blocks.

Administrative Movement is a form of tactical movement that can only be used in hexes that were friendly controlled at the start of the turn and have no enemy interdiction (22.2.1). This allows units to move faster in each turn as the Movement cost per hex is reduced.

Strategic Movement. At the start of each turn units are allocated 200 SMPs. These can be spent on either Sea and/or Rail Movement and some common factors apply to each:

- Availability of Strategic Movement Assets. To move by Rail or Sea you require Trains or Ships. The assets needed to move a unit are related to its size and the type of equipment.

  So a late war Soviet Tank Corps with attached support units will demand much more rail or naval capacity to move than a single infantry brigade.

- Load/Unload Cost. It costs SMPs to 'transfer' to/from strategic movement. This cost represents the time taken to load/unload. It is less in larger ports/railyards and more in a rail hex that is further from a railyard. Loading/unloading also consumes Port/Rail Capacity increasing costs for other units using the same rail line and reducing freight flow during the logistics phase.

- Rail Movement Cost. As units transit rails they consume rail capacity resulting in congestion which can cause additional SMP cost for other transiting units.

Impact of Interdiction. Ground Attack and Naval Patrol Air Directives result in an Interdiction Value being placed on hexes. The higher the value the greater the movement cost through the hex and the more likely a moving unit will take damage. Note that any level of interdiction will prevent the use of administrative movement in that hex.

Interdiction can also be generated as a result of Soviet partisan actions (13.4).

Rail and naval movement through heavily interdicted hexes is particularly costly (both in terms of movement and losses). Very high levels of enemy naval interdiction can actually block movement into those hexes.

4.8.2. Combat

In WiTE2 combat is a function of movement and thus costs MPs. There are two types of combat: Hasty and Deliberate (23.4). Hasty Attacks cost less MPs but you can only attack from a single stack with reduced commitment and support fire. Deliberate Attacks cost more MPs but allow you to select multiple stacks to participate in the attack.

> ***Note that if you attack a hex and win, all this does is to force the enemy unit(s) to retreat (or surrender or rout), it does not move your attacking units into the hex. That would require another round of movement and it maybe that your original attackers now lack the MP to advance. In effect, it might be better to leave some units out of the attack, or have a local reserve, to ensure you can exploit your victory.***

Process to order an attack

In WiTE2 combat is treated as a special form of movement. In effect it costs movement points to attack and during the movement (action) phase you can mix attacks with moves exactly as you wish.

To order a single unit to attack:

- Simply select the unit by left clicking on it and then right click on the target hex.
- You can check the likely combat odds (23.8) before attacking by hovering the mouse over the target. An estimate of the likely chances of winning the attack will pop up;
- If you right click on the target unit you will conduct a hasty attack, if you use shift+right click you will conduct a deliberate attack.

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In the example above, the German regiment is considering an attack on the Soviet rifle division to its NE. The image on the left shows the display if a hasty attack is planned and on the right if a deliberate attack will be used. Note the improvement in the attacker's combat value at the expense of more movement points. Interpreting these odds takes some care as they can be misleading if you have poor levels of detection and will not take account of how the battle unfolds (artillery and airpower can substantially reduce the combat value of units).

To order more than one unit in the same hex to attack:

- The basic steps are as above, including whether to make a hasty or deliberate attack;
- To select more than one unit to attack, hold the shift key and left click on all the units in the hex that you wish to attack with (remember that double clicking on a hex selects all the units present).

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In this instance, 3 German infantry divisions are ordered to attack a Soviet stack of a rifle and tank division. A deliberate attack has been selected (it could have been a hasty one). If you do not want to use all the units in the stack, left click on the unit display on the right hand side.

To order an attack using units from more than one hex:

- This is more complex and can only be done if you intend to launch a deliberate attack;
- Hold down the shift key and move the mouse over the hexes that contain the units you wish to attack with;
- On the right hand side of the game screen will appear a full list of all the units you have selected;
- On that screen, click on the unit type icon for any unit you do not want to include;
- Hold the shift key down and right click on the target hex

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Here the Soviet player is launching a major attack and wants to use units in two hexes to attack the Germans. This must be a deliberate attack. If, for example, they wanted not to use the 18 Guards Rifle Division (perhaps so it can advance into the hex if the combat is successful) then left clicking on the display will remove it from the battle.

In this case, the Guards Rifle Division was left out of the attack and was able to advance into the vacated hex (some of the other attackers now lack the MP to move forward). Since it has 7 MP remaining, if wanted it could attack the beaten German infantry division again (note that is now shown as having only 1 CV due its losses in the last battle.

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If this second attack succeeds, and the Soviets have armoured units in reserve, they may manage to break out deep into the German rear.

> ***This process may sound complex but quickly becomes intuitive. Note that if you have selected units that lack the MP (or are in the wrong location) to make a deliberate attack, you must deselect them before you can launch the attack.***

CV (Combat Value). Choosing where, when and with whom to attack is a key skill. To help you understand the relative strength of units their counters display the Unit CV. Comparing the Attacking CV with the Defensive CV provides an indication of the likely outcome (4.8.4) but does not reflect likely changes to both values as the actual battle is resolved (4.8.3).

When you mouse over the unit you plan to attack, the hex pop up shows you a better indication of the adjusted CV values for both sides. Be warned: when combat occurs other factors such as terrain, reserves and leader checks occur that cannot be predicted so the CV is only one indicator of possible success. Equally if your knowledge of the enemy hex is limited (known as the detection value 10.2) then the information on their CV may be misleading.

If the final outcome is a 2-1 CV ratio (or better) then the defender will retreat from the hex. Depending on circumstances the defender may rout, shatter or surrender rather than just retreat.

Support Units. Whilst it is obvious which Combat Units will participate in combat it is less clear for Support Units. Support Units that are directly attached to Combat Units will automatically be added to the battle. Support units attached to the HQs of Combat Units participating in the battle must pass a series of checks in order to take part.

Resolving Combat. When an attack occurs the combat engine resolves the combat as individual ground elements are engaged. The detail that you can see depends on the message level which you have set.

The results can be reviewed using the F11 key which will display all the battles over the recent turn (for both sides) and you can select the ones you wish to review (37.1)

If you win then the enemy will retreat from the hex allowing you to move into the hex if you have units with sufficient MPs remaining.

4.8.3. Other Factors that affect combat

This Topic explains some of the other factors involved in Combat and how to use them to advantage.

Detection Level. The Detection Level is a measure of how much you know about your enemy. This is most readily apparent when you are playing with Fog of War On – in that Units with a DL 1 will be shown as a counter on the map but with no further information. Low detection levels will also adversely affect the attacker as the scope for being surprised or ambushed by the defender is increased.

Combat Preparation Points. Preparation Points are an important feature in WiTE2. They represent allowing units to rest and build up for an attack and influence both the displayed CV, the allocation of Support Units and overall combat performance. Preparation Points are gained when a unit does not use all of its Strategic Movement allowance (with this improved if they stop in friendly controlled territory, not adjacent to an enemy unit or if they are part of an Assault HQ – 4.13.3). They are lost as units move, if they attack (this will cost you half the remaining total), if the unit is attacked and the enemy comes close to success or, for Support Units, when these are assigned to a new HQ or attached to a different Combat Unit.

> ***If possible try to retain your CPP as they also help you in maintaining the mobility and efficiency of your army.***

Fortifications. A key element of any defensive operation is the use of fortifications to protect your position. Fort Levels provide a significant bonus in defensive combat.

Almost all units in WitE2 have the ability to establish fortification levels although it is much more difficult to reach the highest levels. The building of fort levels is automatic but there must be a combat unit in the hex. Both sides can build specialist Fort Unit in particular hexes to help in this process and construction engineers either in the unit's HQ or attached (only possible for Fort Units) will speed the process.

Morale and Experience. All units have ratings for Morale and Experience which represent a Unit's Capability and Training. In simple terms the higher a Unit's Morale and Experience the better. They influence both movement and combat.

Fatigue. As Units conduct operations they gain Fatigue. The rate of gain for Fatigue is influenced by morale and supply as well as the terrain traversed and any combat. Fatigue impacts the Combat Value of a ground element with the CV reduced by 1/3

of the fatigue level. Fatigue also impacts movement point allowance. Try and rest your Units before fatigue gets too high.

Reserve Mode. Any READY combat unit may be placed into RESERVE mode by selecting the Ready/Refit/Reserve toggle on the unit bar (4.7.7). Combat units in RESERVE mode may be automatically committed to a nearby battle, both offensively (must be within 3 hexes) and defensively (must be within 6 hexes). Reserve units that are committed to combat do not move, but they must have the MPs required to be expended in order to commit to the battle. Units that move, retreat or rout are taken out of reserve mode.

Attrition. Attrition represents the effect of wear and tear on units.

In WiTE2, there are different ways in which a unit may suffer attrition:

- Units that begin the turn adjacent to enemy units during their logistics phase will suffer additional attrition losses representing low intensity combat;
- As units move they will start to build up fatigue. A percentage of a unit's vehicles will be destroyed and damaged based on the number of movement points the unit expended during the previous turn;
- If units are forced to retreat after a battle they will suffer additional attrition losses. The losses will depend on the level of experience and morale of the retreating unit and whether or not one side is motorized;

Trucks will also suffer attrition during the logistics phase. This can affect both the trucks assigned to support the logistics system (in depots) and those attached to units (as these will be used to draw supply from the nearest available depot).

Interdiction. Imposing interdiction levels on a hex though air power or partisan actions can raise movement costs for both units and supply in addition to possibly inflicting direct casualties. Any level of interdiction will deny the ability to use administrative movement (4.8.1).

4.8.4. Interpreting the Combat Result

The battle report (37.1) will indicate the losses suffered by both sides and it is possible to open up other tabs to explore the battle in more detail.

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The example above is the report for the Soviet attack discussed in 4.8.2. At first only the top screens will be shown giving you a quick overview of what happened. If you press the option to 'show details' then the display shown will appear (here clicking on hide details will remove the extra information).

How to interpret this information (and the other tabs) is discussed in sections 23.10 and 37.1. For the moment, note that across the top you have the numbers of men involved, the changes from the at-start to end of battle CVs (so the German division dropped from 93 to 22), how many units were involved (both on map and as support units) and how many elements were disrupted, damaged or destroyed. The other tabs allow you to explore this in more detail if you wish to see which elements were hardest hit and equally which elements did the most damage to the enemy.

4.8.5. Possible Combat Results

Once a battle has been resolved one side or the other will have won. Usually, if the final odds are less than 2-1 the defender will hold the hex, if the final odds are more than 2-1 the defender will be forced to retreat. If the final odds indicate an overwhelming victory, this retreat may be for more than one hex indicating a significant disruption of the enemy's defensive line.

In addition to winning or losing the battle may generate other outcomes:

- If the attackers are well led, it is possible that a defeat will be converted to a 'scouting' attack with much lower losses;
- If the final odds are more than 5-1 it is possible that the defender may be forced to retreat 2 or more hexes;
- If the defender is in a hex that was isolated at the start of the turn (23.12) and is forced to retreat they may retreat normally if a path exists or surrender. They will always surrender if they have no valid retreat path;
- If the defender had no valid retreat path (but was not isolated at the start of the turn), then the retreat will become a rout with much higher losses;
- If the defender is badly beaten, has low morale or experience, poorly led or is an infantry unit facing motorized attackers, it is possible that a retreat result will see the unit shatter and be destroyed instead of retreating. In these circumstances, even if the unit retreats normally it may also take much heavier losses.

4.8.6. Special Turn 1 rules

Some of the rules above may be suspended or modified on the first turn of any scenario. Quite often you will find units that will be frozen for a number of turns. In addition, scenarios that start on 22 June 1941 will be affected by the rules in chapter 11.

These provide a movement bonus for Axis units attacking into the Baltic States and Bielorussia (so not the Ukraine) if they only have 15 MP left (if they are motorized). These movement bonuses are suspended for units moving into or beyond hex row

x:194 (so basically a line running north-south through Minsk). Other important changes are suspending the cost of enemy ZoCs and reducing the impact of combat on units leaving the hex (11.2).

> ***When moving your units, these costs will be calculated for you, but you may find that similar units entering the same hex have to pay different costs due to these rules.***

More widely, the Germans cannot move units in (or into) Hungary and Rumania and the Soviet South Front will be fixed unless the Germans move South and East of Lvov (the exact trigger hex is 187,187). The map below shows the Soviet at-start deployment in this region and the critical hex.

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In addition, if the Axis side is played by a human player, then Soviet motorized units will be placed into reserve mode and may intervene in any battle (11.3.2). This is more likely to happen for formations reporting to the South West Front (again in the Ukraine).

4.9. INTRODUCTION TO INVASIONS AND AIRBORNE OPERATIONS

Overall air transport of units (including airborne operations) and naval invasions are a relatively minor part of WiTE2. In WiTE2 neither side has the capacity for the type of amphibious or airborne actions that the Western Allies had developed by 1943. However, if they wish both sides can conduct paratroop operations but only with brigades or the regiments of a broken down German division.

Only the Soviet player has the capacity to launch naval invasions and only in the Black Sea.

Full details on how to prepare for and execute airborne and naval operations can be found in later in this manual (sections 23.9 and 24.7). An outline of how to use air transport planes to move freight is covered in section 4.10.16 of this chapter as well as later in the manual (22.5).

4.10. INTRODUCTION TO LOGISTICS

This Topic provides a basic overview of the logistics system in WitE2. The logistics system in WitE2 can seem deceptively simple but the more you explore, the more detail can be seen. More information about the logistics system can be found in section 6.9 and chapter 25. The information in the player's notes sections, especially 30.8, may also help you to understand this vital part of the game.

It consists of 4 key elements: Production, Unit Demand, Freight and Distribution.

The one page guide overleaf sets out the basics of this section:

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4.10.1. Production

Raw Materials are converted by factories into four supply items:

- Supplies
- Fuel
- Ammo
- Replacements (consisting of either Aircraft or Ground Elements)

These items are then stored in Production Pools until required. When they are moved across the supply system, these are treated as 'freight' (25.3) and use up rail, shipping and truck capacity as they are delivered to your armed forces.

Once freight arrives at the unit it is broken back down to one of the four items.

Units need the four different supply items as they move and fight. The demand for each item varies depending on the type of unit and how it has been used in the preceding turn(s).

In addition, the production system (Chapter 28) is used to create new Ground Elements (21.2). In turn these can be used by freshly raised units to bring them up to strength or to replace losses in your existing formations.

As a player you have no direct control over the production system in WitE2. You may lose or gain resources and factories as the game progresses but you are unable to change either what or how much a factory produces or the TOE of units (you can, however, set a maximum to control how much of this TOE the unit will absorb).

The production screen (36.3) provides a summary of production showing how much is being built and how much is being held in production pools. Elements annotated with #- are no longer produced and those annotated ** have yet to begin production.

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For the moment, you can ignore this screen but may want to refer to it to check why, for example, some of you air units are short of planes (you may be using a type in low production or that is now obsolete). You can use the screen to go to more detail about a given element, check which factories produce it and which units are making use of it.

4.10.2. Types of Depots

Freight moves by train, ship and truck to the network of depots. Depots have two attributes. They have the ability to store supplies that can be used by nearby units in the coming turn(s). Equally they have the ability to receive and send freight during the logistics phase. In addition, they often hold the trucks used to support the logistics system.

There are four Depot types.

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This shows three different types of depots and their symbols. Berlin is a National Supply Source (marked with a star), Stettin is shown as an exporting port (black box) and receiving port (note how the symbol has changed) and Rathengow is a rail depot (marked by a train symbol).

> ***Managing this part of the game takes some experience but one critical issue cannot be over-stated. Depots only send freight to those at a higher priority level (4.10.4) so a priority 4 depot cannot send freight to another depot. Equally an exporting port can only send naval freight to a destination that has a higher priority.***

Level 4 (National Supply Source). These produce Freight. They cannot be built in game.

Level 3 (Export Port). These ship freight to Level 2 Depots. The ports cannot be built in the course of the game but may become damaged and need to be repaired. A given port can be allocated to receive or send supply according to the player's needs.

> ***Note that if a port is also connected to the rail network it will interact with other rail depots for the receipt and dispatch of freight using the rail system.***

Level 2 (Import Port). These receive freight from Level 3 Depots by Ship. The depot is created on capture of a port, can be disbanded and rebuilt later if desired. The higher the priority of the port depot, the more likely it is to receive freight by sea (and the capacity to ship freight is limited by the number of transport ships in a region as well as by port capacity).

Port Depots are automatically created by Amphibious HQs when invading.

Level 1 (Rail Depot). These receive freight from Level 1-4 Depots by Rail. They are created if a player builds a Depot in any hex with a railway (even if this is not currently connected to the wider rail network). If the chosen location has no railyard then a Level 1 Railyard is created with 100% Damage.

Thus level 1 depots can also be built in hexes that are on a rail line but where there is no current link. The number of such depots (i.e. those not built in an existing town or city) that can be created each turn is limited.

This allows the player to pre-build a rail yard so the depot will be fully operational when the rail line is connected.

> ***As with airfields, the computer will allocate construction engineer Support Units to a hex that is building (or repairing) a rail yard. Keeping a stock of these in your high command or Front/Army Group HQs is useful for this purpose.***

Level 1 Depots can be built or disbanded through the City Information Window accessed by clicking the City Name in the Unit in the General Information Box.

4.10.3. Building Depots

There are two ways in which you can build new depots.

- Fully Automated. If you press Cntrl+C then the computer will build new depots, change their priority and disband any unneeded depots. If you use this option it is strongly recommended you complete all your rail repair (21.6.1) actions for that turn before doing this so that the routine has access to all the useful information (see 25.7.3 for more details of the rules used for this option). You will be reminded that you have this option when you decide to end your current turn;
- Manually. A depot can be built in any hex on a rail line. If the hex does not contain a rail yard, then one will be created (with 100% damage) to support the depot. Each depot built this way will cost 1 Administrative Point.

4.10.4. Setting Priorities for Depots

To help distribute freight in support of your Operations you are able to set Supply Priorities. Priorities can be set for individual Depots and HQs (all units attached to the HQ have the same Priority) ranging from 0 (lowest) to 4 (highest).

You can change depot priority from the on-map display, from one of the tabs at the top of the screen, from the depot screen or using the Commander's Report.

Even at level 4 a depot or HQ may not receive all the freight it can potentially hold if there is insufficient capacity in the related rail system or the depot itself. The supply system seeks to allocate a basic amount to each depot, those with higher priority only gain more if sufficient transport capacity exists.

Each airbase has its own supply priority regardless of the Supply Priority of its controlling HQ.

4.10.5. Depot Storage Capacity

Depot capacity is related to Port and Railyard size and not the Depot Type. The larger the Port or Railyard the more Freight can be handled by the Depot.

Relative Depot capacity is shown by the height of the black bar. While bigger depots may appear to be more efficient, in many sectors of the Soviet Union you may need to rely on a greater number of relatively small depots. This will be displayed when you select the logistics tab

In the example above, the black bars show that Stettin is a larger depot than Rathengow (but Rathengow is actually typical of the bulk of depots on the map).

The size of the depot (linked to the size of the rail yard in the hex) is key to its capacity and this can be reduced if the rail yard (or port) is damaged (which can happen when it changes hands or due to enemy bombing) and increased if a HQ is stacked in the hex (25.7.8).

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This shows (visually) the impact of placing a HQ on a depot. On the left side Baranovichi has no HQ and the black bar indicates its capacity to process freight. Placing an Army HQ on the hex trebles its capacity (this can also be checked using the mouse-over options, see 6.9.1 for more information).

> ***The importance of doing this so as to optimise your logistics network cannot be over-stated. Especially for the Axis player in 1941, use of this ability will make all the difference as your armies sweep into the Soviet Union. In turn, come 1944, the large Soviet forces need all the help available to remain in supply when on the offensive.***

Thus a depot in a hex with a damaged rail yard (or port) will function less effectively than one where the rail yard (or port) is fully repaired.

If a rail yard is damaged, either due to being captured or just built then it will try to automatically assign any available construction units to speed repairs.

4.10.6. Distribution of Freight

The movement of Freight between Depots by Sea or Rail is finite.

There are two constraints on moving freight: firstly the capacity of the Port or Railyard to handle the freight and secondly the capacity of the network in between.

These costs are the same as those for units moving by Strategic Movement. As Strategic Movement happens, freight movement costs later in a turn can become excessive. In effect, unit Strategic Movement may constrain Freight (at worst, the

cost of movement will be so high that you lack sufficient rail assets to send any freight to a location).

The phasing of the game turn matters in this regard. While the logistics phase (5.3.1) comes before the ground movement phase in a turn, the rail usage is reset to zero at the end of the logistics calculations. Thus any ground movement in one game turn reduces the rail capacity available to move freight in the following turn.

The final link is between Depots and Units. Units will seek to draw freight from the nearest Depot. This is mostly done by Truck or, in some cases, horse drawn transport.

> ***If a unit is a long way from the nearest functioning depot it will have to allocate more of its own trucks to moving supply. In turn this will reduce the MP allocation as the unit will have less trucks available to support its combat operations.***

Port depots can be set to export or import (25.2.2) freight. Exporting ports will have a priority in the supply phase and will only send out freight if sufficient cargo ships are available in that sea area (25.6) and there are importing ports of a higher supply priority.

4.10.7. Rail Usage

Rails are colour coded to show Rail Usage (if you select the Supply Map Mode). Bright green means that no freight has passed that hex and red means that the equivalent of 30,000 tonnes has (38.7.7). Rail Usage is incurred not just by movement but also by air interdiction and partisan actions.

As Rail is used it becomes congested and movement costs more SMPs (Green = no penalty, Red = Max Penalty). Congestion is maximized at 30k but movement is still possible at the highest cost in SMPs for Units and Railyard Points (which especially affects freight).

> ***Note that double rail lines can carry up to 30,000 tonnes per turn before they reach maximum capacity. Single rail lines can only carry up to 12,000 tonnes before they reach maximum capacity.***

4.10.8. Rail Repair options

A fully functioning rail network is key to your logistics. Damaged hexes can be repaired in one of two ways (22.6). Both sides have a number of Support Units that can carry out rail repairs. These are allocated to a HQ and then sent to any suitable hex within that HQs command range (4.7.4)

This range limit is important, if you assign your rail repair to units to the OKH or Stavka then they will be used almost anywhere on the map. If you want to concentrate their effort on a given sector it might be better to allocate them to a corps or army HQ as the shorter range will limit their deployment.

When in use, the rail repair units will appear on the map and are affected by the normal stacking rules (i.e. they are one of the 3 units that can normally be in a hex),

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If you want this unit to stop repairing a given hex, then click on 'Return to HQ' and it will be removed from the map.

In addition both sides have full manual control over a few specialist rail repair HQ counters (21.11.1). These are moved on the map and if they occupy a hex that can be repaired (i.e. is adjacent to an already repaired hex) then their display will show as:

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Note that this has two indicators not present on other HQs. The line RRC is the cost to repair the current hex (in this case 1). If you click on this text, the current hex will be repaired and that cost in MP will be deducted from the unit's allowance. The value RRV indicates how much rail repair capacity the unit currently has.

4.10.9. Depot Priority and Eligibility for Resupply

Setting all Units and Depots to Priority Level 4 will not make your logistical challenge simpler as there is never going to be enough for everyone to get everything.

The system will allocate freight (which in turn is broken down into supply, fuel, ammunition and/or replacements as needed) according to priority. A level 4 depot will, if railway capacity exists, receive more freight than a level 1 depot. However, a depot will also try to use trucks to obtain freight and in doing so may reduce the number of vehicles available both for transferring supply to combat formations and moving those formations.

4.10.10. Depot Priority and freight movement

A depot will only send freight to a depot at a higher priority (so a priority 4 depot will not send freight to another depot).

In general you should layer your depot priorities to bring freight from the NSS to the front line by using the priorities. A depot at priority 1 or more, between the NSS and the front line will claim some freight if it is a source of supply for either combat units or nearby airfields.

4.10.11. Tools for influencing the allocation of Supply between Depots

You have 3 main means to influence the allocation of freight.

First, relative supply priority of each depot is important as this will direct freight to the more important areas, but remember that just because you have a depot at priority #4 does not mean it will gain all the supply it wants. Railway, shipping and truck capacity may be lacking.

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This shows the layout of depots behind Army Group South in August 1941. Some depots in Poland have been set to 0 and the main line from Lvov to Vinnitsa has a sequence of depots at priority 2, increasing to 3 where the main airbases are and 4 for the depots nearest the front line.

Second, placing a HQ on a depot will increase the available capacity of that depot, again increasing the ability to unload and load freight. Army level HQs are particularly effective in this respect (4.10.5 and 25.7.8).

> ***This is very important. If possible keep your HQs on functioning depots as this will improve the ability to forward supplies to your combat units. Also, if you want a unit to refit (after suffering combat losses or to upgrade to more modern equipment) it will do so much quicker if it is in REFIT mode, on a depot and stacked with a HQ.***

Third, placing one of your rail repair HQs (these are called FBD for the Germans and NKPS for the Soviets) on a depot, and not moving it in the turn, will increase the amount of supply drawn to that depot compared to others on the same network.

> ***Note that in this case, you do not increase the amount of freight moving along a given supply path but you do alter where that freight is delivered to. This can allow you to build up for an offensive relatively quickly on a small sector.***

4.10.12. HQ Priority and Eligibility for Resupply

HQs also have supply priorities from 1 to 4 (25.8). In this case, the system is designed to ensure that each HQ is first allocated the basic minimum and then the higher rated HQs will obtain additional freight (if it is available).

Note that a HQ will try to obtain the supply needed for its units and will start to use the trucks allocated to move its combat formations to achieve this.

> ***Since using trucks to gain supply adversely affects the Movement Points of a unit (22.1) you might want to avoid placing HQs that are***

distant from the main supply net on too high a supply priority. The cost of obtaining that supply may undermine your operational mobility.

Equally, a HQ at a high priority will divert trucks from unit movement to obtain the needed freight.

If you are not careful, you may end up with well supplied but relatively immobile units. Be prepared to set HQs in relatively isolated areas to a lower supply level to avoid this.

4.10.13. Unit Resupply

When a unit is eligible to get resupplied from its HQ it must first pass a leader administrative check. If successful it may get up to 20% of the need of the item (Motorized units seeking fuel or Artillery Units seeking Ammo get up to 40%) subject to availability and loss during the delivery.

Note that this process is repeated for up to 5 times per turn for each unit. Thus a unit that has good commanders all the way up the command chain (15.5) is likely to receive more supply on average than one that has poor commanders.

The Unit Supply Window (37.12) shows the detail of the Supply received. At the bottom you can see when a Unit failed to meet an eligibility check which meant it failed to receive some of the potential supply.

Units look to draw freight from the nearest depot, which can be some distance away. The further the unit is from the depot, the greater usage of vehicles and fuel to move the supplies and the more that is lost in transit.

Note: The trucks attached to the unit will be used for this as well as those retained in the general truck pool. If too many trucks need to be used for re-supply, the Movement Points available to the unit will decrease.

The overall number of trucks detached from units to obtain supply can be checked using the end of turn logistics and production report (36.9).

The range for this supply is limited to either 30 hexes or 75 motorized MP if the logistics level is set to 100.

All units can get freight from a depot up to 3 hexes away without vehicles by using horses.

Once the closest depot is depleted of freight, a unit will try to get its remaining needs from the next closest depot up to a maximum of five but normally only will access two different depots.

4.10.14. Improving the chances of gaining replacements and supply

For the unit to get replacements, it must pass both administrative and support checks and it helps if it is in refit mode or is located in the National Reserve (13.2).

Units have up to five chances each turn to receive supply and replacements. Thus if they pass every leadership test, and are close enough to a depot with sufficient capacity, they can gain up to 100% of their need.

If the unit is in refit mode it is more likely to receive up to 40% of the need each time it passes one of these tests (if the supply is available). Units in refit on any depot will attempt to get to 100% TOE irrespective of the supply priority, drawing from other depots as well.

Adding a HQ counter to a depot will substantially assist any combat units stacked in the hex and looking to take on reinforcements. Similarly you can leave your rail repair HQs on a depot to raise its priority for supply deliveries (25.7.9).

Units in refit located in the same hex as a national supply source depot (type 4) will have access to virtually unlimited freight.

Units set to refit and in the relevant national reserve (13.2) will be the priority for new or replacement equipment. As far as possible, their needs will be met before any on map refit takes place.

4.10.15. Strategic Movement and Rail capacity for resupply

The Depot's ability to receive freight is set by the Railyard & Port Capacity Points remaining at the end of a turn. Strategic Movement also consumes Railyard & Port Capacity Points so you must balance carefully how much strategic movement you use. In effect, if you use up the capacity sending fresh units to a sector very little freight can be allocated in the logistics phase.

4.10.16. Air Supply

You can use air transport to supply to forward units. Air Transport to an air base hex is more efficient than landing supply in a non-airfield hex.

4.10.17. Displaying Information about the Logistics System

The Logistics Display allows you to see some key logistic information. As with all on-map information you can access this using the information tabs at the top of the screen (6.2), right clicking on the map (6.3) or by using one of the hot keys (Appendix J).

Rail Lines are coloured to show usage indicating areas of increased movement cost due to congestion.

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This shows the rail net behind the Soviet units attacking at Rostov in early 1942. The main line to the Caucasus is yellow indicating enough usage to cause problems. Some branch lines are orange so any units or freight using them will be subject to additional delays. The black lines around Taganrog have not yet been repaired.

Pressing the '8' key also displays a network of lines which show the main Depot to have supplied a unit (red line) and last Depot – Depot (white or blue line) link.

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This shows (at a zoomed out level) the supply network for AGC and AGN in August 1941. The red lines show that depots such as Vilnius and Minsk are supplying the bulk of the combat units. Those in turn (the white lines) are drawing supply from the rail network back to Germany). Naval supply (the blue lines) is being used to send freight to some ports in Lithuania and Estonia.

This can be helpful if you are trying to understand where units and HQs are drawing their supply from. If they are using too many trucks for this their relative combat capacity and movement may be affected.

4.11. CHANGES TO YOUR ARMY

As the game progresses the two armies will change. This reflects the allocation of new equipment, new forms of organisation and shifting levels of morale and experience. It also reflects the process of absorbing combat losses and replacing those losses in existing units.

4.11.1. Reinforcements

Reinforcements are fresh units (both combat and support units) that arrive in game (either as a historically occurring event or the result of the Soviet player building fresh units).

> ***Note that most of the Soviet units destroyed in the early game (up the 1 November 1941 turn) will be placed onto the reinforcement cycle and will return at a later stage. However, these units will then need to be rebuilt with appropriate Ground Elements and given time to train before they will be of much use in combat.***

The reinforcement chart (36.7) shows all the scheduled reinforcements.

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This shows the first turns of the game and the German reinforcement schedule. It includes reinforcements, units being transferred from another theatre to the map and transfers between theatres. Not shown on that image, but the chart also shows when units will be disbanded, withdrawn or transferred from the map to another Theatre.

4.11.2. Replacements

Replacements are allocated to existing formations to bring them up to strength as set by their current TOE (26.1).

Units in refit mode will have advantages over other similar units when receiving replacements. Equally units in refit mode and in the National Reserve will be the first to be allocated any available equipment.

Note that routed units will not receive replacements until they recover from being routed.

In addition to fresh men and equipment, elements that have been damaged in combat may also return as replacements.

There are delays that affect the speed at which damaged elements will return representing the time lost as lightly wounded soldiers and damaged equipment are treated or repaired and then return to their units.

Replacements are sent as freight along with supplies, ammo and fuel (25.3).

Replacements coming into units will bring down the average experience for that type of ground element by a small amount.

4.11.3. Changes to the at-start Army

As noted in the earlier discussion about the Table of Equipment (TOE), the mix and type of elements in a unit will change over time. Equally a unit may substitute an equivalent element if its preferred element is not available (this will happen in particular with tanks and artillery guns). Units that are in the National Reserve or on a National Supply Source will change to a new TOE more quickly, others will do so over the next few turns (assuming they are connected to the main supply network).

In addition, the structure of the two armies will change. Broadly the Axis forces will stay the same over the game. Their basic combat unit will remain the division and their command structure will be one of corps, armies and army groups.

The Soviet army will change substantially over the game. By August 1941, the at-start Corps will start to either disband or convert to Army HQs. From then to the end of the war the basic Soviet command structure will be of Armies reporting to Fronts.

Equally as the game progresses, completely new unit types will become available to the Soviet player.

By December 1941, the Soviets will also slowly start to replace the division as their basic combat unit with a Corps.

4.11.4. Building Soviet Combat Corps

From late 1941, the Red Army started to re-organise so that units operated as corps size combat units. These are treated as normal combat units (CU) in WiTE2 and not as corps level HQs (21.11).

These are built in one of two ways. The build unit screen (27.2.3) will show when they are available and the component parts and the maximum number at any one time.

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This screen is used to build new units. At the top will be shown how many you wish to build and the cost in Administrative Points (5 in this case). Since some of the components already exist, it will be suggested you use them (in this case all in the Soviet reserve). Below that are the elements that will be needed to fill out the new formation and a list of all the existing corps formations. Note that at this stage of the game the Soviets have 26 Rifle Corps in play and can build up to 41.

On Map. The Soviet player can build Cavalry, Rifle and Mechanized Corps on the game map. To do this they need to bring 3 of the requisite unit types (cavalry divisions for a Cavalry Corps, rifle divisions for a Rifle Corps, mountain divisions for a Mountain Corps and mechanized brigades for a Mechanized Corps). If these component parts are present in a hex, press the build up/breakdown button (21.3.2). You will be informed of the cost in administrative points and asked if you want to complete the action.

If the division or brigade has a scripted transfer to another Theatre at some stage (13.1) then it cannot be used to build a Corps.

Off map. Units in the Soviet reserve can also be converted to corps in the same way. In addition, if building a corps in the reserve you can build it without having all 3 component parts. In this case, the requisite missing brigade(s) or division(s) will be constructed and then combined into the new unit. The cost in administrative points will be higher as you have to create the new units as well as build the corps.

Finally Soviet Tank Corps can only be built off map. The component elements must either already be in the national reserve or acting as an off map Support Unit and attached directly to the Stavka HQ.

This is because the tank brigades are only support units and cannot be deployed directly on the map. A Tank Corps is built using 2 Tank Brigades and 1 Motorized Brigade. These units will be placed in the Soviet reserve and can then be ordered to the map.

A Soviet Corps will be created as a Guards formation if two or more of its component parts already had Guards status.

4.11.5. Building Fresh Units (combat and support)

Usually only the Soviet player can build fresh units. The exception to this is that both sides can build fixed fortification units (20.5).

To do this, select the build screen (shift b). This will show all the units that can be built, their administrative point cost (if any) and the total number that can be built. It will also indicate the components needed to build the unit and how many of these are currently available.

Most unit types have a build limit (this will change across the game) and this cap cannot be exceeded when building new units (you may have more of a type than can be currently built due to changing limits).

You can order between 1 and 10 of a particular unit type at any time. New units will be assigned to the National Reserve where they will acquire the equipment they need and start the process of training and gaining experience.

Note that the numbers shown are for all the possible elements that could fill out that unit. The game system allows a degree of substitution so if a certain tank or gun model is not available it will use something similar (21.2.7).

The German player can build specialist fortification units.

4.11.6. Elite Units

Both sides have elite units that have advantages in terms of unit morale and, via their ToE, more and better equipment.

The German SS units are created at their historical dates. This often involves withdrawing one version of the unit before it returns. Thus the initial group of SS Motorized divisions will withdraw in late 1942 and return as SS Panzer-Grenadier divisions. In turn these will withdraw and return as SS Panzer divisions. In addition, the Gross-Deutschland formation (which starts as a brigade) is treated as an elite unit as are some other German units.

In 1943, the German player will receive first SS Corps HQs and then SS Army HQs. These can only be commanded by SS leaders (15.2).

Soviet elite combat units are mostly created as they win sufficient battles. There are constraints on how many of particular types of unit (infantry, armour, mountain, artillery, etc.) may become guards units. There is no limit on the number of cavalry or airborne combat units that may become guards units. Heavy tank and rocket units are automatically created with guards status. The limit for motorized type units is approximately 35 percent.

For non-motorized type units, the approximate percentage limit varies by year as follows: 1941 - 5 percent January - June 1942 -10 percent July - December 1942 - 25 percent 1943 - 25 percent 1944 - 30 percent.

From 1942 the Soviet player will receive a number of Guards Army HQs as part of the normal reinforcement cycle. Some of these will replace existing Army HQs at the date when they historically changed their title.

At their historical dates, Soviet Air Operational Groups will rename as Guards formations. This has no direct impact on gameplay but will also trigger the designation of a number of air units as Guards. These formations will receive a +5 bonus on their potential maximum morale.

4.11.7. Upgrading Air Units

Air units can be set to upgrade to new planes either automatically or manually. If this is done using the automatic system it will happen during the logistics phase and the unit will be useable in your next turn. If you do so manually, the unit will not be able to fly in the turn it upgrades.

When an air unit swaps to a new plane type there may be some loss of experience.

When air units upgrade they cannot change their type so a tactical bomber formation will still be equipped with tactical bombers not with longer range bombers. A list of the restrictions in this respect can be found in section 16.5.1.

Air units in the non-reserve Theatre Boxes will be automatically set to automatic upgrade.

4.12. WEATHER

4.12.1. Basic System

The WitE2 weather system models both ground and air weather conditions, in addition water in rivers and lakes can freeze allowing easier movement. The ground condition determines MP costs for movement and the impact on attacking CV values in ground combat. The air condition impacts air missions.

The Weather changes before the Soviet phase (in other words the German turn uses the same weather as the preceding Soviet turn). This reflects the Soviet Union's (and its Allies) better weather forecasting capability.

Dominating Weather Conditions. Each hex is assigned to a weather zone and each weather zone is assigned a dominating weather condition for each particular month of the year. This is the weather that will apply in that hex unless it is modified by a weather front (8.1).

Weather Fronts. Weather fronts are critical as they will amend the dominating weather for that particular zone meaning the weather can change from turn to turn. There are 5 different types of weather fronts that can enter the map and alter the base air condition in a hex depending on the time of year, the base weather and the climate zone. Falling rain or snow in hexes in turn creates mud and snow levels.

Air Conditions. There are 6 Air Weather Conditions: Clear, Rain (these represent light rains - summer rains, no more than 2-3 days a week), Heavy Rain, Cold (light snow, clear sky most of the time), Snowfall (more regular snowfall with more cloud cover) & Blizzards (snow storms and very low temperatures). These affect the conduct of air operations and both Heavy Rain and Blizzards will stop almost all air missions from taking place (even if the mission takes place, you may end up with heavy operational losses as a result).

Ground Conditions. There are 6 ground conditions: Clear, Light Mud, Heavy Mud, Light Snow, Snow and Heavy Snow. These affect ground movement and combat.

Each condition affects the cost of movement through a hex. This cost is in turn modified by the quality of the road system: Good, Average or Poor. In WiTE2 each hex has been graded for its road quality. The better the road system, the less impact weather has on movement and ground combat.

Checking the Weather. There are three methods by which you can see the weather in a hex:

- Hex Rollover. The weather condition in each hex can be found in the hex rollover text – this also shows the amount of snow or water on the ground.
- Weather Screen. Information can also be found on the Weather Screen. The Weather Screen allows the player to toggle on information for the Ground Weather conditions, the Air weather conditions, display the Climate Zones or the Road Systems.

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In this case, the bulk of the Soviet Union has snow on the ground and is dominated by the two high pressure systems.

The weather screen also allows you to access a forecast for the next turn (8.2);

- Weather Graphics. The weather can be seen on the map by toggling the Weather button on the Map Info Bar. You can toggle between showing both Air and Ground conditions, Ground only, Air only, or no weather art at all.

Impact of Weather on Air Operations. Air mission weather is classified as very poor, poor, fair, good, or excellent, and this is determined by the aggregate cloud cover over a particular air mission's entire flight path. The determination of the percentage of cloud cover in a particular hex reflects the current air weather condition.

As the weather worsens, it is likely that either the number of planes who complete a mission will be reduced or the mission may be completely cancelled.

Once the mission flies, the weather in the target area will also impact the effectiveness of the airstrike or reconnaissance mission. Ground Support missions are significantly reduced in effectiveness during bad weather such as heavy rain, snowfall, and blizzard. In addition to decreasing the effectiveness of air missions, bad weather can result in less aircraft taking part in missions and even entire air missions being cancelled. Flying in bad weather results in increased aircraft losses.

4.12.2. Special Winter Rules

Whether the first winter of the war was unusually harsh is a matter of debate but what is clear is that the German army was badly prepared for the impact. This is simulated by increasing losses due to attrition and breakdowns. The full rules are set out in section (8.6.1) but note that the Germans will probably have a lot of disabled men who will return to their formations in the spring.

By contrast the winter of 1943-44 was unusually mild and again the usual weather rules are amended (8.6.2) to reflect this.

4.13. MANAGING COMMANDERS AND HQs

This section covers how to manage your Command and Control in WitE2. As noted above managing the deployment of your HQs, your Order of Battle and how you assign your leaders are key skills to playing the game well.

4.13.1. Leaders

Almost every HQ Unit has an assigned leader who commands all units attached to that HQ, and indirectly affect those attached to lower level HQ's. Leaders have ranks and designations that determine what level and type HQ units they can command. More importantly they have leadership ratings that affect a wide range of functions.

Leader Ratings. There are seven leadership ratings, Political, Morale, Initiative, Admin, Mech, Infantry, and Air, with the last three collectively referred to as combat ratings. In all cases, a higher number is 'better' but it does mean that a commander with a high political score but low military competence can be expensive to replace.

- Political. This affects the cost to replace the leader and the probability of promotion/dismissal/execution.

- Morale. This affects unit combat value in battle, determining win/loss credit, adding or recovering fatigue for the unit's ground elements, and rallying routed units.

- Initiative. Affects the MPs a unit will have during the turn, the ability of ground elements to fire and hit during combat, the ability of units in reserve status to commit to a battle, the ability to reduce casualties by turning a low odds hasty attack into a reconnaissance in force or to break off a losing attack before suffering excessive losses.

- Administrative. Affects the MPs a unit will have during its turn, checking for repair of damaged aircraft and ground elements and determining wastage and resupply. Admin checks are also affected by the actual number of support squad (21.2.2) ground elements in the leader's HQ (this reflects the wider capacity of the officer's staff and is one way the game models the Soviet disorganization at the start of the German invasion).

- Mech and Infantry. These ratings are part of the ground combat system and are used to determine the overall combat value as well as the ability of the ground elements in the units under their command to be able to fire and to hit opposing ground elements. Successful rating checks will increase combat value and improve the chance of ground elements to both fire and to hit.

- Motorized units use the Mech rating and non-motorized units use the infantry rating;

- Air. For air leaders, a successful air combat skill check will result in more ready aircraft from an Air Group participating in a particular air missions.

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General Khalyulzin is a less than stellar Soviet commander with low values for almost all the categories. His units are likely to fail many command rolls as a result and thus fight far less efficiently.

Changing Leaders. You can change a Leader by clicking on the Leader's name in the Unit Detail Screen. There is a dismissal cost in APs that you must pay (in the case of General Khalyulzin this was 8). You are offered a choice of new Leaders shown with their ratings so you can select the most suitable.

If you click on the dismiss button, you will be offered a list of possible replacements such as:

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The replacement cost will vary according to how suitable the new leader is for the post (it increases if the role will be a promotion and their current rank is too low). The screen also tells you if your chosen leader is already leading a HQ. If so, they will be automatically replaced in that role.

Equally the game routines may dismiss a leader with relatively low political value and who has lost a number of battles. Leaders may also be killed in combat.

Leader Rating Checks. Leader ratings can have an impact on almost all actions taken by units. It is therefore important to select the best leaders that you can afford with your APs and ensure that they are commanding units in the optimal structure – both in terms of size and deployment.

Commanders at different levels in the Order of Battle will have different effects on the units under their command (15.5.3).

Most combat units will report to a Corps or Army HQ (the latter becomes common as the Soviets abandon their pre-war OOB in August 1941). The commander of this Corps or Army will use their full ratings to affect the units directly under their command.

Commanders at the next level (i.e. an Axis Army command or a Soviet Front command) will have a lesser impact on all the units under their command. Their scores are reduced both by distance in the command hierarchy and on the map. Their leadership scores are used if the lower level commanders fail one of the many leadership checks (affecting supply, combat performance and the recovery of disrupted elements – among other things).

In turn, commanders at the Stavka (the Soviet supreme command), an Axis Allied High Command, a German Army Group or the German OKH HQ can help units pass if their immediate commanders have failed their tests (15.5).

> ***Players Note: Creating a logical Order of Battle and placing your best commanders at the appropriate level is a key skill in playing WiTE2. A commander with very high scores will have less direct impact if they are in a more senior position but will affect the performance of more units. Bringing together your best commanders at each level can create a real advantage on one sector of the battlefield.***
>
> ***Also note that the Germans have an advantage of generally better commanders than the Soviets and potentially having four command levels (corps-army-army group-OKH) compared to the three of the Soviets (army-front-Stavka).***

4.13.2. Headquarters

Leaders are assigned to headquarters (HQ) units and in turn then command the various combat and support units that make up your army. This section sets out some of the ways in which HQs and units interact and the consequences when this is flawed.

Commanding HQ. In Combat each side has a commanding HQ (normally the HQ with most CVs directly reporting to it in the battle). Units not reporting directly to this HQ suffer modifiers that reduce their CV for the battle. Try to attack with units in a single Corps or Soviet army if you can. Ideally do not mix multiple Axis Army commands or Soviet Fronts in the same battle as the command penalty can be severe.

Command Points (CP). Each combat unit costs command points depending on its size and any difference in nationality between the unit and its HQ. Usually a Soviet corps will cost 3 command points, an Axis or Soviet division 2, and an Axis or Soviet brigade or regimental unit 1 CP.

Off map Support Units have no cost in Command Points nor do on-map rail repair units.

These values are increased by 1 if the unit is reporting to a HQ of a different nationality. Note this applies all up the command chain, so a Hungarian brigade attached to a German army will cost that army 2 CP, and in turn will cost the relevant Army Group 2 CP.

Command Capacity (CC). There is no limit to the number of units that can be attached to an eligible HQ unit. However HQ Units have a Command Capacity (CC) which determines how many units (CP value) it can efficiently command.

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In this case, the 6th Army commands units costing a total of 21 Command Points and thus exceeds its command capacity of 18. Normally a leadership check is the leader's relevant score divided by 10. Since the 6 Army is overloaded by 3 the divisor will increase to 13. In general, if you can, try not to overload HQs.

The CC values of many types of HQ will shift over time (21.11.3).

Command Ranges. When leader rating checks are conducted the range to the HQ is important. Keep your Units within Command Ranges of their HQ Units. The most important relationship is the unit should be less than 6 hexes away from its direct commanding HQ.

You can see if units are out of range on the map by selecting the HQ. Units in-range will show with a blue border, units out of range will have a red border. It is important to ensure that combat units are within 5 hexes of their immediate controlling HQ.

Changing HQs. You are able to change the HQ of a Unit once per turn by clicking the HHQ in the Unit Detail Screen. When it has changed it will be shown with a *. Changing HQs has no Admin Point Costs.

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Here, the Soviet Mechanized Corps has changed its HQ to 1st Guards Army this turn. It now cannot move to another HQ until the next turn.

If a combat or support unit is allocated to a new HQ in that turn then there will be a penalty of against any leader checks that use the administrative value (mostly logistics).

4.13.3. Assault HQs

The rules above are modified if the HQ is designated an 'Assault HQ' (21.11.2).

This can only be done for a limited, but changing, number of Axis Armies or Soviet Fronts.

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In this case, 1st Panzer Group has been set to assault status increasing the Command Points of the Army HQ and all attached Corps HQs. By contrast 6th Army is not on assault status and it, and the attached Corps, retain their standard Command Capacity.

The consequences are to increase the Command Capacity by 5/3 for the HQ itself and 4/3 HQs that report to it, units reporting (directly or indirectly) to the command will gain Combat Preparation Points more quickly (23.2), will have a better chance to pass the various leadership checks (15.5) but will not build fortifications (20.2) beyond level 1.

> ***This is a powerful option but is primarily designed to improve the offensive capacity of the attached formations. However, the capacity for more rapid regain of CPP can be useful in any situation.***

Errata 01.01.14 The Command Capacity Bonus now varies by side and date, see section 21.11,2 for the revised information. This also changes the number of Assault HQs each side can have at any stage of the game.

You can see which commands are set to Assault status from the OOB screen (6.2 and 36.1), as:

These advantages do not accrue if:

- The unit itself or its HQ has just been attached to the relevant Axis Army or Soviet Front this turn;
- If either the Assault HQ or any other HQ in the command chain is overloaded in terms of Command Points (21.11.6);
- If any HQ in the command chain is outside the command range for the Assault HQ (21.11.4)

4.14. THEATRE BOXES

The Theatre Boxes provide the game with the ability to simulate the influence on the Eastern Front of other areas of conflict. You can bring up the Theatre box display using the tabs on the To show the theatre boxes on the map press the relevant tab on the Info Screens, right click on any hex or using the Ctrl+t hotkey. Ctrl+t by default will take you to the national reserve.

There are two basic types of Theatre Boxes in WiTE2.

4.14.1. National Reserves

Both sides have a reserve box which can be used to refit either damaged or new units.

Ground units are moved from the reserve to the map first by accessing the reserve (either via the Commander's Report 35.2.3 or the on-map display 13.2) and then selecting the units to redeploy. The arrival hex for German and Soviet units needs to be designated on the map and can be changed during the turn so that different units arrive in different hexes (13.2.1). Units from other Axis nations will arrive in their respective national capitals.

Ground Units can be sent to the reserve if they are on a working rail line and more than 4 hexes from any enemy unit. They also need enough Strategic Movement Points (SMP) remaining to allow them to both entrain and move a single hex by rail.

Errata 01.01.14 For a unit on the map to disband or be sent to a theater box, it must now be more than 8 hexes from enemy units. To be able to send a unit to a TB, it must also be on a connected rail hex. Other limitations/restrictions re disbanding and transferring to a theater box remain unchanged.

Again this can be done counter by counter on map or using the Commander's Report.

Units sent to the reserve will lose all their existing Combat Preparation Points (23.2.2).

Air units are moved from the reserve by selecting the desired destination airbase and opening the air redeployment option (13.2.2 and 17.3.2). If you are using the AI-Assist routines then this will be done automatically as the AI will send weakened air units to the reserve and bring fresh ones to the map.

4.14.2. Other Theatre Boxes

In addition to the Reserve, here are a number of Theatre boxes that model regions where one side had to keep a large garrison (such as the Soviet Far East) or where secondary fighting took place (such as the Balkans or the Arctic) while other theatre boxes reflect regions (Western Europe, North Africa and Italy) where the Axis forces are engaged with the Western Allies.

Finally, the partisan war within the Soviet Union and in Yugoslavia is modelled using appropriate Theatre Boxes.

Depending on the game play options, some Theatre Boxes are out of play and units will only enter or leave them according to historical deployments. The player(s) have to make a decision whether to actively manage the Theatres or not at the start of the game as this cannot be subsequently changed.

If a unit has no set withdrawal dates it can be transferred from the map (or the national reserve) to a non-reserve TB to boost strength at that location but can't be subsequently removed unless the options in 13.3.4 have been enabled. Enhanced Player Theatre Box Control allows free movement (up to certain limits) between theatres and between theatres and the map.

It is suggested that in early games the Theatre Boxes are left locked (they are automatically locked in any non-campaign scenario). The full rules for managing the Theatre Boxes are in Chapter 13.

4.15. EVENTS

WiTE2 has an event system which enables scenario developers to either reflect actions happening in off map Theatre Boxes (such as the start of a new offensive or a lull in combat) or that directly affect the on-map portion of the game. These can be conditional on the certain outcomes such as the loss or capture of some locations by a certain date (13.5).

The one page guide, Further Details, summarises key information about the Theatre Boxes, Events, Weather and Logistics systems.

One page guide#8

4.16. VICTORY POINTS

Earning VPs and Victory Conditions allow you to win a game even if you have lost the war – by achieving a better result than History. Victory Points can be seen in the VP Screen (Hotkey-V). The calculation of Victory Points and Victory Conditions is different for Short scenarios and Campaign Games.

4.16.1. Victory Points in the short scenarios

Victory conditions for non-campaign scenarios are based on control of victory locations set by the designer and cumulative losses in men, guns, AFVs and aircraft. Victory points for control of victory locations are awarded each player-turn as well as separate victory points awarded for controlling victory locations at the end of the scenario. Victory locations can be applicable to both sides or be specific to one side only.

Victory point locations can be displayed by selecting the Toggle Victory Locations button in the map information menu tab (Hotkey-shift-V).

Losses are based on the number of men, guns, AFV or aircraft that must be destroyed for the opposing side to gain one victory point. This base number for losses can be further modified for each side by a certain percentage.

At the end of the game the total points for each side are compared as a ratio and the result is determined by the following rules:

- Decisive Victory - ratio greater than or equal to 5.0
- Major Victory - ratio less than 5.0 but greater than or equal to 2.0
- Minor Victory - ratio less than 2.0 but greater than or equal to 1.1
- Draw - ratio less than 1.1

4.16.2. Victory Points in Campaign Scenarios

Campaign Scenarios start at different points during the war but the game will always end at the latest on the first turn in August 1945.

For campaigns that start in June 1941 the system basically encourages the Axis player to try and capture more cities (either take them earlier or take cities that historically were not occupied). In turn, when the Soviet player regains the initiative, they too gain bonus points for capturing cities in advance of the historical schedule.

For campaigns that start later than June 1941, the VP scores are initially set on the basis of the progress of the historical war.

Key Concepts

Part 2: The Playing Environment

The campaign victory system relies on two key concepts.

Initiative.

At any stage of the game, only one side has the initiative. This side will gain VPs as below as they capture cities and lose VPs if their opponent manages to retake a city.

Initiative Switchover – Currently initiative can switch to the Soviets between Oct 1 1942 and July 1 1943 whenever the German score is 10% or more below the German HWM. If this has not already happened then the initiative will switch on July 1 1943. Once initiative switches, it never switches back.

Once the initiative changes, the VP score is recalculated using the value of the cities held by the Soviet player at any stage, plus any bonuses for cities that were historically lost but not in the current game.

German High Water Mark (HWM)

This is the highest score ever obtained by the Germans throughout the game. At the time that the initiative changes, the Axis HWM score is frozen, and the Soviets begin to score points (in the same way the Germans have been scoring).

> ***Note that this rule uses the highest score the Germans have achieved at any stage of the game, NOT the score on the turn when the initiative changes.***

Detailed Rules

Certain cities are marked as victory locations and each of these cities is given a base victory point value.

Bonuses will be given for capturing cities based on comparing to the historical capture date. A maximum of 6 points can be earned per city. If the city is captured on the historical turn, a bonus of 3 is scored. One additional point is earned for each week earlier the town is taken, and 1 is lost for each week late. So taking a city 3 turns early would score 6 points, and 2 turns late would score 1 point.

Once scored, bonus points will never be lost, but the base points are lost when the city is lost. If a city is retaken, these base points are regained but the bonus points can only be awarded once in the game. If historically a city changed hands more than once (such as Kharkov) then the first capture date is the one used to determine the bonus.

Cities that were never taken by the Germans will generate the maximum early capture bonus if captured by the Germans at any stage in the game. However, if

such a city is retaken by the Soviets there is no bonus for early recapture simply the value of the city itself.

Soviet capture bonuses can be earned while the Germans have initiative when the Soviets recapture a city. When the initiative switchover occurs, Soviet cities never taken by the Germans are considered recaptured by the Soviets at the time of the Initiative switchover for determining Soviet bonus points.

> ***The effect of this rule is to encourage a Soviet player to trigger an early switchover of initiative while the German player gains from delaying this as long as possible.***

All points up to the change of initiative are scored by the Germans. Any positive (either from events or the bonus for retaking cities) scoring by the Soviets at this stage become negative German points, and any negative Soviet points become positive German points. Later in the war when initiative changes, only the Soviets score points and any Axis points are used to reduce the Soviet's score.

4.16.3. Victory Conditions for Campaign Scenarios

WiTE2 can be won due to the sudden victory conditions (29.1), the capture of Berlin, the in-game situation at the end of 1944 or by reaching the scenario end date.

Sudden death victories can come from:

- Axis Sudden Victory (Axis quarterly check value achieved), this gives a Decisive Axis Victory
- Soviet Sudden Victory (Soviet quarterly check value achieved) gives a Decisive Soviet Victory (if it happens before or on 31 December 1944) and a Major Soviet Victory (if it happens after 31 December 1944 and on or before 1 April 1945)
- Axis Sudden loss will occur if they did not achieve High Water Mark score (29.1.1) of at least 525 by 1 January 1942 and 575 by October 1942 (note they do not need those scores on those dates but to have achieved them at some stage). Note this will not apply if the Axis side is being played by the AI.

The fall of Berlin gives the following outcomes if the Soviets take the city (the relevant dates for the Western Allies are slightly different see the full rules in Chapter 29:

- A Decisive Soviet Victory if on or before 31 December 1944,

- A Major Soviet Victory if after 31 December 1944 but on or before 28 February 1945
- A Marginal Soviet Victory if after 28 February 1945 and on or before 31 May 1945
- or a Draw (if it falls after 31 May 1945 but before the scenario end date)

If on 31 December 1944 the Soviets fail to have matched the Axis high water mark score and the Western allies control no German territory, this is an Axis Major Victory.

Finally if the game reaches the scenario end date without triggering any other victory condition then the result is an Axis Marginal Victory. The end dates vary with the scenario:

- 1941 Campaign – 1 August 1945
- Stalingrad to Berlin Campaign – 1 July 1945
- Vistula to Berlin Campaign – 1 June 1945

The rules for the Sudden Victory conditions can be found by accessing the Victory Point screen, as:

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.This shows the screen on T1 before any German moves. On the left hand side are the current VP level, that the Axis has the Initiative and the VP score needed for either sudden victory or sudden loss. On the right are all the cities that can contribute to the VP score, their basic value and the bonus if they are captured this turn.

On map display

If you select the appropriate map mode (the victory location tab or shift+v or by right clicking on a hex), the map will display all the cities that have a VP value, the base value for their capture and the bonus score if they are taken in the current turn.

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This shows some of the victory locations for the Typhoon scenario. Note that all the flags are both grey and red (indicating that both sides gain VP for that location). If you place the mouse over one of these hexes, the pop-up screen will show the VP award for that hex. In this case, the Germans gain no VP during the game but 150 if they hold that location at the end of the scenario while the Soviets gain 100 VP each

turn they hold Vyazma and a bonus of 500 for holding the city at the end of the game.

4.17. USING THE COMMANDER'S REPORT

Learning to use the Commander's Report is an art all in itself. You can actually play WitE2 without ever accessing the Commander's Report however most players quickly learn to use it as a means to access vital information. There is no right or wrong way to use the functionality offered by the Commander's Report – after all it's your Report. Take time to explore the information presented and the various tools available to sort and select different views.

The Commanders Report allows you to carry out actions on groups of units such as sending them to the Reserve Box, setting them to refit mode or changing their ToE. You can also usually click from the CR to the relevant map location.

More information on how to use the Commanders Report can be found in Appendix F (chapter 35).

4.18. EVENT LOG & METRICS

This Topic provides a basic overview of the Logistics Phase Event Log & Metrics feature included in WitE2 (36.4 and 36.9).

Logistics Phase Event Log Overview. During the Logistics Phase the game performs thousands of calculations on your behalf from building forts to training pilots. The Event Log (Hotkey-Shift-E) provides a summary of that process so that you can see what has happened.

The event log is particularly useful if you are either reviewing the turn (for example all the air missions are recorded here) or trying to work out why something unexpected happened.

Metrics. The Metrics Screen (Hotkey-Shift-M) provides the player with a number of graphs so that you can track the progress of some key variables such as Production, Troop Strengths and Victory Points over time. The ability to identify trends in the data will allow you to modify your game play accordingly.

Turn Summary. This provides a quick overview of changes (36.16) in the last game turn and allows you to identify units that are isolated or have low supply as well as to track the victory conditions (this section will be different if you are using the turn summary for a campaign game or a shorter scenario).

This screen will open by default when you open a game and can also be accessed from the tabs, right clicking on the map or ctrl+s

Not only does this provide a quick overview of the previous turn but you can click from it to other screens (or the map). 1 will take you to the reinforcement screen for the current turn, 2 will highlight the affected units on the map and 3 will take you to the victory screen.

The one page guide, Metrics, overleaf summarises how to read some of this information.

One page guide #9

4.19. STARTING THE INTRODUCTORY SCENARIO

This section brings together the information already presented in this chapter and takes you through the first turn of the Velikie Luki scenario in detail as well as providing an outline of how to play out the future turns.

Historically this was part of the wider Soviet Mars offensive designed to destroy Army Group Centre at the same time as the Soviet offensive at Stalingrad aimed to destroy Army Group South. Whereas the wider offensive was a disaster, Velikie Luki itself was captured by the Soviets in January 1943. The vital rail junction both helped Soviet resupply efforts and broke the direct connection between AGC and AGN. In turn, the threat to Smolensk forced the Germans pulled out of the Rzhev salient later in 1943.

The order of battle is as historical as possible and includes the various specialist combat and command formations the Germans created to defend this sector. The map layout is slightly ahistoric (in that the Soviets start controlling Rzhev) simply as this made designing the scenario and issues such as connecting to the off-map logistics system easier.

While setting up the game, in addition to following the steps below, you might also want to review the first of the one page guides (game introduction), as the play through develops the appropriate guide is indicated for that section.

4.19.1. Setting up the scenario

To set up the scenario, open your copy of WiTE2, if you have previously watched them, you can skip the introductory videos by pressing the ESC key.

Once you reach the opening screen, configure it as shown below.

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The key variables are to set the Axis to computer, the Soviet side to human and the difficulty level to Easy. So you, as the player, will have substantial advantages over your computer controlled opponent.

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This is configured automatically and will reflect the choices you made on the opening screen.

However, for this initial game we want to make some additional changes. Click on the Fog of War box on the Soviet column and the screen will change to:

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This change means you will be able to see all the AI's formations and the moves it will make in its turn. This is another substantial bonus especially is it improves your ability to plan your moves and estimate how the AI will re-act.

Leave all the other boxes as they are. In this game we are going to use the Automated AI assistance for the air war (4.5) and there are no-off map theatre boxes (apart from the National Reserve) to use (4.14). Note that you can alter any of the difficulty level variables to produce what is called a custom set up. In general, the single most important variable is the Morale Level (2.6.2) as this will have a direct effect on the AI's performance (30.7).

Once you have made the changes you want, close this screen (click on the X in the top right hand corner) and you will return to the opening screen.

In a game against the AI you can amend any of those settings in the course of the game. In a game against a human opponent, they cannot be amended.

Before actually starting the game, you may want to review the user preferences (2.6.3 and 36.17). For this game, leave almost all these on default (you can explore what difference they make later), apart from turning 'move animation' off. In a small scenario this will make relatively little difference but in a larger game it will soon become boring watching the counters move hex by hex (with this option off they will simply move to the final hex that you selected for their move).

Again, you can change any or all these variables as you wish during a game (even one against a human player) as all they affect is how the game displays or behaves.

You should always follow this order as the settings you adopt will influence how the game plays when first opened. So if the first turn belongs to your AI opponent then they will run with the default settings rather than any you wish to implement.

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Now return to the main menu and select 'pick scenario' (do not click the PBEM box as that will set the game up for you to play against another human opponent) and you will find.

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This is the full list of all the scenarios currently in the game (including any you may design yourself). The date indicates when the scenario was last modified.

Click on 'Introductory Scenario 1 – Velikie Luki and the screen will change to:

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The chosen scenario is now highlighted in green and on the right is information about the scenario (it is 9 turns long, there is no Axis turn 1 so it starts with the Soviet turn), a brief historical context and some player notes.

Note this also tells you how many Administrative Points you receive each turn (4.3.2) if the game is on the neutral settings. If you have set up so one side or the other has an advantage in terms of admin level (as above) then this base number will be modified. So in this case, the Soviet 5 AP per turn will become 6 (5 times 1.20). In this scenario these are relatively unimportant (4.3.12) but the Soviet player may wish to spend some to create new depots as they advance westwards.

To set up the chosen scenario, press on the arrow/load symbol at the bottom left hand side.

After the game has been created, it will suggest a folder where the turns will be saved, such as:

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Unless you have a strong reason not to, it is usually as easy to accept the proposed folder. Note that if you are playing the Soviet side this interface will be a reddish-brown, if the Axis a dark grey. This convention is used many times in the game.

Click on the tick and you will be taken to map.

During the game, you can save at any time. You do this by shifting to the 'ADMINISTRATION' tab and clicking on the save icon as:

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At this stage, it is a good idea to review the one page guide #2 game interface as that will provide useful context for what you can now see.

4.19.2. Using the AI assistance for the Air War

When you open the game, you will see something like this (on the right will be a summary information screen, for the moment just close that as we will review it later in this walk-through). For this game, we are going to use the AI assistance (as we set the game up that way) so now might be a good time to review the one page guide #4 (AI assistance) and section 4.6.1.

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The area marked A is out of bounds for this scenario, B is Axis controlled territory, C is one of the locations you need to capture to win (we will come back to various ways you can configure the map display later) and D is one of the labels that indicate where your air force is deployed (4.5.4).

How much information is shown on this label will depend on how zoomed in or out you are when looking at the map (6.8.1)

Since WiTE2 is divided into distinct phases, we will focus first on setting up the air war (remember there is no logistics phase on the first turn of any scenario (4.3.3).

As a brief review of the concepts behind the air game, remember that your air force consists of individual planes and in this scenario you have 251 ready planes – you can see this on the 3rd Air Army label (82+149+20 of the three types of planes) – and 83% of your potential planes are ready (so you actually have 291). Those planes are divided into 5 Air Operational Groups, some of those groups report to the 1 ShAK air corps, others direct to the Air Army.

There is a lot of functionality available even just by viewing and manipulating the labels. If you simply hover the mouse over the 1 ShAK, it will show which air operational groups report to that command:

479

So the 2 air groups with the ground attack aircraft report to the corps, as you can see all the other labels are now much fainter. This is the sort of thing that is more important in a large scenario as it allows you to see a lot of information about the layout of your air force just by using the on map options.

The other element in the air war management is the actual HQ that controls the planes. The label (3rd Air Army) is located as centrally as possible to the actual deployment of your planes at the air bases (so will move as the air groups are redeployed).

480

It plays two important roles in the game but for this scenario we can ignore it completely. It allows you to change the leader of the air army (4.13.1) and it is used

to assign support squads to active airfields. Since it will do that automatically up to 90 hexes from its location (4.7.4) it can be left where it is for this scenario.

You can review all this, open and close air labels, look at airbases and so on. We will now set the orders that will influence how the AI acts.

In WiTE2, while the AI will carry out much of the air war for you, we need to set some basic parameters. We could use the ShAK formation if we wanted the ground attack planes to do something different but in this case we will work with the air army.

Click on the 3 Air Army label and the screen will change to:

481

This gives us a lot of information that for the moment we are going to ignore. You can see the airbases in use (the blue labels), if you click on one of these it will even show you the planes present at that base. All this information is also summarised on the right hand side of the screen.

All we are interested in is the information box for the 3 Air Army at the top of the screen.

Notice that the information shown here is very different to that available from the on-map counter.

We can make all the changes we need from this box.

We will change two variables. We will tell it only to fly at day (so change the top filter to show 'day only' from the current 'MIX MISSION') and alter the stance from 'Flexible' to 'Advance' (as we hope to be moving forward and need the short range Soviet air assets to stay in range. We have only one vaild Soviet Front command HQ (Kalinin Front) so there is no need (or scope) to amend this.

482

We can revise those settings each turn if we need to but those rules should be good enough for the entirety of this scenario so we can more or less ignore the air war from now on.

That is all that is needed, the AI will now generate a set of air directives using its available assets and the information you have provided. In some scenarios, you will find that on T1 there is a set of scripted missions, if these exist then the AI will default to those and make its own changes for a later turn.

So now, either press the F12 key or the arrow on the top right of the screen.

You will often find that WiTE2 allows you to carry out an action by right clicking on the map, pressing a hot key or clicking on one of the tabs at the top of the screen. In effect, use which ever one is easiest for you.

483

At this stage you might want to save the game, so you can return to this point and review your choices.

Select the admin tab and then the save option.

484

That will then open this screen (which will show all the saved games for this particular scenario). In this case there are none, so select the left hand arrow at the bottom

485

And then enter the name for the save. I have used 1a to indicate it is from turn 1 and the air planning phase. But you can use whatever names make sense to you.

486

Press on the tick and the game will save and you will return to the main map.

So now, let's run the air phase, once you press F12, you will be asked to confirm. As the turn runs you will see the summary box on the lower right hand side of the screen (4.5.7).

You will be presented with a summary of the missions that took place (in this case only some reconnaissance missions), close this screen and you will be returned to the map.

Every game will be slightly different, especially in terms of reported losses and actions chosen. However, it is unlikely the AI-Assist will decide to do something radically different to how it worked during this play through.

The reason why there were so few missions reported there is that the AI assist has put all the combat aircraft onto ground support. This is the most useful mission in the game but the planes will now only fly in support of actual combats in the ground phase.

4.20. STARTING THE GROUND PHASE

War in the East 2 rewards planning your operations. Even in a simple scenario like this it is worthwhile to review your forces, the terrain, what you know of the enemy and your objectives. In effect, creating a rough plan will mean you don't move units (or make attacks) that you later realise reduce your options to secure your main goal.

> ***Some of this becomes second nature. In the main it is less about a detailed understanding of the exact game rules and more about understanding how all these factors (what Clauswitz called the 'terrain') combine to create opportunities and limit your options. As a simple test, in a later play through of this scenario, ignore Velikie Luki and commit the Soviet forces to an offensive on the top corner of the map – it is likely you will fail badly due to the poor terrain and lack of decent supply lines.***

Before moving any formations it is useful to review the situation and carry out some administrative tasks. Generally it is a good idea to generate a save once the air phase is completed. So again set up a save as before and you will find the air phase save. Generate a new one for this point. Again you can use any naming system you wish.

487

4.20.1. Housekeeping

Before considering any actual moves it is useful to review the overall situation and adjust the map to fit your immediate interests.

If you are reloading a saved game, or have just run a turn, you will see the turn summary on the right hand side of the screen.

488

You can dismiss this by clicking on the X at the top (1) and it is not very informative on turn 1. However, it gives access to two screens that are useful. One (2) is the Victory Point table and the other (3) is the reinforcement screen.

Click on the VP screen and you will be presented with:

489

There are four key parts to this screen. The symbol at the top (1) allows you to access a graph that will show the VP score by turn so you can track how it changed as you play the scenario.

The next two (2 and 3) indicate how VP are scored. In this scenario there are 4 VP locations (currently shown on the map as discussed above). The Axis side will gain VP for these locations if they hold them at the end of the scenario, the Soviet side gain both points at the end of the scenario and if they hold them for any turns during the game. In effect, there is a strong incentive in terms of VP for the Soviet player to try and capture these locations as early as possible and for the Axis to delay this – or to try and recapture them.

In addition each side gains VP according to the losses of the other side. So the Axis will gain 1 VP for every 1,000 Soviet losses and the Soviets will gain VP for every 666 Axis losses.

Since the Soviets lost some planes during the recently conducted air phase (the exact number will be different in your game), the Axis side already have 1 VP. Broadly this means that both sides have an incentive to inflict losses and a reason to try and minimise their own.

At the bottom will be an indication of how well one side is doing. At this stage, there is no advantage.

If you close this, you will return to the map, and we can review the reinforcement schedule. Click on this, and you will see:

490

By default this will open to show ground unit reinforcements but you can view air unit transfers (1).

In the campaign, this screen is quite complex with arrivals to the map, transfers between theatres and withdrawals. Here, the main thing to note is the relatively substantial reinforcement on turn 5 which might provide a useful boost to your forces. Note that some formations have an arrival hex and others do not (2). Those with an arrival hex are treated as on-map combat units (4.7.2), those without one are off-map support units.

We will explore the implications of this difference as we move through the scenario.

Close this screen and return to the map. Now close the turn summary screen as well.

The on-map display in WiTE2 can be configured in lots of ways to make it easier for you to see the information you need – and you will find your own logic in this respect and may also find that some views you only use occasionally.

By default, you have the enemy controlled hexes shown and the locations of the VP cities.

Part 2: The Playing Environment

I am going to add 4 more overviews.

The fortification level of a hex can be useful for planning so we select that (you can see this by placing the mouse over a hex but the visual display quickly shows where the enemy has well prepared defensive lines). In addition, I want to see the road network (7.2.2), the supply network (4.10) and to change how the weather is shown so that it only shows the ground conditions. Since we have automated the air war, we do not need to pay that much attention to the air conditions and as the weather worsens it can become harder to see important terrain differences until you are used to reading the map.

The combination will alter the display to:

491

> ***Feel free to explore the rest of the options. Everybody has their own preferred combinations and often find these alter over time. Here the counters show attack cv-move, if you are on the strategic defensive it may be more useful to see attack-defend cv?***

You can make these adjustments by pressing the tabs at the top of the screen or right click on the map and access the 'Map Info' menu.

The logic to the changes is that supply is really important in the game and seeing your depot network will help you to manage this. Equally, especially as the weather worsens, the few better roads become important.

While the in-game movement routines will find the quickest path for you and calculate the costs, knowing where the roads are can help. Not least they reduce the cost in trucks used to resupply your formations as you move into enemy territory.

As you can quickly see, the Axis have an advantage here - historically the poor roads badly hampered the wider Soviet Mars offensive especially as there are also not many rail lines.

We will come back to logistics, but now may be a good time to review the one page guide #7 on logistics.

As part of setting up the game display we can also alter how the counters display (4.7.7 and 6.5). By default the enemy counters will show their attack-defend combat values (this may be incorrectly shown when you play with Fog of War) and your own will show attack combat value – movement points.

This is probably the most useful version but if you are on the defensive you might find it useful to alter your counters to show attack-defend CV as a guide to how well your defensive layout is.

Practice doing this by pressing CNTRL+Z and you will see the second value alter.

You can explore all the various ways to display the map and counters. You may find in the end that the map becomes too cluttered or that some displays obscure other information. They are all useful but you will find a few that really help your gameplay.

One good thing, the game will re-open with the map layout you last chose so you do not need to revise it every time you play the game.

> ***In a full game, you may want to use this planning/administrative phase to move units to and from the reserve, re-assign weakened units to the rear, revise your depots and so on. Equally you can always do these things later in the game turn – you will find your own systems to manage this game.***

With the map and counters displayed as we want, we can now plan our first moves.

4.20.2. Preparing your first moves

Before we do anything else with the ground units, now is a good time to review the one page guide #6 on the ground war

Some of this pre-move interaction will become second nature as you gain experience. Equally in many games, you will restructure your order of battle so it fits with how you wish the game to develop.

However, it is useful to carry out some steps before actually committing your army to combat.

One step is to review your chain of command. Each type of HQ has a range (4.7.4) beyond which it will not offer any useful support to the combat units. In this scenario, the Soviet player has 3 HQs.

You have the Stavka counter that represents your senior command. In the campaign game this will often be deployed in Moscow, but here is it placed at the bottom right hand side of the playable map area. It is only included to enable certain game functions and can be ignored during this scenario.

Of more importance is the Kalinin Front HQ which can be found at Poldova. If you click on this, the map will change as:

492

Some hexes have been shaded as grey (1) in addition to those out of the scenario area. They are too far (in movement points) for the HQ to move to this turn or there is some other reason (in one hex the HQ would be on its own next to an enemy combat unit).

Some other counters are now outlined in blue (2). These are all directly commanded by the chosen HQ. The blue connecting line is to some combat units that report to

the Front, the turquoise line indicates the link is to a HQ that is subordinate to the chosen HQ. Finally (3), the Stavka is outlined in orange and there is an orange line indicating the HQ reports to that one.

This check is useful, as much of the value of a HQ is lost if it is out of range.

Looking at the Kalinin Front counter, you can see that it is set as an Assault (4.13.3) HQ, this matters as it increases the command capacity and the speed at which units regain lost Combat Preparation Points (4.8.2). For the moment, leave the Front HQ and move onto the 3rd Shock Army HQ.

Again, left click on this and the map display again changes

493

Here the link to the Front HQ is in orange (it commands the Shock Army), the links to the combat units are in blue (all are within command range). Note the 3 units that report direct to the Front are outlined in yellow. This is because they share a controlling HQ with the chosen unit (in that they too report to the Front).

For a Soviet Army HQ (or an Axis Corps) perhaps the most important test is whether the combat units it controls are outlined in blue.

If you right click on the unit display (right hand of the screen), then you will see all the units that report to it.

494

We can ignore most of the information on this counter for the moment but note there are 2 types of units under its command. Off map Support Units (1) are marked with a '-' before their name. Some of these could be attached directly to Combat Units (2) but left in the HQ they will be allocated into combat by the computer routines. The important part is they will only be committed if the combat occurs in the command range of that HQ.

So the most important aspect of your HQ counters is to keep them in range of their subordinates.

However, before moving onto planning the attack, there is one aspect that is worth noting. If a HQ is on a depot, it increases the capacity of that depot (4.10.11). This is really important as it improves the ability of that depot to receive, store and distribute supplies to the combat units.

Capacity is shown by the black bar on the depot symbol, move the Kalinin Front one hex south-west.

495

As you can see, the capacity has dropped. Undo that move, using the 'U' tab on the third row of tabs at the top of the screen (this will return the Front HQ to the depot).

You can also view the implication of that move by hovering the mouse over Nelidovo (6.4.2). Again ignore this for now but that information can be very useful if you have a more complex supply system.

Now click on the 257 Rifle Division (in the hex due east of Velikie Luki), and again the map display will change.

496

The selected unit(s) are now outlined in purple (1), the other units reporting directly to the same HQ are in yellow (2) and the HQ is outlined in orange (2). The three units that report to the Front HQ (3) are not outlined as they have no command relationship to the selected unit.

The enemy controlled hexes are now either shaded dark or light (4) brown. The lighter hexes are currently enemy controlled hexes that the chosen unit(s) can reach without actually having to fight a battle. Since we have Fog of War set off, you can see this for all the map – at other times this information is often missing due to a lack of knowledge of enemy deployments.

As an experiment now select the 1-2 Motorized Corps counter (located in hex 203, 131). You may need to left click on the stack a few times till this one is chosen. Again the map display will change.

Single left clicks will cycle through the units stacked in a hex, a double click will select all the units in that stack.

497

First note the other brigades of the Corps are in blue (this tells you they are part of the same combat unit), but now note that the hex to the west of Velikie Luki is also shaded light brown. Unlike the Rifle Division you first selected, this brigade can actually cut the rail line to the city and potentially surround the city.

At this stage, we can start to plan our offensive.

The victory locations are relatively close to the front but Velikie Luki is the most valuable. You basically have 2 choices, you can try to attack it directly and it may well fall on the first turn but the German defenders will fall back safely (remember you also gain VP for inflicting losses). Or you can try to surround the city. If it remains isolated in your next turn, then any later attack may well be easier (the

enemy will weaken when cut off) and, even better, they will surrender (yielding even more VP).

There is no right or wrong in your choice – both have advantages and disadvantages. The biggest risk of a direct attack is you fail, the risk of an encirclement is the Axis forces manage to break in and re-establish contact.

To help with the choice, it is now useful to alter the map display to remove both the depots and the VP locations.

> ***This restructuring of the on-map display becomes second nature after a while, in effect you can often configure the display to show exactly what you are interested in at any one time.***

498

What now is clear is relatively how strong the defenders are. The combat engine in WiTE2 is complex (4.8.2) but essentially to push the defender back (4.8.5) you need to have double their combat value at the end of the battle. Given you will struggle to match the defender's at start value it is unlikely you will achieve this with a direct assault. Equally if you fail, your units will be weaker as they will lose half their CPP (4.8.3) making a subsequent attack much harder. On the other hand, the defender will be weakened during such an attack so, perhaps, a second attack might succeed where the first failed.

> ***This sort of decision making is key to good game play. Clearly one way to take a strongly held hex is to attack many times, but to rotate the attacking units so each time you are using fresh units. Often you can avoid a direct attack and rely on movement to force the enemy to fall back (or risk encirclement). You lack the forces to bring in fresh units for a new attack in this situation.***

With all this in mind, we are going to try to encircle the city first.

4.21. SOVIET FIRST TURN

4.21.1. Planning the encirclement

You actually have a number of choices for how to manage this turn but the key goal is to encircle Velikie Luki.

So start by left-clicking on the stack in hex 201, 107. Note that both these units can move into the hex to the west of the city.

This can only happen as you have your morale set at 120, the bonus is enough to reduce the costs of that move allowing you to advance these units to the hex. If you play this scenario with 100 morale, you will find you need to rely on the Mechanized Brigade alone to complete the encirclement.

By default, this will select the Rifle Brigade (31) and note it can move into the target hex.

499

For the moment, leave the brigade and move the Rifle Division (381). Make the change by left-clicking on the hex again, the display will change. Note that now the division is outlined in purple both on the map and in the counter display.

4100

Now move the mouse to 200,129, note as you do this the movement path for the unit is marked out, showing 11 in the first hex and 0 in the second. These numbers are the MP that unit will have remaining if it moves to the proposed target hex.

4101

Right click on the target hex, this converts the possible move into a move order. The 381 RD will now appear in the target hex (if you had selected 'show move animation' you would see it move hex by hex).

The situation should now look like

4102

Note the change in map shading, the unit you still have selected has 0 MP remaining so every hex on the map is now out of reach.

Another aspect of that move worth noting is that the CPP % dropped from 50 to 48, as you lose 1 point for every hex you move into during the turn.

Now click on hex 203,128, note that the 2 hexes entered by 381 RD are now a different shade. That is because they were Axis controlled at the start of the turn but have been entered by a Soviet unit. They are treated as 'pending' Soviet control and this limits their usage and affects the cost to enter them (4.8.1). In particular, no Soviet unit can use 'Administrative Movement' in those hexes (and this will include the cost of any supplies sent forward at the end of the turn).

4103

We are now going to re-organise the other units to support the encirclement. Select the 257 RD (due east of Velikie Luki) and move it to hex 201,128 (this will protect the line of communications to the units cutting off the city). Move the 28 RD from 202,138 (the hex at the south end of the line) to 202,129. This will uncover the southern part of the front but there is little risk of an Axis offensive.

The layout now will be

4104

You now have a choice. You can continue re-organising the layout of the units to optimise the partial encirclement or try to take the hex SW of Velikie Luki to complete cutting it off.

4.21.2. Attacking to complete the encirclement

We are going to try that option with the 4 Soviet divisions adjacent to the '2-6' Axis stack. This will also allow us to explore some important concepts when attacking just with infantry formations. Due to the way movement costs and Zones of Control (4.8.1 and 22.2.4) work none of those 4 units will have the MP to both attack and enter the target hex this turn. So we need to plan this attack with some care.

Start by left-clicking on the stack shown as 19-16

4105

Now hold the shift key down (or click on the shift option on the information tool tabs) and move the mouse SW to the hex occupied by the 6-16 unit. The display will now look like:

4106

All 4 divisions are outlined in purple (they are selected) and all four divisions are shown on the right hand side of the screen in a short hand manner.

Now click on the entry for 9 Gds RD on the right hand of the screen (we are going to leave it out of the planned attack). You do this by clicking on the counter symbol not on the text.

This display will now change to

4107

We now want to consider the attack.

Keep the shift key depressed (either on your keyboard or use the tab) and move the mouse over the Axis units, the display will now give you an estimate of what might happen if you attack.

4108

The combat engine in WiTE2 has many variables (4.8.2 and 4.8.3) but the key concept is that if the attacker has double the Combat Value of the defender – at the end of the actual fighting – the defender will be forced to retreat (at the least – 4.8.5). The starting CV is a good clue to the final position but the relationship is not linear and can be misleading (due to fog of war) or if one or both sides has substantial artillery or air assets available.

But you have starting odds of over 3-1 and you outnumber the defenders. You are attacking with 4 divisions and the defenders are a regiment (2/83 ID) and a battalion (the ski troops).

> ***This sort of interpretation of the pre-attack odds becomes second nature over time. The shown CV are a useful guide but experience will help you understand when they are misleading. As an example, a Soviet rifle division in the summer of 1941 might appear strong but might also collapse in combat due to low morale or experience, especially if it is in clear terrain and attacked by German mobile troops.***

So this is a worthwhile gamble.

You can choose the level of detail to watch the battle by pressing 0-7 (at 0 you will see nothing, at 7 you will see the results of every infantry squad, gun and plane firing). Select 2, this will give you chance to check over the summary outcome and consider if you want to see more details after the battle.

Now simply right click on the target hex (so the same as if you were ordering a move). This will trigger the attack and at the end you will see:

4109

For the purposes of that image, I changed the game display to show battle sites.

So the Germans retreated relatively quickly with low losses on both sides. You can use the 'show details' option on the battle report to explore that combat in considerable detail but for the moment let’s move on to the rest of the moves.

Inevitably the losses will be different to what is shown above as each combat relies on many dice rolls and the interaction between the various combat elements engaged (21.2.1).

Clearly in your game, the actual details will vary. In particular, the AI may have allocated aircraft as Ground Support (4.5.5) which can be very useful in terms of disrupting the enemy before the actual ground fighting commences.

If, like me, you reviewed that battle after it happened, press F1 (or the left hand tab) to return to moving units.

4.21.3. Final moves

Of the three units in 202,130, the 9 Gds RD should have its full movement allowance so advance that into the hex you have just driven the Germans from. This is why we left it out of the attack. Given the layout of the defenders, all the other rifle divisions now lack the MP to both move through a Zone of Control and enter the target hex (38.7.1).

To complete your moves place the 31 Brigade in 202,128 (that will stop the defenders breaking out easily) and the 1 brigade of the Mechanized Corps in 200,129 (so you have a powerful force blocking the direct relief route).

Finally move the Kalinin Front counter to the airbase at 205,126. This is not essential but will help the AI redeploy your aircraft closer to the front (remember we set the Air Command to 'follow' the HQ).

> ***When moving your HQs it is a good idea to return to showing the logistics and depot display. All things being equal, a HQ is better placed on a depot as long as it is also in command range of its subordinates. In this case, there is no suitable depot that also meets the desire to move the Front HQ, but you could construct one at the airfield. However, this will be costly (in terms of supply demand to construct the infrastructure and in a short scenario probably not worth the cost).***

You should have a layout similar to:

4110

Save the game (in case you wish to return to this step) and press F12. That will commence the end of turn routines. For this turn, click on Yes when asked about the AI Depot Management option as there are no locations where it is worth adding an extra depot.

> ***Depot layout is a complex issue but basically you want a chain running back to your National Supply Sources (4.10.2) and then close enough to the front so that your units do not have a long supply chain. But you do not want too many as then you will lack trucks to move your units and their attached artillery as all your trucks are allocated to the depots.***

4.21.4. The AI response

The map will change, you will see the AI routines first for logistics, then its air phase and then the movement of combat units (remember you have Fog of War off).

> ***How the AI responds will vary from game to game and the difficultly level you chosen. In particular giving the AI a morale setting over 110 will change how it behaves (and as you become more experienced, produce a more challenging game).***

4.22. TURNS 2 - 3

At this stage, the game returns to your air planning phase. And you will see something like:

4111

You can dismiss the events message by opening it, marking all messages as read and closing it.

Note that on map, you can see how the AI has redeployed your air force. On the right hand side is the turn summary chart and this is worth looking over. More details on how to interpret this screen can be found in section 36.16.

4112

At the top (1) you can see you have had 1 ground and 1 air reinforcement. Clicking on the symbol will take you to the reinforcement chart and you can see you now have an extra Rifle Brigade.

Below this are some information screens. At the top is your total losses (combat and attrition in the last turn) and (2) how the on-map forces have changed (note the Axis must have had some reinforcements), (3) can be very useful as a quick glance over your logistics situation. In this case trucks in units is important as it determines how mobile your formations will be (4.8.1). (4) can be used to find weak or poorly supplied units on the map (just click on the 'ALERTS' options).

Finally (5) tells you if you are winning or losing. And this looks terrible. But remember the VP scoring is very dependent on the Soviets capturing cities.

At this stage of any turn, you can review many factors using the Commander's Report. This is a good time to carry out any administrative tasks you feel are useful. Over time you will develop your own routines and the Player's Notes (Ch. 30) contain some advice in this regard.

For the moment, we can move onto the ground phase by pressing F12 (there is no need to amend our air orders).

As before, you will see the air phase run, be shown the phase summary, close that and return to the map.

4113

For this display I have selected the unit modes tab (shift-r) as it tells us two useful things. First the reinforcement is outlined in green so we can easily find it. Second, the German defenders are isolated (outlined in red). You can see what all the possible options are in section 6.5.3.

You can turn that off once you have reviewed the situation. The other major changes are that the rest of the Mechanized Corps are now available to move as is the Ski Brigade (44) in hex 203,126.

You may find the AI has laid out its forces differently to those shown but it will try to cover the front line. At higher difficulty levels it may well have tried to break through to Velikie Luki,

Practically, only one thing matters this turn, capturing the city.

If you select all the units surrounding the city (as above) you will see the odds are something like 39-32. Now this might be enough, you probably outnumber the enemy, they may be low on supplies (actually they are not – due to FOW being off you can see how much freight is in the depot – see if you can work out how to view this information).

If you attack and fail, all your units will lose half their remaining CPP making it harder to attack in such strength again.

4114

The only powerful units you have available in addition are the two Mechanized brigades so move them to 202,129 and then select all the possible attackers. The odds should have improved to around 55-32 and given your other advantages this is probably likely to work. Your final choice is to add the 4-12 division at 201,131 but that is securing your flank.

We will gamble on leaving that where it is.

So make the attack.

4115

In this case the post-battle symbol has changed to show the enemy surrendered.

From here, there are many options.

First let's explore the different ways you can use the Rifle Brigades. They can be on the map and treated as a combat unit or assigned to either a HQ or combat unit (this

can significantly improve your combat power in a hex). To allocate one directly to a combat unit will take several turns (due to the scenario set up), so first move the newly arrived brigade to the hex with the Shock Army HQ.

4116

Right click on the unit counter (on the right hand side of the screen) and you will see the detailed unit screen:

4117

Since it is now in the hex of its HQ and has at least 1 MP left, we can convert it from being on the map to being attached to the HQ. Click on 'CONVERT UNIT'

If you then open the detailed tab for the Army HQ and go the list of 'assigned' units, you will see the 26 Brigade now marked as being off map and with a * (that means it has changed status or HQ this turn and cannot do so again till next turn).

4118

A valid alternative use of that unit would have been to leave it where it was and place it in ‘RESERVE’ mode (4.7.8). The advantage of that option is it may well be committed to support any attack nearby (especially as brigades are more likely to be selected for this than divisions).

For the rest of the turn, it is a good idea not to move the assault units again if you can avoid this. They will regain more of their CPP if left static and in hexes you owned at the start of the turn.

To complete the turn, move the 44 Ski brigade one hex west (this will prevent any easy Axis incursion on your northern flank). Also advance the 28 RD into the city (leave the other units outside – they will regain more CPP if left in a hex you owned at the start of the turn). Just move one formation into the city so that it is garrisoned in case of a counter-attack.

And then attack with the 9 Gds RD (201,130) to the SW. The odds for a deliberate attack should be over 4-1 and this will make it easier to take Nevel (another victory location) in a future turn.

It is quite likely the defenders will rout (they are a security battalion) and move 21 Gds RD from 201,131 to 200,131. In the test game this moved them adjacent to a German HQ that was on its own so that too retreated when the Soviets advance (23.13).

4119

Again, you maybe faced with a different layout. If so, and the defenders are relatively strong, leave this attack to a later turn. WiTE2 does not reward just attacking ‘because you can’.

> ***If you have played WiTE1 this maybe one of the biggest changes. Preservation (and recovery) of CPP is more important over the game than taking a single hex just because you are stronger than the defenders.***

One last thing you can do is to build a depot in Velikie Luki. This will not fully function until the associated rail line is repaired but you will need it later.

You can do this by clicking in the hex and selecting from the depot tab on the top row, by right clicking on the hex and select 'Build Depot' or opening the tab with the city name and order the creation of the depot that way.

4120

Note in every case, your available Administrative Points will drop from 11 to 10.

All the information on these steps can be found in chapter 6 and One Page Guide #7.

Save the game and progress to the next turn.

By this stage, it is likely your game is becoming quite different as the AI will make different choices. In mine, it started a significant offensive from the NW of Velikie Luki (and was held off by the division I advanced after combat and the unit falling back after being attacked). You can usefully review the AI turn by looking at the on-map combat sites.

In other games it may react differently.

4121

The summary screen suggests you are still losing as it assumes the AI will hold onto the other three victory cities. However, as of turn 3, you should be slightly ahead due to the VP gained for forcing the garrison to have surrendered and one turn of holding Velikie Luki,

4122

Before completing this discussion, let’s look at how to assign support units to combat units (not all support units can be directly attached in this manner). Select the 381 RD (200,129) and open up the unit screen, select 'assign Support Unit' and you will see the Rifle Brigade we converted last turn.

4123

Assign that to the division and you will see its combat value improve to 4.8. This can be a very useful way to improve the direct combat power of a unit or stack.

4124

This is one of the many trade-offs in the game. A support unit attached to a combat unit will always be in action if the combat unit is involved. One assigned to a HQ may not be committed (as ever this is decided in part by random chance and in part by the quality of leadership) but, on the other hand, may fight more than once and be assigned to a combat that matters.

4.23. COMPLETING THE SCENARIO

Up to this stage of the game, you should be able to follow the steps above fairly closely but increasingly any replay of the game will vary. The AI will react in different ways, you might make different decisions about the importance of resting units as opposed to exploiting opportunities.

So take the game forward and see how you do. It is probably a good idea to show the VP locations on the map to remind you of where they are. Remember you now have the 3 Rifle Divisions in 205,126 available and will gain more reinforcements over the next two turns (but so will the Germans).

Having completed that, you could replay the scenario at the normal settings and with the Fog of War set. This will remove the advantages you had above (and the malus that affected the AI) and may well make the fighting around Velikie Luki much more difficult.

The scenario is also worth playing from the Axis side as it covers concepts such as City Forts and you can explore how to first slow and then stop an offensive.

4.23.1. Other Scenarios

Once you feel you have completed this scenario, move onto Introductory Scenario 2 – Road to Minsk. That is a two turn study of the opening offensive by Army Group Centre in June 1941. In this case, it is best played from the Axis side (as the Soviets have little to do),

Unlike this one, it is more about rapid movement but you can use it to practice important game functions such as rail repair, how to secure pockets and the need for careful force allocation.

Beyond that, the Road to Leningrad has a low unit density and the Destruction of Southwestern Front is more demanding in terms of unit numbers and scale. In combination they will allow you to explore the main thrusts of the German invasion in June 1941.

The Red God of War scenario will allow you to place the actions around Velikie Luki in more context as that covers the entirety of the Soviet 'Mars' offensive. Typhoon is useful to become used to the effect of the autumn rains and then the winter blizzards on movement and supply.

4.23.2. Campaign Games

The other campaign starts in the game allow you to explore specific phases of the war. Many of the testers have reported how much they have enjoyed Stalingrad-Berlin and the Vistula-Berlin campaigns. Even if you no longer have the broad sweep of the 1941 Axis offensive, Stalingrad-Berlin is well balanced and you can explore how the game handles the phase where the Red Army is still learning and the German Panzers remain devastating when concentrated. Vistula-Berlin may seem one-sided but there is much to learn about how the Soviets conduct a major offensive and the very different logistics demands to 1941 as the Axis.

5. THE SEQUENCE OF PLAY

500

Focus:

This section sets out the sequence of play in WiTE2.

Key Issues:

- How the two player phases interact;
- Key Differences between the Soviet and Axis player phases;
- Differences in games played against the AI and against a human opponent;
- A very short outline of the actions that occur in the logistics and air execution phases

5.1. BASIC SEQUENCE OF PLAY

Gary Grigsby's War in the East 2 is a turn based game, with each game turn composed of separate Axis and Soviets Player turns. In combination these amount to one week of real world time.

The term "phasing player" is used for the player who is currently conducting their player turn. For example, during the Axis player turn, the Axis player is the phasing player and the Soviets player is the non-phasing player.

5.1.1. General Rules

Each player turn consists of a player specific logistics phase and a general logistics phase, which are comprised of a number of segments and sub-segments and are both conducted automatically by the computer.

At the start of each turn, the player has the option to review any events that have occurred (36.9 and 36.15). These may include new options, information about the progress of the war in the off map Theatre Boxes or simply reporting important historical events.

An air directive planning phase is followed by the execution of the majority of air missions as well as air maintenance and any air training missions.

In the action (movement) phase, unit movement and ground combat and other player manual actions, including air transport of units or supplies, are conducted.

The computer may conduct actions with the non-phasing player's forces during the ground phase, such as the commitment of support units and reserve combat units to battles and air missions such as interception and defensive ground support.

Amphibious assaults and airborne landings in support of amphibious invasions, ordered in the Soviet player's ground phase (24.7), occur after the logistics phase of the next Axis player's turn.

The current phase (Logistics, Air Planning, Air Execution, Move (Action)) is listed in the space to the right of the menu tabs. In addition, during the Action (Move) phase, the current status of air ground support (GS) is noted as either on or off (Hotkey- x) as the player may wish to not use up their available ground support missions too early in a turn.

5.1.2. Differences when Using the Server or PBEM

The sequence of play is subtly different if you are playing the computer or against another human opponent.

Against the computer, at the end of your turn, you press F12 (or the end of turn tab) and the game proceeds to run the logistics phase and its own turn. At the end of this

it will have generated two save files, one for its turn and one for the player to use when starting their next turn.

If you are playing a human opponent, either PBEM or using the Matrix server (2.8.2), the basics are the same. Complete your turn, press end turn and either a save will be automatically placed on the Matrix Server or you will need to send it to your opponent. They generate their turn and so on. The process for doing this is covered in section 2.8 of this manual.

One key difference is how amphibious invasions are handled. As above, the Soviet player must order these in their own ground phase but they are not actually executed until after the logistics phase of the German player's turn.

What actually happens in a multiplayer game is that this phase is resolved as the Soviet player saves the game but the map will be blacked out so the Soviet player is not able to see what is happening – otherwise you could gain information normally obscured in the fog of war.

5.2. GAME TURN OVERVIEW

A. Axis Player Turn

1) Axis Logistics Phase

2) General Logistics Phase (for Axis units only)

3) Soviet Amphibious Phase (as above, in a multiplayer turn this has already been resolved but it is shown to the Axis player at this point)

5) Axis Air Planning Phase

6) Axis Air Execution Phase

7) Axis Ground Phase (ground movement and combat)

B. Soviet Player Turn

8) Soviet Logistics Phase

9) General Logistics Phase (for Soviet units only)

10) Soviet Air Planning Phase

11) Soviet Air Execution Phase

12) Soviet Ground Phase (ground movement and combat)

Note that there are no logistics phases for the first player on the first turn of any scenario. If the Axis player is the first player, the scenario will start with the Axis Air

Planning phase, if the Soviets player is the first player, the scenario will start with the Soviet Air Planning phase.

On turn two and following turns the game will follow the normal sequence of play.

This means that in scenarios with the Soviets as the first player, the first nine phases of the Game turn are skipped on the first turn, so that the Axis player has no first turn and the Soviet player has no logistics phases.

5.3. SUMMARY OF LOGISTICS AND AIR EXECUTION PHASES

The logistics phase and air execution phase consist of numerous actions that are conducted by the computer. Below is a summary of the major activities that occur during these phases.

5.3.1. The Logistics Phase

Each player turn normally includes a player specific logistics phase with distinct segments followed by a general logistics phase that has the same segments and sub-segments for each player. The game switches to normal (F1) mode at the start of the logistics phase. The map pop-ups, top menu buttons, and shortcuts are disabled during the logistics phase.

The administrative points and vehicle pool values are also cleared from the screen during the logistics phase.

The major actions that occur during this phase include attrition, building of fortifications, all facets of production, upgrade and swapping of equipment and aircraft, recovery of disabled manpower, morale and fatigue adjustments, unit reinforcement and withdrawals, administrative point adjustment, hex change of control, removal of temporary motorization, repair of rail, factories, and depots, expansion of air base units, determination of partisan attacks and damage, leader adjustments, freight movement, provision of unit supply and replacements, to include aircraft and pilots, movement of support units and support elements, setting of unit movement point allowances, resetting of rail usage, rally of routed units and unit surrender check, adjustment of unit detection levels due to ground recon, and adjustment of scenario victory points.

In addition weather determination only occurs during the Soviets logistics phase and is then set until the next Soviet logistics phase – so the Axis player phase will have the same weather as the Soviet player in the previous turn.

5.3.2. The Air Execution Phase

During the air execution phase the computer conducts air missions, including any pilot training missions, over the seven days of the turn with a day and a night segment for each day of the turn. In addition, each day of the turn has a

maintenance segment where replacement pilots and aircrew can be added to Air Groups, aircraft are repaired and air base units can be repaired and resupplied with fuel and ammunition.

5.4. SUMMARY OF AIR PLANNING AND GROUND PHASES

These two turns are where the bulk of the player interaction with WiTE2 will take place.

The broad outlines of both air planning and ground movement have been covered in chapter four.

The detailed rules covering the conduct of the air war can be found in chapters 16-19 and those around ground movement and combat are in chapters 22-24.

Note that in both these phases, there is no rigid sub-order. You can construct air directives in any order that you like (and change them as you revise your ideas). Equally in the ground phase, you can start by moving any counter that you wish, and your first action can be a combat, to send a unit by rail, a normal move or to order an amphibious invasion.

However, it is worth noting that your air directives are executed in the order they appear for that air command so you may wish to take this into account when setting them up or amending them.

6. USER INTERFACE

600

Focus:

This section sets out how the game interface works and how to access key information on the map and from the background reports.

Key Issues:

- The different available sets of tabs across the top of the screen;
- How to set, change and interpret the soft factors on each unit counter;
- The different sets of tabs that are available during the air planning and ground movement phases and how you can use these to carry out on-map actions with your air and ground units;
- Information that can be displayed on the playing map;
- Information that can be accessed about individual units;
- How to access the information in the various Theatre Boxes;
- Some indications of how to bring together all the information on specific topics;
- Note that almost all the information can be accessed using the tabs, a relevant hot key or by right clicking on any map hex.

The interface consists of a top panel, map area, unit bar (when units are selected) and a number of associated screens and windows for providing information and conducting various actions.

As previously discussed, with the exception of some actions in the map area, selecting is done by left clicking with the mouse on buttons and selectable text links.

6.1. GENERAL CONVENTIONS

This section sets out some of the conventions used in the UI, more detailed information as to what each option means is set out in section 6.2 onwards.

6.1.1. Top Panel boxes and buttons

The buttons along the top rows allow you to do one of five things:

- Access another screen, an example of this is the option to open the detailed Order of Battle Display (36.1);

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- Carry out in-game actions, an example of this is the F1 tab in the ground movement phase which allows you to move ground units using tactical movement;

602

- Alter how the map is shown, an example of this is the option on the map information screen to show enemy held hexes and hexes you have captured this turn;

603

- Some buttons lead onto a secondary set of options to select. An example if the battle indicator tab (F11) on the map information display that in turn is sub-divided to show all battles, air battles only or land battles only;

604

- If the hex selected contains a depot, the right hand side of the display will show the depot and its current priority. The priority can be amended directly from the display. If no depot exists, then this display can be used to order the creation of a depot. A similar set of options exist for airbases.

605

Note that the panel is shaded brown when the Soviet side is active and grey if the Axis side is active.

6.1.2. On the map display

Placing the cursor over any hex will see a pop-up box. The information shown will vary substantially according to what is in the hex and any other choices (such as having selected the logistics display 6.9). This will always show the weather, terrain, any physical features such as towns or rail lines and if the hex is adjacent to a river. If units are in the hex, some information will usually be shown (again varying according to the Fog of War (10.2) and other display choices).

Right clicking on a hex will give access to further options in terms of on-map information, the ability to access various information screens) and some information about the country and region of the hex.

606

6.1.3. Tabs, F-keys and hot keys

Almost all the information options can be accessed either via the various tabs at the top of the screen, right clicking on the map, using the F# keys on your keyboard or via hot keys.

So if a given option is described as the F1 tab, this can be accessed via the tabs at the top or depressing F1. A full list of the hot keys can be found in Section 36.

In addition to these options, many functions (and map views) can be accessed by right clicking on any hex on the map.

In the main, any action can be conducted using any of these options so you can interact with the game as seems most logical. In a few instances, some options may not be available due to how the various elements of the UI interact. The available methods for each option are set out in detail in the rest of this chapter.

6.1.4. From the information screens

This is discussed in more detail later in this chapter and in the relevant annexes, but you can return to the map from the various information screens at a particular hex (and for example have the relevant detailed battle report showing) or to the location of a given unit.

6.2. TOP PANEL

The top panel both provides information and allows interaction with the map area and on-map units.

It is best described as being divided into four rows of information:

- The top row is a standard windows style toolbar, on the left side will be information about the current build, the scenario being played and the last

save generated, on the right are the standard windows tabs for minimising a screen, reducing screen size or to exit the program.;

607

- The second row from left to right gives 3 tabs that in turn affect what is displayed in the row below, some information about the game turn, status of ground support and other information (this will vary according to whether the phase is the air planning phase or ground movement. The example below is from the ground movement phase (indicated by MOVE) and the player has Ground Support (18.1.3) off.

608

- On the right hand side will be a box that will contain information on how many administrative points (Chapter 9) are available, game turn by date and turn number. This box may also include a city/location name, an airfield indicator and information about a depot if these are present in the selected hex;

609

- The information in the third row is a series of tabs, these will vary according to choice made in the row above but mostly will allow to access other screens or change the on-map display.

610

- On the right hand side is the option to change the 'soft' filter (6.5.11) which will change the information shown on the unit counters;

611

- The fourth row contains tabs that can be used to carry out game actions or access information, this will vary depending on whether it is the air planning phase or the ground movement phase (the example below is from the ground phase):

612

- On the far right hand side will be the key to execute the air directives or to end the turn.

613

With the exception of the title bar, the top panel colour will be grey during the Axis player turn and brown during the Soviet player turn.

6.2.1. Title Bar

This is a standard MS Windows title bar with minimize, maximize and close buttons. It will display the game version number and the name of the scenario currently loaded.

Note that the player must use the title bar close button (X) in the upper right corner to exit the program during the computer AI turn as there is no other way to close the game while the AI is running its own turn.

6.2.2. Second Row

614

On the left hand side here are three tabs. These give access to the detailed tabs in the row below and the available set will vary depending on if 'map information', 'info screens' or 'administration' is selected. Some options will only appear during either the air planning or ground movement phase, others are available in both.

The centre will show the type of orders you are giving to your air units or ground units depending on which tab you have selected during the relevant order phase (see the information on the Fourth Row below). Next to this it will show whether or not Ground support missions will be flown. The image below shows how this information will appear in the ground phase (1) or the air orders phase (2).

615

On the right hand side is a box with variable information. In every case, this will show:

- The number of unused administrative points available to the player;
- The game turn (by date);
- The game turn (by turns since the start of the particular scenario).

If a hex on the main map has also been selected, one, two or all of the following information may be shown:

- Location name – most likely the name of the town or city in the hex. Clicking on this will open the detailed tab for that location (37.13);

- If the hex is also a port, either a permanent built structure or a temporary port generated by a naval invasion (24.7), then an anchor will be shown to the right of the name
- Airfield – this will be coded as it appears on the map. Again, clicking on this will open the detailed tab for that airfield (37.16.2);
- Depot – this will indicate the type and the current supply priority (25.7). Supply priority can be amended from a pop-up menu. If you want to open the detailed tab, you need to click on the location name to the left.

Note that if an airfield or a depot could be built in the hex, the option to do so will be shown here.

616

6.2.3. Third Row

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The information here will vary according to which of the menu tabs (above) you have selected. The bulk of the line is made up of a series of tabs that allow you to access information either on the main map or from the detailed information screens. On the far right is a drop down menu that allows you to change the information on the game counters to show information such as supply state or other useful information.

Map Information Tab

618

The tool bar buttons associated with this tab allows you to amend the main map display to emphasise information you currently wish to see. Clicking on most of these buttons will turn on or off the additional information and they can often be used in combination.

In general if a tab is shown as white it has not been selected, if it is shown with a yellow image it is currently selected.

From left to right, the options are:

- View Units on Map: Hides all on-map units when toggled to allow a clear view of the map area
- Zoom Map in: Five zoom levels available.

- Zoom Map out: Five zoom levels available.
- View Enemy Hexes: Distinguishes between friendly, pending friendly and enemy hexes (7.3). Friendly hexes will be clear. Enemy hexes will be shaded rose, and hexes you have captured this turn will be shaded grey.
- View Fort Levels: Displays a circular symbol with a number in hexes that have a manmade fort level (20.1) (this will show any hex with a fort > 0). The inner ring of the symbol is grey for Axis fort levels and brown for Soviets fort levels and the number indicates the current fort level;
- View Rail Damage Info: Displays status of railroads in friendly and recently captured friendly hexes.
- Combat Delays: This will show the additional movement cost to leave a hex if there was a battle in that hex this turn (22.2.7);
- Show on map command links: This gives two options and determines how the command links between units are displayed; Command Efficiency and Command Quality (6.5.2).
- View Unit Modes/Isolated: Highlights on-map unit counters with a colour border according to one of five different modes. This will also identify units that have just arrived that turn or are due to withdraw in the next 5 turns;
- Supply priority: This will show the relative supply priority (from 1 to 4) of each HQ and their attached combat units (6.9.3);
- View Logistics Information: This function can be toggled in conjunction with other functions, and will display detailed information about depot locations, rail usage and the supply system (6.9);
- View Factory Locations: Town, City and Urban hexes with factories, to include manpower, ports, railyards and resource production have their hex shaded red and display symbols for each type of factory present.
- City Capture dates: Shows the historical dates that key cities changed hands. The information is used as part of the Campaign game victory conditions (29.1);
- Road Display: Changes the on-map display to clearly show the location and quality of the road network;
- Weather display: Brings up further options to variously show air and ground weather, ground weather only, air weather only or to turn off the weather information on the main map;

- Victory Locations: this shows the on map victory locations (both for campaigns and scenarios) and the basic value and any potential extra points for early capture;
- Show interdiction levels: shows the interdiction level of a given hex, note that interdiction can be generated both by air attacks and Soviet partisan actions;
- Air recon values: shows the air reconnaissance value for each hex, can be filtered to show the reconnaissance that is used for ground attack missions or for strategic bombing;
- Show air directive targets: Displays the layout of current air directives, can be filtered to all of these or only those aimed at ground targets;
- Show map flak: Displays the flak value of a given hex, can be limited to only show flak generated by AA units in cities or all the flak affecting a hex;
- Show Air Operational Groups: Displays the locations of AOGs on the map (16.3);

On the far right side of this toolbar is the option to set the 'soft factor' for the on-map counters. Clicking this will bring up a further set of options and each allows you to change the look of the on-map counters to display information about a particular aspect (6.5.11).

Info Screens Tab

619

The majority of the screens accessed through the set of tool bar buttons on this tab are informational only. Note that all these functions can also be accessed via right clicking on any map hex.

Information on how to interpret these screens can be found in both the referenced section of the manual and in appendices.

- Display Order of Battle Screen: This screen provides the phasing player a complete Order of Battle down to the individual unit level and also provides a summary of the status of each country's army and air force (36.1).
- Display Loss Screen: This screen provides the phasing player a summary of each side's current casualties (disabled and destroyed) and permanent losses in terms of men, guns, AFV's, vehicles, and aircraft (36.2).

- Display Production Screen: This screen displays production information for aircraft, ground elements, vehicles, ships, supply, manpower, and various other inputs to the production process. The phasing player will only be able to see information for their side (36.3).

- Display Metrics: This will take you to a series of charts that allow you to track various aspects of the game over time (36.4);

- Display Weather Screen: The weather screen displays the prevailing weather conditions graphically superimposed on the map area and provides link to the dominating weather conditions table (36.6).

- Display Unit Reinforcement and Withdrawal Screen: This screen lists reinforcements and withdrawals for the phasing player (36.7). This will include all movements between Theatre Boxes.

- Display Commanders Report Screen: This screen is, in turn, a multi-tabbed list of information on units, leaders, equipment and battles that can be sorted and filtered in numerous ways. In addition, many unit settings can be changed for both individual units and groups of units using this screen (35).

- Display Logistics Phase Event Log Screen: Provides information on numerous events that have occurred during the most recent logistics phase as well as reporting on some actions that occurred during the previous ground and air execution phases (36.9).

- Display Air Doctrines Screen: The air doctrines screen lists each air command and applicable current settings for each air directive type (ground support, bomb city, ground attack, recon, air superiority, and naval patrol) (36.10)

- Display Air Directives Screen: This will show you the current set of air directives by Air HQ (36.11)

- Go to Theatre Box screen: This will take you a detailed listing of all the units assigned to each off map Theatre Box (36.12)

- Display Victory Point Screen: There are two different types of victory screens, one for campaign scenarios and one for all other scenarios. Both types of victory screens provide a running tally of current victory points, to include displays how victory points are earned for each side during a scenario (36.13).

- Display WiTEpedia: This will provide historical background on the various historical formations represented in WiTE2 (36.14)

- Display Events: This will allow you to see events that have already occurred in the game after you dismiss them at the start of the turn (36.15)

- Display Turn Summary: Brings up a useful quick summary of major changes in the last turn to both sides OOB, identifies units that maybe low on supply and the current situation in respect of the victory conditions (36.16).

Again, on the far right side of this toolbar is the option to set the 'soft factor' for the on-map counters. Clicking this will bring up a further set of options and each allows you to change the look of the on-map counters to display information about a particular aspect (6.5.11).

Administration Tab

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The following screens are included in the Administration tab toolbar:

- Quit and Exit to Main Menu: Exits the current scenario and returns the player back to the main menu screen (2.2).

- Show Preferences Screen: Allows the player to review and change the user and map preferences (36.17).

- Show Game Options Screen: Displays the Game Options Screen and allows the player to change options if not locked out due to PBEM mode (36.18).

- Show Hotkey List**:** Displays the complete list of Hotkeys available (36.19).

- Show Save Game Screen**:** Allows the player to save the current turn (2.7).

6.2.4. Fourth Row

The options available here will vary depending on if it is the Air Planning Phase or the Ground Phase. The same set of buttons will appear regardless of if the Map Information, Info Screens or Administration group are showing in the third row.

The majority of the buttons in these toolbars allow the player to select the different modes used to plan air directives or conduct actions in the map area. Most of these tabs enable you to carry out particular actions and all can be accessed by depressing the appropriate F# button on the keyboard.

Only one mode can be selected at a time. The mode currently selected will be displayed on the second row of the panel.

620A

In this case, the amphibious planning mode from the ground phase has been selected. You can see this as the tab is now coloured yellow and the information 'AMPHIBIOUS' shows on the second row.

These buttons are found on the row below the tabs already described and do not change according to whether the player has selected the map, information or administrative tool bar.

Note that some buttons are available in both the air planning and ground movement phase. For convenience, the information is repeated where this is appropriate.

Air Planning Phase Mode Toolbar

621

- No Air Directive Selected (F1): Default standard mode that allows the player to move around the map and select, though not to move, units during the air planning phase. No air planning screen will appear on the right hand side of the playing area (37.16)

In general, all the tabs from F2 to F7 are only of importance if you are manually setting your air directives, this is covered in the manual especially in sections 17.3 and 17.4.

- Ground Support Air Directive (F2): Mode used to manually add new or modify existing ground support air directives by accessing an Air HQ unit listed in the right hand unit bar.

- Ground Attack Air Directive (F3): Mode used to manually add new or modify existing ground attack air directives by accessing an Air HQ unit listed in the right hand unit bar,

- Strategic Bombing Air Directive (F4): Mode used to manually add new or modify existing bomb city air directives by accessing an Air HQ unit listed in the right hand unit bar,

- Air Recon Air Directive (F5): Mode used to manually add new or modify existing air reconnaissance air directives by accessing an Air HQ unit listed in the right hand unit bar.

- Air Superiority Air Directive (F6): Mode used to manually add new or modify existing air superiority air directives by accessing an Air HQ unit listed in the right hand unit bar.

- Naval Patrol Air Directive (F7): Mode used to manually add or modify new naval air directives by accessing an Air HQ unit listed in the right hand unit bar.

- Battle Locator Mode (Hotkey F11): This mode will add battle location indicators to the map. You must opt to show one of three different views from the drop down menu: 1) show all battle sites, 2) show ground battle sites, 3) show air battle sites.

- Display Air Doctrines Screen: The air doctrines screen lists each air command and applicable current settings for each air directive type (ground support, bomb city, ground attack, recon, air superiority, and naval patrol) (36.10)

- Display Air Directives Summary: The air directives summary screen lists the current air directives by air command. Air directives in this screen can be accessed and edited during the air directive planning phase (36.11).

- Toggle Air Execution Phase Detail: This determines the level of detail of the combat resolution report window during the air execution phase. There are four levels annotated by the number of aircraft symbols highlighted, with each providing additional detail. Values available are None, Low, Medium, and High.

- AI Depot Management: Triggers the AI automation for depot placement and creation (25.7.3);

- Activate AI Assist: Used to have the computer manage and move the player's Air Groups automatically, this is different to the F12 option as it can be done as the air planning phase progresses (17.1).

- Factory Navigation: Shows the list of factories producing the various ground and air frames and other key resources (discussed in Chapter 28). For the Soviet player this will show which factories will automatically relocate and when (37.14).

- Shift and Control: Since many game functions require the player to use the Shift or Control keys these options are provided. If one is selected then it is on by default for all future game play instructions until it is removed. Use of these buttons is optional but may make some game operations easier to carry out.

On the right hand side is the option to end this phase.).

- Execute Air Directives (Hotkey F12): End Air Planning Phase and Execute Air Directives.

If you select the options to set air directives (F2-F7), the right hand side of the screen will be modified to show air commands and how many of that directive type have already been set.

622

In this case the F2 (Ground Support) button has been depressed and a full list of the Soviet air commands is shown. Under each command can be seen the number of existing air directives of this type and the total number of air directives of that command. So, for example, the North Western Air Command has 1 Ground Support mission and 2 Air directives in total.

Action (Move) Phase Mode Toolbar

623

The left hand four buttons on this toolbar access the main methods available for moving ground units on the map. As you change this selection, the second row of the toolbar will show the mode you are currently using.

The rest of the toolbar contains other move options, actions that you can carry out or information you can display on the map.

Pressing F1 will also clear all the other map modes and any information they have placed on the map (such as battle sites).

On the left, the four options are:

- Move Mode (F1): Mode used to conduct tactical movement of ground units, and ground battles (22.2 and most of Chapter 23).
- Rail Mode (F2): Mode used for the strategic transport of ground units using the rail network (22.4).
- Naval Transport Mode (F3): Mode used to for the strategic transport of ground units between friendly ports via water hexes (24.3). This is also used if you want to just move the naval HQ on the map.
- Amphibious Transport Mode (F4): Mode used for the strategic transport of combat units from a friendly port to an enemy controlled coastal hex via amphibious assaults (24.6).
- Air Transport Mode (Hotkey F9): Mode used to conduct air transport of supply and units (22.50 and 37.16.10).

- Battle Locator Mode (F11): This mode will add battle location indicators to the map. You must opt to show one of three different views from the drop down menu: 1) show all battle sites, 2) show ground battle sites, 3) show air battle sites.

The next group of options enable you to issue specific orders or carry out certain actions.

- Combat Unit Buildup and Breakdown: Select this button after selecting the hex containing combat unit(s) to build up or breakdown (21.3.2). Selecting the button again will reverse the action just taken.

- Create Fortified Unit in Selected Hex: Creates a fortified zone or region combat unit (20.5). Select this button after selecting an eligible hex on the map where the fortified zone is to be built.

- Build unit menu: Soviet player only - this provides access to the build unit screen (37.5) to create new combat and support units. This option is not shown for the Axis player as they cannot build new units.

- Undo Move: This button will only appear on the mode toolbar when the last ground unit selected in move (F1) or rail mode (F2) is eligible to undo its previous move. This cannot be done if the unit entered an enemy hex or next to an enemy unit.

- Auto Assign Unit(s) to Nearest Headquarters: Automatically attaches combat and headquarters units to the nearest eligible headquarters unit while the units are selected in Move mode (F1) (21.11.10).

The next set of options allow you to automate some actions, change the map display or to turn Ground support on or off:

- AI Depot Management: Triggers the AI automation for depot placement and creation (25.7.3);

- Activate AI Assist: Used to have the computer manage and move the player's Air Groups automatically, this is different to the F12 option as it can be done as the air planning phase progresses (17.1). The value during the ground phase is if you move the HQ an air operational group is set to 'follow' this will trigger an on-map redeployment (if appropriate) of the relevant air units.

- Factory Navigation: Shows the list of factories producing the various ground and air frames and other key resources (discussed in Chapter 28). For the Soviet player this will show which factories will automatically relocate and when (37.14).

- Toggle ground support: This button turns ground support on and off, the current choice is also shown in the middle of the second row.

- Shift and Control: Since many game functions require the player to use the Shift or Control keys these options are provided. If one is selected then it is on by default for all future game play instructions until it is removed. Use of these buttons is optional but may make some game operations easier to carry out.

The final option is to end the turn.

- End this Turn (Hotkey F12): Selecting this button ends the phasing side's player turn.

6.3. USING THE RIGHT CLICK OPTION

In WiTE2 there are often multiple methods to access information or to carry out actions.

Section 6.2 has discussed how to use the various tabs and information presented across the top of the playing area. A useful alternative is to right click on any hex.

Depending on the hex you select, the actual options will vary but can be broken down into actions and information specific to the hex or that allow you access the various in-game information reports.

Every version of the pop up menu will give you the hex location and terrain type. Equally you can centre the map on the hex you have selected.

In addition, you will see the name of both the country and the region where the hex is located.

6.3.1. Actions you can carry out

These, and the resulting display, will vary slightly depending on the hex selected.

Options for an empty hex

624

The theatre arrival hex will be used by all units ordered from the national reserve until a new target hex is selected (13.2.1). Note that units may not be able to arrive at the chosen hex due to stacking limits and the other relevant rules (13.2.1). So in some instances, this option will not be shown.

The other options will create either a new airfield or establish a fortified unit in the hex. Some options will cost you administrative points (9.2) so you will be asked to confirm your choice before the action is carried out.

If the hex is empty but contains a rail line then you may also create a new depot in that hex (there is a per-turn cap on the number of such depots that can be created).

625

Options for a hex with a named location or an existing airbase.

626

If you select a hex that contains a named location (i.e. a town, city or urban hex), depot or airbase you will see the name and an indication of the population size (town) or airbase size.

Depending on what is present, you can use the options at the top right hand side of the screen to adjust depot priority or access the location or airbase detailed screen. In addition if the hex contains an airbase, the airbase unit summary tab will appear on the right hand side of the screen if you have selected the hex by left clicking on it.

627

Clicking on the name (in this case the text Lublin 13) will take you to the detailed city display box (the same as clicking on the name on the top right corner of the map).

628

If the hex has no depot, the option to 'build depot' will appear. If the hex has an existing depot then the type (25.7.1) will be shown together with an option > moving the mouse over this will access a menu that allows you to change the priority (25.4.4) of the depot or to disband it.

If the hex has an existing airbase the option > will allow to move onto the detailed information screen, to expand the air base (unless it is already at the maximum size of 3) or to change the supply priority.

629

6.3.2. Information you can access

If you right click on any hex you can the move onto one of two further menus. Map information is a different way to change the information presented on the map (and all can be done by using the tabs at the top of the playing area or by hot keys).

Map information option.

Map information options are:

630

If you have any of these selected, it will be marked by an ‘x’ to the left hand side of the option.

Info screens option

This option mostly allows you to access much the same group of information screens as you can using the tabs at the top of the game area.

631

6.4. HEX POP-UP INFORMATION

Every hex in the map area will display a text box when the mouse cursor is located over it. This feature can be disabled by setting the hex pop-up delay to zero in the user section of the preferences screen (36.17).

If you enable different map views the precise information will change (usually to provide more information) and this section will concentrate on the data shown using the default map preferences unless otherwise noted).

Note the goal in this section is not to set out in detail how to read (or use) all the displays but to show what can be accessed. Where appropriate links are included to later sections of the manual for more information.

6.4.1. Basic information (always on display)

The following information will be shown for all hexes:

632

The country and region of the hex will always appear as either the second or third line (when a depot, town or airfield is also present).

Every hex on the map is rated for the quality of its road network (poor, average or good). The presence of an average or good road is also indicated by the hex art and can be seen more clearly if the road display overlay (7.2.6) is selected.

If the hex contains a rail line, then the owner and status of the rail line will be shown (7.2.5) as well as the amount of freight (usage) that has passed through that hex in this game turn. If the rail hex is damaged then the current level of damage will be shown (from 1-100) if you are viewing a friendly hex (this information is not shown for enemy hexes unless you have sufficient reconnaissance).

The pop up will also show the direction (using a compass) of any directly connected hex that also contains a rail line.

If the hex has a river in any hexside, then the display will show whether it is a minor or major river (or if the hexside is impassable) and in which direction (using a compass) the river lies. After the compass indicator will be a number from (0) to (9). This tells you how frozen (if at all) the river is (8.5.3).

If the hex contains a Victory Objective (Non-campaign scenarios): Information about points for victory objectives will be in the format xx/xxx, where the first number is the amount of points received by the applicable player every player turn for control of the hex and the second number is the amount of points the applicable player will receive for control of the hex at the end of the scenario.

633

6.4.2. Hex dependent information

The information will also vary according to what is in the hex.

If the hex contains an airfield the information will include:

The name of the airbase, its size (in brackets how much of the potential capacity is in use) and how damaged with a number indicating the level of current damage.

If there are air units present (in areas you control these bases will show as a green), then a list of the formations by name, number of ready planes and types of planes.

634

If the hex contains a fort, then the current level of the fort (from 1 to 5) will be shown. As units improve a fort a percentage in brackets will be shown indicating how much progress has been made towards the next level.

If the hex contains a depot then the pop up will display: type (25.7.1); number of trucks; and, the total freight currently stored at the depot as well as other information about the workings of the logistics system (6.9)

635

Beneath the depot, the following information is shown:

- Received: # – % where # is the freight received during logistics phase and % is the percentage of total depot capacity that was received.
- Stored # – % where # is the current freight stored, (#) is the amount of freight that was at the depot at the start of the logistics phase, and % is the percentage of capacity that was stored at the beginning of the logistics phase.

- Sent Out: # is the amount of freight sent out from the depot during the current turn.
- Capacity: # is the maximum amount of freight that can be stored at this depot
- Below that will be information on where the freight was sent from (in the shown example all this came from Bryansk but in some situations two or more locations will be listed

If the hex has been set for units to arrive from the Reserve Theatre (13.2.1), the pop-up display will indicate this as:

635a

If the rail repair mode is enabled, then such a hex will be marked in yellow as:

635b

6.4.3. If a unit is present

If a ground unit is present additional information will be shown and a detailed separate pop up on the types of equipment in the complete stack.

636

For combat units, you will see the unit name (attack CV, defensive CV and percent of ToE), MP (number of current movement points). If the unit has a directly attached support unit (21.5), this will be listed just below the unit title of the on map unit.

If applicable, information will also show for how long a unit is frozen or till it is withdrawn.

If a HQ is present you will see the name, the number of combat units (CU) it commands, the number of support units (SU) attached to the HQ and its current movement allowance (MP).

637

In addition, it unit(s) are present, then hovering over the hex will see a summary of the elements in the hex appear at the base of the screen.

637a

6.4.4. Information on player activities

If present, you will see both enemy and friendly interdiction values in a hex. This may show for one or both sides as Axis (number) Soviet (number).

638

Note that while this refers to air interdiction, in this case the most likely reason for the low level of Soviet interdiction is partisan activity (13.4).

If a battle has taken place in the current player turn then Combat Delay will show at the bottom of the pop up.

639

6.4.5. Impact of Fog of War

If you place the mouse on a hex in enemy territory you will see the basic information and any rail usage and the state of the rail line.

Depending on your level of reconnaissance you will always know if there is an airbase present and you may see how many planes (by type not detail) are present. The pop up information will also tell you when you last flew a reconnaissance mission over this hex and how high is your reconnaissance level.

If you select a hex with a known enemy unit the amount of information will vary according to the detection level. This cannot exceed det:10 at which stage you will know the unit title, its attack and defence CV and the detection level. At lower detection levels this information may become less reliable or disappear altogether.

6.4.6. Mode dependent information

If you select different map modes the information presented may change. This section only discusses a few of these variations.

Display Units. If you toggle the unit display off then information about combat units will not appear on the hex pop up.

In the Action (Move) phase, if naval transport (F3) or amphibious transport (F4) mode is selected, then the impact of control of sea hexes on those modes of travel will be indicated as follows:

- Friendly controlled – nothing displayed
- Neutral – SHIPPING CONTESTED
- Enemy controlled – SHIPPING HEAVILY CONTESTED
- Enemy amphibious HQ unit and adjacent hexes – SHIPPING PROHIBITED

Factory Locations: If ‘View Factory Locations’ has been toggled on, than the hex pop-up will include information about the specific factories in the hex, to include, port, manpower, railyard, resources and other production factories. Factories that are not yet producing will be listed. Any factories with damage will have the

percentage displayed in parentheses next to the number of factory points of that type in that location.

640

If you are playing one of the limited area scenarios, some of this information will be missing as it is not relevant to gameplay.

6.4.7. Air base display

The information shown for airbases will vary according to ownership and whether or not the logistics display tab has been selected.

Friendly airbases, no logistics tab:

- Green – Has air units
- Green with red circle - Airbase has air units, but less than 50% of needed support or over 100% of airfield capacity
- Yellow – Empty but with air units ordered to transfer there
- Black – Empty airbase
- Orange – Under construction airbase not yet size 1

641

In this example, air base 1 has planes and is under capacity, 2 is over capacity, 3 is empty and 4 has just started construction.

Enemy airbases, no logistics tab:

- Green – Has air units and has been covered by reconnaissance flights this turn
- Blue – Had air units when last covered by reconnaissance flights but has not been covered by reconnaissance flights this turn
- Black – Empty when last covered by reconnaissance flights
- Yellow – Has never been covered by reconnaissance flights
- Orange – Under construction airbase not yet size 1

Friendly airbases, when logistics tab selected:

- Red – Fuel or ammo <=40% of need
- Orange – Fuel or ammo <= 55% of need but neither <=40

- Yellow – Fuel or ammo <= 70% of need but not neither <=55
- Green – Fuel and ammo >70%

Enemy airbases, logistics tab selected:

- Black – All

If the air base is overloaded then it will have a red outer circle in addition to the indicators above.

In all modes, a pop up box will appear if you hover over an enemy airbase telling you when you last flew reconnaissance over the hex and the types of planes (fighters, bombers etc.) that were there at that time.

642

This is taken from T1 where the Axis player is given information about Soviet air deployments nearer the border. Note the higher detection level (10.2) at Kaunas means the Germans are aware not just that Soviet planes are present but what they consist of.

6.4.8. Air Operational Group and Air Command display

The information on these displays is discussed in more detail in chapters 16 and 17 as it needs to be placed in the wider context of how to manage the air war.

When displayed, the information on the Air Command/AOG labels will vary according to how the map is zoomed, as:

- Max-Out zoom – Show small Army and Corps AOG labels only
- Out zoom – Show small AOG labels for all AOGs
- Medium zoom – Show large AOG labels for Army AOGs, small for others
- In zoom – Show large AOG labels for Army and Corps AOGs, small for low level AOGs
- Max-In zoom – Show large AOG labels for all AOGs

When shown at a level of detail, each AOG label will show:

- Number of Ready Fighter a/c (includes down the chain of command)
- Number of Ready Bomber a/c (includes down the chain of command)
- Number of Ready Utility a/c (includes down the chain of command)
- Stance of AOG

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- Mission setting (rest/day/night/day&night
- HQ Follow (small counter coloured like formation being followed)/Naval Ops or no icon if neither
- Percent of Max a/c in the AOG (down the chain) that are ready
- Coloured Bar that indicates the Percent Ready with different colors from Green (best) to Red (worst)

642a

This example shows the AOG labels when zoomed in.

The colours that border the label, indicate:

- Yellow – selected
- Red – all air units under this AOG are depleted (depleted for Axis is < 1/4 of max a/c of unit is ready, for Soviet < 1/3)
- White – all air units under AOG are set to rest
- Green – normal/none of the above

When air bases are displayed, they will be coded as:

- Yellow – at least one item is relatively low
- Red – depleted of at least one item (ammo/fuel/capacity)
- Green – normal/none of the above

642b

Here Milowitz is relatively short of ammunition.

For Air Groups, the codes are:

- Yellow – selected
- Red – depleted (depleted for Axis is < 1/4 of max a/c of unit is ready, for Soviet < 1/3)
- White – rest
- Green – normal/none of the above

Finally when you roll the mouse over an AOG it slightly expands in size. When you roll over an Army or Corps AOG, AOGs that are not directly attached to the AOG will become transparent.

If any part of an air group has been ordered to move (but will complete the move at during the logistics phase) then a > symbol is put next to the name of the AOG. When viewing units under an airbase label on the map, units that are leaving the airbase have a < symbol.

642c

In this case some of the 305 ShAD (the 430 ShAP) is ordered to deploy to Ruzyn. Since that air base lacks fuel, ammunition and supporting manpower (the red symbols), ideally the move is delayed until the next logistics phase. This future move is marked on the AOG displays with the arrow symbols.

6.5. INFORMATION ON THE COUNTERS

The UI allows you to alter the information displayed on the various counters and to access further information from the more detailed screens.

6.5.1. Counter Display

For ground combat units you change how some of the information is displayed. Assuming you are at zoom levels 1 or 2, then each counter will show:

- Its national affiliation (the dominant counter colour), some units such as German SS or Soviet Guards formations are coloured differently to other units of the same nationality;
- Its size (the labels above the unit box) (34.1)
- Its type (using the standard NATO symbols) (34.2)

Below this the display can be varied.

The default option (assuming you selected the standard set up options) is to show the attacking CV and Movement allowance.

You can also change what is displayed by using the ‘z’ or ‘y’ keys.

Selecting ‘z’ will toggle through two modes: attack CV-movement; attack CV-defend CV (note any enemy counters will always display this mode).

In any of the modes you can change the view again using the ‘y’ key. In this case the information will toggle between the CV/MP information and the title of the unit at the top of the stack. Selecting ‘y’ again will return you to the CV/MP display.

643

6.5.2. HQ units and command links

If you select a HQ, this will both highlight subordinate units (21.11) and also show the links using on map lines. The line linking to subordinate combat units is show as blue, to subordinate HQs is in turquoise and to the higher HQ in orange.

644

645

In addition, you can view the command system using the options to show Command Efficiency and Command Quality (36.5) and these will provide a rough view of the effectiveness of your OOB and command arrangements.

6.5.3. Unit Modes

If this option is selected then the status and mode of units will be indicated on map.

Isolated units will be bordered in red, units in Refit mode (26.3) will be bordered in blue, Withdrawing units (27.4) in orange, Reserve units (23.7) in purple and Static units (21.8) in white while Green is used to indicate newly arrived units.

6.5.4. Information displayed on the Combat Unit box

Selecting a hex with units in it will display the unit bar on the right hand part of the game screen. The unit bar contains a separate unit box for each unit in that hex.

646

If a unit is currently selected, its unit box will have a yellow outline (so in the example above the Infantry Division is currently selected and the Corps command not).

The unit box provides a range of information. It is best thought of as being divided into a top half (where the information is similar regardless of the unit type) and the bottom half where the display will change substantially depending on the unit type.

Upper Portion

Unit Name: Selecting this will display the unit detail window (37.3). The unit detail window can also be displayed by right clicking in a blank part of the unit box.

HHQ: Name of headquarters unit that unit is attached to and command range information in the format (x/xx) where the first number is the range in hexes of the unit from its headquarters unit and the second number is the range in hexes over

which the applicable headquarters unit can provide that unit with ground element support squads (21.2.2).

Note, this range is different to the effective command range. In effect a HQ can provide support squads over a far longer range than it can provide either effective command or combat support units to help out in combat.

Selecting the HQ name will shift map view to centre on the headquarters unit and change selected unit to that headquarters unit.

So in the example above, the infantry division is within 0 hexes (out of 5 if they were to be in command) of the relevant HQ (in effect they share a hex with their HQ) and the XXVI Corps is within 12 (out of 15) hexes of the 18 Army HQ.

Unit Graphic: Displays the same information as on the counter in terms of combat and movement factors. In addition a movement status is in the small triangle located in the right corner of the unit counter. If a unit has not moved, then it will be a white triangle with a smaller black triangle inside. If the unit has moved and still has movement points remaining, there will just be a white triangle. If the unit has expended all of its movement points, there will be nothing in the right corner.

On the top left hand side of the counter display will be the same 'soft' factor (6.5.11) selected for all units on the map.

Lower Portion

The information here will vary according to the unit type.

For Ground Combat Units, the following information is displayed:

Unit mode. Units can be in ready (the default setting), reserve (23.7), refit (26.3), unready or depleted modes. Unready and depleted units set to refit will be marked as refit.

If the unit is can be airdropped (23.9), and is currently located on a hex containing an airbase, the option to 'target' will appear. This will allow the player to set up an airborne operation for subsequent turns.

Static Toggle Button (21.8): If unit is in static mode, 'STATIC' will be displayed under unit graphic and unit mode button will be greyed out. If an already static unit is eligible to be reactivated, then the 'REACTIVATE' button will be displayed. If the unit is eligible to be converted to static status this option will appear on the unit counter.

If the unit is eligible to enter (or create) a city fort, this will be indicated on the unit counter (20.6).

SMPs (22.4). The number of Strategic Movement Points is shown directly beneath the counter after the symbol ~. If the unit has not moved by rail or sea this will

remain at the default 200. If the unit is moved normally the SMP will drop according to the distance moved. If the unit is not entrained or at sea then unused SMP will be used to help recover lost combat preparation points.

CPrep (23.2). The Combat Preparation Points currently stored by the unit (a value from 0 to 100) is shown after the crossed swords symbol.

On the lower left hand side will be displayed the number of men, guns and tanks in the unit including any SUs directly attached.

On the lower right hand side will be displayed the proportion of needed supply, fuel and ammunition currently held by the unit.

6.5.5. Information displayed on the Air Base Unit box

While air base units are fixed on the map, in some ways they act as a particular form of combat unit.

647

On the top left hand side, an air base unit will display the selected soft factor.

The following information is displayed in the lower portion of the display.

- Ready Planes/Total Planes;
- Ready night fighters, fighters and fighter bombers;
- Ready tactical and level bombers;
- Ready support planes (recon, transport, patrol and torpedo planes).

In addition, outside the unit display will be a list of the individual air formations at that airbase. If you click on the name of any of these you will be taken to the detailed information for that air unit.

The air command that is responsible for sending support squads to the airbase is also shown. This simply reflects which air command has the most planes at that base and will vary as air units are moved on the map.

6.5.6. Information displayed on the Ground HQ Unit box

Error! Bookmark not defined.

Ground HQs are the corps, army, front, army group and higher command HQs used to organise your Order of Battle.

At the top is the unit name and the HQ it reports to. The numbers after this tell you how many hexes this higher level command is distant (so 5 in this case) and how far it can be and still provide some command functions (so 45 in this case).

On the right is an image of the commander officer and mousing over this will bring up an average leadership score for them (15.3). Clicking on this image will take you to the leader display (37.7) and you can use this to change the commander if you wish.

648

For these units, the following information is displayed:

Supply Priority (25.8): Clicking on this will open a drop down box and this can be set to a desired value between 0 and 4.

Assault Mode (21.11.2). Whether or not the command has been set to assault mode (this is shown for Axis armies or Soviet Fronts only) but will affect all HQs that report to that command.

SMPs (22.4). The number of Strategic Movement Points is shown directly beneath the counter after the symbol ~.

Com Report. Clicking on this will take you to the section of the Commanders Report that details all the units that report to this particular HQ.

On the lower left hand side will be displayed the number of men, guns and tanks in the unit. Note this will include the values for any Support Units directly attached to the HQ.

On the lower right hand side will be displayed the Command Points (next to the tank symbol and will show used command points:command capacity) of the unit (21.11.6), and the proportion of supply (including ammunition) and fuel for all units under that HQ's command at the moment (this will possibly change as units move or fight during the Ground Phase).

6.5.7. Information displayed on Air HQ Unit boxes

For Air HQ Units**,** there are some small differences. It is possible to access the air doctrine screen (17.4.3) for that command from the unit tab and this replaces both the 'assault' indicator and the commander's report tab on ground HQs. Otherwise the information is similar to that shown for a ground HQ.

649

If the show AOG filter is selected (and this will be done automatically during the air planning phase), then information about the wider layout of your air force will appear on the game map.

650

Full information on these options is in section 16.3 that covers using the AOG system to manage your air force.

6.5.8. Information displayed on Naval HQ Unit boxes

For Naval HQ Units**,** again there are some small differences. On the lower right hand side is an indicator that allows you to 'target' an amphibious invasion in a future turn (if the HQ is currently in a port). Below this is a measure of the damage incurred by the naval assets in the command (a range from 0-100).

651

The target button is used to set the amphibious invasion hex for the amphibious HQ unit and combat units stacked with it and will change to display the coordinates of the current target hex and add text to display the current number of preparation (P) points once a target is selected, and can be pressed again to change the target.

The invade button will display once the amphibious HQ unit has the minimum required 50 prep points.

Selecting invade will take the map to F4 mode.

6.5.9. Information displayed on the Rail Repair HQ Unit box

For Rail Repair HQ Units)**,** again there are some small differences. Beneath the counter you will find the values RRC and RRV.

652

Rail Repair Capacity (RRC) is a measure of how much rail repair capacity the unit has left. If you can repair a rail hex, click on this number and the hex will be repaired for the next turn. In the air planning phase the RRC value will be shown as '–'.

Rail Repair Value (RRV) is a more permanent measure of the intrinsic level of engineering assets in the unit.

6.5.10. Multiple Hex Unit Selection

If you select units in multiple hexes in preparation for an attack (23.4.3) then a full list of all the selected units will appear on the right hand side. In this case a small box will appear for each unit listing the unit CV and movement points.

If the selection includes any non-combat units then the unit counter icon on the left will not be shown.

You can deselect any of the other units by left clicking on the unit icon and they will be removed from the attack. A unit can be included also by left clicking.

653

6.5.11. Display Soft Factors

This button, which is located on the far right of the third row of the menu tab toolbars (6.2.3), allows one of seven different factors to be displayed in the left corner of the unit counters. If the soft factor button is depressed, a drop down list of the options will be shown as:

654

The top option will mean that no display option is chosen, the other options are in order:

Soft Factor Summary		Color Code				
Symbol	Soft Factor	Bright Green	Dark Green	Yellow	Orange	Red
655	Morale	>85%	71-85%	56-70%	41-55%	<41%
656	Experience	>85%	71-85%	56-70%	41-55%	<41%
657	Supplies	>85%	71-85%	56-70%	41-55%	<41%
658	Fuel	>85%	71-85%	56-70%	41-55%	<41%
659	Ammo	>85%	71-85%	56-70%	41-55%	<41%
660	Number of Support Units attached to a Combat Unit	0	Not used	1	2	3
660	Number of Support Units attached to a HQ Unit	0	1-6	7-12	13-18	19+

661	Supply Priority	4	3	2	1	0
661a	Combat Preparation	100%	75-99%	50-74%	25-49%	<25%
661b	Fatigue	<25%	25-49%	50-74%	75-99%	100%

6.6. CHANGING MAP DISPLAY MODE AND IMPLICATIONS

As noted above, not only does changing the map display alter the information available it can also alter the actions you can take or how they occur.

6.6.1. Show Battles

If this mode is selected then no other actions can be undertaken until this display is removed.

6.6.2. Show Rail Damage

If this mode is selected then the movement pathing routine (i.e. showing you the movement costs along a chosen move path) is disabled. The units will still move to a selected destination (if they can reach the hex) and will simply appear in that hex regardless of whether you have the 'show move' (36.17.1) option selected or not.

6.7. CHANGING THE COUNTER ORDER

If you repeatedly left click on a stack of units, this will alter the one that is shown at the top of the stack.

Depressing the shift key and left clicking will select all the units.

Equally units in a hex can be selected and deselected as set out in 6.5.1.

6.8. INTERPRETING THE INFORMATION ON THE MAIN MAP AREA

The sections above have identified the various ways you can change the information on the map (including as displayed on the counters). Later chapters in the manual will provide detailed explanations on issues such as logistics (chapters 25-28) so the aim here is to enable you to interpret what you are seeing when you use the various display options.

6.8.1. Zoom Level

The zoom level chosen will both influence how much of the map can be seen and what information is shown about on map counters and the on-map displays.

At Zoom levels 1 and 2 ((Max-In and In)) the 'Y' key can be used to display different information on the counters (attack-move; attack-defend or the unit title). At zoom level 3 only the unit type can be seen and at zoom levels 4 and 5 (Out and Max-Out) all the information is blank (all you will see is a rough indication that a unit is on the map).

Soft factors and movement status can be viewed in zoom levels 1 through 3 and unit type and size at zoom levels 1 through 4. At zoom level 5, only unit nationality and whether the unit is German SS or Luftwaffe or Soviet Guards will be displayed by the colour of the unit.

Rail lines will also not display at zoom level 5.

In each case, the centre of the display will be determined by the location of the mouse cursor.

6.8.2. Combat related information

Two different types of combat related information may be accessed by a pop up box.

If the F11 (show battle sites) tab is depressed than the relevant set of battles (chapters 19 and 23) will be shown on the map.

Hovering over one of these will tell who attacked, and with how many men, guns and tanks as well as any air activity. The same information is then shown for the defender.

Below this will be the losses and then the outcome.

662

If more than one battle took place, only the first can be seen using this pop up but you will see how many battles took place on the top of the pop up screen.

The second is as a predictor when you are planning a ground attack.

With at least one friendly combat unit selected, locating the cursor over an enemy unit that the friendly combat units are eligible to attack displays a possible battle icon (hasty or deliberate), the following text is added to the pop-up text:

- Attacker CV: 45.1
- Defender CV: 23.2

The predictor gives you the adjusted CV values of the units that accounts for all known factors (terrain, forts, dense modifiers, weather, etc.) with the exception of leader values. This value is fogged up for the enemy if FOW is on. Since hasty attack CV values are x1/2, this will be reflected in the total if a hasty attack is what is showing (i.e. shift key isn't held down for deliberate attack). The main advantage of this is that since it knows what hex is being attacked, all modifiers can be applied correctly based on target hex(side) terrain and weather.

663

Players Note

The predictor is an important tool as it's the only way to know how a unit's Combat Values are going to be impacted by the terrain in the hex being attacked.

6.8.3. Displaying Air Directives on the Map

If this option is selected either all air directives will appear on the map if the F1 button is depressed or just those relevant to the air mission type (Ground support, Ground attack, Strategic Bombing, Naval interdiction, Air Superiority or Reconnaissance).

How the air directives display will depend on both the type of mission, if the mission is currently active and if escorting fighters have been assigned.

On map display of Air Directives

Ground support missions will show as a single hex box surrounding a HQ that has been assigned ground support. The hex will also be shaded green.

Other missions will be shown on the map as a box of one or more hexes wide.

Within the box, if fighters have been allocated, the area they can provide escorts to will be shaded green, areas outside their escort range is in purple. If no fighters are allocated, then the box will be purple. If none of the assigned bombers can reach a particular hex, the background will revert to the current map mode. If none of the air groups that are available can reach any hex in the AD, then this background will have a reddish hue.

If you click on the mission type and air command (top left hand corner of the mission box), you will also be able to access the air directive screen on the right hand side of the map screen.

664

This shows some of the default missions for Army Group North on Turn 1. Note the Ground Support mission is linked to the relevant HQ. For the other missions, the

green hexes are where the assigned escorts can reach and purple is where only the bombers or reconnaissance planes can reach.

If you zoom into level 3 or closer, the mission summary box (e.g. GND ATTACK) will expand to show which air command is in charge and how many planes have been assigned.

When the mission is being executed, green lines are the route taken by any escorting fighters and purple lines those by the bombers. If planes must first move to a staging base, their direction will be shown as a black line. Any intercepting fighters will be shown with a green line.

Active and Inactive Air Directives

If the air directive is inactive the surrounding box will be black or white and the area within the box will be left uncoloured.

Air directives can be inactive if they target an invalid area (such as reconnaissance in your own controlled hexes), there are insufficient planes in range or the player has opted to suspend the mission for this turn.

Accessing further information about Air Directives

If you left click on the text at the top left hand corner of a box (mission type and air command) you will access the detailed air directive creation screen. This will show you how the air groups are being allocated (see section 17.4.2 for the options) and how many planes can reach the target box.

664a

Information on how to interpret this information and to change the composition of your air directives is in chapters 17 and 18.

6.8.4. Displaying Air Operational Groups on the Map

By default, the game map will show the location of Air Operational Groups during the air planning phase and this map mode can be selected during the ground movement phase (here it is useful if you are manually redeploying your air units (17.3.5)

665

On map information will show you the rough deployment of each air command level.

In addition, all AOGs are colour coded to show which air HQ controls them.

The example above shows the Luftwaffe at the end of August 1941 (so many air units are well behind the front due to supply shortages). 3 top level Air Commands

(16.2) are in use: Luftflotte 1; Luftflotte 2; and, Luftflotte 3 and each has one or more Flieger Korps and these in turn have Air Operational Groups (16.3) reporting to it. The location on the map is at the centre of the spread of airbases in use by that command (note that since the map is zoomed out, the individual AOGS are not shown in this case).

Clicking on any Air Command will bring up the detailed air command tab on the right hand side (37.16.4) and provide more information about the airbases used to base the attached air units

666

In this case, VIII FleigerKorps has been selected. On map, you can now see where its component AOGs are based (again this is shown at a centre point of the air bases in use). The right hand screen now shows the Air Command HQ tab and below that a list of all the air units and airbases they use. Note that for example StG 2 is spread over two airbases.

> ***In terms of game play this layout reflects a desire to ensure that supplies are going to the front line formations. The advanced fighter AOG provides air protection for the combat units and for any bombers being redeployed. If the bombers are needed, it will take a turn to bring them up and have them combat ready at their new bases.***

More information about how to interpret this information and to manage your air assets is in chapters 16-19.

6.8.5. Hex Selection and the Unit Counter Border Colour

In addition to the information above, selecting a unit will change the information provided on the map.

Selecting more than one unit

For the phasing player, selecting a hex in one of the movement modes (F1-F4) with a unit present will also select that unit. If there is more than one unit in the hex, a single left click on the stack will select only the top unit. Repeated left clicks will select the next unit on the right unit bar and move it to the top of the stack on the map. Double left clicking on the stack or using the Space bar will select all the units in the stack.

Relationship between selected unit(s) and other counters

As you select units you will see other units on the map become highlighted and their surrounding border change colour.

The box around the selected unit(s) will change to purple.

In addition, other units in other hexes on the map and deselected units in the same hex will change their border colour according to their relationship to the selected unit(s):

Next Higher Headquarters Unit: Orange

Peers: Yellow - these units all share the same HQ as the selected unit(s)

Subordinates: Blue or Red – these units directly attached to the selected unit.

If units are less than 5 hexes from the selected HQ they will be shown with a blue border. If they are five or more hexes away then the border will be red.

667

Here a Soviet army has been selected. All its subordinate units are in command range (outlined in blue), other HQs in the same Front are outlined in yellow (as would any combat units that reported directly to the Front HQ), the Front HQ is outlined in orange. The connecting lines match the colour surrounding the relevant units to show the direct command relationships.

A broken down combat division or corps will be displayed in a slightly different way. If one part is selected, then all the others will have a border colour of blue rather than the yellow normally associated with peer units (even if they now report to a different HQ).

668

Here a Soviet tank corps has been broken down and one element now reports to a different HQ. However, all 3 brigades are highlighted in blue in order to identify them on the map as coming from the same original formation.

Note that this is very useful when seeking to organize your on map forces. However, if you select units associated with multiple commands or HQs at different levels in the Order of Battle the resulting display can become very hard to read.

669

Here, units of 2 separate Soviet armies have been selected (so two army commands are highlighted in orange). However, all the combat units in the two armies are shown in yellow as all they have in common one or the other shared HQ.

6.8.6. Movement path

When you select a unit the possible movement paths will be shown by a lighter colour than the rest of the map (if you have set the show movement path option under game preferences).

In enemy held territory the identified path(s) will be accurate but not complete. In effect you can move to any hex shown but maybe be able to move to other hexes. As you move a unit and reduce the fog of war you may find new movement options appear. Equally you may find yourself moving adjacent to a previously undetected enemy unit.

Note that under some circumstances you can lose MPs during a turn. This is most likely to happen if you exit a hex with a high level of enemy air interdiction and in this case you may not be able to reach a hex that was shown earlier in the movement phase. This can also happen in the opening turn of a 1941 scenario if you pass the boundary dividing action in Bielorussia from that in the Ukraine (11.2.2).

670

The move options are shown as:

- No Shading – Friendly hex that can be moved into.
- Light Grey – Pending friendly hex that can be moved into.
- Light Red – Enemy hex that can be moved into.
- Very Dark Grey – Movement to that hex is not possible.
- Very Dark Red – Enemy (or impassable) hex that the unit cannot move into.

In the example above, the quickest (in MP) movement path is shown for the unit and the dark grey hexes to the west of that location indicate it lacks the MP to move into that zone.

6.8.7. Factories

If this mode is selected, factory locations in friendly hexes will be displayed.

671

This shows the factories in the Moscow area. Hovering over any hex with a green production symbol will show information about what is produced and how large the relevant factory is.

If you want more information about the factories, this can be accessed either via the city display (37.13) or selecting the Factory information tab (from the ‘INFO SCREENS’ tab).

Further information on how to read these tabs is in chapter 28.

Factory symbols will also display on the map when a Strategic Bombing air directive is active (18.1.5). The map pop up information will provide data on the type, size and damage of the factories in a hex (subject to fog of war).

6.8.8. Reconnaissance and Interdiction

View Air Recon Levels: When enabled, enemy controlled hexes are shaded based on current tactical air reconnaissance values. The larger the recon value, the lighter the shade, with the shades ranging from very dark (no recon value) to clear (large recon value). In addition, numerical air recon values greater than zero will be displayed in the hex pop-up text. Air interdiction values (see below will also be displayed in the hex pop-up text.

View Air Interdiction Level: When enabled, air interdiction of ground hexes and air and naval interdiction of sea hexes will be displayed on the map area using a colour coded roundel symbol, brown for Soviet and grey for Axis, with a white aircraft.

The number in the roundel is the interdiction value divided by ten and truncated, so an actual value of 39 would be displayed as a 3. For ground air interdiction, only the phasing player's symbol will be displayed and information about enemy interdiction may be inaccurate.

672

This shows Soviet interdiction behind the German lines in September 1941. Only a few hexes (those with the 1 indicator) have enough to have a direct impact (38.7.2) but the red stars indicate there is some interdiction (above 0 but less than 1) in many hexes.

> ***This low level interdiction is most likely the results of Soviet partisan operations. In game terms, the main effect is to deny the Axis player Administrative Movement (22.2.1) in those hexes and this will mostly increase the difficulties of supplying the front line formations and bringing up fresh, rested, reserves.***

For air and naval sea interdiction, the symbols for both sides will be displayed for comparison purposes. The hex pop-up will display the numerical interdiction values for both sides in ground and sea hexes. Control of sea hexes will be indicated by shading with enemy controlled hexes shaded red, friendly controlled hexes unshaded, and contested hexes slightly darkened. Can be used in conjunction with naval transport (F3) or naval amphibious (F4) movement phase modes to determine hexes where naval movement will be contested (24.5).

673

This shows the naval interdiction off Riga after the German air phase on T1. A naval air directive has allowed them to take control of the hexes immediately around Riga (even where there is also Soviet interdiction the German value is at +2).

6.8.9. On Map display during the air execution phase

The air execution phase will be shown on the map in different levels of detail. If you set the combat resolution level to 1 or 0 then no battles will be shown during this phase.

In addition, you can set certain mission types not to be shown as battles regardless of the combat level (by default all reconnaissance missions are set as OFF) using the Air Directive screen (37.16.8). Equally altering the air execution phase (37.16.7) level of detail will alter the display. At the higher levels you will see the flight paths used by each air directive and the phase will be run more slowly At the lower levels, the only information shown will be any battles (if you have set the combat resolution high enough).

In effect, to see combat report windows appear during this phase, you must have a detail setting above None (and the actual AD not set to None), and a combat resolution message level of at least 2. The execution detail level will impact the number of messages that come up during the resolution phase.

You can use the F12 (battle location tab), the air execution phase summary and the information in the logistics event report (36.9.3) to review all the actions that took place in the air execution phase.

6.9. LOGISTICS

The map and supporting information screens can be used to display a great deal of information about the logistics system in WiTE2. On map there are three main ways to influence what is displayed:

- Select logistics from map information tab (or press ‘n’);
- Press the ‘8’ key (you need to be in the ground movement phase for this)

6.9.1. Logistics map information tab

If this is selected, you will see information about your depots and the current rail usage.

Depots:

Hexes with depots are marked on the map area with an inverted triangle and a white symbol denoting the type of depot (25.7.1). Type 1 depots (railyards) are marked

with a rail symbol, type 2 depots (that will import supply over a sea connection) with an anchor symbol filled In blue, type 3 depots (a port that can export freight) with an anchor and filled in white, and type 4 depots (national supply source) with a star.

674

In this instance, the bulk of the Soviet depots are based on rail yards (1), Osipenko is set to receive freight (2) and Eysk to send freight (3). Note that if you click on a port hex you can toggle it between receiving and sending use the top of the game screen (shown as an inset).

Depot supply priority levels (25.7) are indicated by a color coded number in the middle of the depot symbol with bright green=4, dark green=3, yellow=2, orange=1, and red=0).

The depot priority level can be opening the location tab, by right clicking on the hex and selecting depot to access the priority options or from the tab on the left hand of the top row. In the example above, Eysk can be changed from priority 1 by clicking on the depot symbol and selecting a new priority level from the drop down menu. This can also be done from the city view screen or using the right click drop down menus.

Bars are shown at each depot. The Green bar represents the amount of freight received during the logistics phase, the blue the amount of freight currently stored at the depot, the red bar the amount of freight that has been sent out by the depot this turn, and the black bar the total storage capacity of the depot (25.7.2).

Each segment of the bar represents 10k tons of freight, while the depot must have at least 100 tons to qualify to show any part of the bar. The maximum the bar will show is 20 increments which is 200k tons, so anything over 200k will display the same bar height.

Rail Usage:

Hexes with rail lines are colour coded based on tons of rail usage but only give a broad guide to the impact on the strategic movement point penalties in a hex. The exact usage of a given hex can be found by hovering the mouse over the hex.

> ***Remember that dual track rail lines have a capacity of 30,000 tons per hex compared to 12,000 for single track rail lines.***

675

Here the Soviet rail net around Kursk is heavily used due to a build up of forces. Most of the rail lines are shown as yellow, a few are orange (reflecting the extra

supply demands of the large air base at Schigry. The map pop up shows the usage of a particular hex.

> ***Note that what is shown is the residual usage after the logistics phase, this value reflects congestion that occurred and was not totally cleared, so will affect the next logistics phase. In effect, actual usage would have been higher than the 10,209 shown.***

Hex pop-up: If you hover over a depot, a pop up text box will appear with the actual numerical values used to generate the bars at each depot. Also included in parentheses next to the stored amount is the amount of freight that was stored at the start of the logistics phase. The hex pop-up text also displays the percentage of maximum capacity for the Received and Stored (at start of the logistics phase) values, as well as the capacity of the depot.

676

From the same area, Kursk is a key depot and is operating close to its capacity. The information also shows that it receives its freight from Moscow.

The deployment of the Soviet rail repair unit (the NKPS shown towards the bottom of the image) is important as it makes it more likely for freight to be sent to Kursk than any other local depot (25.7.9)

6.9.2. The supply net (‘8’)

This adds information about the supply lines between units and depots. Links between units and the main Depot to have supplied a unit are shown using a red line (but note that units may draw supply from more than one depot). Links between depots are shown as white lines (if overland) or blue (if any part of the path involves sea transport).

677

This shows the Axis supply net in Estonia. Both Talinin and Parnu are receiving freight by sea (the blue lines), Parnu can send freight onto Sonda and Narva (the white line) as they both are at a higher priority than Parnu. Talinin cannot send to another depot (a priority 4 depot cannot supply another depot) but is supplying a number of Axis combat formations (the red lines). These concepts are covered in section 25.7 in more detail.

As a gameplay note, it might be better to lower Talinin to priority level 3 and then it could send its supplies onto the priority 4 depots closer to the front line. On the other hand, setting it at 4 means it attracts the bulk of any freight being shipped in the Baltic.

6.9.3. Supply Priority Map View

This can be accessed from the Map Information tabs. It provides an overview of the relative supply priorities of combat units and headquarters.

678

In this map view, units surrounded in orange are at priority 1, yellow is priority 2, dark green is priority 3 and light green priority 4. If any units were at priority 0 they would be outlined in red.

6.9.4. Further information

If you are trying to understand the flow of supplies to your units in more detail then the following secondary screens may provide additional information:

- The supply details tab on the detailed unit information screen (37.3) will show how the unit tried to access supply in the last logistics phase and may give you an idea why it failed to do so;
- The logistics log (36.9) will show information both on supply distribution and production;
- The commander's report has two screens that may be useful. The 'units' tab (35.2.2) can be set to show either the current supply levels for a unit or the amount of supply it received in the last turn. The 'locations' tab (35.7) can be set to show the freight stored in every depot and the location of your trucks;
- The turn summary chart (36.16) can give a quick overview of any supply problems. Clicking on the 'supply alerts' button will mean that any units with less than 75% of their needed supply are shown on the map bounded in yellow.

Interpreting this information is complex and this level of detail is not usually needed for game play. You will also need to consult chapter 25 to interpret the displays but this may enable you to ensure your limited resources are being allocated in the most optimal manner.

6.10. THEATRE BOXES

WiTE2 uses a number of Theatre Boxes (13.1) to reflect the commitment of troops away from the main area of operations.

Theatre boxes appear on the map if you select Ctrl-t (or right click on any hex). They contain three tabs.

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Status. Shows the land and air combat values of the units currently deployed in that theatre, the numbers of fighter, bomber and patrol aircraft. If you click on the [+] key, the full break down of how this cv is made up will be shown.

You will also see the number of combat divisions allocated.

The amount of freight that was received and, in brackets, needed. The number of trucks deployed to that theatre permanently and the number used to supply units in that Theatre.

Finally the amount of replacement ground elements and aircraft received by that Theatre.

The second and third tabs will show more detail on the **ground and air units** in the theatre.

The amount of detail for each individual unit shown will depend on the map zoom level.

The example below is at the most detailed level

680

Units in the Theatre boxes can be handled as units on the map. Clicking on a unit will bring up the detailed unit tab but with the HQ related information missing.

You can also access the units in a Theatre using the filters on the Commander's Report. If you want to send them to another Theatre or the main map (13.3.4) it will often be easier to do it this way.

6.11. THE JUMP BOX

This can be found at the bottom left of the screen (this option is enabled by default but can be turned off using the preferences screen – 2.6.3). The main part of this display shows the entire game map and indicates the location of the counters. Clicking on a portion will take the player to that sector.

At the top are letters which will vary according to side. The Soviet player will see N,T,E,R, and the Axis player W,N,Fi,R,G,Af,It,B.

Clicking on any of these letters will take you to the appropriate theatre box (13.1). Each letter also has a colour coded triangle. This indicates whether the required assets are in that Theatre to avoid penalties.

Since each Theatre has separate ground and air requirements (13.3.2), this indicator will show the status of the worst (so if the ground requirement is fully met but the air requirement is only 50% met it will show that).

The colour codes can be interpreted as:

Light Green > 119.9

Dark Green > 100 and <= 119.9

Yellow > 80 and <= 100

Orange > 60 and <=80

Red <= 60

681

In this case the Soviet Northern Theatre more than meets the requirements for both air and ground assets. It is shown in green on the jump map and this situation can be cross-checked with the detailed Theatre box display.

6.12. THE WITEPEDIA

The WITEpedia (36.14) can be accessed via the info screen pop up if you right click on the map or from the information tabs at the top of the screen.

A short report will be provided on the activities of most combat units in the game, leaders and other items. The report will also include a clickable link to other web resources discussing the particular topic.

7. MAP AND TERRAIN

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Focus:

This section provides more information on the types of terrain (physical and human) on the game and how ownership is determined. It also covers the impact of Zones of Control and stacking on movement.

Key Issues:

- The different types of terrain in the game and their effect on movement and combat;
- The different ways in which control of hexes is modelled and its effect on the game;
- The different types of Zones of Control and their impact on the game;

The map displays the physical and political features of the area where the German-Soviet conflict mainly took place. The map extends from Siberia to the Atlantic and from the Arctic Ocean to the Sahara. Not all this area is playable in the campaign games and the shorter scenarios will be played in more limited areas.

The map includes both physical and human features as well as the rail networks crucial to supply both armies. A hex grid is used to regulate movement and combat and this can be turned off using Hotkey- Ctrl-g.

7.1. MAP AREA

Each hex on the map represents an area of 10 miles across and is classified as one specific type of terrain, though there may be additional features present in the hex or hex sides.

Rivers and less than full hex lakes follow hex sides and can slow or block movement across applicable hex sides.

Hexes may contain smaller towns, which can have factories, but do not normally have any terrain effect. Cities will offer substantial defensive bonuses.

Hexes may also be defined as coastal, allowing for the presence of ports in towns, city and urban hexes as well as naval movement.

Rail networks are represented by rail lines in hexes, which are used for strategic movement and supply.

Each hex is graded according to the quality of the road network and this has an impact on movement (38,6) and supply costs, especially in constricted terrain or during periods of poor weather.

7.2. TERRAIN

Terrain types and features are represented on the map area and can affect movement, combat and supply. See section 22.3 for impact on tactical and strategic movement and 23.5 for the impact on combat. Movement and combat effects are also summarized in appendix 38.6.

7.2.1. Types of Terrain Hexes

Each hex on the map is classified as having one dominant terrain type. By default hexes are treated as clear unless other terrain is present.

All terrain except clear, sand, desert, ferry and water hexes is considered covered terrain for air reconnaissance purposes (18.1.6).

Type	Typical Image	Notes

Part 2: The Playing Environment

Clear	**701**	
City	**702**	
Urban	**703**	
Heavy Urban	**704**	
Light Woods	**705**	This image will vary according to the game season.
Heavy Woods	**706**	This image will vary according to the game season.
Rough	**707**	
Mountain	**708**	
Swamp	**709**	
Tundra	**710**	
Water hexes: Ocean/Sea/Lake	**711**	No tactical movement, but strategic naval/amphibious movement and supply trace possible
Impassable Water hex	**712**	Can become passable if frozen or if the moving player owns both sides
Impassable hex	**713**	These are either in neutral countries (as shown) or allocated to one of the Theatre Boxes for game play purposes. In addition some parts of the map are out of bounds for certain nationalities (Axis Allied formations are mostly limited to the Ukraine).

7.2.2. Terrain Features

The following terrain features can be in addition to the terrain type in a hex. Some are purely political features, but others can impact movement, combat and supply.

Coast: Any type of terrain bordering ocean and sea water hexes. Coastal hexes can be used for naval transport if a friendly port is located in the hex and may be the target of an amphibious landing (24.7).

Port: Found in some town, city or urban locations in coastal hexes. Ports generate naval and amphibious transportation tonnage capacity as well as naval interdiction points.

Ferry: A special type of sea water hex that allows movement between two land hexes separated by the ferry hex.

714

This shows the Kerch straights between the Crimea and Krasnodar regions.

Railroad: Rail lines run through hexes, with undamaged and linked rail lines forming a rail network that serves to link each sides supply grid.

715

Note that all rail lines are either double track lines or single track (with much lower capacity). In the case above the line in Melitopol is a double track line, the two hexes at the top are single track lines.

Roads: Each hex has a road network ranging from poor to good. This can be seen by the indicative hex art, using the display road network filter and by using the hex pop-up.

716

The left hand image is the normal map view showing hexes with good (1), average (2) and poor (3) roads (note there is no particular map art for poor road hexes). On the right is the same map section but with the road display enabled.

> ***In general it is suggested that you use the road display filter, especially when planning operations as the few good roads offer substantial movement bonuses (especially in poor weather).***

Named Locations: Some hexes on the map contain named locations. These are mostly towns and cities but also include hexes with an airbase or a depot. Urban locations are divided between Towns, Cities, Urban and Heavy Urban depending on the density of buildings. Towns etc. are also rated according to their population and

1 population point represents 50,000 people (note this includes the population in the surrounding countryside).

National Capital: This indicates the capital city of most nations on the map area.

Minor River hexside: Affects movement point costs and combat (2 in the image below)

Major River hexside: Affects movement point costs and combat (1 in the image below).

Impassable Lake or River: Blocks movement, combat and supply tracing (3 in the image below).

717

Air Base Unit (Airfield): Displays presence of an air base unit in the hex. Symbols for Air Base units on the map reflect the size of the air base unit (1, 2 or 3).

718

Depending on the map mode and the allocation of air units, the colour of a given airbase may differ from this (6.4.7).

7.2.3. Impassable Terrain

There are three types of impassable terrain in WiTE2

Ground Unit Exclusion Zones: Units cannot rout into ground unit exclusion zones.

These areas are represented in one of two ways. Most are linked to the various Theatre Boxes (such as most of the Balkans in June 1941), others are on-map regions where specific units or nationalities are prevented from happening.

Typical of the first type are the Arctic and Balkan regions. However, some areas change status between being in a Theatre Box (13.3) and being on map as the game progresses. Examples of this include most of Serbia which will become playable once the Soviets are able to enter or of parts of Germany that will be removed from play in 1945 to reflect the final advances of the Western Allies.

Examples of on-map exclusion are the restrictions that prevent some of the Allied forces supporting the German invasion of the Soviet Union from entering certain hexes (14.2).

Units can be retreated one hex into an exclusion zone. Once there, they will automatically be displaced during their logistics phase to a nearby friendly town, city or urban hex.

Neutral (Impassable) Terrain: No air, ground or naval units may move, rout, or retreat into Spain, Turkey, Andorra, Switzerland, Sweden or Ireland. These areas are shown as neutral in the hex pop-up text.

Impassable River hexsides can be crossed if both sides are friendly controlled, paying the same cost as if crossing a frozen major river hexside.

7.2.4. Town, City and Urban Hexes

Town, city and urban hexes are terrain features or types that are population centres as well as locations for factories, ports and railyards.

Each population point is equivalent to 50,000 people (as in 1941). The density of the built up area in the hex is represented by the designations of Heavy Urban, Urban, City or Town. Note that the population reflects both those in the built-up section (i.e. the named location) and in the surrounding countryside.

This manpower is treated in the game as manpower factory points and this can be damaged, and repaired, as with any other type of factory.

The manpower currently in a hex may have changed from the initial population, at the 1941 scenario starts, due to combat, starvation and migration. Manpower thus represents the current recruiting potential of a town, city or urban hex and its surroundings, and is what generates replacement soldiers during the game.

7.2.5. Railways

In WiTE2 railways are divided into dual and single track lines. Single track lines only have 40% of the capacity of a dual track line.

If the rail move mode is enabled (F2) then additional information will be shown about the state of the rail network.

The symbol is dark green for undamaged rail, red for damaged rail and yellow or orange (this will vary according to whether the hex was repaired by a support unit or a player controlled rail repair unit) for rail undergoing repair that turn. Rail hexes that have white dots within a green circle are hexes that have been converted but are not connected to the rest of the rail network or are rail hexes that cannot be used for strategic rail movement or supply purposes due to being adjacent to enemy units.

When this mode is selected information is also provided about the wider rail network and repair options. Hexes further than 10 hexes or 25 MP from a railhead are shaded light grey, hexes further than 25 hexes or 100 MP from a railhead are shaded dark grey, enemy hexes are shaded rose, and rail repair HQ units are bordered in yellow.

This shows hexes more than 25 MP from the nearest functioning rail hex (1), hexes that are Axis controlled (2) and the location of a Soviet rail repair unit (3). In addition, it shows rails that have not been repaired (red), have been repaired this turn either by a Soviet NKPS rail repair unit (3, yellow) or a Soviet rail repair support unit (4, orange) and that are fully functioning (green).

The orange and yellow hexes will be fully functioning (green) in the next turn.

7.2.6. Roads

Each hex is graded for the quality of the road system. As in section 7.2.2, selecting the road display option will make these more obvious on the map.

In poor weather and restricted terrain (Mountains, Heavy Woods and Sand), better roads will significantly lower the movement and supply costs for units. This will also influence the speed of administrative movement if units are moving in friendly controlled hexes (22.2.1) that have no enemy interdiction.

7.2.7. Regions

In addition to national borders, the map is broken up into a number of regions. These affect the intensity of the partisan effort and are used for writing Events that affect the game (13.5).

The regional view can be accessed by right clicking on any hex, >> Map information and the select Map Regions as:

720

7.3. CONTROL OF HEXES

7.3.1. Different forms of Hex Control

Ground hexes are either friendly (controlled by the phasing player), enemy (controlled by the non-phasing player), or pending friendly.

The latter are hexes that have been taken during the current turn and will switch ownership at the end of the phasing player's turn. There are additional costs for all units moving into enemy and pending friendly hexes to account for both timing issues and the inherent difficulty involved in moving into recently enemy held regions.

721

This shows friendly (1), pending friendly (2) and enemy controlled (3) hexes from the Axis point of view.

Ground units can enter enemy controlled hexes only if the hex is empty of any enemy combat units.

7.3.2. Impact of Enemy Controlled Hexes

Headquarters units are not allowed to move into enemy hexes, but may move into pending friendly hexes, representing the inability of headquarter units to move through areas that have not been cleared by combat units during the current turn.

Enemy controlled hexes block the tracing of supply, commitment of support units from headquarters during combat, and provision of support squad ground elements to units from headquarters units during the logistics phase.

> ***Note that pending hexes do not block the commitment of combat units set to 'reserve' in combat (23.7).***

7.3.3. Isolated Hex Conversion

Isolated hexes (23.14.1) that are not occupied by a friendly unit, or adjacent to a friendly combat unit may switch control to the other side automatically during friendly logistics phases. This will happen if they are adjacent to any enemy combat unit or within 2 hexes of an enemy division or corps sized unit.

Air base units in these hexes will be captured and become enemy controlled.

7.3.4. Air Base Unit Capture

Enemy air base units in hexes that become pending friendly or were isolated and convert to friendly control are captured and become empty (no support units) air base units for the capturing side.

When air bases are captured ready planes with enough pilots will be evacuated if sufficient amount of fuel is in the base (so any damaged planes will be lost).

In case of low fuel, the number of aircraft evacuated will be reduced. Evacuating aircraft will initially try to fly to the nearest air base that is more than 5 hexes from supplied enemy units. If they cannot meet those criteria, they will fly to any friendly air base unit.

Captured air base units are automatically reset to supply priority 3.

7.3.5. Control of Ferry Hexes

Players may only move and trace supply paths over ferry hexes if they control the hex by holding the ground hexes on either side.

If this is contested, then control of a Ferry hex is determined by the player with control of the greatest number of land hexes adjacent to the ferry. For this purpose each adjacent port that has a net level of at least 1 counts as an extra hex controlled. If there is a tie, the tiebreakers in order are:

- Side with greatest interdiction value in the hex.

- Side with most number of Combat Value (CV) points adjacent to the hex.
- If still tied, then the phasing player has control.

7.3.6. Control of Ocean and Sea Water Hexes

Control of ocean and sea water hexes is determined by the amount of naval interdiction projected by each side in the hex. Naval Interdiction values printed in sea hexes are displayed in brown for the Soviets and grey for Axis.

Naval interdiction is generated by nearby friendly controlled ports, the deployment of naval HQs and the naval interdiction air mission (18.1.8).

Control of an ocean or sea water hex is defined as having a map display adjusted interdiction level that is 2 greater than the enemy level. The map displayed values are the true value that is a number from 0-99, divided by 10 and then truncated. The true values are displayed in the hex pop-up, but the values shown on the map are the truncated /10 values, and it is these that are used for determining naval control of a hex.

> ***Example: The Soviets have a real value of 32 (map value of 3) and the Axis player has a real value of 16 (map value of 1). Since the Map value of the Soviets is 2 or more than the map value of the Axis, the Soviets have control of the hex.***

When interdiction is displayed, enemy controlled sea hexes are shown in red, neutral are shown darkened, and friendly control is shown normally.

The hex pop up will display current control with hex control indicated by the text Axis, SU (Soviets), or Neutral, which indicates contested water hexes. In the Action (Move) phase, if naval transport (F3) or amphibious transport (F4) mode is selected, then the impact of control of sea hexes on those modes of travel will be indicated as follows:

- Friendly controlled – nothing displayed
- Neutral – SHIPPING CONTESTED
- Enemy controlled – SHIPPING HEAVILY CONTESTED
- Enemy amphibious HQ unit and adjacent hexes – SHIPPING PROHIBITED

7.4. ZONES OF CONTROL

Zones of Control (ZOC) represent the ability of ground combat units to exert control over the land map area in their vicinity and the area that they move through.

7.4.1. Impact on Enemy Movement

In WiTE2 all Combat Units exert a ZOC that will impede and slow enemy movement out of hexes adjacent to the unit.

Routed or depleted combat units, headquarters units and rail repair units do not have a ZOC.

If a unit has so few MP that it can only move 1 hex then it will not be able to move even one hex if that would take it into an enemy ZOC.

7.4.2. Impact on Supply Tracing and the Allocation of Combat Support Units

Supply can be traced through an enemy ZOC as long as the hex is friendly controlled or pending friendly, albeit at an increased cost due to additional movement point costs due to the loss of Administrative Movement (22.2.1).

HQ units must be able to trace a path of no more than five hexes through friendly or pending friendly hexes to combat units in order to provide support units during combat (23.6).

7.4.3. Converting Enemy Controlled Hexes

In WiTE2, ZOC's are used to change enemy hexes into pending friendly hexes as well as to increase the cost of moving or tracing supply out of or between enemy units with ZOC's.

All units will convert previously enemy controlled hexes if they enter that hex. However, division and Corps sized combat units can both convert the hex they enter as well as any unoccupied adjacent hexes in their ZOC unless the unoccupied hex is also in the ZOC of an enemy combat unit.

8. THE WEATHER SYSTEM

800

Focus:

This section provides more information on how weather affects both ground and air operations and how it changes from turn to turn.

Key Issues:

- How weather in a given turn is determined;
- Estimating weather conditions for the next turn;
- The impact of weather on air operations;
- The impact of weather on ground operations;
- Special rules for the period between December 1941 and February 1942 and for the December-February periods in 1943-44.

8.1. GENERATING THE WEATHER CONDITIONS

The weather for every hex is determined once a turn during the Soviet logistics phase. This is important as it means that the weather in the next German game turn will be the same as Soviet weather in the previous turn.

Weather is determined using a larger map area than is actually playable in WiTE2. The weather will change throughout the year as temperatures rise and fall and weather fronts form and move onto the playing area. Most of the fronts that affect game play in WiTE2 will originate in Siberia, the Arctic or the North Atlantic but each of these will change the weather in different ways.

8.1.1. Climate Zones and Dominating Weather Conditions

Each hex is allocated to one of eight different climate zones. The climate zones are Polar, Humid Cold, Humid, Humid Warm, Temperate Humid, Temperate Dry, Arid Steppe, and Arid Desert.

The division of the wider game map into these zones can be found by using the 'Climate Zones' tab on the Weather Conditions screen (36.6).

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In addition the weather zone for a given hex will be shown on the pop-up that appears when you mouse over that hex, as:

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The actual weather is partly determined by the Climate Zone. This indicates the type of weather that might be expected to dominate in that zone at that time of the year. The chart can be accessed by clicking on 'Show Dominating Weather Table' on the Current Weather Conditions screen.

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Expected conditions are Clear (C), Rain (R), Heavy Rain (HR), Cold (Co) or Snowfall (Sf).

These default weather conditions are then modified as weather fronts move across the map. A front can bring a different weather type to that expected so the actual weather may improve, or worsen, compared to what is expected.

The current air weather condition determines the amount of moisture (water level) is added each turn to a hex, which over time will determine and modify the ground condition and ice level. Thus the ground conditions will move between Clear, Light Mud, Heavy Mud, Light Snow, Snow and Heavy Snow depending on recent and current air weather.

The current ground conditions and moisture levels for any hex can be found by right clicking on the hex.

8.1.2. Weather Fronts

There are five types of weather fronts that can enter the map and alter the dominating air weather. Weather fronts will impact all hexes they moved through during the turn (i.e. the hexes where it started on the previous turn and those where they are in the current turn, and hexes in between).

The fronts are Polar Maritime (mP), Tropical Maritime (mT), Arctic Maritime (mA), Polar Continental (cP) and Tropical Continental (cT).

For example, the Polar Continental Front (cP) will change a hex that would have been Clear to Cold in November to February but will leave the weather as clear at any other time of the year. If the hex would have had Rain in the period November to February this will change to Snow. In the same period, if the hex would have had Snowfall, a Polar Continental Front will replace this with Blizzard conditions.

However, an Arctic Maritime Front (mA) will change an otherwise Clear weather hex to Rain at any time of the year and will convert a hex that would have had snowfall to Blizzard conditions.

8.1.3. Moisture and Water Levels

The air weather influences the ground weather as the moisture level of each hex alters according to atmospheric conditions. The following table shows the impact of various air conditions on the moisture in a hex and on ground conditions.

Type	Moisture (Water)	Impact on any Snow	Moisture Effects
Clear	Water level decreases by 2-7 each turn	Converts snow to water	Clear = water 1 and Snow 1

Rain	Changes from –1 to +2 each turn / If water is >3 than 1 is subtracted / If water is >7 then an additional – 1 / Water level can't be over 5	Converts snow to water	light mud= water 2-5
Heavy rain	Increases 2-4 per turn Good Roads 1-2 Average Roads 2-3 Poor roads 2-4	Converts snow to water	heavy mud= water 6 to 9
Cold	Snow level in hex changes – 1 to +2 each turn / can't be over 6	Increases snow levels by between -1 and 2 per turn up to level 6	light snow = snow 2 to 3
Snowfall	Increases 1-3 each turn / can't be over 7	Increases snow level by between 1 and 3 per turn up to level 7	snow= snow 4 to 7
Blizzard	Increases 2-4 each turn	Increases snow level by between 2 and 4 per turn up to level 9	heavy snow = snow 8 to 9

8.1.4. Changing Snow Conditions

The Snow Level in a hex will never reach 8 or 9 unless the air condition for the hex is also a Blizzard. Snow in a hex will never be 7 unless the air condition is Snowfall or Blizzard.

Once the snow level reaches 8 or 9, it is treated as Heavy Snow for ground movement purposes slowing movement and reducing attacking CVs.

All Snow converts to water if air weather changes to one of: clear, rain or heavy rain.

8.2. ESTIMATING THE WEATHER CONDITIONS

Since the weather system is dynamic it is also possible to estimate the likely weather in the following turn. In effect, the combination of the Dominating Weather table and the movement of Weather Fronts will allow an estimate of the likely impact on a given hex in the following turn.

However, this estimate maybe inaccurate if the Weather Front either disperses or does not move as predicted. Equally, the estimate made available to the Soviet player is more reliable than that for the Axis player as most Weather Fronts affecting the game map originate from regions where either the Soviets or Western Allies had better weather forecasting capacity than the Axis.

An estimate of next turn's weather can be found by clicking on the date for the following week at the top of the Current Weather Conditions screen.

8.3. WEATHER DISPLAYS AND GRAPHICS

The Weather Screen allows the player to toggle on information for the Climate Zones, the Ground weather conditions, the Air weather conditions or the Road Systems.

The weather condition in each hex can be found in the hex pop up text. The weather can also be seen in the artwork on the main map. By using the tab (or the Map Information button) the player can toggle between showing both Air and Ground conditions; Ground only; Air only, or, no weather art on the map, with the button graphic displaying the current state.

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This shows the four ways the map can display the weather conditions (in this case during the autumn rain turns). Image 1 has both ground and air conditions shown, 2 is ground conditions only, 3 is air conditions only and 4 disables the on-map graphics. While most of the time you may find 1 the most useful, in particular in winter turns 4 can be useful to check underlying terrain.

8.4. IMPACT OF WEATHER CONDITIONS ON AIR OPERATIONS

Although atmospheric air conditions create changes in the overall weather, the resulting Air Weather only affects air operations. The air weather conditions over an air mission's flight path are used in determining the amount of cloud cover and the overall air mission weather. There are six Air Weather Conditions as follows:

Air Weather Condition	Remarks	Category

Clear		Excellent
Rain	Light Rains/Summer Rains, Additional cloud cover	Fair
Heavy Rain	More overcast and sustained rain	Very Poor
Cold	Light Snow, Clear sky much of the time	Good
Snowfall	More regular Snowfall with more Cloud Cover.	Poor
Blizzards	Snow storms and very low temperature.	Very Poor

As indicated above, the air mission weather is classified as very poor, poor, fair, good, or excellent, with this being determined by the aggregate cloud cover over a particular air mission's entire flight path. When setting an air directive (17.4) the player can indicate the worst conditions it will take place under. Even if the mission is ordered, if the weather is poor or very poor it maybe cancelled, or relatively few planes will complete the mission and there is a risk of high operational losses (19.5.2).

The air weather condition in each hex sets a percentage of cloud cover for the hex. There is some randomness in this setting, but the worse the air weather condition, the more the cloud cover effect.

In turn this creates a Weather Value scaled from 0 to 100, with the higher score reflecting worse weather and thus a higher chance of adverse effects, up to and including mission cancellation and will lead to higher operational losses (18.3.11)

If a mission does take off and reach its target then the weather in the target area will impact the effectiveness of the airstrike (bombing or recon). Ground Support missions in particular will be significantly reduced during bad weather such as heavy rain, snowfall, and blizzard.

8.5. IMPACT OF WEATHER ON GROUND OPERATIONS

Ground operations are only affected by the ground weather in a particular hex.

There are six Ground Conditions; clear, light mud, heavy mud, light snow, snow and heavy snow.

Ground conditions are determined by the current air weather condition and the cumulative amount of moisture (water level) in the hex. For example, consecutive periods of heavy rain will turn clear ground condition to light mud and then heavy mud. Cold, snowfall, and blizzard air weather conditions, will freeze the moisture and result in varying amounts of snow. The current weather condition and moisture levels in any hex can be seen by right clicking on a hex.

8.5.1. Impact of the Road System

Each hex is rated for the quality of its road system as: Good; Average; or, Poor. The quality of the road system helps to offset the impact of poor ground conditions on movement and combat. Basically the better the road system, the less impact weather has on movement and ground combat

8.5.2. Impact of Weather on Movement and Combat

The ground condition in a hex, when combined with the type of road system present, determines both whether there is an additional tactical ground movement cost (38.6), which can also affect supply, and whether the combat value (CV) of attacking units are modified (23.8.4).

When attacking, any modifications are based on the ground weather conditions in the hex occupied by the attacking unit at the time of combat. This is also true for attacker reserve units that are committed to the battle (CV weather effect is based on the hex they are physically in on the map) and support units that are directly attached to a combat unit.

Attacker support units in HQs are affected by the ground weather in the target hex.

> ***In poor weather, especially blizzard turns, the weather will mean that a number of combat elements are not available. This will particularly affect the attacker and means you may want to ensure the likely odds are around 4 or 5-1 before launching an attack to take this into account.***

8.5.3. Ice Levels and Frozen Lakes and Rivers

As the weather becomes colder, lakes and rivers may start to freeze. Once they are frozen, movement costs will be substantially reduced.

Ice levels range from zero (none) to ten (frozen solid). Ice levels will never exceed ten or go below zero. Ice levels from one to four for minor rivers and from one to seven for major rivers are defined as loose ice and this will increase the movement costs as the ice level increases up to seven.

Minor rivers with ice levels five through 10 are defined as frozen as are major rivers with ice levels eight through ten. Frozen rivers will have little impact on movement

costs. The Ice level is determined individually for each river hexside using the warmer weather of the two hexes to which a river hexside is adjacent with changes as follows (from warmest to coldest). Each turn the air weather will change the relevant ice level by:

- Clear: – 3
- Rain: – 2
- Heavy Rain: – 2
- Cold: 0
- Snowfall: +1
- Blizzard: +2

As with ice free movement across rivers, MP costs are different depending on whether the unit is moving into an EZOC or not (38.7.1). Note that ice level costs are cumulative with the regular cost to move or attack over river hexsides.

Frozen ice levels (5 or more for minor rivers, 8 or more for major rivers) causes all river hexsides (including impassable) to have much less impact on movement or combat (and this is the only time a unit can attack across an impassable river hexside).

As ice conditions do not occur in full water hexes, tactical movement over such hexes (including small lakes, large lakes, and sea hexes.) is not allowed, regardless of ice level. In addition, neither strategic naval transport nor amphibious transport is affected by ice levels except as stated below in Lake Ladoga and the Sea of Azov.

8.5.4. Supply when Lake Ladoga and the Sea of Azov are frozen

These two bodies of water have slightly different supply rules when frozen.

During certain times the ports in Lake Ladoga and Sea of Azov sea zones will be impacted by ice. There are two levels of ice - Thin Ice and Frozen Solid. When Thin Ice is present, all ports have their port points /10 each turn. If they are Frozen Solid, then no freight shipping is possible (although this will not shut down ports when determining isolation status). The ice-state can be accessed by right clicking on a suitable hex.

In addition special rules apply to reflect the Ice Road that was used to resupply Leningrad in winter. If Lake Ladoga is Frozen Solid, freight will attempt to move through port source depots to port depots via trucks instead of ships. For this to happen, there must be a functioning port source depot for the goods to pass through and the move is shown as a rail not sea move if you mouse over the affected hexes.

Note that this supply line is subject to interdiction and will be hampered (or broken) if the key ports are damaged.

The timing of the ice conditions in the two sea zones is as follows:

Lake Ladoga

Ice Type	Harsh Winter	Normal Winter	Mild Winter
Thin Ice	Nov 1 – Nov 20	Dec 1 – Dec 20	Dec 21 – Jan 10
Frozen Solid	Nov 21 - Apr 20	Dec 20 – Mar 31	Jan 11 – Feb 29
Thin Ice	Apr 21 – May 10	Apr 1 – Apr 20	Mar 1 – Mar 20

Sea of Azov

Ice Type	Harsh Winter	Normal Winter	Mild Winter
Thin Ice	Dec 10 – Dec 31	Dec 21 – Jan 10	Jan 1 – Jan 2
Frozen Solid	Jan 1 – Mar 10	Jan 11 – Feb 29	Jan 21 – Feb 20
Thin Ice	Mar 11 – Mar 31	Mar 1 – Mar 20	Feb 21 – Mar 10

8.6. SPECIAL WINTER RULES

8.6.1. First (Harsh) Winter Rules

Impact on movement

These rules apply in any turns from June 1941 up to the end of March 1942 but will have particular effect during the winter turns.

Resupply. When carrying freight, Axis vehicles pay double the normal weather movement costs. They also pay an additional 8 MPs for each Blizzard hex entered.

Rail System. When Axis trains are moving freight by rail, the MP cost for each hex is increased by 10 plus the snow level in Blizzard hexes. In non-blizzard hexes if the snow level in a hex is over 5, then the MP cost per hex will be increased by the snow level/2.

Note that both these rules apply from 22 June onwards, just they become more of a problem once snow and blizzard conditions start to occur.

Impact from attrition.

These rules apply in any turns between 1 December 1941 and the end of March 1942.

Frostbite/Weapon Malfunction. Ground elements can suffer increased fatigue and/or damage (but not destruction) during the logistics phase if in Blizzard hexes or in hexes with snow levels of 6 or more (the more snow the more fatigue/damage). Support elements are much less likely to suffer fatigue/damage, while infantry type elements are more likely to suffer fatigue/damage.

Extreme cold will affect ground elements, aircraft and AFVs. Both aircraft and AFVs will be particularly vulnerable to breaking down. AFVs also have an increased chance of breakdown (damage) during combat when the combat is in a blizzard or snow level 6 or higher hex.

Units in protected hexes suffer less damage (protected in this sense is one of: a fort level 2 or more, city, urban, heavy urban hexes).

Errata: Undocumented rules

Axis units in heavy snow have their defensive CV modified as follows:

Dec 1941 - /2

Jan 1942 - /1.5

Feb 1942 - /1.33

This is reflected in the CV values shown on the map.

In addition, once in combat, there are admin and land combat rating checks made. For each failed check, the defence value is modified an additional time. So a unit in Jan 1942 in heavy snow can have their CV divided by 1.5 up to 3 times if it fails both checks.

Errata 01.02.39:

Entrained units are no longer susceptible to first winter rules

8.6.2. Mild Winter Rules

The winter of 1943-44 was relatively mild so the basic winter rules are amended between December 1943 and February 1944 as follows:

- If a weather front will shift the weather to blizzard this only applies for the first turn the front is on the map. In subsequent turns, it shifts weather to snowfall instead.
- Snowfall generates +Die(2) snow level instead of +1+Die(2) per turn;
- Snow levels during snowfall can decrease by 2 instead of 1 if already above 6.
- There is a 25% probability that Polar Continental and Arctic Maritime weather fronts will be cancelled.

9. ADMINISTRATIVE POINTS

900

Focus:

This section provides more information on how the concept of Administrative Points is used in WiTE2.

Key Issues:

- How administrative points are gained;
- Different uses of administrative points;
- Costs for various decisions;

Administrative (admin) points (AP) represent the ability of a side to modify their command and control and supply structure, to include units, leaders and supply depots. Administrative points can be used to create new units, and depots, transfer AA assets between cities and to motorize infantry formations.

9.1. GAINING ADMINISTRATIVE POINTS

Each player starts with a number of Administrative Points that varies depending on the scenario. Each player receives additional administrative points during their respective logistics phase, also depending on the scenario. Information on the number of admin points each side will receive in a scenario can be found in the scenario description on the Load Scenario screen (2.1).

Note that in addition to receiving regular per turn allocations players can receive additional Administrative Points as a result of scripted events (13.5). In addition, if a given Theatre Box exceeds the basic requirements, a random event may allocate additional administrative points (as well as a victory point).

Players can also gain Administrative Points by placing combat units into the STATIC Mode. When this is done a pop-up box will show the number of Administrative Points (and Trucks) that will be gained by doing so. In this case the number of Administrative Points gained is based on the number of vehicles that the unit would have needed to be fully mobile.

Unused Administrative Points are carried over to the next turn and the maximum that can be retained during the logistics phase is 9,999.

The number of Administrative Points can fall below zero if they are needed during the logistics phase to carry out certain actions. The most likely reason for this is the need to remove a currently static unit from the map due to the withdrawal schedule. In this case the needed Administrative Points are deducted and the player will start the next game turn with less than their usual per turn allocation.

9.2. EXPENDING ADMINISTRATIVE POINTS

There are numerous actions that require the expenditure of Administrative Points.

The following options will all cost one Administrative Point:

- Creating a depot (25.7.2);
- Setting a factory, railyard or manpower centre to priority repair (28.6.4);
- Assign a construction engineer Support Unit to a city;
- Using level bombers to conduct supply missions;

- Moving any flak unit that is attached to a city to another city (note this transfer can be more expensive depending on the exact move made);
- Disbanding (for the Axis only) or merging a unit (21.10).

The following actions will cost at least more than 1 AP, and in many cases this will vary according to the specific circumstances.

- Changing leaders. The amount will depend on the seniority of the new commander (15.2) and the type of HQ (21.11.1) as well as the number of political points possessed by both commanders (15.3.1);
- Motorising an infantry unit (22.2.5) either temporarily or permanently will cost a variable number of administrative points each turn depending on the number of trucks required;
- Moving a unit from STATIC to READY will cost Administrative Points based on the number of trucks a unit will need to become fully mobile. If a unit has been placed in STATIC mode and that will be withdrawn in the current game turn will be automatically set as READY resulting in an involuntary expenditure of Administrative Points;
- Creating a City Fort. Both sides can do this at a cost of 10 APs. There is a limit of 8 per side at any given time;
- Transferring some types of Anti-Aircraft units that have been assigned to a city to a ground or air HQ;
- Creating a Fortified Zone (20.5). Both sides can do this (up to a maximum of 40 for the Soviets) at a cost of 4 for the Axis and 2 for the Soviets;
- Place a Command on Assault status (21.11.2). This will cost 10 for an Axis Army and 20 for a Soviet Front HQ;
- Building New Units (27.2). The Soviet player will sometimes be charged Administrative Points if they wish to build certain unit types (both Combat and Support Units); and,
- Create a Corps sized Combat Unit (27.5). The Soviet player can build Corps as the game progresses and the cost of this will vary between 5 and 20 Administrative Points according to the game turn and type of corps.

The Table below sets out the cost of each action:

Action	Admin Point Cost	Remarks

Disband a Unit (note this cost also applies if two units are merged)	1 (Axis), 0 (Soviet)	21.10
Merge a Unit	1	21.10
Manually Create Supply Depot	1	25.72
Priority Repair	1	28.6.4
Reactivate Static Unit	Varies according to the number of trucks the unit would need to be fully mobile	21.8
Temporary Motorization	Varies according to the number of trucks needed	22.2.5
Change leader of a HQ unit	Varies	15.2
Create Fortified Zone Unit	4 (Axis player all game); 2 (Soviet player)	20.5
Transfer AA Battalion from City to High Command HQ	3	16.8
Transfer AA Regiment from City to High Command HQ	10	16.8
Transfer Marine or Naval Battalion from City to High Command HQ	3	16.8
Transfer Marine or Naval Brigade from City to High Command HQ	10	16.8
Transfer any flak unit from a city to a city	1	16.8
Transfer Marine or Naval AA to a non-port location	2	16.8

Transfer LW or PVO AA Battalion from City to High Command HQ	15	16.8
Transfer LW or PVO AA Regiment or Brigade from City to High Command HQ	50	16.8
Transfer eligible Construction unit from a HQ unit to a city	1	21.6
Build a Corps (Soviet player only)	20 (1941 Rifle Corps) 10 (1941 Cavalry Corps) 5 (1942-45 any type)	27.5
Build a new Combat or Support Unit (Soviet player only)	Varies according to the game turn and unit type. Some units will initially cost Administrative Points but then will become free.	27.2
Create a City Fort	10	20.6
Place a Command on Assault Status	10 (Axis Army) 20 (Soviet Front)	21.11.2

In addition some tasks that cost no AP require the player to have at least 1 available. This includes building new airfields and expanding existing ones.

10. FOG OF WAR (FOW) AND ENEMY UNIT DETECTION LEVEL (DL)

1000

Focus:

This section provides more information on the impact of Fog of War and Detection on WiTE2.

Key Issues:

- The concept of 'Movement' Fog of War in the game set up options;
- How Detection Levels vary over time;
- How Detection Levels affect Fog of War;

10.1. SETTING FOG OF WAR OFF

Either when setting the game up (2.3) or later (if playing against the AI), the player(s) can opt not to use the Fog of War (FOW) rules either just for unit detection or for unit movement.

10.1.1. No Fog of War and Unit Detection

In this case all enemy units are visible on the map with accurate information on type, name, size and combat value included in the hex pop-up information. The Detection Level of each unit is still computed and impacts the combat effectiveness of any attacks against those units, but the location of all enemy units is known to the player (including those that would otherwise have a detection level of zero).

10.1.2. Movement Fog of War

The Fog of War options enable you to set the impact on movement separately to that on unit detection.

If you enable the basic FOW rules (i.e. some units cannot be seen and others will only show partial information) then you need to decide whether you will also use movement FOW or not.

With FOW on, unless there is an unbroken enemy front line, this option allows the player to see hexes behind enemy lines that do not contain enemy units up to the limit of the selected units allowed movement.

To offset this, if movement FOW is enabled, the show movement path and show movement allowed preferences will only display movement options to hexes if the movement path could be traced via friendly/pending friendly hexes or to hexes adjacent to friendly/pending friendly hexes (7.3).

> ***Movement FOW takes away an "enhanced recon" feature caused by the nature of the movement system, but at a cost in play time. Basically, you will have to make an increased number of shorter moves when using move FOW as you won't be allowed to move far into enemy territory. Ultimately your unit can cover the same ground, but with more mouse clicks and more individual moves. Also, it won't be as easy to determine the fastest path to an enemy hex deep in enemy territory.***

The example below shows how this can alter gameplay.

1001

On the left hand side is the map with movement Fog of War enabled. When the German 2-36 Panzer regiment is selected information is only available about the current front line hexes and those are known to be Soviet controlled but not contain

any Soviet units. Moving that regiment eastwards will slowly uncover more information about occupied or unoccupied hexes.

On the right hand side, movement Fog of War has been disabled and it is now clear where there are Soviet units behind the front line. In this case, the German unit could move towards Dnepropetrovsk without encountering any Soviet formations.

10.2. DETECTION LEVEL (DL)

If you opt to use the Fog of War rules then the concept of the Detection Level (DL) is critical. Detection level (DL) is the determination of how much information is known about on-map enemy units. The higher the detection level, the more information is known and the more effective attacks will be on that unit.

10.2.1. Changes in Detection Levels

Each unit on the map, as well as attached support units, is automatically assigned a detection level from zero to ten, based on factors such as distance from enemy units, covering terrain and the results of air reconnaissance.

1002

This shows how varying Detection Level affects the knowledge of enemy units. If there is no reconnaissance and the unit has not been in previous contact, then it is likely it will not be shown at all. Beyond that (1) is an example of a unit with low detection values, (2) has a higher value (enough to know it is a tank formation), (3) is known to be a rifle division but there is another, unknown unit in the hex so the total combat value is unknown, and (4) is a unit with higher enough detection to provide a decent estimate as to its cv. See section 10.2.7 below for information as to how this information relates to the DL for a given hex.

Unit detection levels will change over time and can be influenced by player actions. During the logistics phase, an airbase unit will have its DL decline by one, while non-airbase units will have their DL decline by Die (5). The DL levels of enemy combat units that are adjacent may then be increased as adjacent enemy combat units compare scouting values for the different units to determine changes in DL levels.

In addition, every time a unit moves next to an enemy unit, the enemy's DL will usually go up due to automatic scouting and probing attacks. Losses from these scouting and skirmishing actions are represented by higher attrition levels for adjacent enemy units. Combat against enemy units will also increase their DL.

The DL of units that move away from the enemy will decrease over time.

10.2.2. Detection Levels and Combat

A higher detection level will increase the effectiveness of ground and air combat against that unit. The hex pop-up text will display detection levels for on-map units, to include construction support units and Anti-aircraft support units attached to cities.

Note this will occur even if FOW is turned off. In other words you can see the unit on the map but the scope to be surprised in combat, due to a low detection level, remains.

10.2.3. Raising Detection Levels by Air Reconnaissance

If you fly tactical reconnaissance missions you can raise the detection levels in the hex.

For non-air base units, air reconnaissance can raise detection levels up to a maximum of four with the following limits:

- Maximum Detection level 1: Non-Air base units located in non-clear terrain further then 3 hexes from supplied enemy units.
- Maximum Detection level 2: Non air base units located in non-clear terrain and not adjacent to enemy units.
- Maximum Detection level 4: Non-air base units located in clear terrain

Air reconnaissance can raise the DL of air base units up to the maximum of 10, if the airfield recon mission is chosen (18.1.6).

The Show air recon levels button (Shift-t) in the map information tool bar (6.2) will graphically display the level of air recon coverage with the lighter the shade in the hex, the better the air recon level. The actual numerical air recon level is listed in the hex pop-up.

1003

This has the air reconnaissance map mode enabled. Blue hexes (1) are Axis controlled, light brown hexes (2) are Soviet controlled with some degree of Axis air reconnaissance and dark brown (3) are Soviet controlled without Axis air reconnaissance. Note, in this case, the units are still detected even if they are in a hex that has not been recently covered by an air reconnaissance mission.

> ***If an air group is set to run a 'unit' reconnaissance mission (18.1.6) it will initially focus on raising the DL of already identified units, if this reaches the maximum feasible it will shift to trying to spot unidentified units (interdiction recon). So the choice of target has some bearing on whether your recon assets will focus on known formations or seeking to find unidentified ones.***

10.2.4. Impact of Strategic air reconnaissance missions

Strategic air reconnaissance only affects knowledge about the chosen targets (factories, manpower etc) in the city hexes reconnoitred.

Strategic reconnaissance will only target town, city and urban hexes while normal air recon can target any hexes and raises the Detection level of the hexes which in turn increase the DL of the units there.

When FOW is on, each time an enemy factory is bombed a picture is taken of those factories and an estimate of damage is made. When determining what factory to fly a strategic bombing mission against, the computer will use the FOW damage values. This means that a target that is thought to be heavily damaged will be less likely to be bombed, and it's the fogged up damage level that is used.

10.2.5. Reconnaissance missions and other air missions

The interaction of reconnaissance and tactical air missions is discussed in sections 17.1 and 17.4. For the moment, note that it is useful to make the reconnaissance mission focus on the chosen target for a ground attack (tactical) or strategic bombing mission in order to improve the quality of any air attacks.

10.2.6. Detection Level and Naval Missions

Units utilizing naval and amphibious transport that remain at sea can have their detection levels raised by enemy naval interdiction in their water hex. Detection levels for units in water hexes are checked at the end of the logistics phase and at the end of the air execution phase.

To preserve FOW, during the amphibious invasion phase and air planning phase of an AI player turn, units will not be shown on the map. In addition, during multiplayer and PBEM, the map is blacked out during the amphibious phase.

10.2.7. Impact of Different Detection Levels

At the lowest level (0) you will not even be aware an enemy unit is in the hex. As the Detection Level increases you will be provided with more information about the unit but note that completely accurate combat values (CV) may not be displayed even at the highest detection level, and the potential size of the error increases as the DL number decreases.

The different detection levels are:

- Detection Level 1: The unit counter will be blank. A unit with detection level less than 3 won't show its nationality counter colour. In this case it will be displayed with the generic Axis/Soviet colour.
- Detection Level 3: The Unit type will be displayed.

- Detection Level 5: The Unit name, unit size and CV will be displayed. Enemy units that start adjacent to friendly units will have a minimum DL of 5. Note that Unit counters will only display SS / Elite / LW / Guards status (colouring) if their detection level is 5 or greater.

- Detection Level 7: Soft factors can be observed (6.5.11).

The DL also influences the type of information you have about Support Units, Flak levels, enemy air operations, the effect if more than one enemy unit is in the hex and knowledge about enemy fortifications.

Support Units: Support units attached to cities, HQ units and ground units have detection levels in the same manner as on map units as their DL increases. In effect, their strength is added to the information displayed (or not) about other units in the hex.

Flak Levels: When FOW is enabled, flak values displayed on the map will be less accurate if the hex has a lower detection level.

Air Operations: Detection will affect your knowledge of the enemy air force and operations in various ways:

- Air Base Units: When FOW is enabled, the lower the detection level, the information will be less accurate in the hex pop-up text regarding enemy Air Groups located at the airfield. The accuracy of any damage report will also vary with the detection level.

- Air Mission Graphics: The graphic display (18.4) of any enemy interception and ground support missions, during the air directive resolution phase, on the map area will only show the direction the enemy Air Groups came from, not the entire line back to the air base unit they flew in from when FOW is enabled.

Stacked Units: When FOW is enabled, no CV/MP numbers will be printed on an enemy counter if there is no unit with a detection level greater than 4 in the stack. If there are units with DLs both greater than four and four or less in a stack, numbers will be printed, and a '?' will be printed instead of the – or = between the numbers to indicate that in addition to the estimated CV strength in the hex, there are units of unknown strength in the hex. If the top unit in the stack has a DL of 1 or 2, a blank unit type box will appear on the top unit counter to indicate it is of an unknown type.

Enemy Fortification Levels: When FOW is enabled, information on enemy fortification levels (20.1) will only be displayed for hexes that are adjacent to a friendly unit or for hexes that contain a detected enemy unit with a DL of at least three.

10.2.8. Fog of War and AI movement

When the AI is moving, if FOW is on then you will only see enemy units that are adjacent to your units. Once the movement phase is complete, the standard detection rules are used again.

10.2.9. Fog of War and Rail Damage/Usage

If FOW is on, then a hex will not show either rail damage or usage for enemy hexes unless you have sufficient detection level.

11. SPECIAL FIRST TURN RULES

1100

Focus:

This section brings together the rules that affect the first turn of scenarios starting on 22 June 1941.

Key Issues:

- The reduction in Soviet air power;
- Axis ground movement advantages;
- Special rules for capturing rail hexes in the Baltic Region;

Many of the scenarios in WiTE2 have special rules for the first turn. These may remove the active phase from one of the players or ensure that certain units are fixed for a number of turns.

However, specific rules apply to the first turn(s) of any scenario that commences on 22 June 1941 to reflect the lack of preparations by the Soviet Union.

11.1. AIR COMBAT

All Soviet attempts at interception and/or flak during the air execution phase will be much less likely to succeed at the start of the week but will improve each day. The Axis player is advised to make a maximum effort on the first day of the turn.

In addition, attacks on Soviet airfields are more likely to succeed if they are carried out on D1. This bonus will reduce as the week progresses.

11.2. AXIS GROUND MOVEMENT

11.2.1. Restrictions

There is no ground movement in Hungary on turn 1 of the campaign.

Axis units have no SMP allocation on T1 (note that not only does this prevent strategic movement it will also stop any recovery of Combat Preparation Points, see section 23.2.1).

11.2.2. Movement Bonus

Axis units that meet both of the following conditions will receive a movement bonus on the 22 June 1941 turn:

- The Unit is moving from and to a hex north of row 173
- If Motorized, unit has more than 15 MPs remaining and if non-motorized it has more than 8 MPs remaining.

These conditions are checked each hex the unit moves so a unit moving south of row 172 will lose the movement bonus as long as they are moving to/from that area. The image below shows where this divide is on the immediate German-Soviet border region.

1101

In addition, the movement bonus is not applied for movement into (or beyond) the x194 hex row. Basically this is a line running from Polotsk (on the Dvina) to Minsk and just east of Gantsevichi.

11.2.3. Reduced costs for Zones of Control

Units receiving the bonus do not pay any additional movement costs for entering or leaving a ZOC, nor do they pay a cost for entering an enemy controlled hex.

11.2.4. Combat Delay

Most of the rules for the creation of delay in hexes after combat (22.2.7) are the same during the Axis phase of T1. The exception is that there is no minimum delay of 1 MP simply due to having a Soviet unit adjacent to the combat hex.

> ***Note: this only affects hasty attacks that ended with odds > 10-1, so allows the Germans to make faster progress on sectors where they have complete dominance.***

11.2.5. Unlocking the Soviet Southern Front

If a Soviet national hex south or east of 187,187 (just southeast of Lvov) is Axis controlled then all of Southern Front and related airbases will be unfrozen.

1102

11.3. SOVIET RULES

11.3.1. Ground Movement Restrictions

Soviet units attached to the Southern Front along the Romanian border are frozen for the first turn. These units will be unfrozen if the German player exceeds the constraints in 11.2.5.

11.3.2. Reserve Activations

All Soviet motorized units are set to reserve status with a notional 25 MP on turn 1 if the German side is being played by a human.

Soviet units in the region where X>172 are more likely to commit from reserve (basically the at-start front line south of Wlodawa). This is the same region affected by the rules in 11.2.2.

11.3.3. Determining Initial Soviet Unit Morale and Experience

While WiTE2 presents a highly accurate OOB reflecting the situation of the two armies on 22 June 1941, the actual status of many Soviet units is determined each time the game is created to reflect uncertainty about their actual combat capacity and the degree of surprise that resulted from the German attack.

The morale and experience of all Soviet units at the start (on map and TBs) is set as follows:

1. Determine initial **morale** by taking a base of 30 and adding Random (1-24).

2. Add 5 to the morale of all NKVD, Mountain, Cavalry, and Airborne units.

3. Further modify the morale of all non-support, non-HQ, motorized units, by multiplying their morale by .9 (90%).

4. Modify the morale of all units based on the difficulty level by taking the morale level modifier divided by 100 and multiplying the unit morale. For example, if the difficulty level is set as challenging and you are playing the Axis then the morale level modifier of 110 would be divided by 100 and all Soviet units would have their morale multiplied by 1.1.

5. Modify the morale of units in the Southwest area by adding 10. This is defined as Y>171, Y<197, and x<218. The box below shows the northern and eastern limits of this modification.

1103

6. Modify the morale of units in the Moscow area by adding 5. Moscow area is defined as x>215 and Y<136. This area is roughly bounded by the image below.

1104

7. The final morale of Soviet units cannot exceed 99 or be less than 35 after all adjustments, to include any difficulty level settings.

8. Set the **experience** level of each type of ground element in all Soviet units using the formula ((2/3*Morale of unit) + (½*random (morale of unit))), not to exceed 99 or be less than 30 after all adjustments, to include any difficulty level settings.

11.3.4. Determining Initial Damage to Soviet Ground Elements

As part of the normal automatic game start process, some ground elements in Soviet units will become damaged.

1. 0-10% of non-AFV ready elements will be damaged.

2. 10-30% of AFV ready elements will be damaged.

11.3.5. Air resupply

For all turns in June 1941 air resupply cannot be used to prevent isolation of Soviet units no matter how much is dropped (25.9.3). This will take effect normally for any such missions run in the Soviet T3 (so will not affect the Axis T3 where such units will remain isolated).

11.4. RAIL DAMAGE IN THE BALTIC REGION

For the first four turns any rail hex in this region (Lithuania, Latvia and Estonia) may be captured with the rail line intact (note that rail yards will be damaged as normal as they change hands). There is a 70% chance that such a rail hex will not be damaged if it is captured in the movement phase or when isolated hexes change ownership.

Note that any hex that is captured in a combat will be damaged.

12. NATIONAL AND UNIT MORALE

1200

Focus:

This section explains how the concept of National Morale affects gameplay in WiTE2.

Key Issues:

- How National Morale changes over time;
- How National Morale affects unit morale;
- How units can gain or lose morale;
- How units gain experience

In WiTE2 the concept of National Morale is used to capture the typical level of training and expertise of the combat units that are fielded by each nation.

Each nationality in the game has a basic level of national morale. The actual unit morale can be above or below the national morale, but unit morale will tend to gravitate towards the level of national morale.

National Morale changes can be found in appendix 38.2 or in the Game Editor.

12.1. INTERACTION OF UNIT MORALE AND NATIONAL MORALE

12.1.1. Newly Built and Rebuilt Units

Units that are destroyed and rebuilt or freshly built will have their morale set to 30+ (national morale/4) + random (national morale/4). This will never be lower than 30 or higher than 60.

12.1.2. Elite Units

Both the Soviets and the Germans fielded units that were regarded as elite. These units gain a modifier to their respective national morale as:

Special Bonus

- German regular (or LW) Elite units +15

  Note this includes formations such as the Gross Deutschland and the Hermann Goering Panzer Division

- Soviet Guards +10
- SS Elite +5 in 1941, +10 in 1942, +15 1943 and later

Also some units gain a potential morale bonus due to their type (the type bonus and the special bonus can be added together):

- Cavalry, Mountain, Airborne and Air Landing +5
- Axis Allied motorized units +5
- German Motorized Units +10
- Soviet Motorized Units (from Sept 1942-August 1943) +5, Soviet Motorized Units (Sept 1943-end of war) +10.

Example: a Soviet Motorized Guard unit in 1945 has a net +20 modifier (+10 motorized in 45 +10 Guard), while a Soviet Guards Cavalry unit would have a +15 modifier (+5 cavalry +10 elite).

To stress these values do not change the unit morale as such, they set the potential NM for those formations that they can reach using the rules in 12.1.4.

12.1.3. German Luftwaffe Formations

The various field divisions that the Germans raise from Luftwaffe cadres all have a 10 point penalty against the notional German NM. However, this adjustment will not reduce their NM below 55 so will have less effect (in comparison to most German infantry formations) as the war goes on.

12.1.4. Adjusting Unit Morale to National Morale

Individual units may have different morale levels to the current National Morale level. This can be due to the morale allocated to the unit when it first enters the game. For example, some of the units that will be transferred from the Soviet Far East in late 1941 will have a higher morale to reflect their elite status and experience gained in the various clashes with the Japanese up to 1939.

Equally units will gain or lose morale as they win or lose battles (23.10.4).

Ground unit morale may decrease due to losing battles, suffering from air interdiction, or being in an isolated state. The higher a unit's morale is over its national morale, the greater the chance the morale will be reduced when it loses a battle.

Retreated units may lose one morale point, which will be increased to a loss of two morale points if the leader Morale check fails.

Routed units lose one additional morale point.

If the unit's morale is below its national morale then it can recover as much as 10% of the national morale but not more than the country's national morale.

Example: German national morale is 70 in 1942 so a unit could recover 7 per turn, but cannot exceed 70 by this method unless it is an elite unit

If the unit's morale is below its national morale, or 50 (whichever is lowest), and it is more than 10 hexes away from the nearest enemy unit then it may gain between 0-2 morale points.

Each turn there is a chance that a unit's morale will be lowered by 1 or 2 points if its morale exceeds its national morale by 30 points or more.

12.1.5. Other changes to Unit Morale

Note that units also may gain or lose morale for other reasons.

If the maximum TOE is set below 50, the unit will not receive a morale increase in the logistics phase;

The morale of a unit may increase during the friendly logistics phase due to these circumstances:

- The unit is in the reserve theatre box or in a theatre box with no ground combat;
- The unit is in a very good supply and support situation and its morale is less than 75. If Die (75) is greater than the unit's morale then a gain for this situation is possible.
- Units that are below 40 morale automatically gain one morale point in the logistics phase.
- Isolated units may lose one or more morale point(s) depending on existing supply shortages.
- Units which miss morale and fatigue rolls can lose morale during logistic phase.
- If at the end of the logistics phase a unit has less than 20 percent of needed supplies, it has a chance of losing 1 morale point. If the value is less than 10 percent there is a chance of losing 2 morale points.
- Each logistics phase there is chance that a unit can lose a morale point due to fatigue. The higher the fatigue and the lower the morale of the unit, the greater the chance that the unit must make a leader morale check to avoid a morale loss.

12.2. SETTING NATIONAL MORALE OVER, OR UNDER, 100

When initially setting up a game (or at any stage if playing against the AI) it is possible to set the morale level for one side or the other to a value other than 100.

Raising this above 100 will impact on combat performance, unit morale and the resulting cost of movement into enemy territory. In effect, the basic morale of each unit is multiplied by the value you set. Note that for the Axis side such a morale gain only affects German units not those of the various Allied nations (Chapter 14).

Note that units will start a scenario with the morale set by the scenario designed regardless of the chosen level. Unit morale will then adjust to the revised National Morale score according to the standard rules (12.1.4).

If the morale level is adjusted this will apply equally to the morale of combat and support units and of pilots. In turn that will increase the typical skill level of most pilots over time (16.7).

In addition to this, there are two important threshold levels that have a wider impact on game play.

- Whenever the morale level is set to 110 or greater, then leader admin checks for movement allowances are always successful (22.1) and units get an extra +1 morale gain from a victory, and lose one less morale point than normal from a loss. In effect this increases the mobility of your army and means it is more robust during combat.
- When the AI is set to morale of 110, it is given additional MPs, and allowed to make certain kinds of strategic movement that would otherwise violate the rules. This movement makes it much easier for the AI to form a defensive line. This should not assist the AI in offensive movements, although the extra MPs will help.
- The AI is also given a chance of getting a special bonus in combat that will cause some disruption and a smaller amount of damage to the enemy at the start of each combat. This bonus applies to the Axis AI in the period to November 1941 and from April-November 1942. It will apply to the Soviet side from March 1943 onwards.
- If the morale for one side is set to 120 (or higher), there are a number of secondary advantages. All tests to determine Movement Point allowances (22.1) using both the administrative and leadership ratings will be passed. Units will gain extra morale during the logistics phase and gain more morale if they win battles (and lose less in the case of a defeat). In addition, if the Axis side is set at 120, then no Soviet units will enter combat due to the reserve activation rules on turn 1 (11.3.2).

If morale is set below 100, then the relevant national morale is further modified by this factor. In other words if morale is set at 90, a unit that would otherwise have had a morale of 50 will have one of 45.

There are some notes on the various ways the AI alters the rules and the implications of these changes in the Player Notes, especially section 30.7.

12.3. EXPERIENCE

12.3.1. Ground Element Experience

Experience represents both how well a ground element is trained and its ability to maintain unit cohesion in combat situations. In a unit each type of ground element (i.e. infantry squad, 50mm Mortar, Panzer IIc) has an experience level that is an average of the individual experience of all the same type of ground elements. As with morale, the higher the ground element experience level, the better. Experience

mainly impacts combat, affecting combat value, the amount of retreat attrition, and the probability of firing and hitting enemy ground elements.

1201

This shows how experience can vary across the elements in a unit. Here most are clustered around 50 but some are lower than this and the rifle squads substantially above the average.

Ground elements increase their experience level automatically during the supply and replacement part of the logistics phase through training. Though this is the only time ground elements gain experience, the amount of combat the ground element participated in during the previous turn positively affects the ability of the ground element to increase the number of experience points gained.

Ground elements can train up to the average experience level of their parent unit.

Experience increases in the logistics phase can happen as follows (these are all cumulative so the maximum gain is 9 per turn):

- Elements with experience below 50% of unit's morale will get 3 experience, elements with experience above 50% and below 75% of unit's morale will get 2 experience, elements with experience above 75% and below unit's morale will get 1 experience.
- Units in refit and not adjacent to an enemy controlled hex, or in the reserve TB or in a Theatre Box with Ground Combat Level set to none None can add this chance. Elements with experience less than 91 and less than their morale, have a chance of receiving additional experience, with the lower the experience, the greater the chance of receiving the bonus. If the bonus is gained, it will be in the range 1-3.
- Elements that have participated in combat since their last logistics phase, and with experience less than 91, can also gain 1-3 experience. The more combat, and the lower their experience, the greater the chance they will gain experience.
- Units in non-reserve TBs with Ground Combat Level higher than None and with experience less than 91 will gain experience from combat intensity (up to +5 per turn). The lower their experience, the greater chance they will gain. The higher the combat intensity, the higher they can gain, and the more likely they are to gain.

Ground elements will not lose experience just because their unit's morale dropped below their current experience level.

Replacement ground elements coming into units will tend to bring down average experience, but not by a significant amount. Newly created units will appear on the map (or in the National Reserve) with a low experience level to represent the need for many turns of initial training and the buildup of unit cohesion.

The experience for ground elements newly introduced to a unit due to a TOE change will be based on the average of similar ground class elements in the unit. If no such elements exist, the national morale will be used to build the new elements.

12.3.2. Air Group Unit Experience

Air group unit experience has a significant impact on combat effectiveness during air missions. Air group units gain experience based on the number of missions they fly. Air group units in the National Reserve are considered to fly training missions each day during their player air execution phase in order to gain additional experience (18.3.5). These training missions will increase the chance of operational losses, resulting in additional damaged or destroyed aircraft from the air group units conducting the training.

Air group units will decrease in experience due to the addition of replacement pilots. In addition, pilots in air group units that upgrade (swap) (change out) their aircraft model to either an aircraft of a different type (for example from a Fighter-Bomber to a Fighter) or a different number of engines will lose -2 on their experience for each reason (i.e. to a maximum of -4).

13. THEATRE BOXES AND THE EVENT SYSTEM

1300

Focus:

This section explains how Theatre Boxes and the Event System affect game play in WiTE2.

Key Issues:

- Theatre Boxes;
- Theatre Boxes and the Partisan War;
- The Event System;

Theatre boxes are used to capture the full commitments of the Axis powers and the Soviet Union in WW2 and reflect one of three types of zones. In some, Soviet and the Germans and their allies are in direct combat (such as Finland at the start of the 1941 scenario). In others, either the Soviets or the Germans have to divert a substantial amount of their armed forces to either fight the Western Allies or protect vulnerable frontiers (such as the Soviet Far East). In addition the Partisan Wars within the Soviet Union and Yugoslavia are treated within their respective Theatre Boxes.

Finally both sides have a generic 'Reserves' box which can be used to refit units off map.

Players will have the option to lock the Theatre Boxes via the Enhanced Player TB Control game option, so only scripted transfers to and from the non-reserve TBs will occur. Setting this game option must be done before the start of the game and cannot then be changed. Setting this game option off will place additional limitations on the player with respect to units in the TBs

Note regardless of this choice, the Reserve Theatre Box will always be fully in play.

The Event system (13.5) is used to reflect progress in other theatres and uses triggers (such as date or geographical locations) to change allocations of manpower, administrative points and tracks combat and losses, Western Allied progress and national morale. Allied bombing will also affect German industrial production.

If there are insufficient forces in a given theatre box the player may lose both Victory Points and Administrative Points. In addition, the chain of events affecting that theatre may occur earlier hastening the surrender of some Axis powers. On the other hand, exceeding the required garrison may see the player gain both Victory and Administrative Points and delay the related events.

13.1. THEATRE BOXES

13.1.1. List of the Theatre Boxes and how they interact

The Axis Player has the following Theatre Boxes:

- The National Reserve;
- North Africa;
- The Balkans;
- Western Europe;
- Norway;
- Finland;

- The Soviet Union Garrison (inactive at the start of games commencing on 22 June 1941).

The Soviet Player has the following Theatre Boxes:

- The National Reserve;
- Northern Front;
- The Far East;
- Trans-Caucasus

For both sides the National Reserve is used to hold units training, refitting or re-organising after heavy losses. If units are set to 'REFIT' (26.3) in the National Reserve they will have a priority call on any available resources.

Apart from for some units (such as destroyed units returning to the game), use of the National Reserve is optional for both players.

For the Axis player, the North Africa, Balkans, Western Europe and (initially) the Norway boxes sees them notionally in combat with the Western Allies. Loses are set through varying the combat intensity (13.3.1) and the required garrison will change as the game progresses. Towards the end of the war, part of Yugoslavia may become playable and areas in Germany will be removed from the map and made unplayable as the Allies advance.

For the Soviet player, the Far East and Transcaucasus Theatres require a variable garrison. Failure to meet this may cost the Soviet player victory and administrative points.

At the start of the game, Axis units in the Finland Theatre are notionally in combat with Soviet units in the Northern Front. Each side faces their own garrison requirements and combat intensity. A shortage of troops may cost administrative and victory points and may delay or advance the events connected with the war in Finland (40.1). Once Finland has surrendered, the Soviet Northern Front forces are in conflict with Axis forces in the Norway Theatre.

13.1.2. Accessing the Theatre Boxes

This can be done on the map via the tabs at the top of the screen, by pressing CNTRL+T or by right clicking on any hex and selecting 'map information' and then 'Theatre Boxes'. The geographical Theatre boxes can be found overlaying the portion of the map they reflect (so the Soviet Far East box is on the eastern map edge). The Soviet reserve can be found in Siberia and the German reserve in Germany.

By default, when a player selects CNTRL+T the map will centre on the location of the Reserve Theatre box. The buttons in jump map will also take the player to the Theatre box.

Alternatively, all the units (both ground and air) in the Theatre Box can be accessed via the Commanders Report (but in this case they will be shown as part of the normal Commanders Report).

13.1.3. Transfers to and from the Theatre Boxes

Many combat units are set to transfer between the boxes and these can be found in the 'reinforcements and withdrawals' tab (36.7). These will withdraw on the set turn in the state (especially % TOE) that they are at that stage. If they are very weak, the player runs the risk of losing VP and AP as that Theatre may lack sufficient resources (13.5).

Units are only eligible for voluntary transfer to a Theatre Box if they have been in their current location (map or theatre) for at least one turn and, if on the map, are not in a zone of control, and also must be on a rail hex that is connected to the wider rail net. In addition they must be more than 4 hexes from the nearest enemy unit and have sufficient SMP remaining to both entrain and move a single hex by rail.

It can take one or more turns for a unit to move from the map to a Theatre Box (or vice-versa). Units that arrive on map from the Reserve Box will be deployed as in section 13.2.

In addition, the reinforcement and withdrawal screen shows scripted moves to and from other Theatre Boxes.

Soviet units moved out of the non-reserve Theatre Boxes will arrive around Cherepovets (Northern Front), Moscow (Far East) or near Baku (from the Transcaucasus).

If the player wishes to move a unit from the Map to any Theatre it must have enough SMP to entrain and move at least one hex.

Errata 01.01.14: For a unit on the map to disband or be sent to a theater box, it must now be more than 8 hexes from enemy units. To be able to send a unit to a TB, it must also be on a connected rail hex. Other limitations/restrictions re disbanding and transferring to a theater box remain unchanged.

Some units have no SMP (22.4.2) including all Axis units on T1, units that are currently routed and units that have recovered from being routed in the previous logistics phase. Also units in city forts have no SMP (20.6)

13.1.4. Destroyed Units and the National Reserve

For both sides many destroyed units will be placed in the National Reserve to be refitted as the player chooses. The specific rules for the Soviet player can be found in section 27.2.1.

For the Axis player, units that are eligible to be rebuilt (see 25.2.4 for some restrictions) will be placed in the National Reserve after a delay related to the unit size, as:

- Division (including any 1/ breakdowns of the division) = 9 turn delay
- Brigade = 5 turn delay
- Regiment = 3 turn delay
- Battalion or less = 1 turn delay.

Errata 01.02.14

Destroyed units will be placed in the National Reserve with 0 Max TOE. This value will need to be adjusted by the player before the unit will start to take on replacement elements. If left at 0, the unit will never rebuild.

13.1.5. Interaction between Theatre Boxes and the Game Map

Depending on the events that have occurred in the game, certain map regions may become playable (i.e. removed from a Theatre Box) or will be removed from the playing area (i.e. added to a Theatre Box). An example of the first type will be the addition of most of eastern Yugoslavia to the playable map some time after the Soviets occupy Romania. The second type occurs as the Western Allies make progress into Germany in 1945.

If the Soviets have taken key cities in Bavaria, Schleswig-Holstein or Brandenburg map regions then these will not be passed to Western Allied control.

Some of the Western Allied bombing events (40.5) will target cities that are on the map. In this case any flak in the city will be added to the flak already in the relevant theatre box and reduce the damage done to the city.

Isolated units will not be withdrawn from the game map.

13.1.6. Automatically Managing the Theatre Boxes

War in the East 2 can be played by leaving the Theatre Boxes (apart from the National Reserve) as locked. In that case, forces will be moved according to the reinforcement schedule and will change their ToE and/or allocated planes as the game progresses automatically. The units in the theatres will take their share of replacement manpower and equipment.

13.1.7. Morale adjustments in the Theatre Boxes

All units in TBs gain Die(3) morale up to their NM. In addition, units below their NM, in the reserve box or a TB that has a ground combat intensity of none, will gain die(6) morale up to their NM.

In combination a unit can gain up to 9 morale a turn from these two rolls.

Such units are still subject to other morale adjustments that may offset some or all of the gain (12.1).

13.2. TRANSFERS FROM THE NATIONAL RESERVE THEATRE

13.2.1. Ground Units Transfer to and from the National Reserve

The National Reserve (for both sides) is treated as a special Theatre Box where units can train and take on fresh equipment. Units are moved from the Map to the National Reserve using the rules above.

When moving ground units from the Theatre Box to the map they will arrive by default close to Berlin or Moscow.

Alternatively, Axis and Soviet units can be allocated to any on-map hex, currently controlled by the player that was originally of German or Soviet nationality (respectively). In effect, this means that neither side can bring in reinforcements on the other side of the 1941 borders.

In addition, the target hex must be 10 hexes away from any supplied enemy hex and on rail hex or a port that can trace supply normally.

The allocation can be changed as often as desired during the player turn and the unit will be moved in the next friendly logistics phase. Units will arrive at the location hex in use at the time they are ordered to the map so, in theory, every unit could arrive at a different hex. Once ordered to the map, they will be shown in the reinforcement screen with their target hex.

Note that these orders cannot be subsequently cancelled or revised.

The target hex is selected by right clicking on the map and choosing the option ‘Set Reserve TB Arrival Hex’.

1302

Note that the target hex is used to indicate where the reserves should arrive. If there is insufficient stacking capacity in the target hex they will appear as close to that location as possible (along a relevant train line).

13.2.2. Air Units Transfer to and from the National Reserve

Air units move to and from their National Reserve in a slightly different way.

Air units can be assigned to the reserve either by clicking on the individual unit counter or by using the Commander's Report (35.4).

1303

Air units are removed from the reserve in various ways. This can be done by opening an airbase and allocating the desired air units. This process can also be conducted using the Air Operation Group or Air Command tabs (17.3.1).

In addition, if you are using the Automate AI air assist system (17.1) it will manage transfers to and from the National Reserve as part of the process of allocating your air force (17.1.4).

Movement into and out of the reserve will affect how pilots are allocated (16.7.3).

13.2.3. Changing Unit Status in the Reserve Theatre Box

Units in the Reserve Theatre Box can be set to refit, have their maximum ToE adjusted and swap their type of planes as if they were on the map.

> ***Play Note: This capability is very important as units in REFIT mode in the reserve theatre box will have a priority in the allocation of reinforcements and replacements (26.3.2). Setting only some formations to refit will ensure that replacement equipment and manpower is also available to units on the map.***

Units in the national reserve will seek to reduce their actual TOE to the set value immediately in the following logistics phase. Any excess equipment will be returned to the relevant pool. If the unit has at least 80% of its support needs it will retain this regardless of the actual maximum TOE set by the player.

13.3. ACTIVE THEATRE BOXES

13.3.1. Combat Intensity in the Theatre Boxes

Each Theatre Box has a combat intensity for ground or air operations ranging from none, very low, low, medium, high and very high. These values can be changed by events.

The higher the combat intensity, the greater the losses that units in that Theatre will suffer. Note that even if the combat intensity is set to 0, some attrition related losses will still occur.

1304

In this example, for the Soviet Northern Theatre, ground combat intensity is low and air medium.

Thus combat intensity determines the losses that will affect the garrison in each Theatre Box. If you want to check what this means in practice, you can review ground and air losses in the various theatres using the Event Log (36.9)

1305

13.3.2. Required Strength in each Theatre Box

While combat intensity sets the level of losses in each box, the required strength in each box is set by, and adjusted, by event.

If the requirement is exceeded, it is possible that the player will trigger events granting them addition Administrative and Victory Points as well as delaying progress in that particular campaign (see section 40.3 for an example of what this means in practice). Failure to meet the requirement will see a loss of Administrative and Victory Points and the risk that a particular campaign will move more quickly (so, for example, the Axis player might lose North Africa before the historical date).

> ***Note that it is possible to both gain and lose VP for a given Theatre in a particular turn as the routine checks for air, naval and ground allocations separately.***

If the Enhanced Player TB Control game option is off, then the player cannot directly influence this apart from ensuring that there are enough resources (manpower, guns etc.) to replace losses in the Theatres. If the game option is on, this can be influenced by moving units into or out of the relevant Theatre (in addition scripted reinforcements and redeployments will still happen).

13.3.3. Unit management in Non-Reserve Theatre Boxes

In these boxes, there are restrictions on the actions available:

Players cannot change the Max TOE of these units.

Units are automatically moved in and out of refit status based on their % of TOE. When under 65% of TOE, they are put in refit automatically during the logistics phase, and then removed (potentially during the same logistics phase) when the unit has gone over 65% of TOE. Players cannot change the refit status of these units

If the unit exceeds 100% of its TOE then it will send any excess elements back to the active pool.

Players may not change the supply priority of these units. Supply priority of these units is automatically set to 4 with these exceptions for some Axis units:

- Units in the North Africa and Soviet Union Garrison theatre boxes are set to 3 at all times.
- Units in the Italian, Balkans, and Western Europe theatre boxes are set to 3 once Italy has surrendered. Units in Western Europe theatre box are set to 4 from 1 September 1944 to 31 December 1944, and then back to 3 in 1945.

If a unit has no set withdrawal dates it can be transferred from the map (or the national reserve) to a non-reserve TB to boost strength at that location but can't be subsequently removed unless the options in 13.3.4 have been enabled. Enhanced Player Theatre Box Control allows free movement (up to certain limits) between theatres and between theatres and the map.

Units cannot be ordered to move from the map to another Theatre Box (apart from the reserve) if they have a future scheduled transfer.

Air units in the non-reserve theatre boxes will be set to automatic upgrades.

Errata 01.02.39:

Changes to Max TOE for units in non-reserve theatre boxes:

Units will normally have their Max TOE automatically set to 100 when in a non-reserve theatre box.

Axis non-motorized units, non-elite units, in non-reserve theatre boxes will have their TOE's lowered if they do not have the sufficient manpower in their national active manpower pool as follows:

a) German non-motorized units will be set to Max TOE of 80 if the German active manpower pool begins the turn below 150,000. They will have Max TOE set to 65 if the pool begins the turn below 75,000.

b) Italian, Romanian, and Hungarian, non-motorized, non-elite units, will be set to Max TOE of 80 if their national active manpower pool begins the turn below 20,000. They will have Max TOE set to 65 if the pool begins the turn below 10,000.

c) Finnish non-motorized, non-elite units, will be set to Max TOE of 80 if their national active manpower pool begins the turn below 10,000. They will have Max TOE set to 65 if the pool begins the turn below 5,000.

d) Slovakian non-motorized, non-elite units, will be set to Max TOE of 80 if their national active manpower pool begins the turn below 2,000. They will have Max TOE set to 65 if the pool begins the turn below 1,000.

13.3.4. Enhanced Player Theatre Box Control

If the player(s) opt to allow manual management of the non-reserve theatre boxes many of the rules above are modified.

However, the supply priority and maximum ToE of units in Theatre Boxes cannot be modified and the player still has no control over the units placed on refit.

Units may be ordered to move from the map or the reserve to a TB, and units may be ordered to move out of a non-reserve TB as long as removing the unit will not leave a garrison requirement below 90% of the requirement (one of the sub-categories that the unit is contributing to). If the Theatre is below 90% all the remaining units will have an orange band indicating that no more transfers are allowed.

When a unit is ordered to move to or from a non-reserve garrison box, that unit will lose all future TB withdrawal data (i.e. if had been scheduled to move to another TB or the map later in the game it will no longer do so). In addition, if this option is selected then any unit can have its future scripted transfers removed.

> ***Note this may cause problems later in a game as it is likely the later transfers were in place to meet changing garrison requirements in the target Theatre. Players will need to remember to identify a substitute formation or suddenly face a short fall in that Theatre with possible losses of victory and administrative points as well as adverse events.***

Units that are locked cannot be moved in any situation.

Note that by default, using the enhanced control option does not actually eliminate future scripted transfers. These will happen as set out on the reinforcement chart unless they are specifically cancelled.

Future unit transfers (i.e. not those currently in process) can be cancelled in one of two ways. The easiest is to open the reinforcement screen, find the unit and delete the transfer. The alternative is to delete the transfer using the unit counter but this is not available if the unit has scripted transfers later in the game .

Note that regardless of whether this option is selected or not, a player can always choose to voluntarily send extra units to a given Theatre.

13.3.5. Limits on units with withdrawal dates

If the enhanced theatre box management option is not selected there are a number of limits on the actions available to units with a withdrawal date. Note that some units will withdraw and then return to the map at a later stage, these restrictions will then not apply at that later stage.

Units with a withdrawal date cannot:

- Be merged to bring another combat unit up to strength (21.10.2);
- Be used to construct a Soviet division (using rifle brigades – 27.5.4) or a Soviet Corps formation (27.5.5);
- Be set to static mode (21.8);
- Be voluntarily disbanded (21.10.1);
- Be sent to another Theatre Box.

13.3.6. Limits on allocations to some Theatre Boxes

Even if the players are using the enhanced control option there are some constraints as to which units can be sent to certain Theatres.

- Hungarian, Rumanian and Slovakian forces limited to: 1) Axis Reserves and 2) Soviet Union Garrison;
- Finnish forces limited to: 1) Axis Reserves 2) Finland (note that this restriction does not apply to any Finnish units released to the map if the Axis player captures Leningrad, see 40.1 for details);
- Italian forces limited to: 1) Axis Reserves 2) Soviet Union Garrison 3) NA 4) Balkans and 5) Italy 6) Western Europe.

13.3.7. Disbanding units in the Theatre Boxes

The rules for this vary according to whether the Enhanced control option has been selected or not. If it is in use, then a unit can be disbanded from any Theatre if the:

- Unit is not locked
- Unit is not a high command or air command HQ
- Disbanding unit will not reduce a garrison requirement it contributes to below 90%

If the enhanced control option is not in use, then disbands can only happen if the:

- Unit is in the Reserve TB
- Unit has no withdrawal/transfer data
- Unit is not a high command or air command HQ

13.3.8. Allocation of replacements to Theatre Boxes

Errata – 01.02.14. Theatre boxes (including the reserve) are now limited during the logistics phase in that they will never use more than 2/3 of the trained pilots that begin the replacement phase in the pool. 1/3 of the trained pilots are reserved for air units on the map, which receive their replacements after the theatre boxes.

13.4. THE PARTISAN WAR THEATRE BOXES

The Partisan war in the Soviet Union and Balkans is conducted within two Theatre Boxes.

13.4.1. The Balkans

The Balkans box is treated as a normal off-map Theatre Box but if the Soviets capture Romania then the eastern portion will be allocated to the map enabling movement in the Belgrade region (to simulate the late war fighting).

This theatre is handled by setting a varying garrison requirement and combat intensity. Failure to meet the garrison may cost the Axis player victory and administrative points and may lead to more rapid collapse of the Axis position in SE Europe.

13.4.2. The Soviet Union

The Soviet Union Garrison box simulates the partisan war. Axis anti-partisan and security forces are allocated to the box according to the usual transfer of units to and from the game map. If the Theatre Boxes are made fully playable then the Axis player can remove these units.

The partisan war is modelled in three ways. First the Axis garrison requirement will vary over time and second the intensity of combat (thus generating losses for the Axis forces) will vary.

Finally, the partisan war will create low levels of interdiction in regions occupied by the Germans. Some of this will last most of the war but sometimes it will reflect short lived Soviet partisan offensives in particular regions undertaken in conjunction with Red Army offensives. The amount of interdiction caused will be impacted by how well the Axis forces are meeting or exceeding the garrison requirement.

Since any interdiction stops Administrative Movement (22.2.1), the effect will be to raise the cost of moving German units and supplies.

Errata - Clarification: If the Axis player allocates formations in excess of the required number to the Soviet Union Garrison box then the intensity of the Soviet partisan effort will be reduced (but the relevant events will still occur).

13.5. EVENTS

The event system in WiTE2 is used to reflect actions that affect the various Theatre Boxes and to enable the use of situational criteria to trigger on map actions. In addition, the event system is used to transfer units between or in/out of the various theatre boxes and the game map.

Some events are just for information but most reflect the ebb and flow of the war in North Africa, Italy and then in France. In addition, the impact of strategic bombing by the Western Allies is simulated this way.

Each of these campaigns has a series of events that reflect major offensives or the opening of new active fronts. The event system is designed so that if the Allies make more progress in say North Africa (either by random chance or the Axis player removing units) then the later events in Italy will also be advanced. Equally delaying the Allies in North Africa will delay Italian surrender.

The events related to shortages or excess of forces in a theatre affect the later events. Each air or naval gain or loss will move the timeline by 1 day (in the appropriate direction), each land gain or loss will move the timeline by between 4 and 7 days.

The event system is also used to add or remove extra Victory Points and Administrative Points if the garrison in a given Theatre Box is over or under that required.

A full list of events and the various linked campaigns is in Appendix K. While most have some impact on the war (not least by the loss or gain or victory points), those listed in sections 40.12 and 40.15 have a very direct bearing as they award extra manpower or administrative points to reflect large scale shifts in mobilisation for the two sides.

14. MINOR ALLIES

[1400.jpg]

Focus:

This section covers the rules specific to the various states that supported either German or the Soviet Union during the war.

Key Issues:

- Movement Restrictions;
- Surrender Rules;

Several nations fought with Germany or the Soviet Union during WWII. In June 1941, Italy, Rumania, Hungary, Slovakia, Bulgaria and Finland are considered Axis allied nations.

Many units from these nations may be used by the Axis player but others will only enter later as reinforcements or are fixed in place for a number of turns.

14.1. GAME SETTINGS AND NATIONAL MORALE OF AXIS-ALLIED NATIONS

If the national morale for the Axis side is set above 100, this will only impact on the German forces and the National Morale of all the Axis-Allied nations will be unchanged. If the national morale for the Axis side is set below 100, then this will affect all the Axis nations (including Germany).

14.2. MOVEMENT RESTRICTIONS ON AXIS-ALLIED NATIONS

Unless the Germans capture Leningrad, Finnish units are limited to the Finland Theatre Box. If Leningrad falls, an event may occur to allow the German player to move some Finnish units to the main map. These units can then be moved freely on the map with no further constraints.

Movement of Southern Axis Allies (Romanian/Hungarian/Italian/Slovakian) north of a stair step roughly from Warsaw to Kursk to Saratov to Chkalov is prevented.

1401

This gives a broad idea how these restrictions affect Axis Allied forces in the Ukraine. They cannot enter the heavily shaded regions at the top of the screen.

Note these restrictions do not apply in hexes that were German controlled on 22 June 1941.

Romanian units cannot move into Hungary as long as they are Axis-Allied but can do so once the country has surrendered to the Soviets.

In addition, Romanian units cannot stack with Hungarian units in any hex. Nor can Slovakian and Hungarian units stack together.

Axis Allied air units may only be assigned to AOGs of the same nationality but their AOGs may be set to also report to German formations.

14.3. SURRENDER OF AXIS-ALLIED NATIONS

All the Axis-Allied nations may surrender as either the Western Allies or the Soviets make gains. Different rules and conditions apply in each case. Most of this progress will be determined by the various events set within the game.

When an Axis-Allied country surrenders, any airbase will have its nationality changed to German if the hex remains under Axis control.

14.3.1. Italy

Italy will usually surrender at some stage in the Autumn of 1943 depending on the progress of the Western Allies. Since most remaining Italian units will be withdrawn from Russia in late Spring 1943 it is unlikely this will have a direct impact on game play.

The Axis player can delay Italian surrender by committing extra units to the Italy or North African Theatre Boxes.

14.3.2. Finland

In WiTE2 most of the struggle between Finland, the German troops committed to the Arctic and the Soviets will take place in the off map Arctic Theatre Box and Soviet Northern Theatre Box.

If the German player captures Leningrad, they may have the option to transfer some Finnish units from the Finland Theatre Box to the map.

Finland will surrender, and change sides, when the Soviet 1944 Offensive event occurs and if the Soviets own Leningrad. Both sides can reinforce the relevant Theatre Boxes in an attempt to hasten or delay Finnish surrender.

Note this Finnish surrender will see the Victory Points for Helsinki (and any appropriate time bonus) added to the Soviet total (29.1.2).

14.3.3. Rumania

There is a 50% chance that Rumania will surrender at any date after 1 January 1942 if one of a number of Rumanian cities or towns are Soviet controlled. With the exception of much of the North-eastern “bulge” to the east of Hungary, this area includes most of Rumania.

1402

The image above is a rough indication of the location of the more likely surrender triggers. Others exist to the south and east of the displayed area.

Rumania also automatically surrenders if Bucharest is Soviet controlled.

Upon Rumanian surrender, all Rumanian units will automatically be disbanded.

Soviet Rumanian 1 and 4 Army units will arrive as reinforcements one turn after surrender.

All Rumanian nationality hexes not occupied by a non-Rumanian Axis will also change to Soviet control.

Hexes may then revert to Axis control using the standard rules for determining hex control (7.4.3).

Rail hexes that were previously Axis controlled will be converted to Soviet control with no damage.

Errata (01.01.00): The Romanian Surrender event is no longer triggered by the loss of Constanta, Sulina, Cogealac, or Medgidia.

14.3.4. Hungary

While historically Hungary did surrender, the Hungarian army continued to fight alongside the rest of the Axis. Thus in WiTE2, Hungary is treated as remaining an Axis power until the end of the game.

14.3.5. Slovakia

There is a 50% chance that Slovakia will surrender at any date after 1 January 1942 in a turn if the Soviets occupy one of the towns or cities in Slovakia or the towns of Nowy Sacz, Liska and Jaslo (marked on the map below).

1403

All Slovakian territory, unless occupied by an Axis unit, will become Soviet controlled. As with Romania, hexes may then revert to Axis control using the standard rules for determining hex control (7.4.3).

Rail lines in hexes that become Soviet controlled will be damaged.

14.3.6. Bulgaria

In WiTE2 Bulgarian forces are treated as part of the Balkans Theatre Box. The country will surrender to the Soviet Union 14 days after the event 'Rumania Surrenders' has occurred.

14.4. SOVIET ALLIED FORCES

The surrender of Romania and the capture of sufficient Polish territory will result in the creation of Soviet Romanian and Polish armies. One turn after Rumania surrenders, the Soviet 1st and 4th Romanian Army will appear as reinforcements in Romania.

The Soviet capture of Bialystok or Brest Litovsk will result in the arrival of the Soviet 2nd Polish Army headquarters unit and attached units 26 turns later.

In addition, the Soviets will receive a Czech Rifle Corps and the Soviet Polish 1st Army through the normal reinforcement process.

Since there is no separate Rumanian, Czech or Polish production and manpower for the Soviet side, all Soviet Rumanian, Czech and Polish units will utilize Soviet production and manpower for replacements. When Rumania surrenders all Rumanian equipment and TOE will automatically convert to Soviet (SU) nationality

15. LEADERS

1500

Focus:

This section explains the role of leaders and how they affect ground and air operations

Key Issues:

- Constraints on which leaders can command which HQs;
- The impact of the various leader ratings on the game;
- How leaders at different points in the chain of command affect unit performance;
- Leader promotion and dismissal

Leaders play an important role in Gary Grigsby's War in the East 2. Every headquarters unit (with the exception of naval and rail repair units) has an assigned leader that commands and influences all units attached to that HQ, to include attached HQ's and their attached units.

Each leader has a rank and designations that together determine what level and type of HQ unit they can command.

They also have leadership ratings that affect a wide range of game functions, from their ability to be promoted or avoid dismissal and a possible firing squad, to their ability to influence the morale, fatigue, movement points, attachment costs, combat value and combat performance of attached units under their command.

15.1. LEADER DESIGNATION

Leaders are given a designation that determines the maximum level of headquarters they can command (21.11.1). Some will only be able to command Corps and Army/Air Army headquarters (Type 3 and 4 HQ units). Others can command Corps, Army/Air Army, and Army Group headquarters (Type 2, 3 and 4 HQ units). At the highest level, leaders can command Corps, Army/Air Army, Army Group and High Command headquarters (Type 1, 2, 3 and 4 HQ units).

A leader may not be placed in command of a headquarters unit that is at a higher level than his Max Command level. This maximum command level cannot be changed by promotion to a higher rank.

The Optimum rank for each command is summarized in the below table. An exception is that for air HQ units, the rank required to command the HQ is one lower than that of other HQs.

HQ unit type	Soviet Optimum Rank	German Optimum Rank
Corps (Type 4)	GENM	GENL
Army (Type 3)	GENL/GENM	GEN
Army Group (Type 2)	GENA/GENP/MAR	GENO
High Command (Type 1)	GENA/MAR	FM

15.2. LEADER COMMAND RESTRICTIONS

Leaders may be restricted as to what kind of headquarters unit they can command. The restrictions include ground only, SS only, air and ground, and air only. German SS headquarter units may only be commanded by a SS leader. In addition, a SS leader cannot command a non-SS headquarters unit.

15.3. LEADER RATINGS

There are seven leadership ratings, Political, Morale, Initiative, Administration (Admin), Mechanized (Mech), Infantry, and Air, with the last three collectively referred to as combat ratings.

Leadership ratings range from one to nine.

15.3.1. Political Rating

The political rating affects the cost to replace the leader, as well as the probability that the leader will be promoted for victories or dismissed for defeats. Though the actual admin cost is based on the differential in political ratings between a leader and the leader in the next higher headquarters, generally, the higher the political rating, the greater the cost in admin points to replace a leader.

A high political rating also decreases the chance that the leader will be dismissed and possibly executed due to a poor win/loss ratio.

In addition, a leader with a high political rating will have a greater probability of being promoted, all other things being equal. A low political rating will have the opposite effect on cost of replacement and chance of dismissal or promotion.

15.3.2. Morale Rating

The Morale leader rating is used for determining unit combat value in battle, determining win/loss credit, adding or recovering fatigue in the unit's ground elements, and rallying routed units.

15.3.3. Initiative Rating

The Initiative leader rating is used for determining the actual number of movement points a unit will have during the turn, the ability of ground elements to fire and to hit during combat, the ability of support units and combat units in reserve status to commit to a battle, and the ability to reduce casualties by turning a low odds hasty attack into a reconnaissance in force.

Equally leaders with an initiative rating of more than 5 are more likely to halt a poor odds attack at a greater range, thus reducing overall attacker losses.

15.3.4. Administrative (Admin) Rating

The Admin leader rating is used for determining the actual number of movement points a unit will have during its turn, checking for repair of damaged aircraft and ground elements and determining fuel and supplies wastage as a result of air missions.

Admin checks are specifically affected by the actual number of support squad ground elements in the leader's HQ (21.11.7). The effect of this is proportionate to the number of missing squads.

15.3.5. Combat Ratings

Mechanized (Mech) and **Infantry Ratings**: These ratings are used to determine the overall combat value of units under a HQ, as well as the ability of the ground elements in the units under their command to be able to fire and to hit opposing ground elements. Successful rating checks will increase combat value and improve the chance of ground elements to both fire and to hit.

Mech ratings apply to motorized units and the infantry ratings to non-motorized.

Air Rating: For air leaders, a successful air combat skill check will result in more ready aircraft from an Air Group participating in a particular air mission.

15.4. CHANGES IN LEADER RATINGS

Based on the number of wins compared to losses (19.6 and 23.11), leaders may see some of their skill ratings increase. Administrative, initiative, mech, infantry, and air ratings can only be increased if they are currently less than six.

Only air leaders in command of air headquarter units can increase their air rating. Mech and infantry ratings can only be increased for leaders in command of non-air headquarter units. Political and morale ratings can only be increased if they are currently less than eight. The naval skill rating cannot be increased.

The chance of increasing a skill rating becomes more difficult as the type number of headquarters unit the leader commands decreases. For example, a leader in a High Command (Type 1) command will have a much more difficult time increasing their skill rating than a leader in command of a Corps (Type 4).

Leaders check to see if any of their ratings increase once each turn during their side's logistics phase.

15.5. LEADER RATING CHECKS

Leader ratings can have an impact on virtually all actions taken by units; to include both the logistics and air planning, execution and ground phases of the turn.

Leaders conduct thousands of checks using one or more of their ratings for everything from combat value (CV) determination, many steps in the supply and logistics system and admin and morale checks for most units. In turn the infantry or mech checks figure prominently in ground combat, air rating checks are made for every air mission.

15.5.1. Leader Rating Check Procedure

Each leader rating check is essentially the computer generating a Random(x) value where if the result is less than the leader rating then the check is passed, but if the result is greater than the rating otherwise the check fails. Leaders of headquarters units where the number of attached units exceeds the command capacity (21.11.3) will have their chances of making the leader rating check reduced with the more excess units, the less the chance of a successful check.

In addition, the chances of passing admin checks is increased as the number of support squad ground elements in the HQ unit of the leader conducting the check increases.

> ***For a corps commander, within their command capacity, the basic chance to pass a given check is their relevant leader score divided by 10. So a leader with a 6 for admin has a 60% chance of passing a given test.***

15.5.2. Leader Ratings and chance to pass a check

The chance to pass a check is dependent on how a unit reports to the chain of command. The expectation is that Axis units will report to a Corps HQ and that, after August 1941, Soviet units will report to an Army HQ.

In this case, the chance for the immediate commander to pass a given test is their relevant rating divided by 10.

> ***Note that all HQs, regardless of level, can only provide leadership to units that directly report to it over 5 hexes. So an Axis unit reporting to the OKH must be within 5 hexes or is treated as being out of command range and in this case the notional command range (21.11.4) of a higher level HQ is ignored.***

However, Soviet units reporting to an army up to the end of November 1941 will have a lower chance to pass any leadership test to reflect the problems with command and control the Soviets faced in the early stages of the war. At this stage, the base chance for all such leadership tests is 10+2. From any turn starting after the 1 December 1941 Soviet units reporting to an army HQ are treated as if they reported to a corps (i.e. the base chance to pass a leader test is 10).

If a unit does not report to a Corps (Axis) or Army (Soviet) there are penalties to reflect the unusual assignment of combat units.

If the command exceeds its command capacity (21.11.3), in other words if it is directly controlling too many combat units, then the base chance to pass a given

check will increase by 1 for every command point in excess of command capacity. Thus a HQ with a command capacity of 8 and controlling units costing 11 command points would use 10+3=13 as its base rate for any check. This figure may be further amended according to the rules above and distance to the unit under consideration (15.5.4).

The base chance to pass a test will also be modified according to the range from the combat unit to the headquarters unit for most checks.

If the immediate commander fails a check, then the next commander in the chain will be checked and may allow the unit to pass.

15.5.3. Chain of Command Rating Checks

If a leader fails their rating check, the leader of the next higher headquarters unit in the chain of command will then conduct the check, but with the base value of the check doubled.

Each failed check will in turn result in the leader of the next higher headquarters in the chain of command conducting a check with the base value doubled each time until the leader of the High Command headquarters unit in the chain of command succeeds or fails the check.

Note that the number of possible checks and the number of times the base value is doubled is dependent on where the unit is attached.

> ***For example a German unit attached directly to OKH (High Command headquarters unit) will have one leader check at the value of 10+2. The same unit attached to a Corps could have up to four leaders conduct the check at the Corps, Army, Army Group and OKH levels.***

In this case, the base value for such higher leaders will be amended according to the level of command the unit reports to, as:

Axis Command Structure	Base Value	Amended Base Value if the unit reports directly to this level		
Corps	10	NA	NA	NA
Army	20	12	NA	NA
Army Group	40	24	12	NA
OKH	80	46	24	12

Part 3: Game Concepts

The Soviet structure up to the withdrawal of the Corps HQs in August 1941 is one where some units might report directly to a corps and others to an army. In that case, the rules are:

Soviet Command Structure	Base Value	Amended Base Value if the unit reports directly to this level		
Corps	10	NA	NA	NA
Army	20	12	NA	NA
Front/MD	40	24	12	NA
Stavka	80	46	24	12

Up to the end of November 1941, the Soviet structure is one of Army-Front-Stavka but the values change as:

Soviet Command Structure	Base Value	Amended Base Value if the unit reports directly to this level		
Army	12	NA	NA	NA
Front/MD	20	12	NA	NA
Stavka	40	24	12	NA

From December 1941 to the end of the war, the values and structure are:

Soviet Command Structure	Base Value	Amended Base Value if the unit reports directly to this level		
Army	10	NA	NA	NA
Front/MD	20	12	NA	NA
Stavka	40	24	12	NA

Note that any units that report to one of the Airborne Corps will use the Axis table to determine their leadership rolls.

Examples:

1) If a German unit reports to a Corps in the normal command structure and each leader has an admin rating of 6, the chance to pass any single test is:

Level	Probability	Notes
Corps	60% (i.e. 6/10)	So immediate chance to pass is 60% at the Corps level and there is a 40% of the test being passed to the Army level
Army	12% (i.e. .4*6/20)	Only 40% of checks will come to the army level, each has 6/20 chance to pass, on average 12% will pass this stage and 28% will be checked at the Army Group Level
Army Group	4.2% (i.e. .28*6/40)	From the above, 28% of checks will be passed from the Army level and each has a 6/40 chance to pass. On average 4.2% will pass at this stage and 23.8% will now be checked at the OKH level.
OKH	1.8% (i.e. .238*6/80)	So of those checks that go to OKH level, in this example a further 1.8% will be passed.
	78%	In this example, the German unit will pass 78% of its leadership checks, a substantial improvement over the chances if it relied on just the Corps commander.

Note – for simplicity this example uses the same leadership value at each stage but for example a leader with an admin score of 8 in the Army Group would increase the chance to pass that step to 5.6% and the overall chance to pass the test to 79.3%.

2) A Soviet unit reports to a normal Combined Arms Army in **1942**, again assume that all the leaders in the chain have a base value of 6:

Level	Probability	Notes
Army	60% (i.e. 6/10)	So immediate chance to pass is 60% at the Army level and there is a 40% of the test being passed to the Front level
Front	12% (i.e. .4*6/20)	Only 40% of checks will come to the Front level, each has 6/20 chance to pass, on average 12% will pass this stage and 28% will be checked at the

		Stavka Level
Stavka	4.2% (i.e. .28*6/40)	From the above, 28% of checks will be passed from the Front level and each has a 6/40 chance to pass. On average 4.2% will pass at this stage
	76.2%	In comparison a Soviet unit, even with similarly competent leaders is less likely to pass the tests. In practice, many Soviet leaders are less competent than their German counterparts.

3) A Soviet unit reports to a normal Combined Arms Army in **October 1941**, again assume that all the leaders in the chain have a base value of 6:

Level	Probability	Notes
Army	50% (i.e. 6/12)	So immediate chance to pass is 50% at the Army level and there is a 50% of the test being passed to the Front level
Front	12% (i.e. .4*6/20)	50% of checks will come to the Front level, each has 6/24 chance to pass, on average 12.5% will pass this stage and 37.5% will be checked at the Stavka Level
Stavka	4.2% (i.e. .28*6/40)	From the above, 37.5% of checks will be passed from the Front level and each has a 6/46 chance to pass. On average 4.8% will pass at this stage
	67.4%	As intended this reflects the relative command confusion in the Red Army at this stage. Note that more checks are actually passed at Front and Stavka level simply as so many more are failed at the Army level.

From these calculations it is worth noting that the Soviets gain from better commanders at the Front/Stavka level as more tests will be passed to that level. This will be compounded as even late in the game, many Soviet army commanders will have low ratings for some of their leadership values.

15.5.4. Command Range Modifier

A command range modifier is applied to leader rating checks conducted by leaders in all headquarters units to which the unit involved in the chain of command, to include the HQ unit to which the unit is directly attached.

Morale leader rating checks are exempt from the command range modifier.

Each level of headquarters unit has a designated number that the range from it to the unit is divided by to get the modifier after first subtracting five from the range to the HQ units, with the value never set below zero.

This means that tracing five or less hexes to any HQ or less than 91 hexes if to an air command HQ results in no range penalty.

The range effect depends on the level of the HQ unit, so that higher level HQ units can be located further away and still influence the combat units under their command. The range modifier interacts with the chain of command checks above.

Note that the range used for this test is the distance in hexes minus five. So an Army HQ that is within 5 hexes of the unit will face no range penalty.

Errata: Clarification (01.01.01): When determining the modifier, instead of subtracting 5 from the range before determining the modifier, you subtract the following:

Corps HQ – 5

Army – 10

Army Group/Front – 15

High command - 20

The modifiers are as follows:

Unit	Command Modifier
High Command (Type 1)	Divide Range by 4
Army Group (Type 2)	Divide Range by 3
Army (Type 3)	Divide Range by 2
Corps (Type 4)	Divide Range by 1
Air (Any Type)	Range is treated as 0 if the actual distance is less than 91 hexes.

For example, if the leader of a German Army HQ unit that was 15 hexes away from a unit was conducting an initiative check, 5 (i.e. (15-5)/2) would be added to the random number value.

The impact of this can be shown using the first example in section 15.5.3.

Level	Assumed Range modifier	Base Probability	Notes
Corps	Within 5 hexes = 0	60% (i.e. 6/10)	So immediate chance to pass remains at 60% and 40% is now passed to the army level
Army	15 hexes away, i.e. 10/2	9.6% (i.e. .4*6/25)	The chance to pass is now 6/(20+5) so the calculation is 40% * 6/25 or a 9.6% chance to pass
Army Group	20 hexes away, i.e. 15/3	4.1% (i.e. .30*6/45)	Now 30.4% of checks will be passed from the Army level and each has a 6/(40+5) chance to pass. On average 4.1% will pass at this stage and 26.4% will now be checked at the OKH level.
OKH	85 hexes away, i.e. 80/4	1.6% (i.e. .26*6/100)	So of those checks that go to OKH level, in this example a further 1.6% will be passed.
		75.2%	In this example, the German unit will pass around 75% of its leadership checks due to the impact of the range modifiers for the higher commands.

A HQ that is outside its command range will not allocate either its leadership bonus or support squads (21.2.2) to combat units under its command.

PlayNote: While the effect of range on leadership effects is relatively minor, it can be enough to make a critical difference. It is suggested that higher commands are deployed on the map so they are closer to the crucial sector of their command. So the Army HQ is closer to the most important Corps HQ, Army Group HQ closer to the most important Army and so on.

15.5.5. Command Range Exceptions for Leader Checks

Parachute or Air-Landing Combat Units that are attached to an HQ that contains the name Airborne, Paratroop or Fallschirm are considered to be only one hex from their attached HQ unit and all higher level HQs in the chain for the purposes of leader checks. This prevents units conducting an airborne landing from suffering a leader penalty as long as they are attached to an appropriate airborne type HQ unit.

15.5.6. Leader Rating and command re-organisation

If a unit shifts to a new HQ then that HQ's leader will have at least a -1 malus on their leadership value for any administrative rolls during that turn. If the new command also reports to a different higher command then an additional -1 malus will be applied to the corps/army commander's administrative vale.

For example, a German infantry unit moves from one corps to another in the same army. The new Corps leader has -1 on their administrative score. If that new corps reported to both a different army and a different army group, the net malus will be -3 on the administrative value of the Corps leader. If it also changed from say OKH to the Rumanian Supreme HQ, then the malus becomes -4.

15.6. LEADER PROMOTION AND DISMISSAL

Leaders can be automatically promoted or dismissed depending on their performance as measured in wins as compared to losses as well as their political rating. In some cases, the dismissed leader may be executed and permanently removed from the game. Players can also manually dismiss leaders and select another leader as a replacement.

A leader may be limited or restricted in the kind of headquarters they can command, to include level (Corp/Army, Army Group, High Command) and type (SS, air or ground).

15.6.1. Promotion

Leaders undergo a promotion check once each turn during their sides logistics phase. A leader is promoted to the next rank if they pass the check, which is based on their political rating and their number of combat wins and losses. Promotion will result in the zeroing out of that leader's number of wins and losses. A leader with a max command of high command may be promoted to the highest rank if selected to command a high command HQ.

For Corps and Army headquarters units, a leader will be automatically promoted to an appropriate rank if selected. If promoted this way, the leader must make a check for each skill rating to see if it drops one point. There is less of a chance for a particular skill rating to drop if that skill rating has been previously reduced.

If a leader is killed and the computer replaces the dead leader with a leader that requires a promotion, a similar check for a drop in skills occurs.

Leaders who are promoted through the normal promotion check process do not check for a decrease in skill ratings.

15.6.2. Dismissal and Replacement

Leaders can be **dismissed automatically** by the computer (representing the national political and military leadership) due to a poor win/loss ratio. In some cases of poor win/loss record dismissal the leader will be executed and permanently removed from the game rather than being returned to the leader pool. Leaders killed by execution will be noted in that side's Logistics Phase Event Log (36.9.8) at the beginning of the ground phase. In all cases of automatic leader dismissal, the computer will automatically select a replacement and the event will be reflected in the logistics phase event log. There is no admin point cost associated with automatic dismissals.

The player can **manually dismiss** a leader and replace them by first selecting the leader in the headquarters unit detail window (37.2) and then selecting the dismissal cost link in the leader detail window. This will bring up the pick new leader window (37.9), which allows the player to select from a list of all eligible candidates as replacement leaders. The list is ranked by the computer based on skill ratings and the current rank of the candidate replacement leaders.

To be eligible, leaders must have the proper level and command restriction designations. Leaders can serve one level up and two levels down from the optimum rank for the HQ level.

There are variable admin costs associated with dismissing leaders. The pick new leader window, which allows the player to select from a list of all eligible candidates as replacement leaders will list the AP cost in a x + x format with the first number being the cost to bring the new leader in to the position and second being the dismissal cost for the dismissed leader.

Errata (Clarification, 01.01.01):

a. The cost of dismissing a leader is increased by the political rating of the leader being dismissed. If the leader is an Axis Allied leader, the cost is double the political rating of the leader.

b. The cost of dismissing a leader is reduced by the political rating of the leader of the Higher HQ for the leader being dismissed (i.e. OKH political rating is subtracted from the cost of dismissing the leader for Army Group North).

c. The base cost before items a and b, are as follows All High Command 30, Axis Army Group 30, Axis Army 20, Axis Corps 10, Soviet Front 15, Soviet Army 10, Soviet Corps 5.

d. There is a minimum cost of 2.

Errata 01.02.39

The base cost of dismissing Soviet Front, Army and Corps leaders has been increased.

1501

A leader with a rank one higher than the optimum rank may fill an HQ position at no extra admin cost, but leaders with a rank one lower than the optimum rank that fills an HQ position will normally require the expenditure of extra admin points. When a leader is dismissed, some leaders that are available as replacements will have less than the optimum rank to take the new position. These leaders have a P in the Pick New Leader window next to the number of admin points it will take to appoint the leader, which will usually be significantly higher than the admin points required for a leader with the optimum rank for the position.

For Army Group and High Command headquarters units, leaders with a P can be selected, however, they will remain at their current rank until they are promoted through the normal promotion process.

15.7. BATTLE WIN AND LOSS CREDIT

A leader may be credited with one win or one loss every time a combat unit in their chain of command participates in a battle. For Air leaders, a win/loss situation occurs if an air group in their chain of command participates in an air mission that results in a set differential in losses (19.6).

In each case, this includes all higher headquarters up to the combat unit's High Command headquarters.

For example, if the German 290 Infantry Division wins a battle then the commanders of L Corps, 18 Army, Army Group North and OKH are all credited with a win.

1502

Wins and losses are recorded in the individual leader detail windows as well as in the unit list in the commander's report.

When a leader earns a win or a loss, there is a chance that it will not count for promotion or skill rating increase purposes. Although the total wins and losses are displayed for the leader as described above, the actual total used by the promotion

system is tracked separately and will in most cases be less than the total wins and losses shown on displays.

15.8. DEATH OF A LEADER

Leaders can be killed and permanently removed from the game due to dismissal, headquarters relocation, air attack and other enemy action. Leaders who are automatically dismissed due to poor performance (losing battles) may be executed. A low political rating increases the chances of a dismissed leader being executed. There is a 15 percent chance that when a headquarters unit is relocated or forced to execute a displacement move, the assigned leader may be killed or captured. In either case, if the HQ is isolated the chance of the leader being killed increases to 50 percent.

There is also a very small chance of a leader being killed if their headquarters unit suffers casualties from enemy air attack, such as ground attack, air interdiction and ground support missions.

Finally, there is a small chance that leaders may be killed due to other enemy action. The probability of this occurring is related to the distance the leader's headquarters unit is located from enemy units, with headquarters units closer to enemy units having an increased chance of having their leader killed. Any leader in an HQ that is more than 10 hexes from the enemy will have his chance of being killed reduced by two thirds.

Errata – 01.02.21

The baseline chance a displaced/relocated HQ will lose a leader was changed, from 15% (50% if isolated), as follows:

- **June 1941 – 5% (10% if isolated)**
- **July 1941 – 10% (15% if isolated)**
- **All other dates – 15% (30% if isolated)**

Note: in-game loss percentages, on average, appear to be slightly higher than these baseline values.

No more than one leader may be killed, per player turn within any given HQ, due to HQ displacement/relocation.

HQs that have lost a leader due to displacement/relocation may suffer an additional MP reduction at the start of their next logistics phase

16. AIR UNITS AND COMMAND STRUCTURE

1600

Focus:

This chapter covers the building blocks to the air war in WiTE2.

- How the air command structure works;
- The difference between Air Commands and Air Operational Groups
- How individual planes are allocated to Air Groups
- How the concept of air profiles limits both the upgrade options for air units and the AOGs they can be assigned to
- How to upgrade your air force as new types of planes become available
- The role of air bases
- How individual pilots are tracked and allocated to air groups
- The types and role of anti-aircraft units

16.1. OUTLINE OF THE BASIC CONCEPTS

The air war in WiTE2 tracks individual planes and pilots and allows the player (if they wish) to manage the modernisation of their air forces, their allocation to combat missions and the load-out used by the planes. However, much of the air war is handled automatically by the computer in the Air Execution Phase (5.3.2).

16.1.1. Automation

The player can choose to partly automate the air war. If the 'AI assist' option is selected the AI will generate Air Directives (17.4) and allocate air groups to Air Operational Groups according to set priorities. In addition it will rebase planes as the linked HQ is moved on the map.

However, the player will need to make some decisions such as which ground HQ (Axis Army or Army Group, Soviet Front or Military District) an Air Command is assigned to follow and the relative priority (for air group assignment) between the AOGs. This process is summarised in the relevant one page guide (4.6.1).

There are two variants to using the AI-assist. If it is selected as part of setting up a game then the orders will be executed twice each turn when the F12 key is pressed. If this approach is used then in a multi-player game the players will need to decide whether to automate the air war at the start of the game and this decision cannot be changed.

The alternative allows the player to access the AI-assist at any point in a turn. It also allows the player to over-ride those decisions (as long as they do not then press the AI-assist option again).

Practically the two methods yield the same options (and require the same inputs) but they work in different ways allowing a different level of direct player intervention.

> ***If you want to focus on the ground war then it is suggested to use the set-up option and ensure that the required actions are taken each time you press F12.***

16.1.2. Pilots, Planes and Air Group Units

While the game engine tracks individual pilots and planes, the lowest command unit available to the player is the Air Group Unit (16.4). This includes a variable number of planes and pilots and can be assigned to a variety of missions depending on the type of planes it is equipped with.

16.1.3. Command Structure

Air Operational Groups (a collection of air group units) report to air commands (for the Germans these are the Luftflotte and Fleigerkorps, other Axis nationalities use

their own command structure and the Soviets use Air Armies and some Air Corps). For the Germans, the air commands in turn report to the OKL.

16.1.4. Air Directives

Most actual air missions take place in the Air Execution phase following pre-created Air Directives. This can be set by the computer (17.1) or manually by the player (17.4).

Most bombing and all reconnaissance missions take place this way. Ground Support bombing missions (18.1.3) are created using an air directive but executed during the Ground Execution Phase. The transfer of air units (17.2.5 and 17.3.5) between airbases can be done in either the air planning or ground phase. Air transport (of freight or units) (22.5) and paratroop drops (22.5.3) happen in the ground phase.

Each Air Command can have up to 32 Air Directives at any one time.

16.2. AIR COMMAND STRUCTURE

The air command structure is different to that used for Ground HQs and primarily exists to enable the allocation of leaders and to provide a means to link air units to ground operations.

16.2.1. Air Headquarters

The actual structure of the air commands varies between the different nationalities.

The Germans use Luftflotte and Fliegerkorps and these in turn report to the OKL.

Axis allies have a mixture of a national Air Command and sometimes a separate formation (such as the Rumanian Combat Air Command) that controlled those air assets committed to the invasion of the Soviet Union in June 1941). These start the game assigned to a German Luftflotte as opposed to their national air commands.

1601

The Soviets mostly use Army Air Formations (air commands and air armies) and these report to Soviet Fronts or Military Districts. In addition at the start the Soviets have the elements of their long range bomber fleet and the various PVO Corps (that are assigned to one of the Army Air Formations).

As the war progresses, AOGs, Air Corps and Air Army commands are added or removed as a result of scripted transfers and reinforcements.

The Air Headquarters are used to assign leaders, and set the relative asset and supply priority.

Note that in addition to their own command hierarchy, Air Commands can be linked to a particular Axis Army or Army Group or Soviet Front or Military District. If the AI

assistance is used, this will influence how the planes are based as those ground HQs move on the map.

16.2.2. Air Operational Group Units and Air Commands

Air Operational Groups control the individual air groups and are assigned to a given Air Command. Supply priority can only be set at the Air command/air army level. If wanted, asset priority, and the HQ being followed can be set at corps AOG level (if so ensure that the air command is set first as otherwise that will override any allocations at the AOG level).

Each AOG can command from one to five air groups.

16.2.3. Air Bases and Air Commands

A given air base can have planes from more than one air command.

16.2.4. Theatre Boxes

Each Theatre Box (with the exception of the National Reserve) has a required air garrison strength. Air losses in a Theatre Box will be set by varying the air combat intensity (13.3.1) to reflect shifting events in the wider war.

There are a number of scripted transfers of air units between the Theatre Boxes and the Map and between Theatre Boxes.

Freshly raised air units are placed in the appropriate National Reserve and can be deployed to an airbase on the map when the player is ready. Equally air units can be removed from the map and placed in the National Reserve for training or to refit.

16.3. AIR OPERATIONAL GROUPS

Air Operational Groups report to one of the levels of the Air Command system and directly control the air groups.

They can be used to automate the control of the air war if you wish to do this (17.1).

If you intend to manually control your air operations then you will still need to allocate air groups to AOGs. In turn the AOGs will be displayed on the map (the label will be roughly central to the locations of the individual air units) and you will need to use these when you wish to move your air groups.

1602

16.3.1. Manual and Automatic (AI assist) control of AOGs

The detailed rules for the allocation of air groups to AOGs, creating Air Directives and moving Air Groups are in sections 17.1, 17.3 and 17.4 respectively.

16.3.2. Air Operational Groups and air unit types

Certain plane types can only be assigned to particular types of Air Operational Groups. Both sides can only assign transport and reconnaissance air units to the appropriate AOGs. These constraints effectively follow the air profiles (16.4.6) that are also used to limit the conversion of planes as new models become available.

For the Germans, the following restrictions apply:

- JG – fighters;
- KG(J) – German single-engined fighters;
- StG and SG – ground attack aircraft (FB and tactical bombers);
- KG – level bombers
- NAGr/ FAGr/Koluft – recon
- NJG – German multi-engined and single-engined fighters;
- NSGr – night bombers, German light bombers, multi-engined fighters and bi-plane bombers
- TG – German transport air groups

For the Soviets, the following restrictions apply:

- IAD – fighters and fighter bombers only
- BAD – level bombers
- DBAD – heavy bombers only
- NBAD – night bombers only
- ShAD – tactical bombers
- SAD – Fighters and bombers

Soviet naval only air groups can only be assigned to an AOG with a fleet suffix (16.4.9) such as –CHF.

The air profile (16.4.6) of the types of planes eligible to be assigned to an AOG is shown on the bottom left of the AOG detail screen (if there are any restrictions).

1602a

16.3.3. Disbanding and Converting AOGs

Over the game a number of AOGs will arrive as reinforcements, be disbanded (or withdrawn) or convert to a different type. If they arrive as a reinforcement they can be called to the map using the procedures in section 17.3.

In particular a number of Soviet SAD AOGs will (ahistorically) be retained in early 1942 and will be renamed in early Summer 1942. In addition, five of the SAD commands will be retained and will convert to ShAD AOGs in early Summer 1942.

> ***Both these changes are needed or the Soviet player will not have enough AOGs to manage the air force, in particular the SADs are needed to enable usage of the Il-2 formations.***

16.3.4. Soviet Guards AOGs and Air Groups

A number of Soviet AOGs will convert to Guards status on their historical dates. This has no direct impact on their performance but will also lead to the upgrade of air groups to Guards status.

For every Guards AOG, usually 3 Air Groups of the appropriate type (16.4.6) will be automatically converted to Guards status (16.4.8). Usually these will be groups directly assigned to the relevant AOG but if that AOG is not currently in use (or lacks sufficient air groups), then groups in the reserve will be converted instead. If there are not enough of these, then air groups in other AOGs will be converted.

Guards air groups gain +5 on their national morale which will raise the average quality of their pilots (16.7).

16.3.5. Axis Allied AOGs

These have some limits as to the nationality of their higher command. They can all be set to report to a German HQ or AOG. However, Rumanian and Slovakian AOGs cannot report to a Hungarian command and Rumanian AOGs cannot report to a Hungarian or Slovakian HQ.

16.4. AIR GROUP UNITS

Air group units are the basic tactical unit that contain aircraft. Each air group unit is designated by group type, which determines the maximum number of aircraft in the unit, and functional type, which determines the kinds of air missions the unit can undertake. The name of the air group unit usually indicates its function as well. Air group units consist of a number of the same type and model of aircraft that are categorized as ready, damaged or reserve.

Aircraft are characterized by a number of attributes, to include speed, climb rate, maximum altitude, radius in miles, number of engines, armour rating, durability, manoeuvrability, and reliability (37.16.1).

Aircraft carry devices such as machine guns, cannons, rockets, bombs, drop tanks and electronic warfare systems such as radar. Aircraft may have several different load outs of devices that can be selected through the Air Group Unit detail window (37.16.3). Pilots and air crews are assigned to air group units and their aircraft from the manpower pool, with pilots also being tracked individually as they gain experience.

Air Groups that appear as reinforcements will initially be placed in their National Air Reserve (13.2.2). Reinforcement Air Groups do not use pilots already in the pool, but create them when they are placed in the national reserve. The pilots in reinforcement Air Groups will have experience levels that are an average value equal to the Air Group's experience.

16.4.1. Air Group Units Status

The Air Unit can be set to one of two main basic statuses. A unit in **rest** will not be used in the current turn but will regain lost morale and reduce fatigue.

All other Air Units are deemed to be active and will take part in air operations according to the type of plane and Air Directive selected. This includes being set to fly missions only during the day (DO), only at night (NO) or both (DN).

In addition, the method by which the Air Group will change planes to deal either with shortages or when more modern planes become available can be set. The options are M>> (this will be done manually by the player) or A (this will be done automatically in the logistics phase using the routines set out in section 16.5).

16.4.2. Fighter Bombers

Fighter Bombers (FB) can be assigned to fly either Fighter Missions or Bomber Missions in the air group unit detail window by selecting the Mission text. The setting determines whether they are available for escort duty or to bomb targets.

The air group unit detail window lists whether the unit is trained as a Fighter or Bomber unit. Fighter bomber air groups trained as fighters will bomb at 80% net effectiveness. Fighter bomber air groups trained as bombers will dogfight with opposing fighters (and fighter-bombers without bombs) as if they had only 80% of their normal experience.

In the Commander's Report (35.4.1), FB are shown as either Ftr or Bmr according to their current role. If they are ordered to act in a role they are not trained for, this will be shown as Bmr* or Ftr* as in the example below

1603

The same designation of a mismatch between current role and training can be found on the unit tab (37.16.3).

1604

A player can retrain an air group unit by selecting the air group detail screen training type. This will take the unit off the map for 8 turns and when it returns, it will be switched from fighter to bomber or vice versa. For example, a FB air group unit trained as a fighter will bomb at 80 percent effectiveness and dogfight at full experience level. If that air group unit was retrained as a bomber, when it returned it would bomb at full effectiveness and dogfight at 80 percent experience level.

Fighter bombers will dive down to conduct attacks at 1,000 feet altitude if their mission altitude is set at 5,000 and above.

Fighter bombers can only participate in strategic bombing missions as escorts.

Fighter aircraft carrying drop tanks will automatically drop them once they have been used up during the mission. Bomb carrying aircraft will drop their drop tanks at the same time they drop their bombs. Fighters and Fighter Bombers carrying drop tanks and/or bombs will fight less effectively if engaged in air to air combat by enemy interceptors. In such a situation, there is a chance that some of the aircraft will prematurely drop bombs and/or drop tanks to more effectively engage the enemy interceptors.

16.4.3. Aircraft Status

Individual aircraft will be ready (i.e. can fly if assigned), damaged (and need to repaired) or in reserve (due to a lack of aviation support at the airbase and unavailable for air missions).

The number of ready planes is shown on the air command tab (in the example below the AOG has 41 ready and 10 damaged or in reserve:

1605

This can also be seen indirectly on the AOG label which shows that 41 planes are available and these constitute 68% of the total aircraft.

1606

Ready aircraft are available to fly in air missions that the air group unit is selected to conduct.

Damaged aircraft require repair and are unavailable to fly, but do count against the maximum number of aircraft allowed by the group type. Damaged aircraft that were

not repaired during the maintenance segments of the air execution phase may be destroyed (written off) during the logistics phase. Older aircraft with low durability and low reliability have a greater chance of being written off.

Aircraft are usually placed in reserve status due to a lack of aviation support at their assigned air base unit or a shortage of pilots in the air group unit. Reserve aircraft are categorized as unready and do not fly in air missions, but are considered flyable if the air base unit their air group unit is attached to is captured (16.6.8).

Reserve aircraft are not counted against the maximum number of aircraft in the unit, but may be re-designated as ready aircraft during the logistics phase if the number of ready and damaged aircraft is below the maximum number of aircraft allowed in the unit. If the number of ready aircraft in an air group unit exceeds the maximum number allowed, aircraft designated as reserve in the air group detail window will automatically be sent back to the applicable production pool over a number of logistics phases, while the excess ready aircraft will be moved to the reserve designation over a number of logistics phases.

> ***Note that if the 'percentage to fly' has been set (17.4.3) in the air doctrine window then neither damaged or reserve planes count as ready. This may lead to the entire air unit being grounded due to a lack of ready planes.***

16.4.4. Air Group Unit Mission Settings

Air group units can be set to operate during day only, night only, or day and night. Alternatively, air group units can be set for rest. Rest means the unit does not fly at all. Air groups in TBs ignore mission settings. Air units in the Reserve TB are available for training missions if they have low experience and are not set to rest.

The mission setting may be changed on the CR screen (individually or in bulk using the mission setting function) or on the unit detail screen for the group (37.16.3).

1607

16.4.5. Air Group Unit weapon and fuel loadouts

Air Group Units have a default loadout determined by the type of aircraft and the assigned mission. The player has the option to change the loadout through the air group unit detail window, which also can be accessed through the Commander's Report air group unit tab, either individually or for multiple air group units with the same aircraft model.

The image below shows some of the loadouts available to the German Ju-88 in June 1941.

1608

Use of manual air group selection allows multiple air group units of the same model assigned to the same type of air directive to change load outs as well (18.2). The type of loadout can impact aircraft effectiveness by decreasing various attributes such as climb rate, speed, and manoeuvrability, though fighters and fighter bombers may drop bombs and/or fuel drop tanks when engaging in air to air combat (19.2).

> ***Note that if planes are at an airbase with low levels of fuel by default a load out with no additional fuel tanks will be selected. If this is done manually, you may find that the available fuel is used up quickly resulting in planes not being available for missions.***

If you change the loadout then the performance data for the aircraft may vary and these changes are shown as:

1608a

In this case, adding the fuel tanks lowers the maximum speed and climb rate and manoeuvre values. In turn the fuel required for the mission is increased and the range extended.

Errata 01.02.27 - • Air units with custom loadouts are now set to Auto loadout, during the logistics phase, if the availability date of their loadout has passed.

16.4.6. Air Profile and Air Group Unit Types

Air group unit type designations are based on the maximum number of aircraft allowed in the unit, the type of aircraft, and the unit's nationality. The exact numbers vary by type of group and date and are determined by the current Aircraft Profile for each group, which lists the maximum size for each of three group sizes, corresponding to small, medium and large size groups.

The Air Profile is also used when assigning air units to AOGs (16.3.2) and swapping planes (16.5.1).

Players desiring to know the full list of air plane types and profiles should go to the game editor aircraft tab, select 'EDIT AIR PROFILES' and click on the Profile for that type of aircraft. A list of the plane models that fit that profile will then be displayed. An indicative list is in 16.5.1 of this manual.

1609

For each individual air group the profile is shown on the unit tab

1609a

In addition each AOG detail screen will show the types of planes it can control (if there are any restrictions).

1609b

Note that especially for the Soviets a number of AOGs will change their designation over the game. It is possible this will leave air groups in the AOG that could not be assigned but they can remain in that command with no ill effects.

16.4.7. Axis Air Group Unit Types

The list below shows the maximum number for each air group formation. However, these vary across the game and a German medium bomber group unit would have a maximum size of 3 for a Schwarm, 9 for a Staffel, and 30 for a Gruppe while a German fighter group in July 1944 would have a maximum size of 4 for a Schwarm, 16 for a Staffel, and 68 for a Gruppe.

Schwarm = 4 aircraft (Germany)

Staffel = 12 aircraft (Germany)

Gruppe = 40 aircraft (Germany)

Escad = 10/12 aircraft (Rumania)

Grup = 36 aircraft (Rumania)

Lentu = 12 aircraft (Finland)

Oszta = 18 aircraft (Hungary)

Szaza = 9 aircraft (Hungary)

Sezione = 4 aircraft (Italy)

Squadriglia = 12 aircraft (Italy)

Gruppo = 36 aircraft (Italy)

16.4.8. Soviet Air Group Unit Types

Polk = 20-67 planes depending on type and turn

Eskadriliya = 2-12 planes

Soviet formations also change their maximum size across the game. The table below is not exhaustive but gives some idea of the main changes to the more common Polk air groups.

The headings are covered in more detail in section 16.4.9 and more information can be found in the game's editor (41).

Date	Fighter	Bomber	Ground Attack	Long Range Bomber	Recon
At Start	67	62	62	42	62
Aug 1941	32	32	33	32	32
Sep 1941	20	20	20	20	20
Apr 1943	32	30	32	32	30
Jun 1943	34	30	32	32	30
Dec 1943	40	32	40	40	32

16.4.9. Air Group Unit Names

Though some of the air group unit names in the game are self-explanatory, many use terms and abbreviations that may not be familiar. The lists below are not comprehensive, but are provided to assist in recognizing the type of air group unit from the name.

German Air Group Unit Names

Stab – Command Flight

JG (*Jagdgeschwader*) – Fighter Wing

NJG (*Nachtjagdgeschwader*) – Night Fighter Wing

ZG (*Zeröstrergeschwader*) – Destroyer (Twin Engine Bf110) Wing

StG (*Stukageschwader*) – Stuka Wing

SG (*Schlachtgeschwader*) – Battle (Fighter Bomber) Wing

KG (*Kampfgeschwader*) – Bomber wing

SKG (*Scnellkampfgeschwader*) – Fast Bomber Wing

NAGr (*Nahaufklärungsgruppe*) – Short Range Reconnaissance Wing

FAGr (*Fernäufklarungsgruppe*) – Long Range Reconaissance Wing

NSGr (Nachtschlachtgruppe) – Night Bomber Wing

SG (*Schlachtgruppe*) – Fighter Bomber Wing

TG (*Transportgeschwader*) – Transport Wing

KGrzbV (*Kampfgruppe zur besonderen Verwendung*) – Battle Group Special Purposes or Operations

Lehr – School/Training

Axis Allied Air Group Unit Names

LeLv (*Lentolaivue*) – Regiment (Finnish)

Soviet Air Group Unit Names

Soviet air group names include both an indication of the formation's principle purpose, its status and any wider role or attachment.

The addition of 'G' before any other initials indicates the air group had been awarded Guards status (*Gvardeyskiy*).

Initials after the title (in the form –KBF) indicate that the formation was notionally part of a different air organisation than the mainstream VVS formations attached to the Red Army.

Examples of this include:

PVO (*Protivovozdushnaya Oborona*) – Soviet Air Defence Forces

SF (*Severnyy Flot)* – Northern Fleet

KBF (*Krasnoznamyonnyy Baltiyskiy Flot*) – Red Banner Fleet

ChF (*Chernomorsky Flot*) – Black Sea Fleet

GVF (*Grazdanskovo Vozdushnogo Flota*) – Civil Air Fleet

PF (*Tikhookeanskiy Flot*) – Pacific Fleet

The rest of the initials give an indication of the primary function of the formation:

BAP (*Bombardirovchnyy Aviatsionnyy Polk*) – Bomber Aviation Regiment

BBAP (*Blizhne-bombardirovochnyye Polki*) – Short Range Bomber Aviation Regiment

DBAP (*Dahl'nyaya Bombardirovchnyy Aviatsionnyy Polk*) – Long Range Bomber Aviation Regiment

IAP (*Istrebitel'nyy Aviatsionnyy Polk*) – Fighter Aviation Regiment

NBAP (*Nochnoy bombardirovochnyy aviapolk*) – Night Bomber Aviation Regiment

MTAP (*Minno-torpednyy Aviatsionnyy Polk*) – Minelaying and Torpedo-Bomber Aviation Regiment

MRAP (*Morskoy Razvedyvatel'nay Aviatsionnyy Polk*) – Naval Reconnaissance Aviation Regiment

OAS (*Otdel'nyi Aviatsion'nyi Aviaeskadril'ya*) – Independent Aviation Squadron

ODRAE (*Otdel'naya Dahl'nyaya Razvedyvatel'naya Aviaeskadril'ya*) – Independent Long-Range Reconnaissance Squadron

OIAE (*Otdel'naya Istrebitel'naya Aviatsionnyy Aviaeskadril'ya*) – Independent Fighter Aviation Squadron

ORAE (*Otdel'naya Razvedivatel'naya Aviatsion'naya Eskadrilya*) – Independent Reconnaissance Aviation Squadron

RAP (*Razvedyvatel'nay Aviatsionnyy Polk*) – Reconnaissance Aviation Regiment

SBAP (*Smeshannaya Bombardirovchnyy Aviatsionnyy Polk*) – Composite Bomber Aviation Regiment

ShAP (*Shturmovoy Aviatsionnyy Polk*) – Ground attack Air Regiment

TAP (*Transportnaya Aviahtsiya Polk*) – Transport Aviation Regiment

TBAP (*Tyazhelobombardirovochnyy Aviapolk*) – Heavy Bomber Aviation Regiment

The various parts of the name are combined so for example TAP-GVF represents one of the civil transport squadrons converted to military service during the war. More commonly, GIAP is the designation of a Guards Fighter Regiment.

16.4.10. Disbanding Air Unit Groups

Air Group Units can be disbanded either using the Commanders Report or the unit screen (37.16.3).

1610

If an Air Group Unit is disbanded then any planes will be returned to the relevant pool and the pilots can be re-assigned to other air unit groups.

An Air Group Unit on an isolated air base may not disband.

16.4.11. Creation of New Air Unit Groups

The Axis player cannot raise new air unit groups as this is handled by the reinforcement and withdrawal procedures.

New air units are automatically created for the Soviet player and placed in the National Reserve to train. These will initially be equipped with any planes that are available in the pools including those with low production rates.

> ***To avoid having rare or valuable planes allocated to units with low experience, the Soviet player may need to either disband some of these formations or swap them to use an obsolete plane until they have sufficient experience to be deemed combat ready.***

16.4.12. Depleted Air Unit Groups

This concept is used by the AI-assist when deciding which air groups to send to the reserve (17.1.9) and is also shown in the Commander's Report. Air groups are treated as depleted for the Axis if they have less than 25% of their total planes and for the Soviets less than 33%.

In addition, air groups are treated as understrength if they have less than 33% of their planes (Axis) or 50% (Soviet).

16.5. UPGRADING AND SWAPPING AIRCRAFT

Dependent on the availability of aircraft models in the production pool, air group units may be changed to a different model aircraft manually by the player or automatically during the player's logistics phase. The default setting for air group unit upgrades is manual

An aircraft model has to be in production for at least 1 month before it can be used to upgrade an air group unit. However, it may be used to equip newly raised air groups created as part of the Soviet player's production system. These can be manually swapped to an older plane type if the player wishes while the air group unit is in the National Reserve.

Players have the option to manually change (swap) the aircraft model through an air group unit's detail window (37.16.3), with possible aircraft models listed when the "CHANGE" link has been toggled from "Automatic" to "Manual" (default is manual). Changing the aircraft model in an air group unit may result in up to fifty percent of the new aircraft arriving damaged.

If Manual upgrade is chosen, clicking on upgrade will generate a list of the possible new planes, as:

1611

The chance of an automatic change increases as a group's total number of aircraft as a percentage of the maximum number of aircraft in the air group unit decreases. The air group unit cannot have flown any missions yet in the turn and will be unable to fly any missions after the change out.

Some damaged planes may be written off when swapped out.

16.5.1. Air Profiles and Upgrade Restrictions

When upgrading (either manually or using the automatic routines) an air unit can only swap to planes with the same air profile.

The table below lists the main profiles and gives some examples of typical planes in each category.

This information can be found in the editor as indicated above (16.4.6) in the Commander's Report (35.8.2) and on the air group counter.

Profile	Typical Axis Types	Typical Soviet Types
Generic	Slovakian bi-planes	
Bi Plane Bomber	Go-145; Hs-123A-2; Hs 126B-2	R-Z; U-2VS
Single-Engined (S-E) Fighter; Fighter	Bf 109x; Fw 190x, He 112, He 162; He 163B, Me 262x	I-15x; I-16; Mig-3; Yak 1x/7x/9x/3; LaGGx; La-5x; La-7x; Pe-3x; Hurricane IIx; P-39x; P-40x, P-47; Spitfire
Multi-Engined (M-E) Fighter	Bf-110x; Do-17x; Do-215x; Do-217x; He 219, Ju-88x; Me-210x; Me-410x;	
Light Bomber Ground Attack	Fw 190 F/G; Hs 123A-1; Hs 129B, Ju-87x, Bf 109E-7	I-153BS; Su-2; Il-2x; Il-10
Medium Bomber Bomber	He 111x; Do 17x, He 177x; Ju 188x; Ju 86x; Ju 88x; Do 217	SB-2; Ar-2; Tu-2x; Pe-2x; Li-2VV; A20x
Long Range Bomber	None	Yer-2x; DB-3x; Il-4x; TB-

		3; Pe-8; B-25x
Tactical Recon	Bf-109x; Fi 156x; Fw 189x; Hs 126x	Il-2KR; Yak 7B
Bi Plane Recon		R-5; R-10; U-2Rcn
Strategic Recon	Bf 110x; Do-17P; Do 215; Fw 200x; Ju-86; Ju-88x; Me-262x; Me-410x; He-111x	Yak-2; Yak-4; SB-2; Pe-2x
Bi-Plane Transport		U-2
Transport	Go-244; He-111x; Ju-52; Ju-86; Me 323; Si 204D; SM.82; LeO 451	Yak-6; TB-3; Li-2; C-47; Snche-2
Naval		GST; KM-1; MBR-2; A-20x; DB-3T; Il-4x; IL-2T

Note the plane types in this table are not an exhaustive list but intended to indicate how the air profile works in influencing upgrade options.

16.5.2. Automatic Setting

If the player toggles the “CHANGE” link from “Manual” to “Automatic,” then in the upgrade sub-segment of the logistics phase, the air group unit may upgrade in accordance with its current aircraft upgrade path as listed in that aircraft model’s city production list window (37.14). It may also downgrade to older aircraft (16.5.4).

In the swap sub-segment, the air group unit may change out the existing aircraft model with an aircraft model of the same functional type, but not necessarily along the upgrade/downgrade path. The computer will only swap out aircraft in air group units that have less than 50 percent of maximum aircraft allowed, with the lower the percentage below 50, the higher the chance for an aircraft swap.

All air units in the non-reserve Theatre Boxes will be set to automatic upgrades.

16.5.3. Manual Setting

An interface window to provide information when upgrading aircraft can be accessed from the air group unit detail window when the group is set for Manual Aircraft Change. Select ‘Manual’.

The window will display the possible aircraft alternatives and for each, the number of aircraft in the pool, the number of aircraft in air group units, and the number of factories. The player can use the selectable links to navigate back and forth between appropriate information windows. Selecting an aircraft model will also allow the player to compare it with the current aircraft model (35.8.4).

1612

Manual aircraft swaps are not allowed if air base unit to which the air group unit is attached is less than four hexes away from an in supply enemy unit. See also 28.4.2 for constraints on using newly produced aircraft types.

16.5.4. Allocation of older plane types

If the air unit was in a Theatre Box (including the reserve) when it changed then the older aircraft are assigned to the transit pool (so it maybe several turns before they can be re-allocated). If the air unit was on the map, then any such planes are moved to the active pool.

16.6. AIR BASES

At the start of the game airbases are created on the map as designed for that scenario. Equally the players can create new airbases or expand the existing ones Each size of airbase can ideally support a certain number of planes (although this can be exceeded) and up to a maximum of 20 air group units (of any size).

The only units that can be attached to air base units are air group units.

Airbases represent the physical and logistical infrastructure required to support air group units, to include airfields, repair facilities and anti-aircraft defenses. Air base units consist of only two types of ground elements, support and air support squad ground elements and anti-aircraft ground elements.

Air base units are fixed facilities displayed on the map area with a symbol denoting their size, which from smallest to largest is 1, 2, or 3 (examples of each type are shown below).

1613

There are multiple ways to access the air base unit detail window (37.16.2).

1614

As set out in section 6.4 one option is to right click on the hex and then select the named airbase. This will create further options to go to the airbase unit detail, to order the expansion of the airbase or to change the supply priority.

1615

Alternatively, the air base unit detail window can be accessed through the general information and city/airfield box (6.2.2) by either selecting the airfield symbol next to the name of the city or by selecting the city name and then selecting the air base unit name located under the units attached section of the city detail window.

1616

16.6.1. Airbase on map display

Air bases on the map are coloured in various ways to indicate their current status and this will vary according to the selection of other display tabs.

Friendly airbases, no logistics tab:

- Red – Airbase has air units, but less than 50% of needed support Green – Has air units
- Yellow – Empty but with air units ordered to transfer there
- Black – Empty airbase
- Orange – Under construction airbase not yet size 1
- If an airbase is overloaded it will be circled in red

Enemy airbases, no logistics tab:

- Green – Has air units and has been covered by reconnaissance flights this turn
- Blue – Had air units when last covered by reconnaissance flights but has not been covered by reconnaissance flights this turn
- Black – Empty when last covered by reconnaissance flights
- Yellow – Has never been covered by reconnaissance flights
- Orange – Under construction airbase not yet size 1

Friendly airbases, when logistics tab selected:

- Red – Fuel or ammo <=40% of need
- Orange – Fuel or ammo <= 55% of need but neither <=40
- Yellow – Fuel or ammo <= 70% of need but not r <=55
- Green – Fuel and ammo >70%

1616a

Enemy airbases, logistics tab selected:

- Black – All

16.6.2. Airbase Unit TOE

Airbases at 100% of their TOE will have 250 Air Support elements to service the aircraft (in some scenarios this number may be exceeded at the start of the game).

The TOE for airbases also includes general support squads (21.2.2) and anti-aircraft guns.

1617

Air bases will seek to acquire the elements needed to match their current ToE to the number of planes at the base. This might see air support and other ground elements moved back to the pools if fewer planes are present or moved from the pool if a base now needs more support.

If you use the manual method to move Air Operational Groups then the presence or lack of support assets will determine if the requested move happens automatically or during the logistics phase.

Air base units created along with a temporary port after a successful amphibious invasion automatically try to fill up the air base unit to 100 percent of TOE at the moment it is created. This uses freight that is offloaded at the temporary port from cargo ships attached to the amphibious HQ unit conducting the invasion.

16.6.3. Building and Expanding Airbase Units

The building or expansion of an air base unit can be started by the player in either the air planning or action (move) phase. Players can build new air base units in any non-mountain that was friendly controlled at the start of the turn (7.3.1). This restriction is lifted if the hex already contains a depot or named population centre.

To build or expand an airfield the player can either right click on the map and select the appropriate option, select the airfield tab at the top of the screen (6.2.1) or select the city name in the general information and city/airfield box and then selects either ‘BUILD AIR BASE’ or ‘EXPAND AIR BASE’ as applicable in the city detail window (37.13).

The speed of construction is based on the terrain of the hex, supply state and availability of construction and labour support units. The percentage progress of the construction is shown in the city display window.

The number of turns required to build or expand an airbase unit is based on the number of engineers and labour squads in the construction unit assigned to the construction project. This assignment will be done automatically from any HQ that is within range (21.11.4). In addition you can pay Administrative Points and manually assign extra construction Support Units (21.6.2).

Progress will be slower in worse terrain and bad weather. The amount of expansion done in the turn is affected by the ground weather with the construction value: divided by 2 if light mud, by 3 if heavy mud, by 4 if light snow, by 5 if snow, by 6 if heavy snow. The amount is also affected by the terrain in the hex as follows: rough/woods/urban/2, swamp/heavy woods/heavy urban/tundra/sand /3, mountain /4.

In addition, especially to expand from level 1 to 2 or higher, an airbase will require substantial amounts of supply. If this is not available then progress will be slow.

If an air base unit is bombed while being expanded, all damage must be repaired before expansion work can continue.

As a result of a successful amphibious landing, a size two air base unit with 50 percent damage will be automatically created in the target hex if it is clear terrain.

If an airbase is captured while under construction then any work will stop. The creation of a new airbase can be cancelled at any stage (using either the right click on the map or the display window) until the air base reaches size 1.

While under construction, an airbase is treated as having size 0 and will appear with an orange colour on the map.

1618

16.6.4. AI Assistance and Airbase creation or expansion

If you use the AI-Assistance (17.1) to manage the air war, the AI routines will expand existing airbases if it identifies a lack of capacity. However, the player will need to build new level 1 airbases if they feel this is needed.

16.6.5. Airbase Supply Priority

Remember that unlike depots and HQ units, if an airbase is set to #0 supply priority it will receive no supply allocation. The supply priority can be changed in the Commanders Report (35.7) or by right clicking on the map hex with the air base or via the general information box (6.2.1).

Airbase supply requirements are set by the number of pilot crews at the airbase not the number of aircraft.

16.6.6. Airbase Capacity

A maximum of 20 air group units can be assigned to an air base unit.

The number of individual aircraft an air base unit can effectively support is dependent on the air base unit size and type of aircraft. Each aircraft, regardless of its state (ready, damaged, reserve) has a support requirement that reflects the number of engines on the aircraft and the air base unit size as follows:

Type	Capacity
1	100
2	200
3	300

Capacity is used up by the number of aircraft*engines, as:

- 1 engine plane = 1 unit of capacity;
- 2 engine plane = 2 units of capacity
- 3 engine plane = 2 units of capacity
- 4 engine plane = 3 units of capacity

If the air base unit load percentage exceeds 100 percent, the amount or aviation support available is reduced such that air support will be equal to air support * 100/load percentage. This will slow the rate at which damaged planes are repaired and increase the chance that individual aircraft are treated as being in reserve.

Air base load (capacity) percentage is shown in parentheses on the hex pop-up text for the air base unit after air base unit size. When the air base unit load percentage is over 100, a red ring will be added around the airfield symbol.

If an airbase is overloaded then repair and replacement rates of aircraft will be slowed. In addition, if the airbase is subject to air attack it is more likely that planes will be damaged or destroyed.

16.6.7. Airbase Size and Poor Weather conditions

Flights flying from size 1 airfields in poor and average road system hexes with light mud and heavy mud may be cancelled.

When planes fly from size 1 bases they have higher chances for operational damage reflecting the poor facilities (usually a bare ground landing strip).

16.6.8. Airbase Capture

Air Base units can be captured and will shift to the phasing player's control. Note that while air base units cannot be destroyed they may be damaged when they change hands. They will need to repair before they are fully functional.

Note that it can take up to several turns (and at least one complete logistics phase) for the associated manpower and support elements at an airbase to be removed if all the planes are transferred. So if you fear your airbases maybe overrun by the enemy, moving out the planes just before capture will still mean any attached ground and support elements will be lost.

If Air Units are on an airbase that is captured any damaged planes will be destroyed. In addition the Air Unit is given a delay of three turns and then will return in the National Reserve.

16.6.9. Frozen Airbases

Some airbases are frozen at the start of a scenario. The air units cannot be transferred to another base until this restriction is lifted.

16.6.10. Assigning air units to airbases

If you use the AI assist routines, then there is no need to directly assign air units from the national reserve to airbases.

If you wish to handle this manually, then one option is to assign an air unit to an airbase and link it to an existing AOG or to create a new one (17.3.1 and 17.3.2).

1619

16.7. PILOTS

Aircraft in an air group unit must have a pilot and associated crew if required to be in a ready status and fly in an air mission. Pilots and any associated air crew are assigned to air group units up to the maximum size of the type of air group unit.

Pilots will remain assigned to an air group unit unless they are either killed in action, the air group unit is disbanded or the air group is sent to the reserve (16.7.3). Wounded pilots will remain with their assigned air group unit and will eventually be healed and return to flying duties. The air group unit detail window (37.16.13) has a pilot tab for air group units that lists each pilot by pilot number, and shows their experience, fatigue, air kills, missions flown and health status.

1620

Pilots have both morale and experience (also called skill). Experience is gained in relation to their morale, by winning air combats and (if in the reserve) flying training missions (16.7.4).

Pilots gain and lose fatigue, and experience based on the air missions flown by their aircraft and the experience and fatigue of their assigned air group unit is determined by the average of assigned pilot experience and fatigue. Pilot experience is also tracked by aircraft type at the air HQ unit level where the average experience is displayed in the Air Doctrine Screen pilots tab (37.16.9).

If the air group unit is set to rest, or undertakes no air mission, then all accumulated fatigue will be removed. If the unit has taken part in air missions fatigue will be reset to 25% of the total and this will be carried over into the next turn.

If an air group is sent to the national reserve, its named pilots will be removed (16.7.3).

16.7.1. Assigning Pilots to on-map Air Group Units

When pilots are initially assigned to an air group unit, they are either trained pilots with experience equal to current air national morale or new pilots with experience equal to only half the current air national morale (12.1 and 38.2). The exception is air group units that arrive as reinforcements in the national reserve, whose pilots will have an experience rating based on the average of the air group units' set experience rating. Each nation will receive a certain number of replacement trained pilots each turn and any additional pilot vacancies may be filled by new pilots.

The Commander's Report air tab (35.4.30) has a pilot's section that displays both the total number of pilots and their status and the pilot pool, which displays the number of available trained pilots. The pilot pool and the manpower pool are separate, but even if trained pilots are listed in the pilot pool, they will not be available unless there is sufficient manpower in the manpower pool for the pilot and any required air crew.

For example, to assign an available trained pilot to a Soviet Pe-8 heavy bomber air group unit, eleven manpower would need to be available for both the pilot and the associated air crew.

The options are:

Option	Effect
TPI (Trained Pilots)	Has a priority on receiving both new planes and replacement pilots. Will only take trained pilots from the relevant pool.

PRI (Priority)	Will be allocated planes and pilots after the formations set to TPI have received their allocation. Will take both trained and untrained pilots as needed.
NOR (Normal)	Will be allocated planes and pilots after the TPI and PRI formations have received their allocation. If insufficient trained pilots are in the pool then untrained pilots will be allocated.
RES (Restricted)	Will not be allocated replacement planes or pilots.

NOR (normal) is the default setting.

Note that units set to TPI will also acquire pilots who were previously assigned to an air group but who are now in the pool. These might have relatively low experience levels compared to that of newly trained pilots (16.7.2) especially if the air group was disbanded relatively soon after being formed. On the other hand, such pilots might have high experience levels due to sustained combat experience.

16.7.2. Experience Levels of New Pilots

The experience of a trained pilot brought into a freshly raised unit is equal to:

(National Morale x 3/4) + (Average Experience of Group Being Joined x 1/4) + rnd(20) - rnd(20)

The experience of an untrained pilot is equal to

(National Morale x 3/4 x 1/2) + (Average Experience of Group Being Joined x 1/4) + rnd(20) - rnd(20).

16.7.3. Pilots and the National Reserve

When air units are placed in the National Reserve they have no named pilots and instead have an average morale and experience level. This is either determined when the unit is created or reflects their average values before they were transferred.

These values may change over time due to training missions undertaken if the unit has low experience and is not set to rest this turn.

When the unit is returned to the map, a set of named pilots (if enough are available – 16.7.4) are allocated with average morale and experience levels that match the unit value.

16.7.4. Pilot Training

Globally each nation trains a certain number of pilots per turn and these are added to the available pilot pool. These pilots acquire their particular specialism when assigned to an Air Group Unit (16.4).

Air Groups in the National Reserve are considered to undertake training missions. For the Axis, in addition, each turn some units in the Western Europe TB will train.

Training missions can result in an increase in pilot experience and a possible increase in the air group unit morale rating. If pilot experience is higher than that nation's current air national morale, the chances for experience to increase through training are much lower. In addition, pilots with experience ratings over 50 will have less chance to gain experience through training than pilots with experience less than 50.

16.7.5. Pilot specialism

When first allocated to an air-group, pilots are then allocated a specialization flag so they can only fly certain types of aircraft.

The types are: Fighter (this includes any Fighter Bombers trained as Fighters), Fighter Bomber, Tactical Bomber, Level Bomber, Recon, Transport and Naval Patrol (Naval Only).

Since trained or untrained replacement pilots are not flagged with a specialization until they are assigned to an air group unit, pilot specialization only matters when an existing air group unit is disbanded and the associated pilots are returned to the pilot pool. At that time, they can only be assigned out to an air group unit that meets their specialization criteria. For example, if the Axis player disbands a number of level bomber air group units, the pilots from those air group units will not be available to fill vacancies in fighter air group units.

16.8. ANTI-AIRCRAFT UNITS

Anti-Aircraft Support Units in WiTE2 have a number of functions and types. Some represent fixed emplacements designed to protect cities from strategic bombing while some others represent the mobile AA formations designed to protect ground units and HQs from tactical air attacks.

AA Units attached to combat units and HQs behave like other Support Units (21.5) when entering ground combat and when being moved between HQs and Units. They affect air missions as set out in sections 19.3.4 and 19.3.5.

AA Units attached to cities only affect air missions and there are special rules for the process and cost of moving them between cities or to attach them to HQs (38.1).

Anti-aircraft support units attached to cities will never have a range penalty for being far from their HQ units (15.5.4) during admin checks for resupply.

16.8.1. German Anti-Aircraft Units

Flak Units include both those that supported mobile operations against the Soviet Union and those that defended the Reich against Allied bombers. Most of the latter will only be found in the various Theatre Boxes or assigned to major cities in the Reich. These Flak Regiments represent the concentrated flak defences organized around defending strategic targets (ports, production centers etc.). These regiments have almost no mobility and were either crewed by the Kriegsmarine or by limited numbers of Luftwaffe personnel. As the war progressed, after 1942, an increasing number of flak units defending the Reich were manned by factory workers, teenagers, local Wehrmacht troops deployed as garrisons, women and even Allied POWs.

The individual flak battalions and companies represent the tactical flak units that were manned by Luftwaffe personnel and either guarded tactical and/or operational objectives or friendly troops from enemy tactical fighters and bombers and could possibly engage in ground combat. These battalions had the best mobility and can be attached directly to combat units.

Over time you will notice a number of these will disband. Historically the Germans re-organised their mobile units by increasing the amount of organic AA in the divisions at the expense of these individual battalions.

1621

16.8.2. Soviet Anti-Aircraft Units

The main difference between Soviet Anti-Aircraft units is between those designated as PVO and the rest. PVO (*Voyska Protivovozdushnoy Oborony*) formations were designed purely for the defence of urban areas. In-game, these all start attached to cities and the costs to re-assign them to other roles are set out in section 9.2. In practice, Soviet AA Support Units are treated as either attached to HQs and combat units (21.5.1 and 21.5.2) or to cities (21.5.3) for their employment and the costs of re-assignment.

17. AUTOMATIC AND MANUAL MANAGEMENT OF THE AIR WAR

1700

Focus:

This section sets out how to control the air war either by manual control or using the AI-assistance options. It is split into two main sub-sections and discusses the various tools for assigning planes to air directives, redeploying your air force and managing the allocation of planes to support ground commands.

It gives a general description of how to use the Air Operational Groups (AOGs). AOGs are a grouping of air units, using a hierarchy structure of Army, Corps and Low Level (Division/Brigade/Regiment) similar to that used by ground units. They can be managed entirely manually, or with the help of the AI Air Assist, The AI assist relies on several player inputs to then direct the operations of the AOGs.

17.1. USING THE AUTOMATION OPTIONS

17.1.1. Automated AI Air Assist System

If this option is selected, then the AI air assist will automatically be used during each players' turns. The effect of this is that the 'AI air assist button' well be automatically pressed once when a player ends their air planning phase, and once when they end their ground phase.

In effect, if you do not think you will wish to manually alter any air directives or the deployment of your air units then adopt this option.

If you do not adopt this approach you can still manage your air force using the tools in this section allowing for a mixture of AI-assistance and some manual control of the process. However, in this case during a MP/PBEM game your opponent can opt for full manual control if they so wish.

1701

Here, a game against the AI has been set up to use the automated AI Air Assist routines.

This cannot be changed in a MP/PBEM game and the choice will apply to both sides.

Once this choice is made, the manual option to trigger the effects of AI Assistance will be disabled.

1702

In this case, the players only need to adjust the AOG's Stance, HQ Follow/Naval Ops, Asset Priority, and Supply Priority as below. The player can still build and expand new airbases if they wish (although the AI assist will expand existing airbases if it believes there is a need, it will not build new ones), and the player can decide to set air units to manual or auto upgrade (if manual, they need to do the upgrades themselves).

> ***If you believe you will be operating in a region with few existing airfields then you will need manually to start the construction of at least level 1. Expansion can be left to the AI-Assistance or done manually. A strong piece of advice to Soviet players is to start to expand the airfields behind Moscow from early August 1941 as you will need them as the front line approaches the city. They are also useful to base your longer ranged bombers even if the immediate threat has ended.***

They may also want to build depots at or near major airfields (unless also using the AI depot management, which will do this for airbases).

17.1.2. AI Assistance in other cases

If you do not select the automate option, you can still use the AI Assistance. You can set stances and priorities according to the rules below.

In this case, you will need to remember to depress the button to trigger AI air assist actions.

You can mix using the AI assistance with manual control of the various functions in this case. However, be careful as pressing the AI-assist button will over-ride any manual changes (deployment, air directives etc.) you have made.

> ***Using this mixed approach can be effective when you want to carry out a lot of actions such as transferring damaged/depleted air groups to the National Reserve or have few choices as to how to use your air force and find that a mixture of Ground Support and Reconnaissance missions are adequate to your immediate needs.***

17.1.3. AI Assistance and Air Doctrine settings

When it creates air directives (or delivers ground support), the AI-assistance routine will use the settings in your air doctrine screen (37.16.9). This will determine factors such as mission height, days of operation, intensity of commitment and the type of weather conditions suitable for the mission.

While the default settings should be adequate, if you are encountering heavier than expected losses or your missions are not operating as you would expect, it may be worthwhile amending some of these settings.

17.1.4. Using the AI Air Assist to move and direct your Air Operational Groups

If you want to automate the air war you need to use a combination of the air commands (army level AOGs each with a corresponding ground air command HQ) and lower level AOGs (corps AOGs and low level AOGs like divisions and regiments) to do so. The one page guide in section 4.6.1 sets out the main steps involved in doing this.

Basically you can use either the air commands or the lower AOGs to set the relative allocation of air groups across your front and to tell the AI how, and when during the turn, to deploy those AOGs and generally how and when to move the air groups.

The air command level is used to create a link between the AOGs and a ground HQ. Normally all AOGs will then be assigned to the same HQ. In the case of the Axis side, the Luftwaffe Fliegerkorps can be set to follow a different HQ to the Luftflotte if desired.

To access this function, ensure that the AOGs are shown on the map and then left click on the label (in this case for the VIII Fliegerkorps as set out in section 17.1.5).

1703

That will then bring up this display on the right hand side of the screen:

1704

For all air commands you can use this screen to:

- Assign it to a higher command if appropriate (in this case the Fligerkorps is assigned to Luftflotte 2);
- When to fly air missions (rest, day and night, day only, night only);
- How to accept replacement pilots (16.7), the options are normal, restricted, priority and trained;
- See which ground command it is following (but see the rules in 17.1.6 below for the options);
- Set the AOG to conduct naval operations (but see the rules in 17.1.9 below for the options);
- Whether the range of its assigned air units are shown on the map (Rng Circles);
- How and when you want the air units to move on the map if directed by the AI Air Assist (17.1.6), in this case the options are flexible, hold, retreat or advance. This can be set at any level in the command chain and will over-ride the assignment for lower commands (so if you want one AOG to be different to say the controlling Air Army set this after choosing the Air Army);
- Asset priority which will tell the AI air assist how to determine how many planes are assigned to the command. This ranges from 4 (the highest priority to 0 (no planes will be allocated). This can only be set at the Army or Corps level in the command chain and will over-ride the assignment for lower commands (so if you want one corps AOG to be different to say from the controlling Air Army set this after choosing the Air Army);
- Supply priority works as the asset priority and determines the supply importance of that HQ. This can only be set at the army AOG level, with all units under the army assuming the same supply priority as the army;
- A list of the assigned air units and their air bases will be shown beneath the unit counter.

Axis-Allied AOGs can only be set to follow HQs of either German or their own nationality (so, for example, a Hungarian AOG can report to a German Luftflotte or its own national commands but not to a Rumanian air command).

The display on the Air Command label will change both according to how zoomed out you have the screen and will reflect the changes above. When zoomed in the label will show the number of fighters, bombers and utility aircraft, and the other information above. In addition, the bar and % on the right hand side will show how many planes are ready for operations out of all those in the relevant air group units.

1705

The icons will change as follows:

Stance	Icon
Flexible	**1706**
Hold	**1707**
Retreat	**1708**
Advance	**1709**

For when to fly:

Timing	Icon
Rest	**1710**
Day and Night	**1711**
Night Only	**1712**
Day Only	**1713**
Mixed (this will be shown for an Air Command where different AOGs have different flying orders)	**1714**

Naval air missions and Ground HQ assignment

Timing	Icon
Follow set HQ	**1715**
Some Naval Air missions	**1716**
No HQ set	**1716a**

17.1.5. Differences between Soviet and Axis AOG options

In addition to the rules above, there are some important differences between how Soviet and Axis AOGs can be assigned to ground HQs or naval operations.

For Soviet AOGs the decision as to which ground HQ to follow and whether or not to conduct naval operations must be made at the Air Army level. Once this choice is made, the same options apply to all subordinate AOGs. In addition the Soviet Long Range Air Command will generate city bombing Air Directives following the priorities set by the player using the air doctrine screen (17.1.3). Note in this case, only the highest priority target will be selected.

Soviet air commands can only be assigned to either Front or Military District (Type 2) ground commands.

For Axis AOGs, only army or corps level AOGs can chose which command to follow and all lower level commands will assume the same option.

There are three exceptions to this rule for the Axis side:

- Any level of AOG can be set to conduct Naval Operations, if this is subsequently cancelled, the AOG will resume following the ground HQ of the relevant army or corps HQ;
- Any transport AOG can be set to follow any ground HQ;
- Any recon AOG can be set to follow any ground HQ.

German Air commands must be set to follow type 2 (Army Group) or type 3 (Army) ground HQs. Axis Allied Air commands can follow either a German or their own national type 2 and type 3 commands and in addition can be set to follow a type 4 (corps) HQ of their own nationality.

17.1.6. Setting AOG Stances and the Implications

A major part of using the AI assistance is setting the stances of your AOG. Your choices will determine how, and when during the turn, the AOG allocates its assets and whether or not it will move to follow the HQ it is assigned to.

There are four stances:

- Flexible
- Hold
- Retreat
- Advance

During the Air Planning Phase (or at the end of it if using Auto AI air assist) an AOG in a flexible stance may:

- Send air groups to the reserve (if they are deemed to be too weak to be capable of combat operations)
- Acquire air groups from the reserve
- Gain air groups from other AOGs (this is based on asset priority and the transfer can include a complete AOG if that is appropriate);
- Transfer air groups to other AOGs (depending on priorities);
- Follow move, the AOG will redeploy to the location of the HQ they are following.
- Carry out Naval Ops against a port, the AOG will redeploy to better operate against the port

During the Air Planning Phase an AOG in a hold stance may:

- Send air groups to the reserve (if they are deemed to be too weak to be capable of combat operations)
- Acquire air groups from the reserve
- Gain air groups from other AOGs (this is based on asset priority and the transfer can include a complete AOG if that is appropriate);

During the Air Planning Phase an AOG in a retreat or advance stance will undertake no particular actions but will still generate Air Directives as appropriate.

During the Movement Phase (and at the end of the turn if this is automated), an AOG with transport assets in a flexible or hold stance will:

- Air supply units (if following a HQ)
- Air supply airbases (if not assigned to follow a HQ)

During the Movement Phase (and at the end of the turn if this is automated), an AOG in a retreat or advance stance will:

- Send air groups to the reserve (if they are deemed to be too weak to be capable of combat operations)
- Acquire air groups from the reserve
- Gain air groups from other AOGs (this is based on asset priority and the transfer can include a complete AOG if that is appropriate);

- Transfer air groups to other AOGs (depending on priorities);
- Follow move, the AOG will redeploy to the location of the HQ they are following
- Air supply units (if following a HQ)
- Air supply airbases (if not assigned to follow a HQ)
- Carry out Naval Ops against a port, the AOG will redeploy to better operate against the port

There are further notes on how to use the stances in section 17.2 but in general use 'Flexible' when the front line is basically stable as this allows air units to adjust their size and deployment but broadly within the current geographical area. Advance and Retreat should be chosen when you are looking for your air force to redeploy as the front line shifts. 'Hold' will keep your air force deployed at their current bases (which can be efficient in terms of the demand for support squads and supply).

17.1.7. Constraint on AOG allocations

In addition to the rules above, there are some additional constraints on how AOGs might be used or allocated.

- The AI assist will not re-assign any AOGs from an air command (HQ or Corps AOG) that is set to priority 4 regardless of the relative demand for air groups across the front;
- Reconnaissance AOGs will not be assigned to a higher level AOG that has a different 'follow HQ' order. They can, however, remain attached to one that has a different HQ target (this allows you to adapt your reconnaissance effort without having to re-assign the AOG);

17.1.8. Air Transport AOGs.

If using the AI automation/air assist, these will always move to depots with freight so they can then undertake supply missions during the ground phase. If they are following a HQ, they will position themselves to resupply units of that HQ. If they are not following a HQ, they will seek to resupply airbases.

In the example below, the Transport group will resupply airbases rather than support a particular ground command as FHQ is set to 'None'.

17.1.9. Transfer Depleted Air Groups to the reserve

The AI-assist will send depleted (16.4.12) air groups to the reserve if they meet any of these requirements:

- U-2 Rcn and R-Z
- All in AOGs set to priority 0
- Any Axis air group with experience below 45 after 7/43
- Any Axis air group that meets the conditions: (depleted or (morale + ready < 50)) and ready a/c < 2 (REST if condition met but ready a/c > 1)
- Any Soviet air group that meets the conditions: (understrength or (morale + ready < 60)) and ready < 4 (REST if condition met but ready a/c > 3)

In this respect, the detailed rules are:

- For the Axis side, an air group is depleted if it has less than 25% of its planes and understrength if this is under 33%;
- For the Soviet side, an air group is depleted if it has less than 33% of its planes and understrength if this is under 50%.

17.1.10. Transfer of Air Operational Group Units

The component air units will be redeployed as they follow the ground HQ that their Air Operational Group or Air command is assigned to follow, or will move as appropriate to execute their naval ops or transport missions. This will happen when you press the AI-Assistance button unless you are using the Automated Assistance (when it happens at the end of the air or ground phase).

17.1.11. Creating Naval Air Patrols

An AOG can follow a HQ or conduct Naval Ops around a port, not both. If set to Navel Ops, the AOG will try to locate itself so it can fly Naval Patrol ADs and AS ADs off the coast of the port, with the intention to gain control of the sea hexes near the port.

In this case, the AOG may have a different focus (naval patrol) to its controlling air HQ.

If you select Naval Ops, a list of the possible targets will be shown as:

1718

Select the port you wish to target (in this case Riga), and the AOG counter will no longer follow the HQ set by its Air Command and will show its focus on Riga:

1719

If you subsequently cancel the naval mission you will need to reset the ground HQ the air command is to follow. If the naval operation was set using an AOG, then it will revert to the HQ being followed by its controlling air command.

17.2. EXAMPLES OF HOW TO USE THE AI ASSIST

This short section tries to place some of the formal rules above into context. In the main the flexible stance is probably the most useful but it may not always give the desired effect.

17.2.1. Retreat and Advance Stances

The 'retreat' stance will be useful for an army conducting a strategic retreat as it will pull the air units back to the area where the HQ being followed is located. For the Soviets, in some instances you may want to link the air groups to a rear area Military District to achieve this in 1941 and 1942.

In turn the advance stance is useful if you carrying out a major offensive and want to keep the air force close to your spearheads. In either advance or retreat, this gives the player an opportunity to move his ground HQs before the AI air assist moves the units toward those HQs in the ground phase.

17.2.2. Specialised support

Especially in 1941, the German player may find it useful to assign a Fliegerkorps to each Panzer Army. This will both ensure air support for your key formations and that the air force advances as rapidly as possible. Although it is possible for the Axis to have an air army or corps support an entire Army Group, this is not the recommended method.

For the Axis, it is usually better to have them support a specific army that is bearing the brunt of the fighting. Fighters will always defend against any enemy air attacks or ground support, but given the limited Axis bomber forces, they are usually best assigned to the main assault armies. Given the number of Armies and Corps AOGs, it is possible to cover many different armies by having some low level AOGs report directly to each Luftflotte if desired.

For the Soviets, there are usually enough air commands/air armies to attach one to each Front, although in the early war period, it may also be best to concentrate most of the Soviet air force in just a few of the air commands.

17.2.3. Bringing air units from the reserve

The automatic system will send and remove air units from the National Reserve. Once they are on the map, they will be assigned to air commands depending on the priorities you have set.

17.2.4. Relative Priority

It is worth bearing in mind that the asset priorities are relative. If you set everything to #4 then the air force will try to be evenly divided across your commands. Especially for the Germans, you will need to ensure your air force is concentrated on specific sectors.

In effect, an AOG set at #4 will try to acquire twice the number of planes as one set at #2. However, the actual number of planes assigned will also be affected by the level of the chosen HQ. So a corps will try to get more than a low level AOG, and armies will be assigned more than a corps at the same priority level.

17.2.5. Triggering redeployment and reallocation

If you are not using the Automated AI Assist routines then you will need to press the AI assist button at least twice in a game turn (before air execution and before the end of the ground phase).

However, you can do it more often and this might allow you to fine tune both air unit allocation and deployment as you conduct your ground phase (especially if the situation is rapidly changing). Usually this is not advised as it will generate air transfers that take up air miles and reduce the available airpower supporting your ground operations.

If you don't plan on doing any manual intervention in AOG movement or air directive creation, then it is advised you use the Automated AI air assist. If you think you might want to on occasion make manual adjustments, you should turn the automated game option off.

If you do this, you can, for example, press the AI assist during the air planning phase and then tweak some of the air directives that the AI has set up. Just keep in mind that if you press the button again, your changes will be wiped out as the AI clears the slate and creates new air directives.

Note that the game will pause while this action is carried out.

17.3. MANUAL CONTROL

17.3.1. Manually Assigning Air Unit Groups from the Reserve

There are two basic ways of doing this.

The first option is to select an airbase and the second is to use the Air Command labels.

> ***It may be good practice to review the air groups in the reserve using the Commander's Report before starting to move any to the map.***

You mostly will want to leave low experience and/or low morale formations in the reserve.

One option is to right click on an airbase on the map and then select the option 'bring AOG/air groups from reserve'. In the example, below, the AOG option has been chosen

1720

Select one (in this case the 206 ShaD) and the list of suggested air groups will be shown as:

1721

By default, this will attach itself to the nearest Air HQ but that can be changed. You can tell it just to use Livny (as shown) or click 'Multiple air bases' and any planes in excess of air base capacity will be deployed nearby.

Air groups will not deploy if the air base is full, if the AOG is full or if the AOG is of a differently nationality.

Finally you can accept the suggested list, remove some (if you do not want to fill up the AOG) or replace them with other suitable air groups. Note that this type of Soviet AOG can only contain ground attack formations.

Once you are content with your choices, click on TRANSFER.

If you chose the option, bring air group from the reserve, you will be taken to a screen that allows you to select any air unit that is currently available. You can filter or sort this tab in various ways to ease identification of the units you want.

1722

Select one or more air groups and click on TRANSFER (before doing so you may want to review the proposed AOG – here the 2nd Air Army – to a more suitable target).

In these cases, you can also open the Air base tab and assign new air groups from there (37.16.2)

Alternatively you can bring new AOGs or Air units to the map from the Air Command label. In this right click on the Air Command and the routine to bring Air groups from the reserve will be shown

1723

You can alter the screen to link them to an existing AOG, spread over multiple air bases as:

1724

A variant to using new AOGs is to use one already on the map. Right click on any existing AOG and if it has spare capacity it will be shown as the suggested command for that air group. Note what is available may be limited due to the restrictions on which plane types can be in which AOG (16.4.6).

You can bring up a list of AOGs through the AOG tab on the Commander's Report (35.4.2). This way you can see what air groups are already assigned to a particular AOG, what aircraft they have and how much capacity is available. This is helpful if you want to collect aircraft with similar characteristics under one AOG, of if you want to size your AOGs so that they will fit onto a particular type of airfield (16.6.6).

Here a single fighter air group will be added to the 278 IAD:

1725

17.3.2. Sending Air Groups to the Reserve

There are several ways you can use to manually send air groups to the national reserve.

You can do so one by one by opening the air unit tab (37.16.3) or in bulk using the Commander's Report (35.4.1).

In addition you can use the AOG on-map label (37.16.4). In this case, right click on AOG label and select "Send/Rotate Depleted Air Groups".

This will send back all the depleted units in the AOG (and down the chain, if you have selected a higher command) and tries to replace each with an air unit from the reserve with a similar profile. The AI chooses what it thinks is the best unit from the reserve. When you roll over the Send/Rotate option a window will appear showing all the units that will be returned and any units that will come from the reserve for each of these. The player can select the option to return the depleted or the option to rotate in the replacement units (which sends and then rotates in a replacement).

1725a

17.3.3. Maximum Air Units for each Air Operational Group

There is a limit to the number of air units in each AOG. Each air units costs a certain number of command points based on its size:

- Group = 9
- Squadron = 3

- Flight(Stab)= 1

AOGs, in turn, have limited command points determined by their type:

- Low level (regiment/brigade/division) = 45 points
- Soviet Corps = 120 points
- Axis Corps = 180 points
- Armies = 600 points

So, a Soviet Division or Axis Regiment AOG will only be allowed to have 5 groups, or 15 squadrons. Soviet corps can have up to 13 groups and the Axis corps 20 groups. An Army will max out at 66.

17.3.4. Manually moving Air Operational Groups

Using manual control, you can redeploy your air units. You can opt to move them by individual Air Operational Group or the complete command.

To do this:

First left click on the desired AOG/Command;

1726

- If you want to keep the same shape then press and hold shift and move the rectangle on the map to the group of airbases you want to assign the AOG to, then right click;
- If you want a different shape, then press and hold cntrl and left click on the map and then draw a shape around the airbases you want to use (a pop up will tell you how many airbases are in the selected box) and then release the left click.

1727

- Once you have selected the target, the plotted move will be shown on the map. If you wish the transfer to occur immediately (as opposed to waiting for the next logistics phase), you can right click on the AOG and then select an immediate transfer. The AOG will now have an > after its name to indicate it is ordered to move.
- If you select the wrong target air base by mistake then you need to cancel that transfer before selecting a new target air base

1728

- To trigger the move, right click on the AOG and tell it to execute the transfer:

1729

If you order 'immediate' transfer this will happen regardless of the situation at the target airfields (so you may find your planes lack supplies and supporting ground crews). If you order 'planned' transfer this might be delayed till the target airbases have sufficient support squads, supply and fuel to enable operations (usually during the logistics phase). A pop up will tell you how many air units were moved.

In this example, the AOG is now set among the AOGs of the 15 Air Army, Depending on the missions you wish to set, it might be easier to convert it from 1 Air to 15 Air.

1730

If you want to leave some air units on existing bases but to spread out others to new bases then:

- Left click on the desired AOG
- Click on the air base – this will bring up a list of the air units at that base

1731

Here we have the 22 DBAD and its formations at Gorky airbase.

Select the units at the airbase you want to transfer by left clicking on each (or select none in which case all units at the airbase will be ordered to move). In this case, we only want to move the Il-4s, by left clicking on that air group (the display will show a gold box around the chosen formations).

1732

- Press down CNTRL+left mouse to draw a box around the intended target airbases (here the move is ordered to Ivanovo);

1733

- Indicate how you want the transfer to progress
- Once you have determined the desired redeployment you can order it to happen immediately or only if the target airbases can support the incoming planes. In this case any air groups that could not be moved immediately will redeploy in the logistics phase when the airbase has sufficient support elements.

The move options are now the same as for the transfer routine above.

17.3.5. Creating new AOGs

Technically neither player can create AOGs. They are allocated (and removed) using the reinforcement system. However, if an AOG has no air groups then it will not be shown on the map.

As such it can be brought to the map either as part of transferring new air units from the reserve (as above) or to allow air group units to change their command to a new AOG,

17.4. MANUALLY SETTING AIR DIRECTIVES

If the player wishes to create a completely new air directive the first step is to select the relevant mission filter (F2-F7) and then select the air command you wish to use.

1734

In this case the F3 (ground attack) option was selected and then the Leningrad Air Command label, giving a view such as:

1735

This shows all the existing air missions for that command and the AOGs that report to it.

The focus of each mission is set out in 18.1. Once you have selected a type, and target, assign the relevant air groups and, if needed, adjust the flight path.

17.4.1. Manual options for setting up an Air Directive

To create a new AD, select ‘GND ATTACK’ and then click on a hex as the centre of that mission: The map and the display will change to:

1736

You can click on CONFIRM and the mission will take place as shown using the default settings or you can adjust the variables.

Type is set by the air directive you have selected and cannot be modified in this screen.

Target determines the central hex of the mission. Note that for a Ground Support (18.1.3) Air Directive this will be replaced by a display showing all the available HQs that can be the focus of the mission. Note that reconnaissance missions (18.1.6) can only be set up to target an enemy held hex, and naval patrols can only be set up to target water hexes

Staging Base determines the intermediate air base that is used to gather the planes used in the mission.

> ***Note manually adjusting this can increase or decrease the number and type of planes available to a mission.***

Area sets the size of the mission target area around the target hex. If this is set to 0 then only the target hex will be the focus of that air directive.

Day/Night determines if this mission will take place during the day or the night. In turn this might influence the type of planes available depending on if air groups have been set to day or night only missions.

Intensity will determine how aggressively the mission will be conducted (and how quickly pilots will gain fatigue).

Weather is used to set the worst conditions that the mission will take place. Beneath this is an indicator of the current weather conditions for the region selected for the mission.

Schedule will determine which days of the week a mission will take place. Clicking on a day will deselect or select that day for operations.

Strike Num will be either automatically determined using the strike intensity set above or can be manually set by the player. It will set the number of missions that particular air directive will try to carry out during the air execution phase.

Altitude determines the altitude at which planes will fly to the mission area and their altitude when conducting the mission. Remember that fighter bombers and tactical bombers will actually attack at a much lower altitude. It can be adjusted using the (-) or (+) in increments of 1,000 feet.

Priority will determine the order in which missions are flown and this is particularly useful if you use the auto-allocation routine for assigning aircraft. It can be adjusted using the (-) or (+) to alter the priority (from very low to very high).

Min AC (ESC) sets the minimum number of bombers/fighter bombers and the minimum number of escorts that must be available in order for a mission to be launched. A text box for each type of aircraft will be displayed sequentially. As long as the minimum is available, a mission will be flown.

Req AC (ESC) sets the requested number of bombers/fighter bombers and the requested number of escorts that the player would like to have fly the mission if available. A text box for each type of aircraft will be displayed sequentially. If no player input, then REQ AC(ESC) will match MIN AC(ESC). If MIN AC(ESC) is available, a mission will be flown.

Follow Path: Toggle Yes or No. When Follow Path is set to Yes, the missions will fly along the flight path until they reach the last waypoint, and then fly from that waypoint to the specific target hex for the mission. When set to No, the mission will fly directly from the staging base to the specific target hex for the mission.

Errata (01.01.01): When Follow Path is set to 'no' for an Air Directive, each mission created by the AD will automatically set a stage base for the mission when it launches and the aircraft will fly directly to the stage base and then directly to the target. The stage base created is heavily weighted toward the bombers in the mission (so not as useful if you have short range escorts you want to fly in the missions). In this case the player selected stage base is ignored.

Part ESC: Toggle link to yes or no partial escorts. If set to yes, than escorts that cannot fly all the way to the target are counted as escorts for meeting the minimum and requested number of escorts for the strike. If set to no, then only escorts that can fly to the target will count for these purposes.

To exit from this screen, either click on the air command title or the >> arrows at the top:

1736a

17.4.2. Assigning Air Group units to Air Directives

Once you have created an air directive you can assign the air groups in various ways. There are three choices in this regard: Automatic; manually using air groups; or, manually using AOGs.

If you manually assign air groups or AOGs to a particular Air Directive they are then not available for any other AD in that turn.

By default this will be set to Auto, here the AI will select appropriate air units from those in the Air Command and use them for this (and other) Air Directives till they have used up all their air mileage for the turn.

> ***This can actually be a very efficient option as the same planes can take part in both a ground attack mission and fly ground support in the ground movement phase.***

When manually assigning air groups to air directives you have the choice of using the AOG or the Air group (you cannot mix this but you can tell a given AOG to split its assets between missions).

If you want to use the Air group option you can do this from the normal display (just select air groups rather than AOG) or by selecting Hide AOG at the bottom of the

screen and all the eligible air groups will be shown. In either case, click on ++ to assign the groups you wish to use:

1737

If you display the AOG, then you allocate using the ++ buttons next to the AOG title:

1738

You can alter this by removing air units with the (--) button.

1739

You can assign a given AOG to support more than one air mission. So using the example above if KG51 is now allocated to a new mission, by default it will seek to split its planes 50/50 between the two.

1740

If you want to change this default allocation, click on the text Auto 50% and this dialogue will appear:

1742

In this we want 25% of the planes on this particular AD, so the assignment for KG51 alters to:

1743

> ***When assigning air units to an AD, you must decide to either do so using the AOG system or by assigning individual air units. If you try to add an individual air unit to an AD populated with AOGs then they will be removed.***

On screen the display of an AD will alter according to how it will operate. If either no planes can reach the designated zone, or part of it is out of reach, then it will appear as transparent on the on map.

At certain zoom levels the label in the top left hand corner will expand to show how many AOGs are involved and whether they were manually or automatically assigned and how many eligible planes can reach the target area.

The AOGs that actively contribute to a given AD will be highlighted when that AD is selected and the others become more opaque, as:

1743e

If no planes can reach the set AD, then this background will become reddish.

17.4.3. Altering existing ADs

You can change existing AD using all the steps above. Such changes can be made to AD created in an earlier turn, those set to be dormant for a turn (or more) or those created in the current air planning phase.

Note that you can amend existing AD either using this screen or the on map display, this can be used to reset the target area or to access the AD screen as above.

1743a

Note that you can amend much of the details of an AD from the map as well. If you left click (and hold this down) on the border then you can adjust the size (bigger or smaller) of the target zone for that AD, as:

1743b

Alternatively, if you left click anywhere within the set area, you can move the AD to a new location, such as:

1743c

If you want to remove an existing AD, you can do so using the [x] button on the left hand side. If you start to amend an AD and then wish to stop the CANCEL option will come up (if you have starting by amending the target hex or staging base), as:

1743d

In addition, if you have an AD displayed on the map you can click on the current staging base and drag it to a new location.

17.4.4. Air Doctrine

When you create a new Air directive by default it uses the parameters set in the Air Doctrine screen. You can overwrite these as you see fit.

The Air doctrine can be accessed from the Air Directive box above or from the tabs. If you move from the Air Directive by default it will open with the Air Doctrine screen for that particular Air Command.

1744

It can be used to create the basic rules for how each air command can carry out any air directive. The ground support tab maybe particularly important as that will always follow the criteria set here.

You can amend these variables as you see fit and chose if they will apply just to the current Air Command or all your entire air force.

Errata 01.02.21

Manual Addendum: Changing the Intensity setting shown on the Air Directive (right side of map) Window for an air directive, changes the Air Doctrine intensity setting for the given type of air directive, for the controlling Air Command. Changing this, will also automatically alter all ADs of the same type, within the Air Command, that are not using a Custom intensity. Players wishing to alter the intensity of only one air directive, should set a Custom value by manually setting the Strike Num for the air directive

17.4.5. Manually adjusting the flight path

The map will display a green line showing the path to the target, and a purple line showing the return path. The green hexes indicate the part of the path protected by escorts, while the purple hexes show hexes without escort on the path to the target. The waypoints on the paths can be adjusted. Left click selects green path waypoint (or both if in the hex) and right click select purple path waypoint. Once a path is selected, left click in hex to move waypoint(s) to the selected hex.

Note that changing the staging base can also adjust the automatically generated flight path.

17.4.6. Manually Cancelling and Suspending Air Directives

The player can cancel or suspend an existing air directive. Note this action can also be carried out using the air directive screen.

1745

Alternatively it can be done using the air planning screen

1746

In either case, if you click on the [x] this will cancel the air directive and it will be removed from the potential list. Alternatively if you click on the [√] then the mission will not operate in the current game turn.

The advantage to just suspending the mission is you can easily set up the mission in a later turn without having to create a new Air Directive.

17.4.7. Summary of the Air War UI

Much of this exists in section 6, especially 6.8.3 for how Air Directives are shown, 6.8.4 for interpreting the display of AOGs (also covered in 16.3) and airbases (6.4.7). The information on HQs can be found in 6.5.7.

Information on how to use the on-map functions to resize and move AD can be found in section 17.4.3 and on how the map display alters as the air turn is resolved in both Chapter 6 and section 18.4.

Section 37.16 in the appendices covers all the boxes, tabs and displays.

In addition, the two one-page guides are invaluable in covering the key mechanics.

18. CONDUCTING AIR MISSIONS

1800

Focus

- The role of the different Air Directives
- How to change aircraft loadouts
- How air missions are conducted
- The air war in the Theatre Boxes

18.1. TYPES OF AIR DIRECTIVES

18.1.1. Outline

Most air missions are set up using air directives and carried out in the air execution phase. The exceptions are 'ground support' directives that are created using an air directive but executed during the ground phase; air transport and air drop missions which need no air directive and take place in the ground phase (or in combination with an amphibious landing) and the transfer of air group units between airbases which can take place in either the air planning or the ground phase.

Note that due to doctrinal approaches, not all mission types are available to every air HQ or Air Operational Group.

18.1.2. Target Priority

Some Air Directives contain a range of possible targets. These include Reconnaissance, Ground attack and Strategic Bombing. The role of each of these is discussed below. If a given target is set to 'none' then no planes will actively attack that particular target but it may be struck by accident.

It is possible that even if a target is set to 'none' that it may be affected by the mission. For example, tactical reconnaissance missions will improve the detection level of any ground unit in a targeted hex regardless of the focus of the mission. Ground attack missions aimed at 'units' will generate some interdiction and, in reverse, ground attack missions aiming to create interdiction will inflict some losses on units in the target area.

Strategic bombing missions may also see targets set to 'none' hit during an attack. Thus a mission aiming to attack industry or fuel production may also inflict manpower losses.

18.1.3. Ground Support

These are created when the F2 key is depressed

1801

In WitE2 this is probably the main focus for both air forces.

Ground Support air directives are created by assigning AOGs or air group units (either manually or automatically) to a particular HQ unit. The mission will then be available to support all the combats of ground units under that command in the ground phase as long as the planes are in range of that combat and have sufficient air miles remaining. You can turn on and off this automatic allocation by using the ground support toggle option.

1802

Ground support missions are used to provide ground formations with direct air support during ground attacks. Air group units assigned to this directive will fly during ground combat in support of ground units that are in the chain of command of the target HQ.

An HQ can only have one air HQ unit set to provide it ground support. If an air HQ unit is assigned to support a ground HQ unit that already has one air HQ unit assigned, the new air directive will take effect and the older directive will be deleted.

A ground HQ with an air HQ unit providing support will not receive ground support from another air HQ unit providing ground support to a higher ground HQ to which they are attached. Ground HQ units without direct support will receive ground support as available from air HQ units directly supporting ground HQ units to which they are attached.

The allocation of planes to a given ground support mission is automatic. These allocations can be influenced depending on how the relevant air doctrine is set (17.4.3) to influence the percentage of bombers and escorts that can be assigned. , However, it is unlikely to draw on more than 300 bombers in a given attack regardless of how many are available or how the air doctrine is constructed.

1803

Note that ground support missions can also see substantial air to air combat as both sides commit planes. These can be escorts allocated to that GS directive, fighters that flew AS in that region in the air phase or are available for auto-interception (18.1.10).

Related to this, even if the GS mission option has been turned off, relevant fighters will contest an enemy attack even if no friendly bombers can be allocated due to the restriction. This intervention will occur even if no enemy bombers or fighters are actually sent (so is best seen as a precautionary move). The fighters can be drawn from those in the relevant GS AD, those in a different GS AD or those available for automatic interception missions.

Very roughly, the relationship between the status of the fighters and their commitment to flying CAP over ground combat is:

- Fighters in the GS AD, and with GS turned on for the attacking side – maximum possible response;
- Fighters in the GS AD, but with GS turned off for the attacking side – medium response
- Fighters not assigned to this GS and with GS either on or off – low to medium response.

Note that air leader admin and air values will affect the commitment of air planes to a particular mission and this may well lead to considerable variation in the number of planes assigned.

In addition to direct losses caused by successful bombing attacks, planes allocated to GS will cause some extra disruptions. This reflects the impact on ground movement and co-ordination caused by the need to avoid air attack.

18.1.4. Ground Attack

These are created when the F3 tab is selected. Ground attack missions must include some enemy held hexes but the area of the air directive can include friendly hexes (these will be ignored when the mission is conducted).

Ground attack missions can be ordered against a range of targets including: Airfield; Unit; Railway; Port; Ferry; Interdiction; or, Railyard. A given mission can be ordered to attack one or more of these targets and the relative priority for each target can be adjusted. At least one option must be set at priority level 4.

1804

Airfield attacks will damage or destroy both planes based at the airfield and the infrastructure of the airfield itself. If the airfield is overloaded, extra damage will be inflicted by an airfield attack.

Unit attacks will try to disrupt, damage or destroy enemy ground elements in the target hex(es). It will also generate some interdiction but much less than the 'interdiction' mission. Such missions may also reduce unit morale and experience.

Railway attacks will slow rail movement (22.4) in the target hex(es) by increasing usage on the rails.

Port attacks will both damage the port (reducing its value as a transport hub) and reduce the level of interdiction it can project into the surrounding sea zones (24.2).

Ferry attacks will increase the cost of using ferry hexes and inflict losses on ground units and freight using those hexes.

Railyard attacks will directly reduce the available rail capacity from that location. This has two primary effects. It reduces the rail capacity on that sector of the rail system increasing the costs of sending units or freight by rail (22.4.4). It also reduces the effectiveness of any depot in the same hex as depot capacity and efficiency is closely related to the size of the co-located railyard (25.7.1).

All the above missions will also generate some interdiction in the selected target hex(es).

If a depot is present in any hex struck by a ground attack (regardless of notional focus) this can result in damage and losses to ground element equipment such as guns as well as affecting the movement of freight into and out of those hexes.

Interdiction attacks will tend to target hexes with a lower movement point cost (i.e. the clearer terrain) and will be spread out across the selected target box but focus on the places where movement is to be expected. Each interdiction attack hits one hex but some interdiction will then be placed in adjacent hexes.

Interdiction will affect any enemy movement in the hex(es). This includes the movement of ground units (including attacks or retreats), the commitment of reserve units to combat, the commitment of support units to combat and the movement of freight.

If ground combat subsequently takes place in a hex that has been affected by interdiction in the air resolution phase then the detailed combat report (37.1) will show the presence of planes (and any damage they cause) even if there was no direct ground support.

The effectiveness of interdiction bombing will be affected by the weaponry used (18.2), the terrain, weather and the detection levels present in the affected hex(es). In addition, the time of year will affect the mission as in winter there is less daylight and thus it is easier for the enemy to move undetected. The interdiction values generated by airstrikes are thus modified by a certain percentage due to the number of hours of daylight based on the month as follows

Month	Jan/Nov	Feb/Oct	Mar/Sep	Apr/Aug	May/Jul	Jun	Dec
% Modifier	-20	-10	0	+10	+20	+30	-30

In addition to disrupting/damaging or destroying Ground Elements, Interdiction has the effect of raising the Movement cost of each hex once it reaches a certain level (38.7.2).

> ***Note that any interdiction >0 has the effect of cancelling Administrative Movement (22.2.1) and this also affects the movement of freight.***

Errata 01.02.06: A mission generated by a ground attack air directive that is performing an attack on a unit has a chance of having the mission converted to an interdiction attack. The chance of switching to interdiction increases with the number of movement points expended by the unit in the unit's prior turn, and increases against units smaller than divisions

18.1.5. Strategic Bombing (Bomb City)

These are created when the F4 tab is selected.

1805

Note that two of the potential targets (Port and Railyard) can also be attacked using the Ground Attack missions and the effect is the same regardless of the type of Air Directive selected.

Only two and four engined bombers can be used for Strategic Bombing missions. As with Ground Attack missions, multiple targets (and hexes) can be selected and the target priority screen can be used to indicate the relative importance. Note that there is a possibility that a mission designed to attack one target may hit another.

In each case the mission will damage the relevant 'factory' that produces that particular item unless a Port or Railyard has been selected.

As with Ground Attack missions, the effectiveness of a given attack is affected by the weather, detection level, skill of the pilots and extent of any anti-aircraft fire.

Note that some strategic bombing attacks on Germany will result from Western Allied raids generated by in-game events (40.5).

18.1.6. Air Reconnaissance

These are created when the F5 tab is selected. All reconnaissance missions must target enemy held hexes. If the wider target area covers friendly hexes these will be ignored when carrying out the mission.

1806

Air Reconnaissance missions are separated into strategic and tactical missions. Strategic reconnaissance can chose from the range of targets that can be attacked using the Strategic Bombing directive.

The air reconnaissance target priorities are used to determine the targets selected for each mission. For example, if airfields are set to low and units set to medium, when a reconnaissance mission is formed and sent out, it picks its target hex, and there is a good chance it will pick units and a smaller chance it will pick airfields. If airfields were set to none and units to high, only hexes with units would be selected for targets, but the increase of reconnaissance values in the hexes flown over by the tactical reconnaissance flight would raise the detection levels of all possible targets including any airbases.

For tactical reconnaissance, the reconnaissance values in the hexes go up along the flight path to the target hex, which should see the largest increase in reconnaissance value. Any of the target priorities can be selected; however, tactical reconnaissance will only increase the basic reconnaissance level of the hex, which only impacts the detection level of Units, Rails (usage and damage), Depots and Airbases. For example, railyards could be set as the target priority and the reconnaissance mission would fly to a railyard target hex, but the mission would still only increase the detection levels of units, depots, rails, and airfields that the reconnaissance aircraft fly over during the mission.

If you select 'Unit' as your target, the missions will focus on raising the information about already known formations. 'Interdict' will focus on uncovering units that may be in apparently vacant hexes. If the mission has fulfilled its primary purpose it will swap to the other function so a 'unit' mission may show up as 'interdict' in the air reports.

Reconnaissance aircraft automatically change to the altitude that is the best fit for their load out when they reach the target hex(es). In effect, they fly (and generate some detection information) to their target hex(es) at the mission altitude and then adjust automatically so a formation with a low level camera will always adjust to the most effective altitude.

> ***In the main, only flying reconnaissance missions for 2-3 days a week can be effective. This will give you an idea of the rough situation in the area you are targeting but will limit losses to what are often relatively rare assets.***

18.1.7. Air Superiority

These are created when the F6 tab is selected

1807

This is designed to ensure that your fighters will seek to engage enemy planes in a particular zone. AS missions can be ordered to take place in both air phases, the friendly air phase or the enemy air phase.

Air Superiority missions will be less vulnerable to flak than other types.

Note that an Air Superiority mission is not the only way to ensure your fighters will seek to intercept and engage enemy aircraft. If a fighter (or fighter-bomber) air unit is at an airbase and not in reserve mode then it will seek to automatically intercept any enemy planes that come within range.

Air Superiority missions are used to gain control of the air so as to minimize enemy air interception of other friendly air missions while degrading the effectiveness of enemy air missions. Air superiority can impact the entire turn, with both sides

capable of conducting missions during both player turns. Fighter units will fly to a target area and try to disrupt enemy missions that are flown into that area.

Aircraft assigned air superiority missions can intercept enemy air activity both on the way to and in their target area. Air superiority missions can be used defensively to protect a target area, or offensively as a fighter sweep type mission.

Air superiority flights can gain altitude when intercepting enemy raids or joining defensive battles. In consequence, fighters on an AS mission will often have a tactical advantage over those escorting bombing or reconnaissance missions.

Air groups that are specifically assigned to an Air Superiority air directive, either by the computer or player manual air group unit selection, will have a better chance of flying interception missions during the enemy movement phase in the target area of the air superiority air directive. This allows them to intercept enemy Ground Support and Transport missions. This is because the miles they flew for air superiority missions in the friendly air execution phase are tracked, and these miles are available to be used in the enemy movement phase for these interceptions.

This takes into account the simultaneous nature of real life air missions against the IGO/UGO nature of the game. It is assumed that the air group units were possibly out flying air superiority missions when the enemy ground support or transports came into the area. The chances of this interception being made will be related to the number of ‘air miles’ the fighters expended in their phase.

No additional fuel or ammo will be expended for these movement phase intercepts as they were already “paid for” during the AS missions during the air phase.

Night Fighters cannot usually be directly assigned to AS missions if they fly at night. The exception to this is if they are allocated to the ‘night intruder’ mission and ordered to target airbases where enemy night bombers or fighters may be based. Instead Night Fighters rely on auto-interception to engage with enemy air missions.

18.1.8. Naval Patrol and Naval Interdiction

Naval patrol missions are used to project naval interdiction to exert control over ocean and sea water hexes.

There are two ways in which air group units may fly naval patrol missions. First, air group units may fly naval patrols to an area under direction of an air directive to their Air HQ unit. Second, air group units not set to night only missions will automatically fly naval patrol if they are not assigned to any air directives and their HQ unit’s air doctrine for Auto Patrol is set to yes.

Naval only air group units are significantly more effective than other units at flying naval patrol. The bomber and patrol aircraft will attempt to create naval interdiction points in the target area (as well as along the path to the target) while fighters

(including those flying air superiority missions) will attempt to prevent enemy aircraft from creating naval interdiction points. These naval interdiction points help to take control of sea hexes. When interdiction is shown, enemy controlled sea hexes are shown in red, neutral are shown darkened, and friendly control is shown normally. Naval air directives are flown during both friendly and enemy air execution phases.

All automatic naval patrol flights, whether bombers or fighters, are limited to 30 hexes from their air base unit.

Naval patrols will be less vulnerable to flak than similar missions over land hexes.

Naval interdiction also acts as tactical air reconnaissance and can increase the detection level of enemy units utilizing naval and amphibious transport that remain in water hexes at the end of their turn (24.5).

18.1.9. Air Transportation

Although not an air directive as such, the air transport of units (22.5.2) and freight (22.5.1) takes place during the ground phase. Air drop of airborne units can take place either in the ground phase or in conjunction with a naval invasion.

Air Transport (including freight, the movement of non-motorized units to a friendly airbase and airborne operations) missions can be accompanied by fighter escorts. For airborne operations, fighters are assigned using the airdrop screen (22.5.3) for transport missions.

If an air transport mission is intercepted, this can lead to losses both among the transport aircraft and the cargo. Aircraft conducting the air transport mission that are aborted will return the ground elements they are carrying to the staging air base unit used to commence the mission.

The detailed rules for air transport missions (all types) can be found in section 22.5.

Also see the rules on auto-interception (18.1.10) for information on when enemy fighters are likely to intercept an air transport mission.

Errata (01.01.03) To be eligible to escort an air transport mission, the fighter unit must now either be within range of the target hex, or if not, be within range of the stage base while the stage base is in range of the target hex.

In addition, the following clarifications influence both the allocation of transport planes and fighter escorts:

First, fighters with any miles travelled will not fly escort (in most cases they aren't shown in the display, but even if they are, they won't fly).

Second, when using multiple missions, it is very likely that after the first mission, the follow on missions will reset the default units flying. So if

controlling the allocation of planes is very important, best to run single missions.

Third, it appears that no matter how many level bomber groups you include in a mission, only one will fly per mission.

18.1.10. Auto-Interception

Technically this is a not an air directive but another way in which fighters can seek to engage with enemy aircraft. In this case, fighters will try to engage enemy aircraft as long as they are not manually assigned to a particular Air Directive. If the 'auto-assign' routine has been used then any fighters with unused air miles may seek to engage with any enemy incursion in the air phase or during the ground phase (either as a ground support or air transport mission).

See 18.1.3 for how these rules are modified for Ground Support AD and battles.

For a fighter air group to be eligible for auto intercept the following conditions must be met (and, in addition, leadership dice rolls will have a bearing on if the air group actually intercepts):

- The air group must not be manually assigned to a particular AD (it can be used by an AD using the auto assign routine);
- In order to intercept enemy transports, the air group must:
    - Be in an AS mission that has flown miles over the combat/drop hex (or intersects with the enemy planes moving from their bases);
    - Not be allocated to any mission over than the above.

In this case, the mission will use elements of your overall air directives (above) to see if it will fly in the current weather conditions.

The system will now check first to see if there is a GS (ground support) air directive covering the HQ in charge of a ground battle. If so, then all air units attempting to fly auto CAP, Ground Support (escorts and bombers), and auto intercepts of enemy GS will check the GS AD setting for the weather to fly (no matter if they are in the air directive or not)

If there is no GS AD set for the HQ in charge of the battle, then any auto CAP and auto GS intercepts will check the air unit's Air Command's GS air doctrine setting to determine when they are willing to fly.

Note: Auto intercepts in the air phase always check the Air superiority air doctrine of the unit to determine if they are willing to fly in the current weather conditions or have enough planes to meet your chose percentages ready to fly (17.4.4)

18.1.11. Interaction between various Air Directives

Ground attack missions with a focus on interdiction disrupt and reduce MP's in units and damage freight (supplies) moving to and from depots. Remember that any interdiction greater than 0 will also prevent administrative movement (for both troops and supplies) in that hex thus increasing MP costs regardless of the level of actual interdiction generated.

If the ground attack is aimed at 'units' it may also generate some interdiction but will mostly aim to disrupt, damage or destroy ground elements in the target hex(es).

Ground support missions are flown in the ground phase but take place before any ground combat starts (23.8). This means that any losses or disruption imposed by air power are not available to take part in that particular battle and this can be devastating if properly applied. In addition, such disruptions then convert to fatigue after the battle, affecting unit performance across the turn (23.1.1). This is probably the single most useful mission for both sides in WiTE2.

Air reconnaissance can increase the impact of interdiction and it is important to ensure your reconnaissance missions are focussed on the same target type as the bombing missions. Note that 'unit' missions will prioritise raising the detection level of known formations, 'interdict' will focus on detecting unknown formations.

Strategic (city) bombing and ground attack missions against ports and railyards lowers the effective size. Since, in both cases, the size of the facility sets the size (capacity) of any depot (25.7) in that hex this can be a very effective tool to restrict the flow of supplies. In addition such bombing can damage or destroy ground element equipment, including equipment being sent to units as replacements.

Air Superiority missions can be difficult to understand. If flown in your air phase they will seek to attack any enemy air missions flown in their allotted Air directive zone. In addition, they create 'air miles' in that zone that are then used to determine the chance of intercepting ground support or air transport missions in the following ground phase. To cover a given region in both the friendly and enemy ground phases means you will need to use your AS mission in both the air phases.

18.2. AIRCRAFT LOADOUTS

This will be set automatically by the computer but a player can over-ride this choice and set loadouts manually.

Aircraft have many possible load outs. Load outs with a lot of smaller bombs allow the aircraft to hit more ground elements in units. Depending on the fuel situation at an airbase, an air group may not select drop tanks, thus greatly reducing combat radius. One solution may be to shrink the area that the mission is covering, as this will effectively reduce the range.

> ***In general matching load out to mission is intuitive but see the discussion in 19.4.5. The better dug in or protected the target, the more effective will be a few heavy bombs, moving units are often best attacked with rockets or light bombs and naval missions are better if the plane can carry torpedoes or mines.***

18.2.1. Automatic Selection

In this case the load out screen should be initially set to Auto

1808

Note there is no need to reset this each turn, as long as the Auto option is selected the computer routines will swap load outs to match available resources and allocated tasks.

Initially the computer will try to select a load out with no drop tanks or with maximum bomb effect. If the destination is not reachable, load outs with drop tanks or fewer bombs will be used instead.

When the setting is Auto it will try to select various load outs depending on the plane type and situation. For example, if the air base is below 50 percent of its fuel need it will choose a load out with minimal sortie fuel value. In case of naval patrol it will try to pick torpedo/mines/bomb. The selection algorithm also goes into two stages. For example for the bombers, first it selects the heaviest bomb load (i.e. that with the heaviest total blast value (19.4.1). If the modified endurance doesn't allow the aircraft to reach the target it picks the bomb load with the least possible endurance modification.

If an Air Group Unit swaps or upgrades its aircraft, the load out selection will be set back to Auto.

18.2.2. Manual Selection

The player has the ability to manually change air group unit load outs, either individually or by various groupings of multiple air group units of the same model aircraft.

The selection is made using the options in the air group unit tab on the aircraft screen:

1809

Once a given loadout has been selected the player has the option to just use that for that particular Air Group unit to all similar planes at the same airbase, all similar planes in that particular air directive, all similar planes in the same air command or all similar planes in the entire air force.

Note the match must be exact. So a loadout assigned to a Bf-109F-2 will not be applied to a Bf109E-7.

The screen will also show loadouts that are no longer available or will become available later in the war.

18.3. CONDUCT OF AIR MISSIONS

During the air resolution phase the number of planes used in each air directive may be less than the total notionally allocated. This can happen for several reasons including failing leadership checks, air units already using up all their available air miles or losses in an earlier day reducing the number of planes available, or, possibly taking the air group below the minimum % required to conduct missions.

18.3.1. Leadership Checks

The leader air rating is checked and may increase the chances of more planes actually participating in a given mission.

Remember that Air Command HQs must be within 90 hexes of an airbase to provide their leadership score but otherwise the leadership chain works as set out in section (15.5.4) with higher levels of command offering secondary chances to pass a particular check.

18.3.2. Miles flown

There are several factors that determine how many missions and what type a particular air group unit can conduct during a turn.

An air group unit can only fly a certain number of miles per turn based on its cruise speed (37.16.1) and current unit morale and experience.

The miles flown are tracked as a percentage of maximum miles that may be flown. . The miles flown logged by a group is increased substantially when operating in bad weather. In addition, if planes operate over 25,000' then the mileage will increase by 10% for each additional 1,000'.

An air group unit can continue to fly missions if miles travelled are less than cruise speed times the number of aircraft in the air group unit times (10+ (morale/4) + (experience/4))).

For example, a 10 plane JU-52 air group unit with morale of 20, experience of 40, and a cruise speed of 160 could fly up to 40000

miles in a turn. The actual mileage flown is based on the type of air mission.

Air transfer missions pay the range in miles, transport missions cost three times the range in miles, and all other air missions, which are considered combat missions and include fighter escort of air transport missions, pay four times the range in miles. For example, an air transport mission to a target hex 12 hexes away would expend 360 miles per plane that flew on the mission, or 12 times 3 times 10 miles per hex per plane, for the transport air group unit, but an escorting fighter unit would expend 480 miles per plane.

Note that a reduction in the number of ready aircraft during the turn will result in a reduction of available miles.

18.3.3. Mission, Escort % and % Required to fly

These can all be set using the Air Directive tab (37.16.8).

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By default the Mission and Escort % are set to 100. This means that the computer will fly the air directive on days when it has, at least, the number of planes it needs to deliver an effective mission. Reducing the % will lower this number and raising the % will increase this number.

The % required to fly is the minimum number of ready planes in the Air Group Unit on that particular day. If this number is not available then the remaining planes in the Air Group will not fly any missions on that day. Since planes can be damaged, and repaired, during the air execution phase it is possible for Air Groups to cease to be available on some days and return to action later in the week.

18.3.4. Morale loss and recovery

Air group unit morale may increase due to destruction of enemy aircraft in air to air combat as well as when the air group unit receives supplies. Air group unit morale will decrease due to aircraft being damaged or destroyed in combat.

In the air execution phase, air group units can recover morale during each air maintenance segment if they did not fly a mission during that day. Air Group units set to the rest mission will recover morale at double the normal rate.

See the tables in section 38.2 for the changing basic levels of national morale for the various air forces represented in WiTE2.

18.3.5. Gaining and Losing Experience

Air group unit experience has a significant impact on combat effectiveness during air missions. Air group units gain experience based on the number of missions they fly.

Air group units or individual pilots can fly training missions if in their reserve TB or in the Western Europe TB (13.3) if that has low combat intensity. These training missions will increase the chance of operational losses, resulting in additional damaged or destroyed aircraft from the air group units conducting the training.

Air group units will decrease in experience due to the addition of replacement aircraft pilots. In addition, pilots in air group units can lose experience due to swapping planes but this will only happen when the new plane has a different number of engines or have changed to a different aircraft type (each of these will deduct 2 experience).

18.3.6. Fatigue and Aircraft Damage

Air group unit fatigue impacts combat effectiveness, the number of aircraft operational losses and the number of aircraft from that air group unit that will conduct a particular air mission. Air group units gain fatigue as a result of air combat and the amount gained is dependent on the number of air attacks made and the total distance flown.

Air group units can recover from fatigue during the supply segment of the logistics phase. As with ground elements, the amount of fatigue reduction will be determined by the supply situation and available air support squad ground elements at the air base unit the air group unit is attached.

Fatigue will increase if the planes are flying over 25,000 feet.

18.3.7. Attrition

Air groups will have aircraft become damaged if the air base unit they are attached to has insufficient supply and/or air support squad ground elements. The airbase unit ground elements will suffer normal attrition and fatigue losses.

18.3.8. Impact of Weather

Weather conditions are based on the weather on the way to the target and over the take off base, stage base and target. The weather can be very poor, poor, fair, good, or excellent (8.4).

Whenever an air mission is attempted in bad weather, there is a chance it will be scrubbed and not take place, with the chance of scrubbed missions increasing the worse the weather.

Ground Support air missions will be significantly reduced during bad weather.

As with all air missions, the mileage flown will be modified based on the number of ready aircraft in the air group unit that actually flew, but a weather mileage extra charge will apply, with the worse the weather the greater the extra miles charged against each aircraft that flew.

Air missions can be cancelled by the minimum weather conditions set for the air directive. For example, if the minimum weather conditions for a directive are set to fair, then any mission being created by the air directive will automatically be cancelled if the weather condition is deemed to be very poor or poor at the time the mission would have flown.

Poor weather will substantively increase the operational losses, especially for air groups with low experience.

18.3.9. Day and Night Missions

Most air missions are conducted during daylight; however, strategic bombing, ground attack, air transport, and interception air missions can be flown at night by air group units that have night missions enabled in their detail window (37.16.3).

Air group units are generally defaulted to day&night (DN) mission settings which allow them to fly in both day and night missions, although night fighters are generally defaulted to the night only mission setting.

All night interception is conducted automatically as there are no night AS flights.

Note that some planes will only be available for day or night missions. Typical examples of day only planes are the bulk of reconnaissance planes that were ill-equipped for night missions.

18.3.10. Aircraft Reliability

All aircraft have a reliability rating which ranges from “really good” (lower numbers) to “really bad” (higher numbers).

These reliability ratings are checked when aircraft conduct a mission with those that fail the reliability check becoming damaged.

To reflect initial production “teething” problems, aircraft reliability will be increased by five when they first come into production and then decrease by one each month until they reach their standard reliability rating. The reliability rating of obsolete (out of production) aircraft is treated as higher than their normal reliability rating, which will make them more susceptible to attrition.

The reliability of a plane is shown on the Air Group Unit tab or under the Equipment (aircraft) tab of the Commander’s Report (35.8.2)

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18.3.11. Operational Losses

These are more likely to occur when there is poor weather, pilot fatigue, planes with low reliability, formations with low morale or that have taken damage earlier in a turn and planes flying to the limit of their range.

> ***In effect, the latter can trigger high operational losses even in good weather conditions and may particularly affect the Axis side in 1941 and the Soviets in the later stages. Be careful at setting air directives to the limit of range and, if you do, consider limiting the days such missions fly or the intensity that they operate at.***

18.4. GRAPHICAL DEPICTION OF AIR MISSIONS

Air Directives will be displayed on the map when being created with the view depending on the choices made with that drop down option or by right clicking on any hex and selecting AD Targets from the map information options.

When viewing the target box on the map, or viewing the path of a strike during air directive creation, lavender in a hex in the target box (or along the path) means coverage by the strike planes (bombers, recon or fighters in Air Superiority {AS}). Green hexes means the strike has fighter escorts that can reach the hex.

Since AS doesn't include escorts these hexes won't be green

1812

In this case, the lower part of the AD is covered by escort fighters and the upper part can only be reached by planes flying the actual mission (bombers or reconnaissance planes).

Air group range circles are shown on the map for air groups. This is the maximum combat range of the aircraft and is shown in purple. Combat range is the distance that aircraft can fly on non-escort missions based on their load out (interception can go out this far too, although there's a low chance of interception at longer ranges).

1813

This shows the combat range for the planes in the German Flieger Fuehrer Ostsee AOG. At the top of the ring are the number and type of planes that can operate at that range.

1814

This shows the same information for the JG 54 AOG. Note that there are three rings reflecting different plane types and different bases.

Air group units assigned escort missions can only fly out to escort range, not combat range. This represents that escorting aircraft must zig zag when escorting bombers and can't travel their maximum range with the bombers. Escort range is ¾ of combat range, while transfer range is 3 times combat range.

The execution of air missions is graphically depicted on the map using lines with the following colours:

Black – Air group units flying to staging base (not shown during air execution phase)

Red – Air Strike flying from staging base to target

Green – Enemy air group units flying to target for interception

Errata – 01.02.27 (clarification).

Fighters, and fighter bombers with a Mission setting of Fighter, display their escort range for radius in their air unit detail screen. Fighter bombers with a Mission setting of Bomber, display their combat range (in this case bombing range) for radius in their air unit detail screen. When the range circles are shown on map using the AOG functionality if the unit consists of fighter bombers one of two circles will be shown. If its Mission setting is Fighter, the purple circle will show the area within which it can escort missions. If the FB's Mission setting is Bomber then a purple circle will be shown indicating the range over which the plane can fly to strike a ground target. This distance is 4/3 further than the escort range, but is usually then lowered due to having a bomb loadout (this can be checked on the load out tab for the air unit).

If an airbase has aircraft but no ground units present in the hex, then left-clicking on the hex will generate one or two range circles depending on the aircraft at the airbase. The green circle is the greatest escort range of any fighters or fighter bombers with Mission set to Fighter that are at the base. The purple circle is the greatest combat range of any air unit at the base. So if the airbase only has level bombers only the purple combat range circle will be shown but for fighters and fighter bombers with their Mission set to Fighter, both the shorter escort and the combat range circles are shown

Errata – 01.02.39

Changed the display of air unit range circles shown in the AOG view for fighters and fighter-bombers that are set to Mission: Fighter. They used to show a purple line equal to their escort range, but now, they show the purple line equal to their combat (intercept/patrol) range. The unit detail screen has been changed so that for fighters and fighter-bombers set to mission:fighter, show escort range/intercept (combat) range. Clicking on a hex with an airbase

in the normal map view (with no ground unit in the hex), will still show both the green (escort range) circle, and the purple (combat range) circle, for each air unit at the airbase.

18.5. THEATRE BOXES

Air Missions are automatically carried out according to the intensity of air operations in that particular theatre. The level of commitment will influence the number of planes lost and damaged. Planes in the Axis and Soviet Reserve boxes will attempt to train pilots, while some units in the Western Europe box may also train pilots each turn.

Otherwise planes in the theatre boxes will be set to automatically upgrade (16.5.2) as new types become available or if shortages occur.

19. AIR COMBAT

1900

This section provides background information on how the air combat models work in WiTE2. Most of this is not directly under player control but understanding these issues may help you to plan more effective air operations.

Key issues:

- How Air Superiority and Auto-interception missions work and interact with other air missions;
- What affects success during air to air combat;
- Impact of Anti-Aircraft fire on air missions
- Air to Ground Combat;
- Some likely causes of high operational losses;
- How wins and losses are determined

19.1. AIR MISSION SEQUENCE

19.1.1. General overview

The following illustrates the general flow of events during the conduct of an air mission:

A. Air Mission sub-phase

1. Phasing player Air Group units committed for [mission]

2. Phasing player Air Group units rendezvous at staging base and then fly to target hex

3. Non-phasing player Air Group units committed for air intercept resulting in air to air combat (missions can be intercepted en-route to target or on return and can be intercepted multiple times)

4. Anti-Aircraft Defence (any accumulated AA from flak flown over is resolved prior to each air combat, bombing of target and landing of the mission).

5. Air to Ground combat in target hex or transports deliver cargo

6. Phasing player Air Group units return to staging base and then fly independently back to air base unit

Only fighters and fighter-bombers flying escort will drop the tanks when they have used them up during flight as a/c with bombs and drop tanks cannot drop one without dropping the other (so they keep the drop tanks until they drop the bombs). Fighter-bombers that are bombing may jettison their bombs and drop tanks and switch to “sweep” which simply means they are becoming fighters trying to fight in A2A going after enemy fighters. This allows those fighters and fighter bombers to engage enemy interceptors at full effect.

Air groups are broken down into smaller “flights” to resolve air missions, to include air to air combat and bombing runs. Decision by fighters or fighter bombers to drop their drop tanks/bombs is made by each such flight. These flights can consist of 4-12 aircraft So one part of an air group unit can switch to sweep while another keeps their drop tanks and press on with their escort mission or, for fighter bombers, to bomb the target.

Errata 01.02.27 - Increased the fuel used by aircraft each time they engage in air to air combat, thus reducing their ability to engage large numbers of enemy aircraft in any one mission

19.1.2. Interaction of AS and other air missions

The following is a brief overview of the air execution phase and how air superiority missions interact with other air missions:

1. Air execution starts.

2. Execute night air directives.

3. Execute day patrol flights.

a) Launch all AS directives, friendly and enemy.

Number of aircraft participating based on doctrine and target area settings.

Flights are generated with the flight path from the staging air base unit to the center of the target area.

AS flights can be intercepted on the way to the target area.

b) Resolve all AS combat.

If enemy has AS flights in the same target area, i.e. both friendly and enemy AS target areas have common hexes, enemy AS flights have a chance to engage friendly AS flights.

c) Resolve automatic naval patrols.

Existing AS flights which are still active contribute to the naval patrol calculations in the AS area with their fighter values.

4. Execute day air directives. As they run all still active AS flights can intercept and engage in air to air combat

a) Friendly air missions

b) Enemy intercepts (size determined by AS Mis Pct air doctrine setting)

5. Land all air superiority flights and repeat from step 2.

19.2. AIR TO AIR COMBAT

Three groups of factors determine which plane is most likely to destroy or damage its opponent in air to air combat. These are: the characteristics of the pilots; the characteristics of the plane; and, the weapon systems in use.

A Fighter air group unit's ability to engage other air group units will decrease based on the distance flown (in hexes) relative to their range, which is calculated as aircraft

radius divided by ten, resulting in fewer enemy aircraft being damaged or destroyed during a lengthy mission.

19.2.1. Pilots

Pilots are rated according to three characteristics – morale, experience and fatigue. In the Commanders Report (35.4) and the unit screen (37.16.3) these are reported as the average for all the pilots in that particular air unit.

The air unit tab by default shows the average values for experience, morale and fatigue (1), opening the pilots tab (2) will show these values for each pilot in the unit.

1901

In air to air combat low morale pilots may try to break off before combat and are less effective in any exchange. In general, the higher the experience of a pilot, the more likely they are to win an exchange. Finally, fatigue lowers the effectiveness of pilots – as well as creating a situation where it is more likely that an 'operational' loss (19.5.2) will occur.

19.2.2. Planes

All the planes available in WiTE2 are rated for a number of characteristics including their range, speed, load, maximum altitude, number of engines and the types of weapon systems they can carry (both default and optional).

The image in 19.2.1 shows all this information for a given type of plane. This is also available from the Commander's Report (35.8.2) and it is possible to compare the values of different types of planes.

In air to air combat a number of these are important. Planes that have high manoeuvre values, rate of climb and higher maximum speed will have an advantage in terms of positioning and possibly attacking first. The armour and durability values will help a plane survive being hit.

Fighter versus bomber combat will be more lethal to the bombers than these raw numbers would imply.

The value for reliability will have an effect in determining if a damaged plane will crash on its return to base (i.e. become an operational loss) or land safely.

Operating beyond the ideal altitude for a plane will see some degradation of its combat efficiency. The ideal altitude for each plane can be found in the editor (41) and the data exported to a spread-sheet.

19.2.3. Weapon Systems

While some reconnaissance and transport planes are unarmed, almost all planes in WiTE2 carry some form of weaponry. This is made up of weapons integral to the plane and those related to a given load-out. Note that some load-outs may allow a plane to fly further or carry heavier weapons at a cost in terms of mobility and speed.

Fighters and Fighter Bombers carrying drop tanks and/or bombs will fight less effectively if engaged in air to air combat by enemy interceptors. In such a situation, there is a chance that some of the aircraft will prematurely drop bombs and/or drop tanks to more effectively engage the enemy interceptors.

In air to air combat, each weapon system (35.8.3) is rated for effect (this is only used in the context of A2A combat), range over which it can fire, the accuracy, the rate of fire and its value when used in air-to-air combat (anti-air).

19.3. ANTI-AIRCRAFT DEFENSIVE COMBAT

Anti-Aircraft fire can occur both when the planes reach their target and as they move from their base to the target hex(es).

Flak values can be seen by depressing the relevant tab (6.2), right clicking on a hex or using the hotkey/

Display options are to show no flak, only that in cities or all flak values.

Numbers displayed are between 0 and 9 to indicate intensity of flak, with the left number being low/mid altitude (below 20k feet) and the right number being high altitude (above 20K). With FOW enabled, the accuracy of the flak values will vary depending on the detection level of the AA support units.

19.3.1. Anti-Aircraft fire on route to target

In addition, anti-aircraft guns can target planes flying in adjacent hexes. AA units in cities/airfields will fire at aircraft flying in adjacent hexes if they are 15,000 feet or higher. Any AA attached to combat units or HQs (whether part of the unit TOE or an attached Support Unit) will fire into adjacent hexes if the enemy aircraft is 10,000 feet or higher.

Fire at adjacent hexes has much less effect than fire at aircraft flying directly overhead. For all air missions AA units in the target hex are much more effective. AA units attached directly to cities or airfields (including flak intrinsic to the airfield unit) are more effective, as are self-propelled flak units. These are cumulative benefits, so a self-propelled flak unit in a city that is in the target hex will receive benefits from all three conditions. Flak against air transport and airborne missions is more severe in daytime than at night.

19.3.2. Altitude effects and anti-aircraft fire

Anti-aircraft guns have two range bands, effective ceiling and maximum ceiling, which is generally 1.4 times the effective ceiling. Fire is allowed up to the maximum ceiling, but any fire above the effective ceiling will be considerably weaker.

When determining the effectiveness of flak, aircraft speed is more important to aircraft flying at lower altitudes. At higher altitudes the effectiveness of flak is most impacted by the altitude itself (i.e. higher is better to avoid being hit by flak).

In air to ground combat (19.4) it is assumed that fighter and tactical bombers with a mission altitude over 5,000' will actually conduct their attacks at 1,000'. This will lead to additional anti-aircraft fire at the lower altitude as non-specialist weapon systems can also be used in an anti-aircraft role.

Air units that fly below 5,000' for their mission will evade most conventional anti-aircraft fire but may be vulnerable to other weapons. In addition, low experience air units flying at this altitude will suffer higher operational losses (19.5.2).

19.3.3. Barrage Balloons

All ports are assumed to have barrage balloons that will impact any raid that is bombing anything in the port's hex. Aircraft bombing under 3000 feet have a chance of being destroyed by the barrage balloon equal to two times the size of the port (port 3 means a 6% chance that bombing aircraft will be destroyed). For night missions, the percentage chance is tripled (so port level 3 means that each plane has an 18% chance of being destroyed).

19.3.4. Anti-Aircraft Fire and Combat Reports

As aircraft fly along their path on a mission, the flak they fly over accumulates until an air battle or a bombing/recon occurs. At this point, all the flak they have flown over fires at the aircraft before the air battle or bombing/recon takes places (and all of the flak is listed as participating in this battle). If no battle takes place on the way home, any flak flown over and the losses caused by this prior to landing are retroactively placed into the last battle site report that had been created by the mission.

Errata 01.02.06:

A ground element can be counted multiple times in a single battle report in the list of anti-aircraft elements. This is because the attack is broken up into 'flights', and each flight has the chance of being engaged by a ground element. So, a ground element could fire at 6 different flights and be counted 6 times.

Non-flak elements were being added into the anti-aircraft count in cases when they should not have been. This was a display only issue as they weren't actually adding to the anti-aircraft value firing at the aircraft. This has been fixed.

Non-flak elements will never fire at aircraft flying into or through and adjacent hex. This was rare before, but has been removed entirely.

Increased the importance of aircraft armor in mitigating damage from flak.

Reduced op losses for day missions and ground support. Also, fixed the function that was supposed to credit some aircraft damaged by flak, that crashed during landing routine, as flak losses. This was incorrectly always counting them as op losses

19.3.5. Anti-Aircraft Fire and Ground Support Missions

If an air mission takes place in the Ground Support phase, planes will be attacked by flak on their route to the battlefield, by any flak in the target hex and by any flak Support Units allocated by a HQ to support the combat.

19.4. AIR TO GROUND COMBAT

Apart from Air Superiority missions (18.1.7), most air missions involve the aircraft attacking targets on the ground.

The impact of this will be determined by the weapons carried by the plane, crew morale, experience and fatigue, the weather (8.4), impact of anti-aircraft fire and the type of mission (18.1).

Broadly there are two types of targets for air to ground combat – physical targets and combat units. The differences (and the types of missions that can be chosen as tactical or strategic bombing) are set out in chapter 18.

19.4.1. Weapon Systems

When attacking ground targets each weapon system is rated for its effect (Eff), accuracy (Acc), blast radius (Blast), anti-soft (ASoft) target efficiency, anti-armor (AArm) target efficiency, target penetration (Pen) efficiency, and High Explosive Anti-Tank (HEAT) efficiency.

1902

Effect is an overall measure of the impact of the weapon and a higher value indicates more explosive impact. The values are related to the amount of high explosive in the bomb or other weapon system. Accuracy reflects the chance to hit a target and the lower the value the less likely this is to happen while the blast radius

indicates the area it can impact (so an inaccurate large bomb may still do substantial damage).

The anti-soft value is used for attacking soft targets (unarmoured ground units), the anti-armour value is used for attacking armoured ground units. The penetration value is the ability to pierce armour. In addition, some weapon systems such as rockets are rated for HEAT as an alternative method of attacking armoured targets.

19.4.2. Air Crew

As in air to air combat, the morale, experience and fatigue of the air crew will play a role in determining the effectiveness of a mission. Again low morale crews may break off before actually attacking. Fatigue will reduce effectiveness and increase the chance of a damaged plane crashing during the mission.

19.4.3. Weather, Altitude and Anti-Aircraft fire

All of these can affect the effectiveness of a mission. Poor weather can reduce the accuracy of an attack, especially if it is combined with lower Detection Levels (10.2). Planes bombing at higher altitudes will be less accurate than those operating at lower altitudes. Finally, anti-aircraft fire can have the effect of damaging or destroying attacking aircraft even before they carry out their attack and lower the accuracy of a given air mission.

19.4.4. Terrain

The terrain in the target hex will influence the effect of any bombing. Not only will wooded, marsh, hilly or urban terrain reduce the detection level (10.2) thus limiting the effectiveness of any mission, but also such terrain provides additional cover reducing the impact of any attack.

19.4.5. Air Mission Type and weapon system

Matching load out to target is complex but there are some broad guidelines.

For a strategic bombing mission, if the target is solid (a factory, port facility or oil field) then it is usually better to use as heavy a bomb as possible. A 500lb bomb has an effect value of 1100 compared to 550 for a 250lb bomb. In addition, larger bombs have much wider blast areas and are thus less reliant on precise accuracy.

For interdiction missions, usually the most effective combination is either rockets or multiple small bombs.

For ground attack missions aimed at units (18.1.4) or for ground support missions, usually more bombs are better than heavier bombs (but poor terrain or substantial defensive works may alter this judgement). In this case, each bomb attacks a

separate ground element and the goal is often to disrupt the enemy rather than inflict direct damage or destruction. If the enemy is well dug in, or defending in urban terrain, it might be more effective to use fewer but heavier bombs.

For naval interdiction missions (17.1.11 and 18.1.8) aircraft flying with torpedoes get a bonus when generating naval interdiction during naval patrols.

19.4.6. Damage to Ground Elements

When ground elements are hit during a ground attack mission they can be destroyed, damaged or disrupted.

Disrupted elements recover before the ground phase but have extra fatigue as a result which can have a substantial impact on their combat performance (23.1.1).

Ground support missions occur as the first phase of a ground battle. Any ground elements disrupted in that phase remain disrupted (i.e. unavailable) throughout the ground phase.

19.5. LOSSES

19.5.1. Air Crew Losses

Aircrews of destroyed planes for the phasing player will have 90 percent of the crew destroyed and 10 percent captured. The non-phasing player aircraft will have 100 percent of their crew KIA if the plane is destroyed.

These casualties count for victory point totals (when appropriate to the scenario) as they are treated no differently than other permanent losses.

19.5.2. Operational Losses

During air missions, planes will suffer operational losses in addition to combat losses. This will be affected by the weather, the reliability of the planes, crew experience and fatigue and any damage inflicted (by either enemy aircraft or anti-aircraft fire) during the mission.

Planes flying at night will suffer higher operational losses.

Aircraft flying under 5,000 feet can suffer additional operational losses, with the lower they fly the greater the losses. Extremely high experience pilots can avoid most/all of these extra losses.

> ***Note that flying low has the advantage of evading almost all anti-aircraft fire.***

19.6. DETERMINING WIN/LOSS FOR AIR MISSIONS

Victory and defeat for air leaders is judged based on losses in aircraft, and damaged, destroyed and disrupted ground elements. There is the possibility that no victor or loser will be declared if the loss differential is not significant.

20. FORTIFICATIONS

2000

Focus:

This section covers the rules on building up fortifications, how they are maintained (or reduced) and the impact of fortifications on combat.

Key Issues:

- How Fortifications are created;
- Construction Values and Construction Points
- How Fortifications are maintained or reduced;
- Special rules for Fortifications in, or adjacent to, Major Cities
- How Fortifications affect combat;
- Special Rules for Fortified Zone units

20.1. FORTIFICATION LEVELS

Manmade fortifications and entrenchments are represented by a fort level in each hex ranging from zero to five. The fort level in a hex and any construction towards a higher fort level is displayed in the hex pop-up for each hex (6.4).

Ground units will seek to prepare fortifications automatically if they end a turn in a hex. All defending units in a hex benefit from the fort level of the hex when in combat.

The different levels of fortification in the game reflect the amount of preparation and resources available. The following gives some idea what each level reflects:

- Level 1 - Hasty dug-in defensive positions with some earthen (just dirt) overhead cover. Heavy weapons are in basic defilade without overhead cover. Minimal camouflage. Can be accomplished within a week;
- Level 2 - Continued position improvement with squad trenches and crew served weapons pits. Moderate camouflage. Additional week or two;
- Level 3 - Connected trench networked system with both primary and alternate dug-in positions. Crew served positions in earthen bunkers with overhead cover. Additional week or two. More extensive camouflage. Typical WW1 or static eastern front positions;
- Level 4 - Introduction of interlocking concrete field fortifications with elaborate defensive engineering works - tank traps, minefields, etc. Examples are the Panther Line and West Wall. Field units are not able to build these on their own and require substantial engineering assets and planning over a period of 3-6 months;
- Level 5 - The only true "forts" in the game. Massive defensive works that take years to build. Sevastopol is an example of this type of fortification.

20.2. FORT LEVEL CONSTRUCTION

For construction on a fort level to begin in a hex, there must be a combat unit in the hex. Depleted and/or frozen combat units cannot construct fort levels, isolated units are limited to building fortification levels no greater than two.

20.2.1. Unit Construction Values

Each combat unit has a construction value (displayed on the left hand side of the unit detail window). This is the sum of the construction values for each of its ground elements.

This value is affected by the fatigue and experience of the unit's ground elements.

During the enemy player's logistics phase, units will use their construction value toward building a fort level. Units that moved during their turn construct fort levels with the percentage of their MPs that are left. For example, if a combat unit used 4 of its 12 MPs, it will only have two thirds of its normal construction value available for building fort levels.

The construction value of a unit is further modified as set out below.

The existing **fortification level** affects the construction values as:

- Fortification level 0 – x 3
- Fortification level 1 – x 1
- Fortification level 2 – x .25
- Fortification level 3 – x .05
- Fortification level 4 – x .01 (these cannot be increased past 10%)

Admin Checks: Fortification build rates for building fortifications greater than 3 can be divided by 2 if a leader admin check fails.

Terrain: In a swamp hex, these values are reduced by .25 (and the maximum fortification level in a swamp hex is 3). In clear terrain, the speed of constructing a level 1 fortification is doubled to 6.

Weather affects the construction values as:

- Light Mud/Light Snow – x .75
- Snow – x .5
- Heavy Mud/Heavy Snow – x .33

Unit mode: A unit in static mode has their construction value multiplied by 1.1.

Proximity to the enemy: Any ground elements in the unit that are not engineer or construction types have their construction value divided by five when adjacent to an enemy unit.

Supply Levels: Construction values are also reduced based on the supply level of the unit. In no event will they be reduced below 20 percent of normal due to supply level.

20.2.2. Support Unit Construction Values

Any attached Support Units will have their construction value shown separately but this will be added to the overall construction value of the unit(s).

Using the example above, the 635th Pioneer Battalion has been added to the Infantry Division. In turn this will add 12 Construction Points to any fortification building:

2002

Construction and engineer support units attached to headquarters units in the combat unit's chain of command can assist those combat units in constructing fort levels if the applicable headquarters unit passes a leader admin check. Units can draw help from support units in any HQ up the chain of command, out to a range of 20 hexes for High Command HQs, 15 hexes for Army Group HQs, 10 hexes for Army HQs and 5 hexes for Corps HQs.

Keeping with the same example, the division reports to the XIII Corps and that has 2 Construction battalions attached. These can be used to support the construction of fortifications by any unit in the same command.

2003

Each eligible support unit may assist the fort level building of no more than one combat unit per turn.

20.2.3. Civilian Population Assistance

Town, city and urban hexes can use their population as civilian labour to help construct fortification levels to a maximum of 8 hexes if a supplied enemy unit is within 25 hexes. This range is partly dependent on the size of the population and only large cities will send out civilian labour more than a few hexes.

For Axis controlled town, city, or urban hexes that are not of German nationality, a combat unit must be present in the town, city or urban hex as well as any other hexes where fortification levels are being constructed.

The town hex must have a population of at least two. Civilian labour can only assist the construction of fortification levels in hexes with combat units where the construction of fortification levels has already begun.

Each eligible town, city or urban hex will calculate a City Labour Value (CLV) based on the population of the hex divided by eight (divided by twelve if not German or Soviet nationality), rounded down. In either case, the CLV can never exceed eight.

The town, city or urban hex will form labour teams with a construction value equal to the CLV times five, with a minimum construction value of five (for German or Soviet nationality cities, the CLV is multiplied by twenty and the minimum value is 20).

The maximum number of labour teams that may be formed is equal to the CLV of the city, with a minimum of at least one team, and only 1 team may be sent to any given hex. These teams may help in fortification level construction in hexes that are within the CLV number of hexes from the town, city or urban hex. The hexes nearest to enemy units will tend to get the help first.

The construction value of the labour team is modified in the same way as combat and support units are modified by fortification level, terrain and weather to determine the net construction points provided to a hex they are assisting.

In addition, if there are no enemy units within twelve hexes of the city, the construction value of each team is divided by four.

A hex may receive labour teams from more than one town, city or urban hex per turn. The population may become damaged from participating in fortification level construction.

> ***For example, Koenigsberg with a German population of 17 has a CLV of 2 (17/8 rounded down). This means Koenigsberg will send out labour teams to hexes up to 2 hexes away from the city hex as soon as there is an enemy unit within 25 hexes. Each team will have a basic construction value of 40 (2x20). Up to 2 different hexes may receive help per turn. If no enemy unit was within 12 hexes of Koenigsberg (but there was an enemy unit within 25 hexes), each labour team would have a reduced construction value of 10 (40/4).***

2004

City labour may also continue to build up the fortification level of an unoccupied hex as long as the hex has some construction already underway, however, fortification level decay 20.3) may more than offset any additional fortification construction done by the city labour.

20.2.4. Construction Points

It requires fifty Construction Points to build each fortification level.

> ***In effect, apart from in the most adverse of circumstances a division will usually be able to build a level 1 fortification in a single turn. A broken down German regiment will probably need 2 turns but this might be completed in one turn if a support unit is provided by a suitable HQ.***

Any individual unit may never provide more than fifty construction points per turn (after modifications) to the construction of a hex.

In addition, a single hex can only gain fifty net construction points of fortification level per turn. For example a hex that currently is at fortification level two with fifteen percent towards fortification level three constructed, would be limited to building up to no more than fortification level three with fifteen percent towards fortification level four.

20.2.5. Supply Costs

The supply costs for fortification construction are as follows:

- Fortification 0->1: Nil
- Fortification 1->2: 2 tons per construction point (no cost for isolated units, construction rate is halved)
- Fortification 2->3: 20 tons per construction point
- Fortification 3->4 200 tons per construction point
- Fortification 4->5: 2000 tons per construction point

Supplies are taken from a unit building the fortifications (but the unit will always retain 33% of its needs) and nearby towns. If this is not sufficient, it will be drawn from the depot network.

20.3. FORTIFICATION LIMITS, DECAY AND DESTRUCTION

20.3.1. Limits on Fortification Levels

Different Fortification Levels have particular requirements and constraints:

- Fortification Level 5: Cannot be built during the game.
- Fortification Level 4: Must have a fort unit in the hex and the hex must either be City/Urban/Heavy Urban terrain or contain a port (of any size). Once built, no unit is needed to keep the level 4 fortification.
- Fortification Levels 2 or 3: Must either be 1) adjacent to an enemy hex, or 2) a City/Urban/Heavy Urban terrain hex, or 3) contain a port (of any size), or 4) contain a fortified zone unit in the hex. Once the level 3 is reached, the condition does not have to continue to be met to keep the level 3 fortification.
- Fortification Level 1: Must be within 20 hexes of an enemy controlled hex.

If a hex meets the requirement to build to a given level, it need no longer meet the requirements of the lower levels in order to build to the lower level (i.e. a hex that qualifies for level 3 only needs to meet the Level 3 requirements in order to build to level 1, 2 or 3).

Fortification levels that have reached their maximum fortification level for the hex may continue to build up to 10 percent towards the next fortification level. So, 'Level 5 fortifications may continue to build up to 10 percent over level 5. This allows them to take some damage and still remain at Level 5.

20.3.2. Fortification Decay

Once a fortification level is constructed, it will start to decay if the hex is not occupied by a combat unit or a city fort (with or without units inside). The chance that the fortification will decay increases as the fortification level decreases.

Depleted and Routed units will not prevent fortification decay.

Level 4 and 5 fortification levels and fortification levels on coastal hexes do not decay.

There is no fortification decay on turn 1 of any scenario.

Decay for level 0-2 fortifications may be greater due to weather conditions as follows:

	Ground Weather and Added Decay		
Fortification Level	Clear	Light Mud/Light Snow/Snow	Heavy Mud/Heavy Snow
0	20%	40%	80%
1	12%	14%	48%
2	4%	8%	16%

20.3.3. Fort Destruction

The fort level of a hex is set to zero whenever the control of a hex changes sides.

During an attack a fort may be partially or fully destroyed (with a corresponding effect on the defender's CV). This can happen due to the numbers of engineers, artillery, and overall size of the attacking force. If any of these factors have reduced the fortification value it will be shown in the battle report with an indicator of how much damage they did.

2005

In this instance a German attack was supported by sufficient combat engineering assets to degrade the defender's fortifications even before the close combat began.

2006

In this instance a hasty German attack tried to dislodge a Soviet rifle brigade. Although the attack failed, the fortification level was reduced by 1, leaving the Soviet unit vulnerable if another attack occurs.

For the overall size to have had an impact then the battle must close to 50 yards in order for there to be a chance of a fort reduction.

20.4. FORTIFICATIONS AND COMBAT

Each fortification level modifies the defensive combat CV of any units in the hex (23.8.7). This will influence both the CV shown before combat starts and after the fighting is complete (so in the second example above, the Soviet brigade still gained some benefit from the remaining fortifications).

20.4.1. Artillery and Fort Levels

To better simulate the ability to pre-register fire locations, the effectiveness of the Defender's artillery fire is related to the fort level of the hex containing the firing artillery. The higher the fort level, the more effective artillery in that hex will be in combat.

Due to their ability to participate in multiple battles, artillery support units attached to headquarters units do not receive any benefit from fort levels when committed to combat, so this benefit is limited to artillery organic to the combat units as well as artillery support units directly attached to fortified units.

20.4.2. Fort Level and AFV Damage

There is a small chance that attacking AFV ground elements may become damaged during combat by mines. The probability of damage increases with the fort level, representing the higher density of minefields.

20.4.3. Fort Level Reduction in Combat

Fort levels can be reduced during combat if the attacking force contains combat engineer ground elements (e.g. Axis Pioneers, Finnish Combat Engineers or Soviet Assault Sapper Squad) participating in the battle and due to the impact of very heavy artillery guns. These units are collectively called Engineer or Mechanized Engineer squads.

This reduction can be fractional, i.e. it doesn't have to reduce a fort by one entire level, and it can just reduce a part of one level. Fractional reductions in fort levels take place in two percent increments. The more engineer ground elements participating, the better the chance for fort level reduction.

Engineer values are divided by the fort level when calculating their ability to reduce fort levels in combat. The chance of reducing fort levels is far greater in a deliberate attack, as engineer values are divided by four during a hasty attack and are reduced to zero if the hasty attack is changed to a scouting attack.

Fort level reduction caused by engineers can result in the reduction of the final defending modified combat value (23.8.7) with this seriously reducing the defensive CV applied in the final combat calculations.

In addition, if the attacking force is unable to force a retreat on the defender, but has a combat value ratio between 1:1 and 1:1.99, there is a chance that the defending fort level will be reduced up to one additional level, with fractional reductions once again possible. This additional one fort level reduction does not require engineer ground elements to occur, but the presence of engineers will increase the chances.

If all defending units are forced to retreat, then any fort levels in the hex are reduced to zero.

Artillery (especially Heavy Artillery) can also cause small fort reductions during combat.

In summary, the impact on fortifications of combat is:

- From artillery fire during fire combat, with heavy artillery weapons causing the greatest reduction. These reductions are generally small fractional reductions;
- If the attack was not halted, the full engineer value is applied prior to the odds calculation and may reduce the fort levels;
- Once the final combat odds and intensity level of the combat is calculated (defined by the unit size of the attacking force where a division equals 9 points but support units are not counted for this purpose), forts may be destroyed if; i. Odds are >= 1.5 or combat intensity is > 30, in this case

there is an automatic 50 point fort reduction (one full fort level reduction) and possibility of additional fort reduction based on the engineer value as above but with the engineer value divided by 2. ii. Odds are >=1 and <1.5 or combat intensity is higher than 15 then1/4 of engineer value attempts to reduce forts as above.

20.5. FORTIFIED UNITS

Fortified units are special combat units designed to supplement regular combat units by assisting in the construction of fortified hexes, helping to avoid the decay of fortification levels and adding additional support units to the defence of the hex it occupies. Fortified region units have zero movement points and can never move.

These include the pre-war Soviet Fortified Zones along the border and the old Stalin Line in the Ukraine as well as placed at some key port locations. In addition, it includes the various fortified units that both sides can build as the game progresses.

20.5.1. Creating a Fortified Unit

Fortified units can be created through the expenditure of admin points by either player by selecting a hex and then selecting the “Create fortified unit” button on the map information tab or by right clicking on any hex and selecting the ‘create fortified unit’ option.

2007

Soviet Fortified Units cost 2 and are limited to a total of 40. German units cost 4 administrative points. If the German player creates a fort in Hungary this will be of Hungarian nationality. If the fort is in Rumania, and Rumania has not yet surrendered, it will be of Rumanian nationality. If Rumania has surrendered to the Soviets then this fort will be German nationality.

Fortified units can directly attach up to three support units of any type (21.5).

The computer ignores the Admin Points for fortified unit building, but is not programmed to abuse this by building lots of fortified regions, it also faces the same absolute limit as the player(s).

Errata 01.02.39

Changed Soviet Fortified Region build limit to 50

Changed Axis Fortified Region build limit and AP costs as follows:

June 41 to Dec 42 – 4 AP / 20 build limit

Jan 42 to Jun 43 – 4 AP / 40 build limit

Jul 43 to Dec 43 – 3 AP / 60 build limit

Jan 44 to Dec 44 – 2 AP / 60 build limit

Jan 45 to end – 2 AP / 80 build limit

20.5.2. TOE for Fortified Units

Fortified units can set their Max TOE level to 1 if desired. Units with their Max TOE set below 50 will not receive a morale increase in the logistics phase.

> ***Note that since Depleted units will not prevent a fort level from decaying, it is important to keep the actual TOE of a Fort unit over 10 percent in order for it to prevent fort level decay and it is suggested that Max TOE be set to at least 15 for fortified zone units.***

Fort type units (Fortified Regions and Fortified Zones) will become depleted if isolated and not in a hex with a friendly combat unit. If they are depleted they may then surrender if an enemy units moves adjacent to them.

20.5.3. Valid locations for Fortified Units

Fortified zones can be placed in any friendly controlled hex, with the exception that Players may not build Fortified units in a hex next to an enemy combat unit unless that hex is also occupied by a friendly combat unit. Axis and Soviets fortified regions will be German and Soviet nationality respectively.

20.5.4. Disbanding Fortified Units

Fortified units can be disbanded like any other unit, with the exception that they do not need to be three hexes away from enemy units.

20.6. CITY FORTS

To reflect the ability of both the Germans and Soviets to defend urban terrain, WiTE2 relaxes the normal stacking rules in urban and port hexes.

2008

This shows a city fort in the Soviet city of Kursk. In this case 5 divisions and a Rifle Corps are now present in the city creating an impressive defensive force. This bundle of units only takes up one stacking slot (21.12) so two other Soviet units could also be in the hex.

These units do not create additional fortification levels but do make capturing well defended hexes more difficult.

A "City Fort" is a notional unit that allows players to stack more combat and HQ units in any city or port hexes. The only units not allowed in a City Fort are High Command HQs, FBD/NKPS rail repair units and Fortified Zones.

20.6.1. Creation

To create one, you must select a unit in or adjacent to the urban/port hex (other than a High Command HQ) where you want to create the City Fort (currently named Fortress for Axis and Fortified Region for Soviets). On the right unit bar you will see a button on the unit that says City Fort. Clicking on this button will pop up to allow you to attach the unit to an existing City Fort within 1 hex and/or to create a new City Fort in a potential location within 1 hex of the unit.

City Forts can only be created in friendly national hexes, so the Soviets can only build them within the 1941 boundaries of the Soviet Union and the Axis can only build them in regions owned by, or allied to Germany, on 21 June 1941.

Note that some scenarios have at-start city forts that breach this rule but no new ones can be created outside these areas.

To create a city fort (this shows how to build the one shown above), any unit in the city or adjacent should be selected and then click on the city fort option:

2009

This will then see the two pop-ups below appear. This tells you that this will build a new city fort in Kursk (some hex locations may be adjacent to more than one eligible city) and that it will cost you 10 Admin Points. If you confirm, then the fort will be built.

2010

If you click on other units (in that hex or adjacent) then you now have the option to add them to the existing Kursk fortified region (which was originally the 3rd Guards Rifle Corps). Note this costs no administrative points.

2011

Any unit assigned to the fort can be removed and when the last one is redeployed the fort will cease to exist.

20.6.2. Effect

If you create a new City Fort the unit will immediately attach itself to the City Fort. The City Fort can't move or attack, but it acts like an on map combat unit with all attached combat units participating in combat (including units attached to the combat

units and any support units that commit to the battle from HQs contained in the City Fort or from HQs outside the fort helping combat units in the fort). The City Fort counter has its own symbol (34.2), and uses a xxx for size. On the unit bar it always shows the Defense CV – 0 MPs as it is a purely defensive unit.

In effect, the on-map City Fort counter is a container that allows additional combat and HQ units into the fort. You can view the units in the fort by going to the city fort unit detail screen and looking at the fort's elements tab. From this tab, you can detach units from the fort, in which case they appear on map in the hex or an adjacent hex where space is available.

Each city fort can attach up to 10 on map ground units (combat and/or HQ) of up to 100 stacking point limit (where corps=15, division =9, brigade=5, regiment=3, HQ and support units=0). City fortress unit can exist on the map without any unit attached. However, they will be destroyed if an enemy unit is adjacent to them and they contain no combat units with a valid CV value (i.e. HQs/support units and depleted units don't count).

Units in a city fort will gain 16 CPP per turn.

20.6.3. Entering and Leaving

Units that have moved in the turn are unable to either create or move into a city fort.

Units that leave a city fort will have a reduced MP but full SMP (i.e. 200).

20.6.4. City Forts and Fortification Units

You cannot build a fortification unit (20.5) in a hex with a city fort. However, it is possible to create a city fort in a hex that already has a fortification unit.

A city fort will prevent fortification decay (20.3.2) but will not build fortifications unless at least one non-depleted, non-routed unit is within the fort.

20.6.5. Effects of retreat on units in City Forts

Errata (01.01.00)

HQs and attached support units in isolated city forts that are forced to retreat are destroyed. Units will be rebuilt per the normal rules, except in this case HQs will also be rebuilt (normally this cannot be done).

21. GROUND UNITS

2100

Focus:

This section explains the nature of Ground Units in WiTE2 and the role of HQs and leaders.

Key Issues:

- Differences between Combat and Support Units
- How the Table of Equipment affects the composition of the ground elements that make up a unit;
- The role of Support Squads;
- How to attach and detach Support Units;
- Different Types of HQ and how they influence the performance of combat units.

21.1. TYPES OF GROUND UNITS

Ground units consist of combat, headquarters, support, and multi-role units.

Combat (CU) and headquarters (HQ) units are deployed as on-map units. Support units (SU) are attached to headquarter and eligible combat units and are normally off-map. In addition some units can be treated as either Combat Units (i.e. on map) or Support Units (off map). These are described as Multi-Role Units (MRU).

Ground units are either motorized or non-motorized.

Motorized and Non-Motorized Units are treated in different ways in terms of tactical movement and supply. Motorized units use vehicles and fuel for tactical movement, combat, and supply, while non-motorized units have far fewer vehicles and depend on supplies for tactical movement and supply. Players can verify whether a unit is motorized or non-motorized on the right hand side of the applicable unit detail window. There are four types of non-motorized units based on their relative mobility and the use of vehicles by ground elements:

- 0 – no vehicles (1)
- 1 – vehicles for supplies only
- 2 – vehicles for supplies and all non-infantry, non-infantry weapon elements
- 4 – Railroad Anti-aircraft (Flak) (2)

Notes

(1) For anti-aircraft units, non-motorized 0 represent fixed/immobile flak emplacements like Flak Towers.

(2) Can only move through non-damaged rail line hexes

2101

Motorized units are either designated as permanently motorized or are non-motorized units that have been allocated additional trucks. Non-motorized units are divided between cavalry and infantry formations for movement purposes (22.1).

All ground units consist of a certain type and number of ground elements and have a Table of Equipment (TOE) that determines the number and type of ground elements required for the unit to be fully manned and equipped. For most units in WiTE2 this TOE will change across the course of the game,

All ground units have a combat value (CV). Depending on the unit type, its current percentage of TOE and status this value may be zero.

Typically this will happen if the unit is currently routed (23.12.5) or if the combination of low morale and low percentage of TOE is such that it is treated as depleted (21.9.1).

21.2. GROUND ELEMENTS AND TABLES OF EQUIPMENT (TOE)

21.2.1. Ground Elements

All ground units are composed of multiple types and numbers of ground elements. These ground elements represent individual squads, guns, AFVs, and other combat vehicles such as halftracks and armoured cars. Every ground element consists of manpower and equipment (such as a tank and its crew).

Each ground element is rated for speed, size and armour. Only AFVs and other combat vehicles have an armour rating with this reflecting front, side, rear and top armour as appropriate.

Ground elements are equipped with devices that represent the actual weapons they would fire (or throw/emplace for devices such as grenades and satchel charges) during combat.

For AFV and combat vehicles, the equipped devices are considered part of the vehicle and may have their rate of fire modified to reflect the restrictions of operating the device inside the vehicle. The manpower that is part of the AFV or combat vehicle ground element is inside the vehicle operating it and employing the equipped devices.

So while a given weapon system has some notional capabilities it may be lower in practice when assigned to a particular tank or vehicle. As an example, the Soviet 152mm gun is less effective mounted on a KV-2 than on a late war ISU-152.

For other types of ground elements, the manpower employs the equipped devices directly, whether the device is a 150mm Howitzer or a hand grenade.

Large (20mm or greater) direct fire devices may have a positive modifier that increases the accuracy of the device to reflect both a more stable firing platform and superior optics.

Each device is rated for range, accuracy, rate of fire, ability to affect different types of targets (air, personnel, vehicles), and ability to penetrate armour.

2102

Note this information can also be accessed from the Commander's Report (35.8)

21.2.2. Support Squads

A significant number of ground elements in all units are support squads, which provide the administrative and logistical backbone required for a unit to operate effectively.

> ***Note that, despite the similarity in name, support squads and support units are different entities.***

Each unit has a notional TOE for support squad ground elements but the actual requirement for support squads, listed by 'NEED' in the unit's detail window, is based on the current strength, and type, of the unit. This need is recalculated during each logistics phase and, if appropriate, during the air phase and when units motorize/de-motorize or if they change to/from Static mode.

For the Axis side, if losses to the rest of the unit result in excess support squads, some may be converted to rifle squad ground elements or returned to the manpower pool during the replacement phase

2103

> ***This German infantry regiment has been heavily defeated in a localised Soviet offensive. As it only has 1 undamaged rifle squad, it is possible that some of its support squads will be converted in the next turn.***

The unit detail screen Support/Need for non-HQs shows the support received during the last logistics phase (including organic support and HQ support help) and the need during the last logistics phase. Specific information on the HQ unit detail screen regarding support help includes:

- Total Support: Total support used (organic plus HQ help) by units in the chain of command under this HQ during last logistics phase.
- Organic Support: Total available support squads in units in the chain of command under this HQ during last log phase.
- Total Support Need: Total support needed by units in the chain of command under this HQ during last log phase.

2104

In this case, the units that report to the XX Corps have sufficient support squads either organic (i.e. in the units) or sent by appropriate HQs.

By contrast, a typical Soviet HQ at the same stage of the game (August 1941) lacks the support squads to cover all its needs.

A unit that lacks Support Squads will try to make up for the lack by drawing on any spare support squads in its controlling HQ. However, the headquarters unit must be within a certain distance from the attached unit in order to do this. This distance, termed "Command Range," is measured in hexes and is based on the type of headquarters unit (15.5.4). Any headquarters unit in a unit's chain of command that is in command range can provide support with its excess support squad ground elements.

HQ's will provide support help to units as long as they are within the command range of the HQ (5 for corps, 15 for army, 45 for Army Group and 90 for high level HQs). During the logistics phase, support from HQ units is passed down from HQs.

When viewing an HQ's own unit detail screen, the Support/Need numbers shown are the number of support squads the HQ used for itself versus the need it had in the last logistics phase.

This provision of support occurs automatically during the phasing players logistics phase. To provide support help, an HQ unit must be able to trace a land path to the unit being supported. The exception is that a non-isolated HQ unit may send support up to 3 hexes to a non-isolated unit no matter the terrain (i.e. may go through water/impassable hexes).

A HQ will always satisfy its own need before using any of its support squads to help units under it. If the Support value shown is higher than the need, then it means the HQ had excess support that it did not give out to units. HQs whose support equals its need, have given out all their support squads as help and there are probably units in the chain of command that are short of help.

A HQ unit has two different calculations of the number of support squads and how many it needs for its own purposes.

If a HQ unit has fewer support squads than its 'NEED' its leader will not gain certain bonuses when trying to pass admin checks (15.5.2).

A headquarters unit can provide assistance to its attached units' support squad needs using excess internal support squad ground elements,

Note

(1) Use the command range for the type of HQ unit involved, however, for purposes of Leader checks, any check of an air command HQ leader will treat the range to the HQ unit as 0 if it is less than 91 hexes to the HQ.

21.2.3. Impact of Support Squads on Unit Performance

The level of logistics support provided by Support Squads has an impact on the following:

- Impacts the formulas that determine the amount of supply a unit receives based on its supply trace;
- Attrition suffered by vehicles during freight operations;
- The amount of fatigue added or removed from a unit during a turn;
- The ability of leaders to conduct successful administrative checks; and,
- The amount of attrition a unit suffers due to movement.

21.2.4. Hiwis

The Axis player will gain additional manpower from 1942 to fill out the support and labour squads by recruiting Hilfswilliger (auxiliary volunteers, also known as Hiwis). These were soldiers and civilians, mostly Russian prisoners, who served as support personnel for German units during WWII. Generated from captured manpower, Hiwi ground elements are equivalent to support squad ground elements and provide the same amount of support and engineer values as a normal support squad.

This Axis generic manpower is generated from Soviet captured manpower (8% each turn) and from captured Soviet city manpower (3 manpower points per factory and production multiplier applies to this calculation).

Hiwis can only fill out a given percentage of Axis generic elements:

- Labour - 70%
- Support in Axis SS Elite - 10%
- Support - 30%

21.2.5. Table of Equipment (TOE)

The Table of Equipment is a vital part of WiTE2 as it determines the type and number of ground elements that will be assigned to that particular Combat or Support Unit.

Each unit in WiTE2 in effect has three different types of TOE:

The **generic TOE** lists the ground elements the unit should contain, this will specify for example that the unit needs x medium tanks but not the actual models to be assigned. Note that different apparently similar units can be assigned to different

generic TOEs, so for example some German Panzer divisions in 1941 will be assigned to the Czech TOE rather than the Standard TOE.

This information can be found in the 'OB' column of the Commander's Report as:

2106

In turn the ideal TOE for that unit type will show as:

2107

This generic TOE is used to derive the **prescribed TOE** for that unit, referred to as TOE (OB), and this lists the actual ground elements needed. This will indicate the actual tank or artillery model needed to fill out the requirements of the generic TOE.

2108

In turn, each unit has a current TOE which will often differ from the notional TOE to reflect both losses and the allocation of different elements to fill out slots in the specific TOE.

2109

In turn, if the 'Show Ground Unit Mapping' option is selected then the actual way in which the current TOE is built up will be shown. This will also show where the unit is using a non-standard ground element in order to maintain its combat performance.

2110

The computer will use a unit's actual TOE as compared to its notional TOE to determine what ground elements will be provided as replacements during the logistics phase. The actual TOE of a unit will often not match its current prescribed TOE. This can be for numerous reasons, including losses, unavailability of replacements, transition to an upgraded TOE or even a downgrade of specific ground element types due to a surplus of old equipment and a lack of new equipment.

The number of men listed in the unit detail window showing the actual TOE (OB) does not include the manpower in support units that are attached to the unit.

On the unit TOE screen, in the unit's actual TOE, substituted elements appear with an * sign. Thus while the TOE (OB) may specify exactly which type of tank should be used, it is quite possible for a given unit to be using different models (or types) of tank if they fill a similar role.

If a unit is set to less than 100% of its TOE it will take on less equipment than its notional prescribed TOE requires.

21.2.6. TOE Upgrades

The ground unit TOEs may change during the game, once the new TOE has been adopted elements will generally change gradually over a number of turns rather than all at once.

The chance of a unit adopting a new TOE is influenced by its mode and location.

- Units that are in the national reserve TB or on a National Supply Source (25.2.3) and that are in refit mode will change automatically to the new TOE.
- Units that are in refit mode elsewhere will have a 50% to update in the first possible turn.
- Units that are not in refit mode will have a 20% to update in the first possible turn.
- Units that are isolated have a 0% to update in the first possible turn.

Each month, after the initial month for the new TOE, these chances will increase by 5%. So, for example, a unit not in refit mode will have a 25% to upgrade in the second month, 30% in the third.

In any case, a unit will not change its TOE if it is more than ten hexes from a depot.

When a TOE upgrade occurs, ground elements will be sent back to the pool if there is none of the same generic type of ground element (i.e. AT-gun, Heavy Tank) in the new TOE. Otherwise they remain and this can cause some types to exceed 100 percent of the new TOE. A specific type of ground element is not eligible for additional replacements, however, until it falls below 100 percent of its prescribed allowance. In addition if a unit contains more than 125 percent of the TOE need of a specific ground element, there is a chance each turn that the unit will return some of the over-strength ground elements to the production pool.

In a few cases, the TOE upgrade for support units requires completely different equipment to that previously allocated. If this would leave the Support Unit depleted, it is automatically transferred to the National Reserve.

TOEs are segregated by type of unit and time of the war. For example, there is a prescribed panzer division TOE for every year. Not only are there separate TOEs for unit types (e.g. armour versus infantry) but separate TOEs even within types. For example, the elite SS divisions at times will have three different TOEs running simultaneously.

Players can view future upgrades by accessing a particular units TOE window.

21.2.7. Ground Element Upgrade/Downgrade and Swaps

Ground elements may change to different ground elements of the same or a different type during the ground element segment of the player's logistics phase. In the upgrade sub-segment, the ground element may upgrade in accordance with its upgrade path as listed in the ground element detail window (37.6) and the city production list window (37.13). It may also downgrade to older equipment if this will fulfil its TOE needs. Many upgrades will remain within the same ground element type (e.g. Rifle Squad, Medium Tank, Heavy Artillery, etc.), but some will result in a change of type such as maybe using a Light Tank Destroyer in place of a Light Tank.

In the swap sub-segment, the computer may change out existing ground elements with ground elements of the same type, but not necessarily along the upgrade/downgrade path, though priority will be given to newer equipment. For example, a Panzer IVg is a medium tank ground element, which upgrades to the Panzer IVh and downgrades to the Panzer IVf2. In the swap sub-segment, however, Panzer IVg ground elements may be changed out to another medium tank, such as a Panzer IIIj L/60, depending on the availability of medium tank equipment in the production pool.

21.2.8. AFV and Combat Vehicle Reliability

All AFVs and other combat vehicles are rated for their reliability. This is checked when they are moved, with those that fail the reliability check becoming damaged.

To reflect initial production "teething" problems, AFV/Combat vehicle reliability will be less when they first come into production and then improve until they reach their standard reliability rating. The reliability rating of obsolete (out of production) aircraft is treated as higher than their normal reliability rating, which will make them more susceptible to attrition.

The reliability rating of an AFV is actually two different items.

The first digit represents the reliability of the AFV when moving (if only 1 digit is shown the 1st digit is assumed to be 0). The higher the number, the less likely the AFV will become damaged during movement.

The second digit is survivability, and the higher the survivability the less likely the AFV will be destroyed in combat during a special survival check as opposed to just being damaged.

Reliability can be checked on the ground element tab (37.6) as:

2112

So in this case, the Pzr IVe has a reliability of 65 when moving and 50 when in combat.

By contrast, the notoriously unreliable Panther D has ratings of 45 and 40:

2113

This also shows two ways to access this information. The information for the Pzr IV was taken from a ground unit tab while for the Panther came from the 'elements' tab on the Commander's Report (35.8.1).

21.2.9. Adjusting to changes in TOE

If a unit exceeds the set TOE (either due to an upgrade or the player reducing the max TOE), then it will respond differently according to its location:

- Units in TBs other than the Reserve Boxes will immediately send back to the active pool any elements over 100% of TOE (note if the maximum TOE is under 100 then these elements will be removed in the next logistics phase).
- Units in the Reserve Boxes will immediately send back to the active pool any elements over their Maximum TOE.
- Units on the map will slowly send back to the active pool any elements over 100% of TOE.
- If a unit exceeds the maximum TOE due to being built from other units (such as a Soviet rifle corps from 3 rifle divisions) then the excess elements will be removed.

21.3. COMBAT UNITS (CU)

Combat units are the on-map battalion, regimental, brigade, divisional and Corps sized units that manoeuvre to take control of enemy territory and engage enemy units in battle. All combat units, unless they are routed or depleted, have a Combat Value (CV) and exert a Zone of Control (ZOC) into their six adjacent hexes (7.4). Combat units are the only ground units that can convert enemy controlled hexes to pending friendly hexes (7.3.1).

In addition, there are several types of combat units that have special characteristics or can perform specific missions. Non-motorized combat units can be transported by air between friendly air bases (22.5) and airborne units can be air dropped into another hex. Fortified Zones are immobile combat units that are used primarily to

build fortification levels. Some combat units, including fortified zones and most divisions, can directly attach support units, and these are automatically committed to any battle the combat unit itself participates in.

21.3.1. Types of Combat Unit

Combat Units are divided into four main types: Motorized; Cavalry; Infantry and Fortified Zones.

Unit type affects the movement points the unit possibly can have (22.1) and the costs of movement and combat.

Combat Units can often have directly attached Support Units. Also divisional/corps sized CUs can be broken down into smaller (usually regimental) sized units. In addition, under-strength combat units can be merged with each other to create a stronger unit (at the cost of one administrative point). Note that Multi-Role units can be either on the map or attached to combat units, so a Soviet Rifle Brigade can be attached to a Soviet HQ or combat formation or placed on the map.

Combat units smaller than a division do not take control of hexes in their ZOC, just hexes that they move through (7.3.1).

21.3.2. Combat Unit Build-up, Breakdown and Merging

Certain combat units can be built up into larger formations or broken down into smaller units.

Building Up units and merging units

In addition, an equivalent size or smaller combat unit can be merged into another combat unit of the same type, eliminating the former and strengthening the latter.

Units building up or merging must be in the same hex in movement mode. Unit build-up or breakdown is accomplished by selecting the unit(s) and then either left clicking the build-up/breakdown button on the map information tool bar or using the Hotkey-'b'. Breakdowns cannot exceed stacking limitations, so combat units can only breakdown if they are the only unit in the hex. Routed and frozen units cannot build-up, breakdown, or merge.

Note that units that will be withdrawn at a later stage cannot be combined using the build up routine. This is most likely to affect the creation of Soviet Corps sized formations or converting Soviet rifle brigades into rifle divisions.

2114

Even though this unit will be withdrawn to the Far East at the end of the game it cannot be combined into a Soviet Rifle Corps. This restriction is removed if the

player(s) opt to use the Enhanced Player Theatre Control option (13.3.4) as they then have more control over deployment to and from the various Theatres.

Soviet build up options include:

- Two Rifle Brigades can build up to form a Rifle Division
- From March 1942, 3 Soviet airborne brigades can build up to form a Guards Rifle Division

The rules for building up to form Corps are in section 27.5.5.

Unit Breakdown. Most Axis Divisions can breakdown into three regimental equivalent combat units numbered 1/2/3. The same three sub-units can be built back up into a division if they are in the same hex. Broken down divisions with regiments designated 1/2/3 may assign one support unit to each regiment. When the parent division is first broken down, any attached support units will be divided up one per regiment. If the parent division is reformed, all support units attached to the 1/2/3 regiments will once again be attached to the parent division.

When broken down, these regiments or brigades will be bordered in blue on the map area when one or more of the broken down units from the same larger unit has been selected.

Soviet divisions cannot be broken down and some Soviet Corps (Tank and Mechanised) will break down into three brigades while Soviet Rifle, Cavalry and Mountain Corps will break down into their component divisions. Since these units are initially formed from specific divisions they will break down into those original components.

Soviet Corps can then be rebuilt either using the original divisions (for no Administrative Points) or any divisions (in which case there will be a cost).

2115

Here the Soviet 1 Guards Rifle Corp has been broken down. The original rifle divisions have reverted to their original titles but with (1GRC) added to the title to remind the player. If the unit is rebuilt with different formations (here the 235 RD was substituted for the 107) then the original unit will revert to its normal title.

2116

Note that while Soviet tank brigades are initially treated purely as Support Units (21.5) this status changes if they have been previously combined to form a Tank Corps. Thus a Soviet Tank Corps will break down normally and the resulting brigades will appear as independent combat units on the map.

2117

Here the Soviet 23rd Tank Corps has been broken down and the component brigades are treated like normal combat units.

Merging Units. Under certain circumstances, two combat units of the same type can merge together, resulting in one stronger unit. In order to merge, there must be another unit of the same type (infantry, armour, motorized, etc.) in the hex. The merging unit must be of smaller or equal size to the gaining unit. For example, a brigade could merge into another brigade, division or corps, but a division could not merge into a brigade.

In order to merge, the sum of the ready ground elements of the two units cannot exceed 100 percent of the TOE of the unit that will remain. If the merging unit is a smaller size unit, than only one third of its TOE percentage counts. For example, if a brigade with 90 percent of its TOE was merging into a Corps with 70 percent TOE, the sum would still meet the requirement as 90 divided by 3 would be 30, which added to 70 is just 100.

When the merge is completed, all elements of the merging unit will be placed in the gaining unit, and the merging unit is considered destroyed and permanently removed from the game. Merging is accomplished by selecting the 'MERGE' link in the detail window of the combat unit (37.3) that will be merging into the other combat unit.

Note that merging units will cost 1 Administrative Point.

When a merge unit is executed, any elements over 100% of TOE will be sent back to the pool (damaged elements first).

21.4. MULTI-ROLE UNITS (MRU)

Multi-Role units are units that can change during the game from an "on map" combat Unit to a support unit. In order to convert from a combat unit to a support unit, the unit must be stacked with the HQ unit to which it is attached. 'Convert' then becomes a selectable option on the unit's detail window. Once the unit is a support Unit it may be attached directly to another combat unit. When attached to a unit or HQ unit as a support unit, it may convert to an on map combat unit as long as this would not exceed the stacking limits.

When it converts to a combat unit, it will be placed in the hex with the HQ unit and will have one movement point remaining. When a multi-role unit converts to a support unit, it is flagged with an asterisk and will not be able to be reassigned elsewhere during the current turn.

2118

In this example, the 125 Rifle Brigade is in the same hex as its controlling HQ so is eligible to convert from being on-map to an off map Support Unit. On the other hand, 16 Rifle Brigade is attached to a HQ so can be converted to an on-map Combat Unit.

Multi-Role units cannot convert while embarked/loaded on ships or trains.

Multi-Role units that arrive as reinforcements will be placed on the map as a combat unit rather than attached to an HQ unit as a support unit.

21.5. SUPPORT UNITS (SU)

Support units are independent companies, battalions, brigades and regiments of various types such as artillery, howitzer, mortar, rocket, anti-tank, anti-aircraft, ski, engineer, sapper, tank, tank destroyer, construction, and labour groups.

Support Units have a TOE and this affects the ground elements assigned to the unit.

With the exception of construction battalions, which can be automatically detached to repair rail lines, support units will not appear on the map, but will be attached to headquarters and certain combat units and will be listed in the detail window of the unit to which they are attached.

Rules for attachment and transfer of Support Units to Combat and to HQs are set out below.

Construction and labour support units are used to assist in the building of hex fortification levels and the repair of rail lines. All other support units are used to assist combat units in battle, either from an eligible headquarters unit not more than five hexes away from the battle, or from being directly attached to a combat unit participating in the battle (23.6).

Though they have no organic movement capability, support units will consume supplies and fuel and gain fatigue when units to which they are attached are moved. They will also take combat and non-combat losses and suffer retreat attrition along with the unit to which they are attached.

> ***Support units in the various National Reserve boxes can be set not to refit. This will stop them absorbing new elements and building up their TOE.***

21.5.1. Attachment of Support Units to Combat Units

The player can manually attach support units (SU) to some types of combat units (CU). Unlike support units attached to headquarters, those directly attached to combat units are automatically committed though only to a battle in which that combat unit is a participant 23.60). Direct attachment thus provides certainty at the expense of flexibility.

There are limits in the type of support units that can be attached to most Combat Units. Construction, labour, artillery, mortar, and rocket support units, or support units with the designations LW, cannot be directly attached to any combat unit apart from a Fortified Zone units. These can have up to three of any type support unit attached to them.

Axis infantry, Panzer and Motorized divisions can all have up to 3 support units directly attached. Axis independent Brigades can have 2. Axis regiments broken down from their division can have 1.

Soviet Corps can have 3 support units. Soviet Rifle and Security divisions can have 1 support unit attached. Soviet mountain, cavalry, tank and early war mechanised divisions cannot have any directly attached support units.

Multi-role units that convert to off-map status will send any attached support unit to their immediate HQ.

Players can physically manage support unit attachments by opening the detail window of eligible combat units (37.8). The “ASSIGN” button can be selected to access the “PICK SUPPORT UNIT TYPE” window to select an available support unit to transfer to that combat unit.

2119

To transfer the attachment of a support unit from a combat unit to another headquarters unit, the player selects the support unit to bring up its detail window and then selects the HHQ or OHQ link to bring up a list of eligible headquarters units to which it can be transferred. Depending on its location on the map, a support unit may also be transferred to another Theatre using this option.

2120

There is no automatic method to transfer support units to or from combat units.

Support units can only be attached to commands within the range of that particular HQ type (21.11.4) and combat units must be in supply in order to transfer support units. The exception is that there are no range limits if attaching an SU from the relevant high command HQ (such as OKH or Stavka).

A specific support unit attachment can only be transferred once per turn, they will suffer a – 1 for admin rolls on the turn the change was made and will be marked with an asterisk in the combat unit detail window to denote that it cannot be transferred again that turn.

Attaching a support unit to an airborne unit or unit prepping for an amphibious invasion will result in the loss of 10 preparation points, though prep points will never drop below zero.

Note that for those Support Units which can build up Combat Preparation Points, half of these will be lost if the unit is reassigned to another HQ or a combat unit.

21.5.2. Allocation of Support Units to Headquarters Units

The bulk of Support Units in the game will be attached to one or other of the HQ units (or deployed to one of the Theatre Boxes).

Support unit attachments can be transferred between headquarters units manually during the ground phase and automatically during the logistics phase.

There is no range limitation to the transfer of support unit attachments; however, headquarters units must be in supply in order to transfer support units.

Support units may be transferred either directly between commands at the same level, along a command chain or to another Theatre but there are range limits for each of these actions.

For the Axis player, Romanian support units cannot be assigned to a Hungarian HQ (or vice-versa).

A specific support unit can only be transferred once per turn and will be marked with an asterisk in the headquarters unit detail window to denote that it cannot be transferred again that turn. In addition, support units will suffer a – 1 penalty for admin rolls on the turn the change was made. There is no limit to the number of support units that can be attached to a single headquarters unit, though a large number of non-construction support units can impact the commitment of support units during combat (23.6.1).

Air headquarters units are limited to attaching only anti-aircraft support units.

Rail repair units can only attach construction battalions and labour groups, and while these support units can be manually transferred from the rail repair unit, there is no ability to transfer additional support units to the rail repair unit (or to return units that were detached).

21.5.3. Attachment of Support Units to Cities

Construction and AA units can also be attached to cities at the cost of Administrative points (9.2). These are attached to cities using the City Detail screen (37.13).

Construction Units

Construction units can be sent back to their HQ at no AP cost by pressing the X next to their name in the City Detail screen. Construction units in cities will automatically attempt to repair factories (including ports and railyards), and repair/expand airbases. Construction Units attached to the city will be used first, but if deemed

insufficient, additional construction units may still be summoned automatically to the hex. Units attached to cities will not be used by the automatic rail repair system.

If a city is captured, all of the assigned Construction Units may escape as long as there is a working rail link. If they are in an isolated city or more than 10 MP from a railhead they will be lost if the city is captured.

Rail repair units (21.6.1) attached to a city will not carry out any repairs. These only function when deployed on map according to section 21.6.

Anti-Aircraft Units

Antiaircraft (AA) or Flak type support units can be assigned directly to a town, city or urban hex for air defense and can be transferred from one city to another or back to their highest HQ unit. Though listed in the city detail window as assigned, AA units actually remain attached to their original Headquarters unit, but will have a 'c' in front of their name in the HQ unit detail window. In addition, AA units assigned to cities will be listed in the Commander's report with the applicable city in the HHQ column. German and Soviet AA units can be assigned from their HQ unit to any friendly town, city or urban hex. Axis Allied flak units may be assigned from their respective High Command HQ unit, but only to town, city or urban hexes of that particular nationality.

To reflect the political cost of decreasing urban air defence, AA units in town, city or urban hexes can only be transferred back to their highest headquarters at a cost in admin points (9.2). To move an AA unit out of a city to the highest level HQ select the X next to the AA unit name from the city detail window.

AA units attached to town, city or urban hex may be destroyed if the hex is captured or destroyed/removed as applicable if in an Axis allied country that surrenders (14.3). A text message will display when AA units in cities are destroyed due to the city being captured. Mobile flak in cities may escape to a nearby HQ or friendly city when the city is captured if that hex is not isolated. The probability of escaping is dependent on the type of AA unit as follows:

- Type (0) non-motorized (in the game these are the German flak towers) – - – 0 percent;
- Type (1) non-motorized – - – 15 percent (the unit must be in in a hex that is not isolated and within ten movement points of a railhead);
- Type (2) and Type (3) non-motorized – - – 66 percent;
- If Type (2) or Type (3) are isolated or more than 10 MP from a railhead they will be lost; and,

- Type (4) non-motorized – - – 100 percent if adjacent to a connected rail hex. This type of AA unit represents a Mobile Railroad flak unit.

21.5.4. Movement of Support Units into and out of Theatre Boxes

Support Units can be move into and out of Theatre Boxes (chapter 13) as with any other unit. This can be done using the Theatre Box display, the Commander's Report or the unit tab.

Some units will be locked in the Theatre depending on the scenario set up and the options selected by the player(s). If they are moved to the map they will initially appear attached to the relevant High Command unit (usually either OKH or the Stavka) and can be re-assigned as normal.

While most transfers do not cost Administrative Points, moving Anti-Aircraft units from any Theatre (apart from the National Reserve) will cost administrative points as set out in 9.2 as they are originally attached to cities in the relevant theatre.

21.5.5. Depleted Support Units

At the end of the logistics phase any depleted non-isolated Support Unit will be transferred to the Reserve Theatre. This may happen due to combat losses or a TOE upgrade that significantly changed the equipment the unit uses.

21.5.6. Automatic Attachment of Support Units

Each eligible headquarters unit can have its support unit level set by the player. To do this you will need to either open the detailed unit window or use the Commanders Report. Frozen HQ units and frozen support units cannot be set for auto attachment.

On the unit window the options are to leave the Support Level 'locked' (in which case all SU deployments must be done manually or to use the '+' or '-' keys to increase or reduce the desired support level.

2121

The Commanders Report (35.3) also has the option to set or change the Support Level of a number of HQs at the same time. To access this, you will need to open the HQ tab and then amend the 'support level' to either 'locked' or a number between 0 and 9.

2122

On the CR screen, each HQ can be set individually to a new Support level or the option 'Support Level' can be used to set a value for all the selected commands.

The chosen level setting indicates the number of each type of support unit that the computer will attempt to provide to that particular headquarters unit, based on availability. For example, if the player sets “Support Level” to 3 the computer would attempt to provide 3 support units of each type, to include Armoured, Anti-Tank, Artillery, Anti-aircraft, Rocket, etc.

This process occurs automatically during the phasing player’s logistic phase and consists of two cycles during which support units are moved first up the chain of command (excess) and then down the chain of command (demand). Support units in an unready status will be transferred to the applicable High Command headquarters unit during the first cycle.

The entire automated support unit transfer system can be disabled by checking the appropriate sides ‘Lock HQ Support’ buttons in the Game Options screen (36.17.1). In addition, the player can disable the automated transfer function for a particular headquarters unit by selecting the ‘LOCKED’ button in its detail window. Note that all headquarters units subordinated to a particular High Command headquarters unit will be locked out of the automatic attachment transfer of support units if their High Command headquarters unit has its Support Level set to “LOCKED.” In addition, if any of the higher headquarters units in a particular HQ unit’s chain of command is set to “LOCKED,” that headquarters unit will not have the ability to utilize the automatic transfer of support units.

Construction and engineer support units have permanently assigned support level settings that override player support level settings, with the exception of “LOCKED,” which will stop the automatic transfer of any support units from the “LOCKED” headquarters unit. The permanent support level settings for construction and engineer values are as follows:

Headquarters Type	Construction	Engineer
High Command (Type 1)	0	0
Army Group (Type 2)	16	4
Army (Type 3)	3	3
Corps (Type 4)	2	2

If you want to minimize the number of support units in a HQ unit, but still allow automatic transfer through that HQ unit? Use a setting of ‘0’ so that the only support units the computer will send to the HQ will be the permanent levels of construction and engineers.

21.5.7. Manual Attachment of Support Units

Players can physically manage support unit attachments through the detail window of eligible headquarters units. The 'Assigned' tab must be selected and this will show both the units currently reporting to the HQ and enable the option 'ASSIGN SUPPORT UNITS'.

When this is selected, all eligible SUs, currently attached to HQs higher up the command chain, will be shown and can be selected,

To prevent the computer from transferring the support units that have been moved manually, the player can either increase the applicable headquarters unit's Support Level to account for the newly attached support units or change the Support Level to "LOCKED," which will prevent that headquarters unit from automatically returning any support units or receiving any additional support units during the logistics phase.

21.5.8. Manual Transfer of Support Units

Support Units can be transferred between units and HQs. The procedure is slightly different to that used to attach them.

If the support unit is attached to a combat unit then it will be shown on the 'Assigned' tab. If the [X] button is selected the support unit will be removed and automatically transferred to the controlling HQ (this will also happen if a unit is disbanded). Alternatively, click on the support unit name and its detailed unit screen will appear. In this case, selecting HHQ will bring up the range of HQs that the unit can be moved to.

If the support unit is attached to a HQ then it can be transferred by clicking on the unit name. Again selecting the HHQ will bring up a list of commands it can be transferred to.

> ***Note this option allows you to transfer a SU to any eligible HQ regardless of its position in the chain of command. So an Army HQ can transfer a SU to a Corps HQ that belongs in a different command if wished.***

21.6. CONSTRUCTION UNITS

Construction units are a particular type of Support Unit. They are assigned to HQs as usual and then allocated to tasks within the range of their controlling HQ. Only rail repairs are conducted by putting construction units directly on the map, other construction assets will be temporarily attached to the city, airfield or depot as appropriate.

Some have a specialist role as rail repair units but most can be used to speed the construction or repair of ports, factories, depots and airbases.

21.6.1. Rail Repair Units

Only designated Rail Repair units can only be used to repair damaged train lines.

Unlike other support units, these units will appear on the map in the hexes they are repairing, but may not be moved by the player other than to send them back to their attached headquarters unit by selecting the construction unit and then clicking the 'RETURN TO HQ' link in the unit bar.

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For human players only, these units will only be allocated up to the command range (21.11.4) of their controlling HQ. For example, if a construction unit is assigned to a Corps HQ unit, it can only repair rail line hexes up to 5 hexes from that HQ, but the same construction unit attached to a High Command HQ unit (e.g. OKH or Stavka) could operate up to 90 hexes away.

Auto-repair units will not usually be deployed to a hex adjacent to a FBD/NKPS rail repair HQ (21.11.1). Equally, due to the phasing of actions in the logistics phase, rail repair units are assigned before hexes repaired by the FBD/NKPS are treated as operating (they retain the notional 1 point of damage from the last ground phase) so the automatic repair units will not repair in advance of such a stretch of rail .

In addition, the automatic rail repair units will not move adjacent to an enemy unit.

> ***In combination this means that the auto-repair units will tend not to operate in co-operation with the FBD/NKPS rail repair HQs.***

Note that a rail repair unit will continue to repair a given hex even if its controlling HQ moves away while it is working. It will then revert to the HQ (and will also do so if ordered to stop the repair work manually).

Detached support units will generally repair one damaged rail line hex per turn. Repair during poor ground weather conditions will proceed much slower. The movement and repairs of these support units takes place during the player's logistics phase.

The computer will return them to their headquarters unit when their rail repair work is completed on a particular section and then automatically send them back to another section that requires repair.

Rail repair can only be carried out by Soviet Railroad repair units, and Axis units with the designation R.A.D., O.T, or have the title 'rail construction'.

21.6.2. Other Construction Units

These are all controlled by the AI and this allocates construction units to the location (city/airfield) automatically rather than to the map. The AI will now try to send multiple construction units if needed to a location (especially for the smaller Soviet construction units).

Every logistics phase the construction units re-evaluate where they are needed and will automatically move to another location. Units in HQs and locations are freely moved by the computer, those attached directly to a combat unit will not be moved automatically. The highest priority requirement will be allocated construction units first, and then on down the list. The priority order from highest to lowest is:

- Priority Factory Repair (damaged factory player has given priority repair status)
- Depot Repair (damaged rail and/or railyard in depot hex)
- Airbase Construction and/or repair
- Non Priority Factory Repair

Any unit that has been sent out to perform one of these repairs is no longer available to be used to assist ground units attached to that HQ in fort level construction (which happens at the end of the turn).

They can be manually returned to their controlling HQ by opening the location screen and pressing X next to the unit.

21.7. FROZEN UNITS

Some units begin a scenario frozen in place with zero movement points for a set number of turns. The number of turns is shown in the hex pop-up text but only for the player that owns the unit (Fzn 2 indicates frozen for two more turns). Other units may be frozen by scenario specific rules. These units do not show the number of turns remaining in the hex pop-up text and unfreeze under the special conditions specified in the scenario rules.

During each friendly logistics phase, the unit's frozen turn counter is reduced by one, and when it reaches 0, the unit is no longer frozen and it will be given MPs for that turn. A unit frozen in this way may also be unfrozen if it is attacked, or if it is within 3 hexes of an unfrozen non-isolated enemy unit either during the logistics phase or after the amphibious phase.

Frozen units are unable to move using either tactical or strategic movement. Frozen units cannot build forts, although construction units may build forts in hexes they occupy. Frozen units cannot disband, merge or build-up with other units or breakdown into smaller units. Frozen units can change their maximum TOE setting.

Air Groups attached to frozen air base units may conduct automated intercept missions.

21.8. STATIC COMBAT UNITS

Throughout the war, the German army stripped many units in quiet fronts of their vehicles and had them dig in and reduce their fuel consumption in order to focus resources in areas where offensives were planned.

To simulate this practice, both sides have the ability to place combat units in static mode during the game, turning in their organic vehicles for use by other units or the supply motor pool. Static mode takes vehicles out of a unit and reduces the unit to two movement points. Motorized units in the static mode pay non-motorized movement costs when they move. The at-start forces in some scenarios may have units already in static mode.

21.8.1. Setting Units to Static Mode

Any non-isolated, non-frozen combat unit on the map may be placed in static mode if that unit has not moved during the turn and is currently located in a hex with a manmade fortification level of two or greater (the AI is not held to the fort level requirement). Combat units are placed in static mode by selecting the hex they are in and then selecting the “STATIC” button on the desired counter in the unit bar.

Note that the “STATIC” button will not be displayed if the combat unit is not eligible to be placed in static mode.

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In this case, the 340 Rifle Division is eligible to move to a static mode as it occupies a hex with a level 2 fortification.

The unit will immediately be reduced to no MPs for that turn and all of that unit’s vehicles will be immediately returned to the motor pool (keep in mind that there are many vehicles in HQ units and in the supply system that are still being used by the unit, but it is assumed that the unit has given up all of its organic vehicles).

The phasing player will immediately receive an admin point bonus based on the number of organic vehicles returned to the motor pool that is equal to 1 + ((trucks in unit + Random(100))/100) (truncated). When showing how many points will be gained, the displayed amount is 1 + (trucks in unit/100) (i.e. the lowest possible gain). The number of vehicles and the admin point gain will be shown to the player prior to confirmation of static mode.

Taking the example above, this will gain the Soviet player 49 trucks and 1 Administrative Point

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And the unit has 0 MP for the rest of the turn.

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Static units have only two Movement Point per turn until they are reactivated, but may use strategic rail, naval or amphibious transport. Static units can build up (recombine) as long as all units doing the build-up are static. Static units can breakdown while static. Static units cannot merge or combine with non-static units. Static units cannot disband (21.10).

Again, using the same example as above, 340 Rifle Division is now static and has 2 MP:

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Units in static mode will appear bordered in white when the Map Information tab: View Unit Modes button has been toggled on. Static units that retreat or rout as a result of combat remain in static status.

Note that units cannot be set to Static Mode in 1941.

21.8.2. Reactivating Static Combat Units

Non-isolated static units that have not moved, may be reactivated at any time during the movement phase by spending admin points. To mobilize a STATIC unit, vehicles are taken from the motor pool if there is sufficient freight in nearby depots to convert to vehicles, (if there are insufficient vehicles in the pool the static unit cannot be reactivated). Combat units are reactivated by selecting the hex they are in and then selecting the “MOBILIZE” button on the desired counter in the unit bar. Static units may not be reactivated the same turn they are made static. Combat units may not attack on the turn that they are reactivated from static mode.

Activated units will immediately receive 50 percent of their vehicle requirement from the pool and 50 percent of their maximum movement points (25 for motorized, 11 for cavalry and 8 for infantry types). The admin cost for activations is equal to 1 + ((truck need of unit when mobilized + Random(50))/50. When showing how many points it will cost, the display shows the AP gain as 1 + (truck need of unit when mobilized+50)/50. This is (the most that could be charged, it could be one less than this.

Note that units with a withdrawal date to another Theatre (13.1.3) cannot be set to Static mode.

21.9. DEPLETED AND UNREADY UNITS

21.9.1. Depleted Units

Units at 10 percent or less of TOE are in a depleted status, have no ZOC and will automatically displace if they end up next to an enemy unit and not stacked with a combat unit that is in a ready or unready status. Note that there are instances, such as if a unit becomes depleted during the air execution phase, where a depleted unit can end up next to an enemy unit and not automatically displace. Displacement will then occur when an enemy unit moves next to such a unit.

21.9.2. Unready Units

Units that have the sum of their current morale and actual TOE percentage equalling less than 90 are in an unready status. Unready combat units do have a ZOC, but may only conduct an attack if they have not expended any movement points during the turn.

21.10. DISBANDING AND MERGING UNITS

Units that are due to be withdrawn cannot be disbanded or merged (this can be checked both on the unit counter and using the Commander's Report).

21.10.1. Disbanding Units

Most ground units and Air Groups may be permanently disbanded and removed from the game.

The exceptions are high command (type 1) headquarters units, all types of air headquarters units, and units of any type that are scheduled to be withdrawn. To disband a unit, select DISBAND from the unit detail window. This will send the aircraft and pilots and aircrew manpower from Air Groups or the manpower and equipment from all of the ground elements in ground units back to their respective production pools. Any support units that are assigned to a unit that is disbanded are automatically reassigned to the next higher HQ unit of the disbanded unit.

Note that units (both ground and air groups) can also be disbanded using the functions in the Commanders Report.

Units can only disband if they have enough movement points remaining to move to a rail hex that is connected to the supply grid, and if they are not within three hexes of an enemy unit. Frozen or static units cannot be disbanded.

A unit is required to have at least one movement point remaining to disband. Fortified zones are an exception as they may disband even though they have zero movement points and they are not required to be three hexes from an enemy unit; the only requirement is that they not be frozen.

The Disband Unit option will not appear in the unit detail window if the above conditions are not met. Disbanding requires and expends one Admin point (for this purpose merging a unit is treated as disbanding a unit and will also cost one Admin point) if playing as the Axis (38.1).

Errata 01.01,14 For a unit on the map to disband or be sent to a theater box, it must now be more than 8 hexes from enemy units. To be able to send a unit to a TB, it must also be on a connected rail hex. Other limitations/restrictions re disbanding and transferring to a theater box remain unchanged.

21.10.2. Merging Units

It is sometimes possible to merge two (or more) weakened units to create a single stronger formation. For this to happen, there must be a reasonably close match in the elements present in both formations (so for example a normal Soviet rifle brigade can be merged into a Soviet rifle division or rifle corps) and the merged unit will not substantially exceed the TOE.

The unit lost when the merger is due to happen must not be scheduled to move to another Theatre Box later in the game (13.1.3) unless the player(s) are using the Enhanced Theatre Box Control option (13.3.4).

21.11. HEADQUARTER (HQ) UNITS

Headquarter units provide a chain of command for command and control of units in Gary Grigsby's War in the East 2. With the exception of High Command headquarters units, all units, including support and Air Groups, have a higher headquarters unit to which they are attached. The current command and control arrangement for the phasing player can be viewed either through the Order of Battle (OOB) screen in the info screens tab (36.1) or through the Commanders Report.

For on-map units, this immediate higher headquarters unit can provide logistical and combat support if within the applicable range. There is no limit to the number of combat units that can be attached to a Headquarters unit, however, ground headquarter units that exceed their normal capacity, termed command capacity (21.11.3), will become less effective. Most combat units will normally be attached to lower level headquarters units, but direct attachment of combat units to any ground headquarters unit is permitted.

Normally a HQ unit is commanded by a leader of the same nationality.

21.11.1. Types of Headquarter Units

There are seven types of headquarter (HQ) units as follows:

High Command headquarters units (Type 1): Each nation represented in the game has High Command headquarters units, one that all other units on that side

are ultimately attached. These headquarters units do not have a higher headquarters and effectively report to themselves. High Command headquarters units cannot be disbanded. Unfrozen units can be transferred from these headquarter units even if the HQ unit is frozen. The following headquarter units are designated High Command headquarters units:

- OKH – Germany (in addition the Germans have the OKW as a High Command with its own OOB tree, but mostly only for units in the Theatre Boxes)
- Italian High Command – Italy
- Hungarian High Command - Hungary
- Romanian High Command - Romania
- Slovakian High Command - Slovakia
- Stavka – Soviet Union

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Army Group//OKL/Hungarian, Slovakian, Romanian Air Commands/Regia Aeronautica; Soviet Fronts, Military Districts (Type 2): These are ground or air headquarter units with large capacities that are attached to a High Command (Type 1) headquarters unit and normally serve as higher headquarters to the rest of their nations units.

Army, Air Force, Air Fleet or Air Command/Soviet Air Armies /German Luftflotte (Type 3): Army headquarter units are ground headquarter units with medium capacities that are attached to either type 1 or 2 HQ units. Though they are ground units, Air headquarter units do not have any capacity limitations and can only attach lower level air headquarter units, such as air base units, air divisions and anti-aircraft support units.

Air Base Units (Type 5): Air base units are different than other headquarter units in that their purpose is to support Air Groups. They are stationary installations and new Air Base Units can be built during the game. Air base units are the only on-map units to which Air Groups can be attached. Air Base Units cannot attach any combat or support units.

Rail Repair headquarter units (Type 6): These are rail repair units that also function as headquarters for construction and labour support units. Only construction and labour support units can be attached to Rail repair headquarter units.

Amphibious headquarters units (Type 7): Amphibious HQ units do not have leaders and must be attached to a High Command (Type 1) HQ unit. Amphibious HQs are used for the amphibious movement of combat units and the naval transport of units and supply over beaches, represented by a temporary port, (when a permanent port is not in the amphibious invasion target hex). Amphibious HQ units may have attached naval support groups representing ships to provide artillery support for amphibious assaults and ground combat in adjacent land hexes. Amphibious HQ units will also have a number of transport and cargo ships assigned to support lift required for amphibious invasions and maintenance of temporary ports.

Amphibious HQs may only use amphibious and naval strategic movement. They may never enter a non-port land hex. They may enter a ferry hex and assist units attacking over a ferry hex. Neither enemy supply trace nor enemy naval transport can pass through hexes adjacent to an Amphibious HQ unit and an amphibious HQ unit will destroy any enemy units embarked on ships in water hexes to which they move adjacent. In addition, Amphibious HQ units will bombard any enemy units in adjacent land hexes at the end of that players air execution phase, potentially causing damage to ground elements.

21.11.2. Assault HQs

Some Axis Armies and Soviet Fronts can be designated as Assault HQs. Each will cost the Soviet player 20 Administrative Points and the German player 10 Administrative Points. If a HQ is transferred to a Theatre Box, or withdrawn due to OOB changes, it will lose its assault status.

Setting an Assault HQ is done from the HQ unit detail screen (using the button on the unit counter). Assault HQ appear with ‘Aslt’ on HQ Commanders Report tab. In addition, current Assault commands are show at the top of the OOB screen (36.1).

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In this image, Western Front is set to assault status (and has extra command capacity) while Bryansk Front is not (but could be converted if the Soviet player has not exceeded their capacity for the current turn).

When a unit is made an Assault HQ its Command Point Capacity is multiplied by 5 and divided by 3 and this new value is shown on the HQ unit bar (6.5.6).

The command capacity of all attached HQs is increased by 4/3 (so, for example, if the standard value is 9 this will be increased to 12).

All the units that report (directly and indirectly) to an Assault HQs are affected by the following changes:

- Double the rate of gaining Combat Preparation Points compared to other units (23.2);
- An increased chance to pass all relevant support checks;
- Soviet artillery gain 50% extra ammunition (before 1944) compared to the normal rules;
- Units may not build fortifications beyond level1.

These advantages do not accrue if:

- The unit itself or its HQ has just been attached to the relevant Axis Army or Soviet Front this turn;
- If either the Assault HQ or any other HQ in the command chain is overloaded in terms of Command Points (21.11.6);
- If any HQ in the command chain is outside the command range for the Assault HQ (21.11.4)

The number of Assault HQs that can be created varies as the game progresses:

Date	Axis	Soviet
1941	6	2
1942	5	3
1943	4	4
1944	3	5
1945	2	6

Note that if the Axis player has designated Assault HQs in excess of the allowed number for that year, they will retain the status but no new ones can be created until you are below the maximum.

Errata 01.01.14 The limits and rules for Assault Fronts are substantially revised.

The revised command capacity bonuses are now:

Date	Axis Army	Axis Corps	Soviet Front	Soviet Army

1941	**1.34**	**1.17**	**Nil**	**Nil**
1942	**1.34**	**1.17**	**1.10**	**1.10**
1943	**1.34**	**1.17**	**1.34**	**1.25**
1944	**1.34**	**1.17**	**1.67**	**1.34**
1945	**1.34**	**1.17**	**1.67**	**1.34**

The limits on the maximum number of Assault HQs are revised to:

Year	Axis	Soviet
1941	**4**	**2**
1942	**3**	**2**
1943	**3**	**3**
1944	**2**	**4**
1945	**2**	**4**

(note that it is still possible to exceed this number if you already had formations on Assault status in an earlier year)

21.11.3. Headquarter Unit's Command Capacity

Command capacity is a measure of the total number of Combat Units that a given HQ can command effectively.

The command capacity of different levels of HQ varies according to nationality and game turn.

Type	6/41-3/42	4/42-3/43	4/43-3/44	4/44-9/45
Corps (type 4)	9 CP	9 CP	10 CP	11 CP
Axis Army (type 3)	27 CP	27 CP	30 CP	33 CP

Axis Army Group (type 2)	108 CP	108 CP	120 CP	132 CP
Soviet Front (type 2)	72 CP	81 CP	90 CP	99 CP
Soviet MD (type 2)	36 CP	36 CP	36 CP	36 CP

Soviet armies (type 3) have differing CP according to type and dates:

Type	6/41 – 8/41	9/41 – 3/42	4/42 – 9/45
Tank Armies	N/A	N/A	11 CP
Guards Tank Armies	N/A	N/A	12 CP
Combined Arms Armies	21 CP	21 CP	18 CP
Shock and Guards Armies	N/A	21 CP	21 CP

OKH, Stavka, and the various Axis-allied High Commands have an infinite command capacity but this is displayed as 999.

Note that if an Axis Army or Soviet Front has been set as an Assault HQ that HQ and all HQs that report to it will have additional command capacity (21.11.2).

21.11.4. HQ Command Ranges

The different types of HQs each have a different range over which they can supply leadership modifications and assign support squads.

High Command – 90 hexes;

Army Group/Front – 45 hexes

Army – 15 hexes

Corps/Soviet Army after July 1941 – 5 hexes

Air Command – 90 hexes (note that if an air command is within 90 hexes the modification for range (15.5.4) will not take place and the air base will be treated as being 0 hexes from the HQ).

21.11.5. Command Bonuses for Some Types of HQ

Certain types of HQs will provide additional bonuses to some or all the units stacked with them.

German Motorized or Panzer Corps: When a motorized unit is performing an admin leader check, leaders of any Panzer Army, Panzer or Motorized Corps HQ units involved in the admin leader check receive a +1 to their admin rating during the check.

German SS Corps and Armies: These can only be controlled by SS Commanders.

Soviet Tank Armies: As with German Motorized or Panzer Corps, there is a bonus of +1 on the admin rating of the commander for motorized units. In addition, if a Soviet Army is designated as a Guards Tank Army there is an increase of 1 in the Command Capacity.

Soviet Shock and Guards Armies: These provide a bonus of +1 to their commander's administrative score. For Guards Armies this is in addition to the bonus for a Tank Army so a Guards Tank Army will provide a +2 bonus to the admin rating if the check involves a motorized unit.

21.11.6. Combat Unit Command Points

On map Combat Units cost a different number of Command Points:

- Battalion/Regiment/Brigade: 1;
- Fortified Zone: 1;
- Division: 2;
- Corps: 4

MRU units off map do not cost any Command Points.

If the HQ is commanding units of a different nationality it will pay an extra 1 command points for each Combat Unit (CU). Thus a regiment of a different nationality will take up 2 Command Points.

Note this penalty applies all up the command chain to Army level for the Axis player. Thus a German Army HQ indirectly commanding non-German units will also use up more of its command capacity. This penalty does not apply at Army Group or High Command HQs.

21.11.7. Headquarters Efficiency and Support Squads

Headquarters units will receive a benefit on all administrative rolls depending on the total number of support squads in the HQ.

Errata 01.02.32:

HQs on map and in the national reserve may now be placed into refit mode. This can be done on the CR screen or by right clicking on the unit within the Reserve box on the map

This will enable them to gain support squads when these are otherwise in short supply.

21.11.8. Headquarters Conversions and Upgrades

In the course of the game a number of HQs will change their designation. Some of these will have little impact on gameplay such as the early German motorized corps being re-designated as Panzer Corps.

However, a number of Soviet armies will be created by converting some of the at-start rifle and mechanized corps HQs. Equally Soviet Guards armies will be created according to the historical OOB and almost all will be converted from an existing HQ.

Gameplay Note: Neither player cannot build HQs in WiTE2.

21.11.9. Headquarters Unit Relocation

The player can relocate most types of headquarters unit, including rail repair units, by selecting the “RELOCATE” button in the right upper corner of the HQ unit’s detail window (37.2). Relocation is similar to a displacement move (23.13), but is a voluntary action and results in the unit being moved to a friendly town, city or urban hex that is in supply.

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The headquarters unit will have its movement points reduced to zero, but there is no relation between the relocation and normal movement. The headquarters unit and any attached support units will suffer retreat attrition (23.12). The town, city or urban hex that the unit is relocated to will generally be to the west for the Axis player and to the east for the Soviet player, but there is a random factor to the relocation so that the player cannot anticipate where the unit will end up.

While airbases cannot be relocated, the planes there can be. If an airbase is overrun any damaged planes will be lost while others will transfer to the nearest operating base.

Game Play Tip: Though a headquarters unit can be relocated multiple times in a turn, relocation is generally only advised for isolated headquarters units you want to get out of a pocket immediately instead of waiting for the unit to be involuntarily displaced by enemy units.

Regular movement is almost always preferable to relocation because the relocation movement is hard to predict and does cause retreat attrition to the headquarters units and any attached support units.

21.11.10. Reassigning Combat Units between HQs

A specific combat unit can only be transferred once per turn, they will suffer a – 1 for admin rolls on the turn the change was made and will be marked with an asterisk in the combat unit detail window to denote that it cannot be transferred again that turn.

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21.12. STACKING

21.12.1. Standard Stacking Rules

Usually a maximum of three on-map units, no matter what the type, size or status, may be in a hex at one time.

Units can move through a hex with three units already present, but will be unable to stop in that hex.

Combat unit breakdown can only take place if the broken down units will not exceed these stacking limits.

21.12.2. Special Stacking Rules (City Forts)

Special stacking rules apply in major urban and some port hexes. In these hexes it is possible to create a ‘city fort’ unit (20.6) and attach multiple combat and command units to this static command.

Units in a city fort will be shown in the Commanders Report (Appendix 35.2) with the notation ‘fort’ as opposed to the usual hex location data. By clicking on unit name, the map will center on fort unit with its detailed unit tab open (you can remove units from the fort using this if you wish).

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22. GROUND UNIT LAND MOVEMENT

2200

Focus:

This section explains how to move ground units in WiTE2. Naval transport is covered in chapter 24.

Key Issues:

- The different types of movement (tactical, strategic and air transport);
- How Movement Points are calculated for tactical movement;
- Tactical Movement costs and the impact of ‘administrative movement’;
- Interaction of the road system and tactical movement costs;
- How to conduct Strategic Rail Movement;
- How to conduct air resupply, movement of air transportable units and airborne operations.

There are two general types of land movement for ground units, tactical and strategic rail. In addition, units can move by sea transport (24.3) and certain combat units can be transported by air (22.5).

Tactical movement is from ground hex to ground hex using movement points (MP) and includes the cost of terrain, of moving into enemy zones of control and enemy hexes, and the cost of attacking enemy units.

> ***Note you do not need to move the unit hex by hex, selecting the intended destination hex will automatically move the unit along the designated movement path. For most purposes, the computer will identify the quickest route between the start and end hex for you.***

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Here the computer routine has automatically selected the quickest route (in MP expenditure) between the starting and destination hex for the chosen unit. Note it will have 1 MP left on arrival and you could move it another hex (if possible) either immediately or later in the movement phase.

> ***Note that the tactical movement costs are also used to determine the cost of moving supplies by truck.***

Strategic rail movement represents loading units on to trains for transport over friendly rail lines uses strategic movement points (SMP), but also depends on the availability of railyard rail capacity and rail usage on rail lines.

Units using strategic rail movement have their tactical MP reduced proportionally to the expenditure of SMP. Equally a unit that has moved by rail or naval transport will have its remaining tactical movement points reduced.

Players can undo a move (‘undo’ button or hot key ‘u’) unless the move resulted in losses from air interdiction, turned an enemy hex into a pending friendly hex, attacked an enemy unit or spotted an enemy unit that previously had a detection level of zero.

The phasing player can conduct movement, combat, air transport and transfer missions and other administrative functions in any order desired during the action (move) phase. Assuming enough movement points were available, for example, a combat unit could use tactical movement to move adjacent to an enemy unit, attack, then use tactical movement to move to a rail hex, and then use strategic movement along the rail network and finally detrain. Equally you can move one unit for one or more hexes, leave it, move another and then return to the original unit to use up its remaining MPs.

Many actions require the selection of a specific mode before they can be conducted.

22.1. DETERMINING TACTICAL MOVEMENT POINTS

On-map units begin each turn with a certain number of movement points (MP) determined by a number of factors, including unit type, whether it is motorized or non-motorized (21.3.1), supply status (fuel for motorized units, supplies for non-motorized units), reductions as a result of being attacked the previous turn, vehicle shortages, fatigue, and leader admin and initiative checks.

Units have a maximum MP allowance that they cannot exceed and a minimum that they will always be able to move.

22.1.1. Maximum Movement Points

The following are the maximum MPs for on-map units:

- Non-Motorized Combat units (except Cavalry) units – 16 MP
- Cavalry Combat units – 22 MP
- Headquarters units – 50 MP
- Rail Repair HQ units – 16 MP
- Motorized Combat units – 50 MP
- Static Units – 2 MP

Soviet maximum movement capacity for HQs and motorized units is reduced to:

- 25 in June 1941;
- 35 for Motorized Brigades throughout the game;
- 35 for divisions between July 1941 and December 1942
- 50 in all other cases.

22.1.2. Minimum Movement Points

Motorized units will always receive at least one MP, even when out of fuel.

Non-motorized units will always receive at least eight MP, even when out of supplies unless the unit was air dropped in the current turn (23.9). The exception is static units that will receive two MP.

Units can always move at least one hex, even if it costs more than their MP allocation. To make this minimum move, the unit must be the only unit selected if more than one unit is that particular hex.

Determining the Actual Movement Point allowance

The following steps are used by the computer to determine a unit's MP allowance during the logistics phase at the start of a turn:

- Start with Maximum MPs (22.1.1);
- Calculate average fatigue of the unit based on the number and fatigue level of each type of ground element. Reduce the number of MPs by the average fatigue divided by ten, rounded down;
- Note that the effect of fatigue is cancelled if a unit passes a test comparing a dice roll to its current level of Combat Preparation Points (23.2.3). In addition passing this test will remove the need to check for initiative and administration (as below);
- Check for leader initiative. If all leaders in the chain of command fail the initiative check, then multiply MPs remaining by 80 percent, rounding down;
- Check for leader admin. If all leaders in chain of command fail the admin check, then multiply MPs remaining by 80 percent, rounding down. Note that units that did not move in the previous turn will automatically pass their next turn's admin check;
- Reset the unit's MPs to eight if determined to be lower than eight;
- Determine if fuel (motorized unit) or supplies (non-motorized unit) are sufficient to enable the unit to use the remaining MPs it has. For example, if a motorized unit has only 50 percent of its maximum MPs remaining after the calculations above, it will only require 50 percent of fuel it would have needed to use its maximum MP.

  For example: if fuel on hand is 60 percent of what the unit needs to use its remaining MPs, then it can only move 60 percent of those MPs, rounded down.

- The movement allowance is capped by a shortage of vehicles in the unit as follows: Motorized Units = Maximum of 6 + (44 * (vehicles in unit/vehicles required by unit). For Non-Motorized Units = Maximum of 6 + (10 * (vehicles in unit/vehicles required by unit). For Cavalry Units = Maximum of 6 + (16 * (vehicles in unit/vehicles required by unit).
- Note that in each case, the number of trucks available is all those shown as unused (i.e. not taken by the resupply routines) plus 1/3 of those used in the supply process.

- Subtract MPs based on attacks made against this unit during the prior player-turn (22.1.3)
- If it is a non-motorized unit, reset the unit's MPs to eight if determined to be lower than eight. If a motorized unit with zero MPs, reset the unit's MPs to one. If a static unit with less than 2 MPs, reset the unit's MPs to two.

As an example of the above rules, a motorized Axis unit that was not attacked during the last player-turn will start with a base MP of 50.

If average fatigue were 22, then the unit MP would be reduced by 2 to 48.

If all the leaders in its chain of command failed their initiative and admin checks, the unit's MPs would be reduced first to 38 and then to 30.

As 30 is 60 percent of the base MP of 50, the unit would need at least 60 percent of required fuel in order to use these 30 MPs; if it had only 45 percent of its fuel needs, its MPs would be lowered to 22.

If the unit has 80 percent of its vehicles, it has a maximum of 6 + (44*.8) or 42 MPs. Since the unit has only 22 MP, it is not affected further by this level of vehicle shortage.

Had the unit had 100 percent of its fuel and had passed the leader and admin checks, instead of having 48 MPs the truck shortage would be reduced the unit to 43 MPs.

22.1.3. Impact of Enemy Attacks on Unit Movement Allowance

When a unit is attacked, depending on the odds, it will suffer a loss in movement points during its next turn. The loss of MPs is equal to the standard attack cost that a unit would have paid had it made the attack (so if it was a deliberate attack and the defending unit is motorized, it would lose 16 MPs from its next turn MPs). This standard attack cost is modified as follows based on the odds of the attack:

Odds From	Odds To	Impact
1.5:1 or greater		Full Effect
1:1	1.49:1	75%
1:2	1:1.01	50%
1:5	1:201	35%
1:10	1:501	20%
Less than 1:10		No Effect

Motorized units cannot lose more than 16 MP regardless of how many times they are involved in combat in the previous turn. They will retain a minimum of 6 MP unless they are also affected by fuel shortages when their minimum MP can be 1.

When a unit is attacked in the amphibious phase, which comes after the unit's MPs are set, any loss of MPs due to enemy attacks is immediate and can leave a unit with 0 MPs at the start of their turn.

22.1.4. Impact of Amending the Logistical Level

If the logistical level is varied from 100 due adjusting the difficulty level when setting up the game this will have an impact on how a shortage of trucks affects the MP available. If it is under 100, then a truck shortage will have a greater impact on MP, if it is over 100 then a truck shortage will have less effect.

22.1.5. Movement Allowance for Air Dropped Combat Units

Combat units that are air dropped, including in support of amphibious invasions, will have zero movement points remaining for the rest of their turn.

> ***Game Play Note: Given a week long turn, the inability of units to move after being air dropped may seem unrealistic. Basically they are taking a 10x10 mile area (hex) and waiting for troops to link up with them. Their importance is in cutting off enemy unit retreat routes and preventing reserve activations.***

22.2. TACTICAL MOVEMENT COSTS

22.2.1. Rear Area Administrative Movement

Ground unit movement costs are reduced if the unit is moving in hexes that were friendly controlled at the start of the turn. In a clear hex in clear weather the cost for an infantry unit will usually be 1 MP compared to the cost of 2-3 MP when entering a hex captured during the turn (i.e. one where you have 'pending control').

The rear area administrative rule will apply when:

- moving in hexes that were friendly controlled at the start of a turn (7.3.1);
- not adjacent to an enemy controlled hex (both the hex exited and the hex entered)
- there is no enemy interdiction in the hex (at any level above zero)

The reduction in the movement cost is based on the lowest quality road system in either the source hex or the destination hex. For poor roads, the reduction is 1 MP

per hex, for average roads 2 MP per hex and for good roads 3 MP per hex. The MP for any hex can never be less than 1.

> ***As an example, if a non-motorized unit moves from an average road hex to a good road hex in rough terrain and with heavy mud then the cost would be 2 (for rough) +2 for poor weather – 2 (since the average road is the worst of the two hexes), in combination this will give a 2MP cost.***

If this move included crossing a minor river, then the base movement cost would be 2 (rough terrain) +1 (minor river) + 2 (heavy mud) and the road system would then reduce the total cost from 5 MP to 3 MP.

22.2.2. Fatigue, Combat Preparation Points and Movement

As units move they will build up fatigue. This will be higher when units move in hexes that have been captured that turn or are affected by Heavy Mud ground conditions.

> ***Moving units in hexes you controlled at the start of the turn will be quicker and see them gain less fatigue than moving into hexes that were enemy controlled.***

Every hex will cost one combat preparation point (23.2) regardless of the notional MP cost per hex.

> ***In this case, administrative movement can still be helpful. If a unit moves its full allowance it will expend more preparation points but if it moves as far as it could without administrative movement it will be left with some unused MP. Since unused SMP contribute to the recovery of Preparation Points, the unit will regain those it lost if you are careful about the speed of advance and keeping a unit in friendly controlled hexes.***

22.2.3. Impact of Interdiction on tactical movement

Interdiction can be generated by enemy air action (18.1.4), partisans (13.4.2) or as a result of an airborne assault (23.9). Any level of interdiction will prevent the usage of administrative movement through the hex.

Leaving hexes with higher levels of interdiction will impose increased movement costs and possibly extra losses in the form of disruptions, damaged and destroyed elements.

22.2.4. Impact of Enemy Zones of Control

The movement costs for exiting an enemy Zone of Control depend on the morale of the moving unit (38.7.1). If the unit morale is between 81 and 100 the cost is +1, between 51 and 80 it is +2 and at 50 or below the extra cost is 3 MP.

22.2.5. Temporary Motorization

Any non-motorized combat unit (**except cavalry units**) that is in supply may triple its movement points (MP) for the current turn by clicking on 'motorize unit' from the combat unit detail screen (37.3), but at a cost in vehicles drawn from nearby depots and/or the motor pool as well as administrative points (AP).

2202

As in this example, the cost of motorising is shown on the unit tab (342 trucks and 1 admin point) and will be confirmed when you decide to (or not) to carry out the action.

Only units that have not yet expended any MPs during that turn may temporarily motorize. The unit will show as Motorized for the rest of the player's turn and will pay motorized unit costs. Mountain units that have been temporarily motorized pay motorized movement costs in mountain hexes (not mountain unit movement costs).

One vehicle is required for each ground element in the unit (ready or damaged) and there must be available vehicles in nearby depots or the motor pool. When a unit is temporarily motorized, vehicles are taken from the depot that the unit has most recently drawn supply from. If no unused vehicles are in that depot, then freight in the depot can be converted to vehicles from the pool (if there are vehicles in the pool).

If there are not enough vehicles, then the unit cannot be motorized.

The Administrative Point cost to motorize a unit is based on the number of vehicles required from the motor pool and is equal to 1 + number of trucks required / 500 (rounded down). The number of vehicles required to motorize the unit and the number of administrative points required for temporary motorization will be displayed next to the Motorize Unit text in the unit detail screen.

All temporarily motorized units and Soviets motorized infantry units (whether motorization is temporary or permanent) pay an additional +1 MP when moving into an enemy controlled hex (in addition to normal costs).

Normally a temporarily motorized unit will be automatically demotorized in the next friendly logistics, phase, but the player will be offered an option to have the unit retain motorization in future turns. In these cases the player must then use the

demotorize button to remove the vehicles and return to non-motorized movement. This demotorization will then occur in the next friendly logistics phase.

Non-motorized support units check in the logistics phase to see if they are attached to a motorized unit, and if so, they are given extra vehicle needs as if they were being motorized themselves. Unlike the on map units, they are not immediately provided with vehicles they need when the parent unit is temporarily motorized. This applies to support units attached to temporarily motorized combat units or attached to permanently motorized combat units. In any logistics phase when the support unit is no longer attached to a motorized unit, it will reduce its needs and return the excess vehicles.

Support units don't cost AP to motorize (they just do it automatically when called for per above). Note this only applies to support units directly attached to combat units. When attached to HQ units, they remain in their natural state (i.e. they don't motorize even though the HQ is motorized).

No AP's are gained when a unit de-motorizes. Units must be de-motorized prior to being transported by air.

Units that are temporarily motorized and retain their motorization each turn pay admin points for the motorization each turn (in this case if no Admin Points are retained the player will start turn with a negative value)

Using the example above, the unit has been ordered to retain its motorisation. This can be cancelled by clicking on 'DEMOTORIZE UNIT'.

2203

Errata (01.01.00):

a. Soviet units may not be temporarily motorized in 1941.

b. Corps and division sized units have a minimum AP cost of 3 to temp motorize.

c. Temporarily motorized units have to pass an extra admin check when determining their MPs (failure reduces their MPs).

d. Soviet motorized units that are brigade size or smaller have a max MP of 35, and this applies to temporarily motorized units

22.2.6. Specific Movement Rules for Brigades and Smaller units

To reflect their lack of combat support elements, brigades and regiments that move into an enemy controlled (and pending) hex must pay a movement cost of at least 3 MP per hex (terrain, weather and interdiction can all increase this to a higher number).

These units move in friendly hexes according to the usual movement rules for their type of unit.

2204

In this case, the German regiment will pay 3 MP to enter a Soviet hex not the 1 MP that represents the base cost for such a hex in good weather.

22.2.7. Combat Delay Movement Costs

Whenever ground combat takes place in a hex, a combat delay cost will usually be generated for the hex which will slow down future movement from this hex during the current movement phase.

This combat delay usually accumulates with every battle in the hex up to a maximum of nine points. This combat delay is listed at the bottom of the hex pop up and can be displayed in the hex inside a small movement compass the same colour as the non-phasing player.

2205

In this example, the German 1-1 division has been attacked twice (once hasty, once deliberate) so the hex now has a combat delay of 4 (if any Soviet units ever manage to capture it).

The graphic display can be toggled on or off using Hotkey- Ctrl-d. The effect of the delay is that when a **unit moves out of a hex**, it expends an amount of MPs equal to the combat delay if a non-motorized unit, and three times the combat delay if a motorized unit.

As always it must have enough MPs to successfully complete the move or it is not allowed. All combat delays are removed out at the start of the next logistics phase.

Combat delay points are added to a hex as follows:

- 3 Points – Deliberate attack with final odds < 5 to 1
- 2 Points – Deliberate attack with final odds >= 5 to 1 and < 10 to 1
- 1 Point – Deliberate attack with final odds >= 10 to 1
- 1 Point – Hasty attack with final odds < 10 to 1.
- 0 Point – Hasty attack with final odds > 10 to 1 unless there is an enemy unit (including the original defender) still adjacent to the hex. In this case a delay of 1 is still imposed.
- 0 Point if the attack failed but was changed to a scouting battle (23.4.2)

Note: This rule makes does not make it harder to enter a hex that was taken in combat, but does make it harder to move further than that hex during the current movement phase.

Errata 01.02.24

Note that due to the changes in this patch, if a hex has a combat delay of 9 it cannot be attacked again that turn.

Also if the attack was on an urban, heavy urban or port hex, combat delay is generated as:

- **A deliberate attack that fails, versus a defender in a non-isolated hex in urban/heavy urban/port, adds 9 to the combat delay. A hasty attack in this case adds 5 combat delay**

22.2.8. Detailed Movement Cost Tables

These can be found in appendix 38.7 of this manual and in the game editor (appendix 41),

22.3. CONDUCTING TACTICAL MOVEMENT (F1)

To carry out any tactical movement, the F1 key must be selected.

There are three slightly different ways in which a given unit may either move or attack (remember that combat is a function of movement in WiTE2).

22.3.1. Ground Movement

Summary: Left click as necessary to select the unit(s), right click to move.

Details: First select a hex with units and then if necessary select the unit(s) that will be moving. Selecting a blank part of the unit box will toggle unit selection.

The current movement allowance will always be displayed on the unit counter graphic in the unit bar.

With ‘show movement allowed’ enabled (default) hexes the unit with the fewest movement points remaining cannot reach will be shaded grey. Impassable hexes, to include hexes blocked due to enemy units, will be shaded red. If ‘show movement path’ is enabled (default) then moving the mouse curser over the hexes where movement is allowed will display a line of symbols, each with a number showing how many movement points the unit with the fewest remaining movement points would have left if it was moved to the hexes along that path.

To move the selected units to an allowed location, right click in the desired hex. If the unit(s) that was just moved is eligible to undo the move, the ‘undo move’ button (Hotkey- ‘u’) will appear at the right end of the mode tool bar.

While the movement rules may appear complex, in most circumstances actual movement is relatively simple. The screen display will first show all the hexes the unit can reach (subject to FOW) and the actual movement cost of the cheapest option.

22.3.2. Placing a unit in Reserve Stance

Units in the reserve stance can contribute to any battle within their command and movement range at a cost to their MP in the following turn (any battles they engage in will affect their MP, see 22.1.3).

Any unit can be placed into reserve mode regardless of the remaining MP in the current turn but is very unlikely to actually take part as a reserve formation if this is too low.

22.3.3. Conducting a Hasty Attack

Summary: From single hex only. Left click as necessary to select unit(s), right click to attack.

2206

Details: First select a hex with at least one combat unit that is adjacent to an enemy unit and use the unit bar to select the units that will participate in the attack. Move the mouse cursor over the hex with enemy units that will be the target of the attack. The hasty attack symbol will appear if the selected units are eligible to attack. Right click on the target hex to initiate a battle.

Hasty attacks will cost motorized units 3 MP (plus the cost to enter the target hex) and non-motorized 2 MP.

22.3.4. Conducting a Deliberate Attack

Summary: Multiple hexes allowed. Shift-left click and Shift-left mouse cursor over to select, shift-right click to attack.

Details: Hold the shift button down and left click on a hex with friendly combat units that will be participating in the deliberate attack. To add additional combat units from other hexes to the deliberate attack, to include on-map artillery combat units firing from two hexes away, move the mouse cursor (with Shift still down) over the applicable hexes, which will result in the selection of all additional units in those hexes.

The unit bar will then change to a list of all units currently selected, with a unit counter graphic followed by the unit name. Units that do not have sufficient movement points to attack will be automatically deselected. Any units in the hexes

that the player does not wish to attack can be deselected by left clicking the counter graphic in the unit bar.

De-selection will be confirmed by the counter graphic being removed and units can be re-selected by left clicking again.

2207

In this case any of these units can be deselected, reducing the apparent combat odds and reselected if you want to include them in the battle.

2208

Only combat units will be selected during this process, but combat units not eligible to participate (usually non-artillery combat units two hexes away) in the deliberate attack will need to be manually deselected in order for the attack to be conducted by the computer. If units lack the MPs to complete the attack they will need to be manually deselected.

The cost of a deliberate attack will vary according to the unit type (38.7.1) but usually motorized units will pay 16 MP (plus the cost of entering the target hex) and non-motorized 6 MP. The main exception is that non-motorized type 2 units (i.e. those that have both vehicles for supplies and all non-infantry, non-infantry weapon elements) will pay 5 MP.

Once the phasing player has selected all the combat units that will be participating in the attack, move the mouse cursor (with Shift still down) over the hex with the enemy units that will be the target of the attack.

The deliberate attack symbol will appear if the selected units are all eligible to attack. Right click on the target hex to initiate a battle.

> ***Gameplay Note: The phasing player does not initially need to have the shift key down in order to select the initial hex, but adding additional units in other hexes, selecting a target for the deliberate attack and conducting the deliberate attack will require the use of the shift key.***

22.3.5. Forced Displacement Movement

In most circumstances units cannot move in the enemy phases. The exception is if an enemy stack made up of units with no CV values (such as HQs, routed or depleted units) has a friendly unit move next to them, they will make a displacement move.

In some circumstances this might also trigger a surrender if it involves a combat unit that has a low TOE and is isolated (23.14.5 and 23.14.6). In other cases, the unit(s)

will move to the nearest hex owned by their side taking attrition losses as they do so. Such displacements may happen multiple times in a turn.

22.4. STRATEGIC RAIL TRANSPORT

Strategic rail movement can be conducted by non-routed, non-frozen ground units. Each unit has a strategic transport cost in tons listed in the unit detail window (37.2, 37.3 and 37.4). For that unit to use strategic rail movement there must be sufficient railyard capacity tonnage available to conduct the movement. The transportation cost of a unit will be deducted from the applicable railyard capacity every turn it uses strategic movement, even if it just moves one hex.

Combat units that are attacked while entrained will only have 10% of their CV in the subsequent battle.

There is a cost in resources (coal) for using rail transport.

22.4.1. Basic Strategic Rail Transport Rules

Strategic rail transport can only be conducted through friendly controlled and undamaged rail line hexes that are connected through the rail network to a permanent supply source. Rail line hexes that are in an enemy ZOC are considered to be cut off from the rail network and cannot be used for strategic rail transport, even if the hex is occupied by a friendly combat unit. The player can view the status of the rail line hexes and the rail network by toggling the Rail Damage Info button (Hotkey- r) in the map information tab (7.2.5)

Selecting a unit that is located on a rail line hex while in Rail Mode (F2) will shade all hexes that that unit cannot move into using strategic rail transport. Note that there is a movement point cost for both entraining and detraining, so that a unit that ends the turn entrained will need to at least expend the necessary SMP to detrain before it can use its remaining MP for tactical movement. See section 6.2.4 for details on using the interface to conduct strategic rail transport.

22.4.2. Strategic Movement Points

All units have 200 Strategic Movement Points per turn, including Static units as these can move by rail. If a static unit is mobilized it will have 100 SMPs on the turn of mobilization (i.e. it will lose half of its potential allowance).

Note that Axis units have no SMP on T1.

Units that are currently routed, or have recovered from a rout in the most recent logistics phase, will have nil SMP. Note that this stops such units being transferred off the map and regaining any CPP.

Tactical MP and SMP are expended proportionally so that use of one movement mode will decrease the remaining allowance of the other.

For example, a headquarters unit with a MP of 50 and a SMP of 200 expends 10 MP of tactical movement to move to a rail hex, resulting in a remaining allowance of 40 MP and 160 SMP.

There is a variable SMP cost to load or unload from trains depending on the presence of a railyard in the hex and the capacity of that railyard. Units without enough remaining SMP at the desired destination will be unable to detrain. Entrained units may not move via naval or amphibious movement.

In general, it is more efficient to entrain and detrain at a rail yard. This will cost less MP/SMP and use up less rail capacity.

Each rail hex moved through costs a certain amount of SMP determined by the current rail line usage tonnage in that hex.

22.4.3. Rail Line Usage and SMP Penalties

Rail line usage is determined by the freight and unit tonnage that has moved through the hex. As the rail line usage tonnage increases in a hex, strategic movement point penalties will apply. The maximum tonnage that is tracked in each hex with a dual track rail is 30,000 tons and for a single track rail this is 12,000 tons. These numbers can be exceeded if sufficient rail capacity is available but each additional ton is charged the maximum SMP penalty (as set out below).

During each logistics phase, accumulated friendly rail line usage in each hex is reduced to the higher of either current rail usage divided by six or the enemy air interdiction value (the actual value of this is shown in a hex pop-up) times 500, with the latter being maxed out at 45,000 tons of rail line usage. In cases where there is no enemy air interdiction, at the start of the movement phase the max rail line usage will be 5,000 tons (for a dual track line and 2,000 for a single track line).

Note that rail line usage has an impact on freight movement to depots during the logistics phase, so moving lots of units over a critical rail line will impact on the amount of freight subsequently delivered to depots at the end of the line.

Rail usage in tons is displayed in the hex pop-up rollover text (6.4) for each rail hex. If the map information tab logistics info button (Hotkey- n) is toggled on, rail hexes are colour coded based on tons of rail usage. Below are rail usage ranges with associated colour codes and strategic movement point penalties per hex depending on the type of rail system.

Status	Dual Track	Single Track	SMP Penalty
Bright green	No usage	No usage	None
Dark Green	1 – 4,999 tons	1-1,999 tons	None

Yellow	5,000-9,999 tons	2,000-3,999 tons	+1
Yellow	10,000 – 14,999 tons	4,000-5,999 tons	+2
Orange	15,000 – 19,999 tons	6,000-7,999 tons	+3
Orange	20,000 – 24,999 tons	8,000-9,999 tons	+4
Orange	25,000 – 29,999 tons	10,000-11,999 tons	+5
Red	30,000+ tons	12,000+ tons	+6

22.4.4. Rail Transport SMP Costs

Entrain: The cost to entrain a unit is a minimum of 75 SMP. This cost can increase if railyard capacity has to be drawn from other hexes than the one currently occupied by the unit. The further the distance the greater the increase in load cost. The cost to entrain a unit will be displayed in the general information and City/Airfield Box (6.2.2) as Rail Load MP: xx when a unit is selected in rail mode (F2).

2209

Detrain: The SMP cost to detrain in a hex with a railyard is equal to 75 minus any remaining railyard capacity in that railyard.

For example, a unit detraining in a hex with a level 2 railyard with 10k ton capacity left would change the basic cost of 75, less the remaining capacity (10) to give a 65 SMP unload cost. There is a minimum 30 SMP cost to detrain. The cost to detrain in a city or urban hex without a railyard is 80 SMP. The cost to detrain in any other hex without a railyard, including hexes with towns, is 100 SMP.

The cost to move 1 hex by rail is 1 SMP plus any rail usage SMP penalty, so the maximum cost to move through a hex would be 7 SMP.

22.4.5. Impact of Air Power on Strategic Rail Transport

Players can use ground attack and strategic bombing missions to attack railyards and thus lower overall railyard capacity. In addition, the further a unit has to go to find sufficient railyard capacity to use rail transport, the more SMP it takes to entrain, so bombing railyards can both reduce overall capacity and increase the SMP cost of entraining units in specific areas.

Air interdiction can be used to maximize the rail usage SMP penalty on specific areas of the rail network.

22.4.6. Conducting Ground Unit Strategic Rail Movement (F2)

To entrain a unit or move it by rail the F2 key must be selected. Left click as necessary to select the unit(s), and then use the right click to move the unit as normal (it will then move using rail movement).

2210

Units must start on or be moved to a hex with a friendly undamaged rail line that is not adjacent to enemy units in order to conduct rail strategic movement.

With 'show movement allowed' enabled the hexes the unit cannot reach will be shaded grey. Impassable hexes, including hexes blocked due to enemy units, will be shaded red. As you trace a line of suitable hexes the map will display a line of symbols, each with a number showing how many movement points the unit with the fewest remaining movement points would have left if it was moved to the hexes along that path.

To move the selected units to an allowed location, right click in the desired hex. The on-map counter unit will display the entrained symbol and the 'on train' button will appear in the unit bar.

The unit will remain entrained until either the 'on train' button is selected or movement mode (F1) is selected, returning the unit to its previous status. Units without sufficient SMP available will be unable to detrain.

Remaining Railyard Capacity will be displayed for each railyard when in rail move mode with the number in the rail circles on the map equal to 1,000 tons of remaining load/unload capacity. If the unit(s) that was just moved is eligible to undo the move, the 'undo move' button (Hotkey- 'u') will appear at the right end of the mode tool bar.

22.5. AIR TRANSPORT

The Air Transport mode (F9) can be used to conduct three types of air transport missions; airdrop of freight (supply) (22.5.1), air transport of non-motorized combat units to friendly air base units (22.5.2), and the airdrop of airborne combat units (22.5.3). This will open this screen which can then be used to order the air movement of freight, units or airborne operations.

2211

When in Air Transport mode (F9), assigned (pending) amphibious invasion and associated airborne landing hexes will be displayed on the map. Amphibious landing ground hexes will be shaded red, the water hexes Amphibious HQ units will move to will be shaded blue and airborne landing hexes will be shaded light blue.

22.5.1. Air Transport of Freight

To transfer freight, you will need to select your target hex (left click) and then a staging base will be identified. You can change this either from the list in the screen or by right clicking on a suitable on-map airbase. Those with sufficient freight are marked in blue, those lacking sufficient freight are in green (a warning message will appear if you try to select a green air base). In most circumstances the computer will identify a suitable staging base for the chosen target.

2211a

In this case, the computer routine has identified Budapest as the best staging base for the target hex. The transport planes are deployed elsewhere (hence the purple line to the NE). Note that none of the other Soviet airbases in this region are eligible as staging bases as they lack sufficient freight.

You can also change the staging base from the pop-up screen:

2211b

The target hex can be any hex but is more effective if an airbase is chosen. All cargo capacity is halved when transporting to a non-airbase hex (i.e. parachuting supplies) and, in addition, only 25-75 percent of the freight air-dropped will arrive in a non-airbase hex.

Eligible air transport units and fighters will be automatically selected and you can add other eligible units if you wish (possible transport groups, including level bombers, that are set to rest, are marked with a cup symbol).

2211c

Note that adding level bombers will cost you one administrative point for each such formation.

Once you have selected a suitable set of air groups, the option to launch the air supply will appear at the top of the screen. You can tab between ordering multiple missions and a single mission. Once you are ready, press LAUNCH and the air supply mission will be conducted.

2211d

Note: This mission will be more successful if (a) there is adequate freight at the airbase with the transport planes and (b) if it targets a

friendly air base (even one you have just captured), if no airbase is available it is better to drop into a clear terrain hex.

When air freight is air transported to a hex, if there is no depot in the hex, a temporary depot is created. Whether a temporary depot or an already existing depot receives the air transported freight, the instant an air transported shipment arrives in a hex, a special distribution takes places of freight from the depot in the hex. This special distribution is of supplies, fuel and ammo only (no replacements) and goes to units in the hex or adjacent to the hex.

If there is already freight in the depot, then some of this existing freight may be distributed out along with the freight that was dropped. It is much more efficient to transport freight to a hex with an air base unit than to a hex with no airfield. If there is no airfield, it is better to drop in clear than in worse terrain. Temporary and isolated depots are not allowed to convert freight into vehicles from the pool. They are not allowed to distribute replacements during the logistics phase, but can replenish units in the pocket with them during the logistics phase using standard non-vehicle methods as well as by using any vehicles already in the depot or vehicles requisitioned to the depot from units in the pocket.

Temporary depots created under this routine remain until the hex is linked to a supply source, at which point the temporary depot is disbanded.

Non-transport aircraft have their cargo capacity halved when performing air transport. In addition, It also costs one AP to assign a Level Bomber to an air transport mission (whether set to Single or Multiple Missions). Level bombers pay four times the normal miles flown when they fly air transport missions.

22.5.2. Air Transport of Non-Motorized Units

Select the transport unit mode (F9) and select Unit from the tabs.

You can select a suitable air base either by scrolling down the list of airbases or right click on an airbase on the map. You will also select the target airbase where the units will be landed.

2211e

Once you have selected a suitable airbase the possible units are shown together with their load cost.

To be eligible, a combat unit must be either in a hex with a friendly air base unit or adjacent. A unit must have at least 1 MP remaining in order to be air transported.

If a non-motorized unit has ground elements that cannot be air transported these will transferred into combat units in or adjacent to the hex with the air base unit that the unit flew from. If there are no eligible combat units, then the ground elements will be

transferred back to the production pool. Any vehicles and excess supply will be transferred to the air base unit that the unit was stacked with prior to being air transported.

Once a unit has been selected, left click on the intended destination. As with freight transport missions suitable air groups (and escorts if any are available will be selected). If insufficient transport capacity exists to move the unit in a single operation then air transport of non-motorized units can be conducted in up to 2 sorties. If more than 2 sorties would be needed, the unit cannot be air transported.

The computer does not account for possible combat and operational losses when figuring the number of sorties required.

22.5.3. Air Dropping Airborne Combat Units

Select the transport unit mode (F9) and select Airborne from the tabs. Airbases with eligible brigades or regiments (23.9.1) will be shown and split between their airbases. This routine is used both for ordering the actual drop and setting the target hex of any eligible airborne units. In the example below, the Soviets have airborne brigades at two locations (Glubkoe and Kacha).

2211f

If insufficient air capacity is not available then the load cost/capacity will show in red.

Click on LAUNCH AIRDROP and the mission will be executed and the mission will appear as a battle report.

Airdrops are a special type of air transport that requires several turns of preparatory time before they can be conducted. Normal airborne drops are executed during the player's movement phase. Airborne drops in support of an amphibious invasion are executed after the enemy player's logistic phase just prior to the execution of the amphibious invasion in the amphibious phase.

> ***Airborne target hexes can only be set in the movement phase, not the air planning phase.***

The combat unit must begin the process in a hex with a friendly air base. The air drop mission will be conducted only by transport air group units. The airdrop of airborne combat units has to be the first and only mission conducted by a transport air group unit in a turn. Once a transport air group unit has used miles for any other purpose, it will be unavailable for airdrop of airborne combat unit missions.

Air drops are not allowed in mountain and impassable hexes. They are allowed in all other terrain; although air dropped units will take more losses during a drop into more congested terrain (such as forests or rough terrain or urban centres). Airborne

units can drop onto a hex already containing friendly units as long as they do not exceed stacking limits, in which case they will scatter to an adjacent hex.

Preparation Points accrue in each friendly logistics phase equal to (100-current prep points)/2, with a minimum per turn gain of 20, and a max prep point value of 95. Airborne units must be on an airbase to set a target.

> ***Note this does not have to be same airbase hex as when it first started to prepare for the mission. Moving between airbases allows a unit to preserve its preparation points.***

Airborne units may not order an airdrop unless they have at least 50 prep points.

Airborne landings that are within 8 hexes of a supplied friendly unit (traced over land hexes) take place immediately upon selecting the Drop button. Airborne landings that are supporting an amphibious landing (i.e. don't qualify as being within 8 hexes of a supplied friendly unit but are within 1 hex of a hex that has an ordered as the target of an amphibious invasion) are executed after the enemy player's logistic phase just prior to the execution of the amphibious invasion in the amphibious phase and will automatically be a night drop.

> ***Remember you must order the amphibious invasion before ordering an air drop that will be in support of the invasion.***

An airborne unit that drops and can't trace to a friendly hex is immediately considered isolated and will surrender if forced to retreat.

The air drop of airborne units will result in additional interdiction added to the drop hex and adjacent hexes.

22.6. RAIL REPAIR MOVEMENT

Friendly rail line hexes must be undamaged in order to be used for strategic rail transport and the transport of freight. Rail line hex damage ranges from one to one hundred percent, but even one percent damage will prevent the hex from being usable for unit strategic rail movement and transport freight by rail.

A change in hex control usually results in an automatic one hundred percent damage to that rail line. The exception to this is rail hexes in the Baltic region that maybe captured intact during the first three turns of a game starting on 22 June 1941 (11.4).

A player can view the status of the rail network by selecting the map information tab rail damage info button. The actual percentage of rail damage can be viewed in the particular hex pop-up rollover text.

Damaged rail line hexes can be repaired either automatically by special on-map construction type support units or manually by the player through the use of rail repair headquarters units.

22.6.1. Automatic Rail Line Repair

Repairs will be made during the logistics phase as headquarters units automatically detach appropriate construction units and send them to damaged rail line hexes (21.6.1). These units will tend not to repair rail hexes adjacent to a rail repair HQ.

> ***Game Play Tip: For the most efficient use of detached construction and labour support units, they should only be manually returned to their headquarters unit if the player believes they are in danger of being attacked or isolated in their current position.***

22.6.2. Manual Rail Line Repair

Players may also repair rail lines by manually using rail repair HQ units. Players must manually move rail repair HQ units and designate which hexes they will be repairing during a turn.

In order for an rail repair HQ unit (21.11.1) to use its special ability to repair rail hexes, the player must manually move the unit into a hex that is suitable for repair, and then select the RRC value that will appear on the rail repair HQ unit in the unit bar if the unit has enough MPs to perform the repair. Selecting the RRC number will set the damage of the hex to one percent, and this last point of damage will automatically be repaired during the player's next logistics phase.

2212

Designating a hex to be repaired expends movement points. The number next to the RRC indicates the MP cost to the rail repair HQ unit to repair the current hex. If the rail repair HQ unit is not in a location that it can conduct a rail repair operation, the RRC number will display a '-' instead.

The hex to be repaired must be adjacent to another undamaged hex or be a hex that has been repaired during the current turn. This could allow the player to double up repairs and repair one track a long way in one turn. If a rail hex is not eligible for repair, the RRC will not display in the rail repair unit's info area.

The MP cost of manual rail repairs are based on the unit's RRV: RRV1=4MP per hex; RRV2=3MP per hex, RRV3=2MP per hex; and, RRV4=1MP per hex.

> ***Note: RRV is based on the number of construction and labour support units attached to the rail repair HQ unit and will decrease if attached support units are removed. Players can manually disband support units from a rail repair HQ unit, but there is no mechanism,***

automatic or manual, to transfer additional support units into a rail repair HQ unit

There is no limit on the number of hexes that can be repaired by a rail repair unit other than the MPs the unit has to expend.

22.6.3. Rail Repair HQ Unit Movement

This requires the F1 key to be selected. Move the Rail Repair HQ unit into a hex that is suitable for rail repair using tactical movement. Select the RRC (Rail Repair Cost) number that will appear on the Rail Repair HQ unit in the unit bar if the unit has enough MPs to perform the repair.

Selecting the RRC will set the damage of the hex to one percent, and this last point of damage will automatically be repaired during the Rail Repair segment of the player's next logistics phase.

Designating a hex to be repaired expends movement points. The number next to the RRC indicates the MP cost to the rail repair unit to repair the current hex. If the Rail Repair HQ unit is not in a location that it can conduct a rail repair operation, the RRC number will display a '-' instead.

22.6.4. Rail Repair from a Captured Port

Note that rail lines in a port can be repaired and then extended from the port, even if the rail line is not directly connected to a NSS. However, rail capacity on this isolated line will be limited to that provided by its own network of railyards.

23. GROUND COMBAT

2300

Focus:

This section explains how to ground combat is conducted in WiTE2

Key Issues:

- How Combat Values are calculated and their effect on combat;
- How Combat Values are modified by leadership, terrain and weather;
- How Combat Values might change during the combat resolution;
- The importance of Combat Preparation Points and combat;
- How Support Units are committed to combat;
- How Combat Units in reserve mode are committed to combat;
- The effect of combat on Ground Elements;
- Combat Casualties;
- Air drops and Combat;
- Displacement Moves and their consequences;
- Special rules for Isolated Units

Ground combat takes place in the ground phase and is represented by combat units of the phasing side expending movement points to attack enemy units. The resulting battle can include Air Groups from both sides providing ground support or interception, the commitment of attached support units, and the commitment of nearby combat units in reserve status. The actual fighting takes place between the individual aircraft and ground elements attempting to fire and hit each other in order to disrupt, damage, or destroy.

Terrain and fortification level, air interdiction levels, leader initiative and combat rating, unit morale, ground element experience and fatigue, ammo status, and the type of attack all play a role in the determination of the initial and modified Combat Value as well as how the battle is fought. At the conclusion of combat, the modified Combat Value ratio determines whether the defender holds or is forced to retreat, which may lead to rout, shattering or surrender, resulting in additional losses from retreat attrition.

Depending on the outcome and odds ratio, defending units may have their movement points for their next turn reduced and combat delay may increase the movement cost of attacking units moving out of the battle hex.

Errata 01.02.06/01.02.08

These patches introduced some changes to the combat system. The primary effects are:

The likelihood of AFV losses was reduced

The effectiveness of high experience artillery has been increased (as they have a chance to gain extra fire chances during combat)

23.1. COMBAT VALUE (CV)

All ground units have a combat value (CV) that is used to determine the results of a battle. The unit CV is equal to the sum of the individual CV's for each ground element in the combat or support unit. The CV is representative of the ability to take or hold territory, often referred to as "boots on the ground." Thus the CV ratings of ground elements are weighted toward infantry and AFV ground elements, while artillery and other guns, though they have good firepower, tend to have low CV's.

The CV in Gary Grigsby's War in the East 2 is a calculated value that can only provide players an idea of the combat ability of the unit. This is partly due to FOW, partly due to the possibility that additional formations may join in a battle and partly as each battle will disrupt (or more) a variety of elements and each such element is then subtracted from the final CV score.

Displayed Unit CV's are determined by a complex formula that takes into account the different ground elements making up the unit as well as unit morale, experience, fatigue, leadership and supply. CV values displayed for units are non-random approximations of what in combat is a series of die rolls and thus somewhat random values, so no single CV can be more than a guide to how the unit will perform in any particular combat. When Fog of War (FOW) is enabled the accuracy of estimates of enemy CV will be further degraded at lower detection levels (10.2).

The elements that go into calculating the CV are set out in annex 34.4. Elements may be more or less effective than this notional value. For example, each heavy tank contributes a value of 9 but a late war IS-2 or King Tiger will be far more effective in combat than an early war KV-2. Equally, in 1941 both the Soviet BT-7 and T-34 are medium tanks but the latter is far more effective.

This may not affect the combat result (hold or retreat) but may have a major impact on the losses incurred.

23.1.1. Initial and Modified Combat Values

At the beginning of combat the initial CV is displayed on the combat resolution report and then, after combat is finished, the resulting modified CV is displayed in the battle report. The final ratio between attacker and defender modified combat values is used to determine whether the defenders held their position or will be forced to retreat, rout or shatter (23.10).

2301

The combat value displayed on the counters and shown as the initial CV in the combat resolution window can be radically different from the modified CV shown at the end of the battle, not only due to combat losses, but due to the many random factors and leader rating checks that occur to determine the modified combat value. Also artillery and air attacks in the early stages of a battle may disrupt, damage or even destroy Ground Elements and those elements are then not available for later in the battle if the attacker closes to close quarters.

In the example above both sides saw significant loss of at-start combat values. For the German defenders a major reason is the loss of the fortifications as the battle progressed due to the amount of Soviet artillery present. On the Soviet side, substantial numbers of elements were disrupted or damaged in the assault.

If the show details option is chosen, that screen will expand to give an overview of how this happened. More details are available in the other tabs (37.1)

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In addition, note that calculated CV's are fairly large numbers, so for ease of visualization the CV displayed on the unit counter on the map and in the unit bar are divided by 100 and rounded down, while the unit CV's displayed in the combat resolution display have been reduced by a factor of 10 and rounded down. The CV displayed on a unit counter will not be displayed as less than one unless it is a HQ, depleted or routed unit, but due to rounding, on-map units with a CV of one as shown on the map could have an actual CV that ranges between 1 and 99.

Errata - Undocumented rules:

In addition to the bonus for mountain units (38.4.1), ski units will have their combat value (CV) doubled in snow hexes and tripled in heavy snow hexes and are not affected by the weather CV modifiers for snow and heavy snow.

23.1.2. Zero CV Units

To reflect their inability to participate in ground combat, some ground units will have a combat value (CV) of zero and will perform an automatic displacement move (22.3.5) if an enemy combat unit moves adjacent unless they are stacked with a friendly combat unit with a CV of at least one.

A unit with a CV of zero will not participate in combat, but may take losses due to being forced to retreat or displace.

Headquarter units will always have a combat value (CV) of zero. Units in a routed or depleted (actual TOE of ten percent or less) state will also have a CV of zero.

Note that there are instances, such as if a unit becomes depleted during the air execution phase, where a zero CV unit can end up next to an enemy unit and not automatically displace. Displacement will then occur when a different enemy unit moves next to such a zero CV unit.

Units embarked on ships moving by sea transport (24.3) in water hexes can move adjacent to enemy ground units regardless of their notional CV value.

23.2. COMBAT PREPARATION POINTS AND COMBAT

Combat preparation points (CPP) reflect the advantage of allowing units to rest and plan before they enter combat. While the obvious advantages apply to the attacking side, units with a high preparation value also gain defensive advantages.

You can also see the combat preparation points of units in the Commanders Report.

23.2.1. Gaining Combat Preparation Points

CPP are gained at the end of the friendly movement phase. All units will gain one CPP for each 24 unused SMP. If units end the turn neither adjacent to the enemy nor in a hex that was not friendly controlled at the start of the turn then they will gain triple the number of CPPs. Note that no unit can ever have more than 100 CPP.

> ***If at all possible keeping units in friendly controlled hexes at the end of the movement phase and out of contact with the enemy will allow units to build up and retain CPP more efficiently. Equally trying to end a phase with at least some CPP is essential to regain lost CPP.***

Units attached to a Soviet Front or Axis Army set to Assault Status (21.11.2) will gain one CPP for each 12 unused SMP.

Errata - note that being adjacent to an enemy controlled hex (even if empty of enemy units) will remove the bonus for rate of gain of CPP.

23.2.2. Losing Combat Preparation Points

CPP's will be lost at a rate of one per hex as they move using the tactical movement mode.

Units that participate in an attack will lose half their CPP once the battle is resolved.

If a unit is attacked and forced to retreat it will lose all its CPP. If it is attacked and the attack fails the lost CPP will vary according to the final odds and the intensity of the attack:

- if the odds were >=1.5 to 1, then the defender will lose half their CPP;
- if the final odds were >=1 to 1, the defender will lose one quarter of their CPP;
- if the final odds were less than 1-1 the defender will lose 10% of their CPP.

A SU gains or losses CPP according to the actions of the unit they are attached to. In addition, if a SU is re-attached (either to a different HQ or to or from a Combat Unit) it will lose 50% of its existing CPP.

Units sent to the National Reserve will also lose all their retained CPP.

Errata 01.02.41:

The loss of combat preparation points (CPPs) by attacking units, instead of always being a 50% reduction in CPP, is now based on the type of attack and the final combat odds:

Deliberate attack

<20 to 1 odds – 50% reduction

>=20<35 to 1 odds – 40% reduction

>=35<50 to 1 odds – 30% reduction

>=50 to 1 odds – 25% reduction

Hasty attack

<20 to 1 odds – 50% reduction

>=20<35 to 1 odds – 35% reduction

>=35<50 to 1 odds – 20% reduction

>=50 to 1 odds – 10% reduction

When the sub units of an Axis Division or Soviet Corps reform into the larger unit, the unit with the lowest CPP value is weighted as if it was two units, when calculating the unit CPP. Example: When units with 25, 50, and 100 CPPs recombine, the combined unit will have 50 CPPs ((25x2)+50+100/4)

23.2.3. Effect of Combat Preparation Points

Attacking units will have their CV for combat calculations modified by the number of CPPs they possess if they are attacking. Every 1 CPP adds 1% to the final CV so a unit with 100% preparation points will have their attacking CV doubled. In effect, CPPs primarily affect the final combat odds – and thus the chance of winning or losing a battle.

In addition, CPPs affect the chances of passing administrative rolls for resupply and to reduce fatigue when in contact with the enemy. In addition, the chances of Support Units being committed and the effectiveness of artillery are also influenced by the number of CPP a unit possesses.

Units with 100 CPP can store up to 150% of their ammunition, supply and fuel needs if they are set at supply priority 4 and do not move.

> ***In effect CPP primarily gives an advantage to a well rested and prepared attacking force. However, the secondary advantages (supply, fatigue reduction and Support Unit commitment) also benefit the defender.***

Note that in addition, CPP can have a substantial effect on the MP of a unit (22.1). If the unit passes a test comparing CPP to a dice roll (higher the CPP, the greater chance to pass) then the movement allowance will not be affected by fatigue, or missed initiative and administration tests. It will still be affected by shortages of fuel, supply or trucks or having been attacked in the previous turn.

> ***The importance of this cannot be overstated. When advancing try to ensure your units retain as many CPP as possible and are in a position to regain as much in the next phase. Overall your units will move faster, especially if there is adequate supply, fuel or trucks.***

23.3. COMBAT SEQUENCE

The following is a general outline of how a battle proceeds. Some steps, such as participation by Air Groups or commitment of combat units in reserve status, may not take place.

- Initiate battle (see section 22.3 regarding use of movement mode (F1) to attack)
- Determine the defence modifiers from terrain and fortification level (23.5)
- Commit support units (23.6)
- Calculate Combat Values (CV) and estimate the odds ratio to determine if reserve commitment might take place (23.7.1)
- Commit reserve units (Defender first, then Attacker) (23.7)
- Calculate initial CV's and odds ratio
- Conduct battle
- Air Mission sub-phase (18.1.3 and 18.1.7)
- Attacker interdiction in the defender's hex will cause damage/disruption to the defending units while defender interdiction in the attacker's hex(es) will cause damage/disruption to the attacker. Each unit in combat is impacted by the enemy interdiction in their hex.
- Both players' Air Groups committed for ground support
- Both players' Air Groups committed for air intercept of enemy Ground Support
- Air to Air combat

- Ground to Air (AA) and Air to Ground combat
- Ground Combat sub-phase with elements being selected by range in a series of rounds
- Calculate final CV and odds ratio
- Determine Winner and Loser (23.11)
- If the Defender lost, determine retreat result (23.12). This could be a retreat, rout and displacement move (23.13), shatter, or surrender and involve retreat attrition (23.12)
- If the Attacker lost, determine retreat attrition on the attacking units (they are considered to be retreating back from the defender's hex).
- Determine reduction in MP's for defending units for next turn (22.1.3).
- Determine any Combat Delay movement costs to be added to the hex. (22.2.7)

23.4. TYPES OF ATTACKS

There are two types of attacks that are distinguished by the amount of time, represented by movement points, spent in preparation and the ability of the attacks to mass forces against the defender.

Hasty attacks expend fewer movement points, but at a cost of reduced combat power. Deliberate attacks expend far more movement points, but allow the fullest application of force. Amphibious assaults (24.6.1) and Air Drop combat (22.5.3) are types of deliberate attack.

23.4.1. Hasty Attack

Defined as "…an attack in which preparation time is traded for speed in order to exploit an opportunity," hasty attacks will generally result in higher attacker and lower defender losses than a deliberate attack.

A hasty attack will require the expenditure of three MP's for a motorized combat unit and two MP's for a non-motorized combat unit. Only a single stack of combat units can participate in a hasty attack and their Combat Value (CV) will be reduced by one half for all steps in which CV is calculated.

Support units can only be committed from eligible headquarters units that have not expended any movement points during the current turn. Note that support units attached directly to combat units will always be committed to battles when the combat unit is a participant.

Errata 01.02.13 - Added a chance for indirect fire weapons to participate in hasty attacks (on both sides). If they participate, their rate of fire will be greatly reduced.

23.4.2. Reconnaissance in Force

Prior to a hasty attack, a special modified CV calculation is conducted and an odds ratio generated. This calculation is not displayed in the combat resolution window and will most likely result in modified CV's and odds ratio that are different than the initial CV's displayed on the counters and in the combat resolution window (37.1).

If this modified CV ratio is less or equal to 2 to 1 (2.01 to one is greater than 2 to 1), than an initiative check is conducted for each combat unit participating in the hasty attack. If all the units pass their leader initiative checks, then the attack is turned into a reconnaissance in force.

If any unit in the attack fails the initiative check, then the attack remains a regular hasty attack.

A reconnaissance in force will result in reduced fighting and losses on both sides and the attacker will have no chance to cause a retreat. This result will be reflected by the combat resolution message "Defending forces were scouted."

23.4.3. Deliberate Attack

Defined as "A type of offensive action characterized by pre-planned coordinated employment of firepower and manoeuvre to close with and destroy or capture the enemy."

Deliberate attacks require the expenditure of sixteen MP's by motorized units and six MP's by non-motorized units (five by type (2) non-motorized units). Multiple stacks of combat units can participate in a deliberate attack against an adjacent defending stack.

Unlike a hasty attack, support units can be committed from eligible headquarters units that have moved during the current turn. In addition, Artillery combat units that have sufficient movement points remaining may participate in a deliberate attack from two hexes away from the defending unit. The artillery combat unit must be selected just as any unit would be selected to add into a deliberate attack.

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In this instance the 4 Artillery Division can join in the attack on the German 7-10 Infantry Division even though it is not adjacent.

If all units launching an attack are artillery combat units that are two hexes from the target hex, then only artillery units from both sides can fire and no support, reserve or Air Groups will be added into the battle for either side.

Game Play Note: The artillery combat units are not actually firing from twenty miles away; the ability to add artillery combat units two hexes from the battle is an abstraction representing the massing of artillery for an intense pre-attack bombardment and the actual firing can take place at ranges as low as 1,000 yards.

23.5. FORTIFICATION AND TERRAIN DEFENSIVE MODIFIERS

In WiTE2, the defender can gain bonuses both from man made fortifications and the terrain. The combat value of defending units can be increased by the fortification defense modifier, which is a combined value that takes into account both the intrinsic terrain and any man made fortification level in the hex.

The combat value of each defending unit is modified by multiplying the CV by one plus the total fortification defense modifier. In many cases, this defensive multiplier will also be increased due to the terrain occupied or in the intervening hexside(s).

23.5.1. Fortifications

All hexes have a manmade fortification value, called a fort level (20.3), that ranges from Fort Level 0 (no benefit) to Fort Level 5 (maximum benefit).

Each fort level gives a +1 Defense Modifier.

23.5.2. Terrain

Terrain can be thought of as possessing an intrinsic fortification level that is added with the manmade fortification level to provide the total fortification defense modifier for that hex.

The terrain type in a hex also determines the average distance (range) for combat between ground elements.

This is important as it reduces the natural advantage that some longer range weapons (such as tank guns) and improves the importance of shorter ranged weapons (such as infantry carried anti-tank weapons). Thus tanks will tend to take heavier losses when attacking infantry in closed rather than open terrain.

The following table summarizes the terrain fortification modifiers:

Terrain Type	Defense Modifier	Remarks
Clear	+0	

Bocage	+2	Dense (1)
Desert	+0	
Sand	+0	
Tundra	+0	
City	+2	
Urban	+6	+3 if Isolated Hex Double Dense (2)
Heavy Urban	+8	+4 if Isolated Hex Double Dense (2)
Light Woods	+1	
Heavy Woods	+2	Dense (1)
Rough	+3	Dense (1)
Mountain	+3	Double Dense (2)(3)
Swamp	+2	Dense (1)
Impassable	N/A	

Notes

(1) In dense terrain, the CV of infantry type ground elements is doubled and the CV of AFV and combat vehicle type ground elements are halved (23.8.3).

(2) In double dense terrain the CV of infantry type ground elements is quadrupled (x4) and the CV of AFV and combat vehicle type ground elements is quartered (x1/4).

(3) Mountain and type 0 non-motorized combat units are more effective during battles that take place in a mountain hex both defending and attacking such hexes.

23.5.3. Combat Intensity in Urban, Heavy Urban or Port Hexes

Any combat that takes place in these hexes will see heavier losses for both sides. In particular attacker losses will be higher and deliberate attacks will always be resolved at close range.

23.6. SUPPORT UNITS IN COMBAT

Support units can participate in combat on either side. Support units that are directly attached to combat units will automatically be added to the battle. Support units attached to headquarters units must pass a series of checks in order to be committed to a battle. Headquarters units can only commit support units to attached combat units. The HQ unit must be within five hexes of attached combat units and be able to trace any path of friendly hexes, which can be in EZOC, to those combat units in order to commit support units during combat.

Note that the actual distance through friendly hexes from a HQ unit to an attached combat unit does not impact the ability to commit support units, as long as the HQ unit is within five hexes “as the crow flies”.

Support units committed to support a cross river attack will be subject to additional disruption (23.8.9).

23.6.1. Support Unit Commitment

The maximum number of attached support units that can be committed by headquarters units to a single battle is 6, with the exception where the defending combat units are in a light urban or heavy urban hex, where the maximum is 18.

> ***Note this limit is in addition to the commitment of Support Units that are directly attached to Combat Units involved in the combat.***

Support unit commitment from headquarters units is not automatic. For each support unit attempting to be committed, the leader of that headquarters must pass an initiative check. The support unit must then pass several checks, with the checks becoming more difficult based both on the number of support units already committed and the total number of non-construction support units attached to the headquarters unit. This means that Headquarters units with large numbers of non-construction support units will have more opportunities to commit support units; however the overall probability of each support unit being committed will be less than if the headquarters units had fewer non-construction support units.

Support units can only be committed if the relevant HQ is five or less hexes from the combat.

The chance of successful commitment will also be affected by the number of vehicles in the unit defined as the percentage of needed vehicles. This will vary as:

- 90+% +2
- 80-89% +1
- 70-79% 0
- 60-69% -1
- 50-59% -2
- 49 or less% -3

The chance of support units being committed can also be increased by the level of fortification in the defending hex. Equally the number of Combat Preparation Points of the units involved in the combat will affect the chances of support units being committed and the effectiveness of any artillery allocated (23.2.3).

HQ units that have moved during the current player-turn will see -1 deducted from the initiative value when determining if an attached Support unit is committed to a deliberate attack.

If the attack is a hasty attack (23.4.1) then only HQs which have not moved can commit Support Units.

Errata 01.00,12 (clarification): For a support unit to be committed to battle, the HQ that the support unit is attached to must be within 30 motorized movement points of the attacking unit being supported.

Errata: Undocumented rules

For a deliberate attack there are some important modifiers. If the attacker (in the current phase) or the defender (in the previous phase) has moved the relevant HQ there is a -1 modifier to the chance of a Support Unit being committed. If the attacker has not moved their HQ in the current turn, then there is a +3 bonus to the chance of a Support Unit commitment.

As a reminder, the relevant leadership value for these checks is their initiative score.

23.6.2. Defender Artillery Special Commitment

Artillery support units attached to a defending HQ unit have priority to be committed into a battle during a special commitment phase. During this round of commitments, defending HQ units have a chance of committing 3 more than the normal limit of

Support Units (so 9 or 21 instead of 6 or 18). After this round, the normal commitment round is conducted.

23.6.3. Soviet Artillery Limitations

Before 1944, Soviet artillery and rocket ground elements (i.e. both those in units and specialist Support Units) will have a notional requirement for only 60% of their ammunition needs. In turn, this will reduce the rate of fire.

Units reporting (directly or indirectly) to a Front set to Assault Status (21.11.2) will have a notional requirement for 90% of their ammunition.

23.7. RESERVE COMBAT UNITS

Combat units in reserve mode may be committed to a nearby battle, both offensively and defensively. The type of attack itself, whether hasty or deliberate, has no effect on the commitment of units in reserve mode. Any Ready combat unit may be placed into Reserve mode by selecting the Ready/Refit/Reserve toggle on the counter or the combat unit detail window (35.2) until Reserve is displayed. Units that move, retreat or rout are taken out of reserve mode.

Reserve units that are committed to combat do not move, but they must have the MPs required to be expended in order to reach the battle hex. The MPs a unit has when it ends its player turn are the MPs available for it to use for commitment as a defensive reserve during the enemy player's turn. Reserve units committed to support a cross river attack will be subject to additional disruption (23.8.9).

During a battle all defensive reserve commitments are made first, and then followed by offensive reserve commitments.

23.7.1. Reserve Unit Commitment

To be committed in defence, a unit in reserve mode must be within 6 hexes of the battle hex. To be committed to an attack, a reserve unit must be within 3 hexes of the battle hex.

A unit in reserve mode may never commit to a battle if it is adjacent to an enemy unit. A unit in reserve mode will never commit into a battle if the initial combat value (CV) odds ratio is over 10 to 1. A defending reserve unit will also never commit into a battle if the odds are less than 1 to 4.

Errata 01.02.41

On map units in reserve mode will not commit in support of a hasty attack.

Units next to enemy amphibious HQ units are not eligible to be committed from reserve.

If the above commitment pre-requisites are met, the unit must then check to see if it has enough MPs to commit to the battle. If it does, then the unit must pass a leader initiative roll to be committed to the battle. The unit must also pass a check based on the MPs to be expended such that Die (MPs to be expended if committed) must be less than or equal to Die (Units MPs).

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In this case the 6th SS Flander's Motorized Brigade entered the battle as a reserve reaction. This is shown on the combat report by an 'R' next to the unit name. Since the Germans lost that battle, its MP is now set to 0 and it cannot take part in any further combats as a reserve reaction.

A unit may participate in multiple battles in the same turn as long as it meets all of the requirements and has sufficient MPs to expend. Defending units in reserve mode that participate in a battle that is lost have their MPs reduced to zero, so will be unable to participate in any other battles that turn.

All reserve combat units committed will suffer a reduction in their combat value if they have a vehicle shortage (23.8.3).

Reserve units may not trace a path to a battle over a ferry hex.

23.7.2. Reserve Commitment and Command Assignment

Units are more likely to be committed to a battle as reserves if they share the same commanding HQ (23.8.6) as the Unit(s) directly involved in the battle.

For the Axis player, this penalty will be reduced if the units either report to another Corps in the same Army or directly to the relevant Army HQ. For the Soviet player, the important relationships are either to be linked to another Army in the same Front or directly to the Front HQ.

In effect, the lower the command battle modifier (i.e. distance to the HQ), the higher the chance the unit will be committed from reserve, especially those units with a command modifier below 10 percent.

23.7.3. Reserve Commitment Limitations due to Unit Size

Corps sized combat units are less likely to be committed offensively as they add one to the leader initiative roll. Brigades and Regiments are more likely to be committed as they subtract one from the leader initiative roll. In addition, as units in reserve mode from one side are committed to a battle, the chance of further commitments to the battle decline, based on the size of the combat units that have already been committed.

23.7.4. Defensive Reserve Unit Special Rules

Defending units committed from reserve may rout if the battle result forces the defender to retreat from the combat. These rules are the same for any other rout (23.12.15).

The AI will never put a unit with morale less than 50 in reserve mode.

Defending reserves are considered to be counter-attacking forces and normally do not get the benefit of fortification levels in combat, though they do benefit from all terrain modifiers that are valid for the hex being attacked. The exception is that reserves committed in defence to fighting in urban hexes will receive the full defensive fortification modifier of both the terrain and fortification levels in the hex.

There are special rules regarding a defending unit's ability to react from reserve into a battle in a city, light urban or heavy urban hex. Any reserve unit within 2 hexes of a battle in a city or urban hex that can trace it's way to the hex and has at least one movement point remaining may be committed from reserve even if the number of MPs to reach the battle exceed the number the unit has remaining.

The unit is thus exempt from the normal distance checks. If the unit commits to the battle, it will expend the normal cost to commit from reserve, but if this is more than the remaining MPs of the unit, the unit will simply be reduced to zero MPs.

Even in the case of supporting urban combat, units can never be adjacent to an enemy unit to react in from reserve and must still pass a leader initiative roll to be committed. In this case, the normal Die (18) die roll used to compare against the number of units committed is changed to Die (36) for light-urban and Die (72) for heavy-urban (instead of Die (18).

23.8. GENERAL GROUND COMBAT RULES

23.8.1. Description of Ground Combat

Ground combat is conducted by an automated tactical combat system consisting of a variable number of rounds where the various ground elements engage each other. In general, the computer first determines the opening range at which combat will take place. This is largely based on defending terrain, with battles in city and urban hexes commencing at shorter initial ranges. The attacker fires first at ranges of 3,000 yards or greater, while the defender fires first at ranges less than 3,000 yards.

Depending on the initial exchanges of fire, the attack may stop before the two sides are fully committed. In this case, the battle report will indicate the range at which the attack 'stopped'. However, when the defending force is less than 1 regiment (1 or 2 battalions), the battle is never stopped due to poor odds (i.e. the range will close to minimum range in every battle).

The next step is to determine **which ground elements will be able to fire**. There are multiple factors involved, including the type of attack (hasty or deliberate), enemy unit detection level (DL), defending fortification modifier, attacking unit morale and supply status (especially ammo), individual ground element experience, fatigue, ammo usage and range of their equipped devices, and leader initiative and ground combat rating (mech or infantry) checks (15.5).

Ground elements that have successfully passed their checks will then **fire their equipped devices once they are within range of an opposing ground element**. The chance to hit, and inflict damage and the number of shots taken, is dependent on the factors listed above and issues such as ground element speed, size, and the firing devices' accuracy, rate of fire, and blast radius against soft targets. For AFV and combat vehicles, additional factors apply such as where they are hit.

Detailed information on the attributes of elements can be found on the Commander's Report Equipment tab (35.8) or the element detail window (37.6).

In addition, Anti-aircraft guns in the attacker's units will not fire 75 percent of the time.

The amount of **ammunition on hand impacts the number of shots** taken in combat. If this is over 100 percent, the combat unit may gain an extra shot. If less than 50 percent, the combat unit will likely have fewer shots than their weapon might allow. Longer range artillery units will fire less often if their ammunition stock is under 75 percent.

> ***Note that having CPP at 100 allows the unit to store extra ammunition.***

Artillery in support units will tend to fire more often, depending on the ammunition stocks on hand. Artillery ground elements in support units and on-map artillery combat units will be more willing to use up their ammunition when they are in a battle than artillery ground elements in other combat units, because the support units and on-map units are less likely to be in additional battles while a non-artillery combat unit must retain some ammunition for other possible battles in the turn.

Low experience combat elements will expend more ammunition when they fire. Defensive fire will be reduced to conserve ammunition if the attacker is relatively very small (roughly less than half the size of the defender). If an artillery element is firing with its non-main gun devices only, only a small amount of the standard ammunition is used.

The **size of the attacking force will also impact the number of shots taken in combat**. This fire penalty occurs in combats where there is a large number of attacking units. The force value of the attacking side is calculated using the following values for each non-support, non-artillery division unit attacking:

- Corps 15
- Division 9
- Brigade 5 (3 if the brigade has less than 2,000 men)
- Regiment 3

Once the force value exceeds 28 there is a chance that elements will not get to fire during combat. Artillery elements are much less affected (and this rule only affects them at closer ranges in combat), and the chance that elements will not fire increases as the force value increases. In general though, adding more units should result in more elements firing, but a lower percentage of the total elements will generally be firing as the force increases. The CV values of the attacking units are not changed by this rule.

Ammunition allocation during deliberate attacks will be restricted to what is needed rather than what is available. Units that start with over 150% of ammunition need should end with more than 50%. In consequence, more ammunition will then be available for direct fire use later in the combat resolution due to this cap on artillery usage.

In addition, bombardment artillery fire will receive a bonus when firing if the enemy (defending or attacking) has more units. This bonus is limited if a side has more than 3 divisions (or equivalents) in the battle, although it increases as more units are engaged, so in most cases it will only cause higher losses to an attacking force.

If the targeted ground element is hit, then the result is determined based on the defending fortification modifier, the defending ground elements speed and armour, and the attacking ground element's device lethality and penetration capability. The result could be no effect, disrupted, damaged or destroyed. AFV ground elements may become damaged during combat due to breakdowns or mines using their reliability scores (37.6).

Any result other than no effect removes the targeted ground element from further participation and they will no longer contribute to the overall combat value in the current battle. In addition, disrupted and damaged ground elements may suffer additional effects depending on which side wins the battle.

> ***Note this rule is one reason why the pre-attack estimated CV can be misleading. A side that is well equipped with artillery, or is backed by substantial ground support, may be able to disrupt and damage sufficient enemy ground elements to change the final odds or perhaps stop an attack before it moves to close range fighting.***

Generally, the range at which firing takes place will decrease for the ground elements such as infantry squads as they manoeuvre to come to grips with the

defending ground elements, though indirect fire and longer range direct fire ground elements may continue to fire at longer range. After all engagements between ground elements are complete, the computer will move on to the next step of determining the winner of the battle.

23.8.2. Initial CV Values.

At the start of the battle, the combat resolution window will display each participating combat and support unit along with its CV in parentheses as well as an overall combat value at the bottom of each side's section.

These initial CV's are essentially the CV displayed on the on-map combat unit counters multiplied by ten. The only modifiers applied to the initial CV's are the fortification defensive modifier and the halving of attacking unit CV's if the attack is hasty. The combat values of the individual units may not add up to the total CV because the total accounts for any loss of CV due to the command battle modifier, while the individual unit value does not. Note that the displayed CV's in the combat resolution predictor window will reflect disruption caused by any cross river attack (23.8.9).

The final overall combat values displayed at the bottom of the screen at the end of the battle may not bear any resemblance to the CV's on the counters as they not only reflect losses suffered during the battle, but have been heavily modified due to numerous random factors.

23.8.3. Combat Value (CV) modification for Ground Combat

Unit Combat Values (CV) are subject to the modifiers detailed below.

The CV predictor that is available as a hex pop up (6.8.2) when the normal or hasty attack symbol appears on the map (indicating an attack can be conducted in the hex) provides the adjusted CV values of the units that accounts for factors such as terrain, forts, dense modifiers, weather, fuel and ammunition shortages

It is not adjusted for the factors in sections 23.8.4 to 23.8.7.

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This value is fogged up for the enemy if FOW is on.

> ***This is a very important tool as it's the only way for the attacker to know how their unit's CVs are going to be impacted by the terrain in the hex being attacked.***

Vehicle Shortage CV Modifier. All attacking and defending units suffer a reduction in CV if they have a vehicle shortage. This penalty is a percentage reduction equal to ((1-(vehicles/vehicle need)) x20). The reduction is multiplied by 2.5 if the unit is motorized. For example, a motorized unit with no vehicles would suffer a 50 percent

reduction in CV, while a 40 percent shortage in vehicles would cause a 20 percent reduction in CV.

The CV modifier for units affected by a shortage of vehicles is reflected in the CV values shown on the unit counters.

However, since it does not impact defending units, unless committing from reserve and since static units cannot attack, this modifier will not impact the CV values on the counters for static units, and will not impact the defence CV value shown for all units (the value shown after the equal sign).

Terrain CV Modifier. The CV values of certain types of elements are modified in terrain designated as dense and double dense.

Dense terrain is Swamp, Heavy Forest, Rough, and Bocage. Infantry type elements are doubled and AFV and combat vehicle type elements are halved in dense terrain.

Double dense terrain is Mountain, Light Urban, and Heavy Urban. Infantry type elements are quadrupled (x4) and AFV and combat vehicle type elements are quartered (/4) in double dense terrain.

Mountain units have their CV doubled in battles fought in mountain hexes, no matter what the weather. There is also a 1.25 multiplier for CV values of non-mountain units that are non-motorized type 0 (no vehicles) for battles fought in a mountain hex.

Units defending in Heavy or Light Urban terrain receive a doubling of their Combat Value when determining the winner and loser of the battle. This doubling is in addition to all other modifiers.

These effects can be summarised as:

- Infantry elements double their CV in Dense terrain.
- AFV elements halve their CV in Dense terrain
- Infantry elements quadruple their CV in Double Dense terrain
- AFV elements quarter their CV in Double Dense terrain
- Combat elements in Mountain Infantry divisions get a 2x multiplier on top of the above in Mountain hexes.
- "Leg" infantry units get a 1.5x multiplier on top of the above in Mountain hexes.
- Defenders in light or heavy urban get a 2x multiplier at the end of combat on top of the above.

- Artillery does not get affected by any of these modifiers.

Weather CV Modifier. Attacking CV values are reduced by the ground weather in their hexes (8.5). The exact modifiers are based on the specific ground weather and road system in the attacking unit's hex and the hex pop up CV combat predictor will reflect these modifiers.

The following table shows the weather CV modifiers:

Weather in Attacking Units Hex	Good Roads	Average Roads	Poor Roads
Light Mud	.90	.80	.75
Heavy Mud	.50	.25	.125
Light Snow	1.00	1.00	1.00
Snow (1)	.90	.80	.75
Heavy Snow (1)	.90	.80	.75

Note

(1) Ski units will have their combat value (CV) doubled in snow hexes and tripled in heavy snow hexes and are not affected by the above weather CV modifiers for snow and heavy snow.

Play note, it is possible that attacking units in different hexes may be affected by different weather modifiers.

Ammunition and Fuel Impact on CV Values. All units with less than 100 percent of their required ammunition, and motorized units with less than 50 percent of their required fuel will suffer a reduction in CV (this penalty is capped at 50 percent reduction in total from these two modifiers).

First a unit loses 1 percent for each 1 percent they are short of ammunition. Next motorized units lose 2 percent for each 1 percent they are short of 50 percent of their required fuel.

Example 1: a motorized unit with 90 percent of ammo needs and 40 percent of fuel needs would have its CV multiplied by .9 and then .8 (or .72, thus losing 28 percent of its CV value). Example 2: The same unit but with 90 percent of ammo and 25 percent of fuel needs would have its CV multiplied by .5 as .9 times .5 is less than .5 which is the maximum combined penalty.

These CV reductions are accounted for in the printed on-map CV values.

23.8.4. Impact of Poor Weather on the Combat Value

The worse the weather, the more likely it is that some combat elements will not be available during the actual combat. This is particularly likely in blizzard and heavy rain turns.

In effect, if attacking under these conditions it is worthwhile to try to have higher notional odds before committing your forces as a number of elements will not be available during the actual battle.

23.8.5. Leadership, Experience and Morale and Combat Value Modifications

There are many factors that go into determining the modified combat values used in deciding the winner and loser in a ground battle. One of the most critical is the leader combat (mech or infantry) rating check.

A successful check can result in the CV of the combat unit being doubled. Several failed checks can result in the CV being halved. As with other leader checks, a failed check by one leader will allow the next leader in the chain of command to attempt a combat rating check, albeit at a reduced chance of success (15.5.3).

Units with low experience elements will also find that a portion of their notional cv will be lost as the combat progresses due to a failure to commit rather than combat losses.

> ***Both these factors will particularly affect the Soviet player in 1941. A stack of units may appear to have a reasonable CV but failures of leadership, or inexperience, will mean they are weaker than they appear at first sight.***

Units with morale of 50 or less that have no hex to retreat to and that are not in a port with less than 100 percent damage may suffer a very large CV reduction.

23.8.6. Command Chain CV Modifications

In order to simulate both the difficulty of coordinating attacks with units from different organizations and the ability of an attacking force to exploit the boundaries between different defending commands penalties will be applied if units reporting to more than one HQ are involved in the same combat.

For each combat, each side will have a designated commanding HQ unit. Generally this commanding HQ unit is selected because it has units with the most Combat Value (CV) directly attached to it in the battle. Units not attached directly to the commanding HQ unit will suffer command battle modifiers that will reduce their CV for the battle.

These penalties will vary according to how distant the respective commands are in the overall Order of Battle. So units belonging to a different Axis Corps HQ but in the

same Army will have a 10% penalty (the equivalent for the Soviets is a different Army HQ but in the same Front). A unit that reports to a corps in a different army in a different army group will face a more substantial penalty.

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In this example, the two units are probably the worst combination possible. Not only do they not share the same Corps HQ, their respective Army HQs report to different Army Groups. Note that the weaker unit has the penalty applied.

The greater the number of HQ units that the unit must trace through to reach the commanding HQ unit, the greater the modifier.

In addition, units that are attached directly to a high command (type 1) HQ unit suffer an additional 20 percent modifier, and those that are attached directly to an Army Group (or Soviet Front command) suffer an additional 10 percent modifier (these are shown as part of the total modifier percentage displayed) in addition to any penalty for coming from a separate command.

> ***Note this rule rewards trying to organise your overall Order of Battle so that units from different commands are not mixed up. If this cannot be avoided, then try to organise your forces so that units likely to share a mission (defending or attacking) report to closely related HQs.***

23.8.7. Combat Value Modifications during combat

In addition, as noted above the CVs can be modified as the battle continues. Elements that are disrupted or damaged will be removed from the calculation as well as those that are destroyed. In addition both engineers (especially in a deliberate attack) and heavy artillery will reduce fortification values during combat thus reducing the defensive CV modification derived from those fortifications (20.4).

> ***In effect, ensuring an attack is well supported by air power, heavy artillery and combat engineers can make a real difference in terms of the chances to actually capture a well defended hex.***

23.8.8. Unready Combat Units Attack Restrictions

Combat units that have the sum of their current morale and actual TOE percentage equalling less than 90 are in an unready status, which is reflected in the unit bar when the unit is selected. Unready combat units may only attack if they have not expended any movement points during the turn. With the exception of unready artillery combat units firing at a distance of two hexes, this means unready combat units must start their turn adjacent to an enemy unit in order to be eligible to attack.

Unready combat units have their attack CV reduced by 50 percent.

23.8.9. Cross River Attacks

Combat units attacking into a hex through a non-frozen (ice level four or less for minor rivers and ice level 7 or less for major rivers) minor or major river hex sides are required to expend additional movement points above the normal attack MP cost (38.7.6). All ground elements that cross the river to attack are subject to a disruption check prior to the initial computation of combat value.

Ground elements with longer range indirect fire devices will normally not check for disruption while infantry and combat engineers most likely will check.

Infantry type ground elements will tend to suffer approximately the same amount of disruption for both minor and major rivers, but AFV and combat vehicle ground elements will suffer more disruption in crossing a major river than a minor river.

Since disrupted combat units do not contribute to overall CV, players can anticipate a reduction in overall CV of up to half for minor rivers and up to two-thirds for major rivers prior to any other modifications.

23.8.10. Attacking from a Ferry hex

If the phasing player can enter a ferry hex (7.3.5), then they can attack from that hex. If the attack fails, the attacking units will be retreated from the ferry hex.

23.8.11. Beachhead Bonus

Defending units on or adjacent to a temporary port hex will have their end of combat CVs multiplied by 4 when determining whether they retreat. If they hold, but would have retreated had they not received this bonus, they will instead suffer additional losses to reflect their fighting to the last to hold the beachhead. This will only apply if they are also in a hex that is next to a sea hex.

23.8.12. High Intensity Combat

Errata 01.02.24

Combat in Heavy Urban, Urban and Port hexes has been amended to reflect the particular demands of combat in these locations.

Generally, the new combat routines will generate substantial losses for both sides (due to the number of elements engaged).

If the attack fails, the attacker will not suffer any losses as they retreat.

If a deliberate attack fails, versus a defender in a non-isolated hex in urban/heavy urban/port, this adds 9 to the combat delay. A hasty attack in this case adds 5 combat delay. In a change to the original rules on combat delay

(22.2.7), if a hex has a combat delay of 9 (the maximum possible) it cannot be attacked again.

Bombardment attacks by on-map artillery units do not generate combat delays.

In addition, units that are isolated will suffer additional penalties in high intensity combat. Note that it is possible for the hex to be isolated according to 23.14.1 but not the unit if it has received sufficient air supply (23.14.3) or if the hex has only been isolated in the current player turn (it must remain in this state for a logistics phase to affect the unit(s)). If the unit is not isolated then no additional penalty applies.

23.9. AIRBORNE OPERATIONS AND COMBAT

Airborne operations can result in combat if the drop hex contains enemy units. In other instances the immediate effect may be seen more as attrition losses suffered by the airborne units and increased air interdiction in the drop hex and the surrounding hexes.

Airdrop scatter - Airborne brigade and regiment size units that are dropped have a 2/3 chance of scattering 1 hex. If they scatter into a water hex they are destroyed. No more than one airborne unit will scatter onto any given invasion beach (i.e. scattering airborne will not stop a two unit invasion from coming ashore). There will be a flak combat report in the original drop hex, and then a drop combat report in the hex the unit scatters to.

Airdrop fatigue - Broken down divisions will suffer 50 additional fatigue points when airdropped. Independent brigades will suffer 25 additional fatigue points when dropping.

23.9.1. Units that can be airdropped

Only brigade or smaller units may drop.

For the Axis, only the 7th Flieger Division, 1st FJ Division, 185th Folgore Division and the Ramcke brigade can be dropped (in each case the divisions must drop broken down into the component regiments).

Soviets may drop any airborne brigade.

Units must have average unit experience of at least 39.

23.9.2. Air Drop Combat

When an airborne unit is dropped on a hex with enemy units, a special form of deliberate attack is resolved. In this combat the defending terrain is not considered

for determining the combat value (CV) of the defending units. Also, the defending units have their CVs divided by 3 to simulate surprise.

If the defending units lose the battle they will be retreated and the attacking units may either land in the hex or scatter to an adjacent unoccupied hex. If the defender holds, then the airborne unit will scatter to an adjacent unoccupied hex.

If forced to retreat and there is no empty hex to retreat to, the airborne unit will be destroyed. If the defending hex is a city, urban or heavy urban hex, or if it contains a fort level greater than 3, or if the hex is also the target of an amphibious invasion, then the chance the defending unit will retreat is greatly reduced.

Airdrops on HQ units may result in the attacking airborne unit being forced to retreat. In this case, a normal battle with casualties is not fought, but there is an odds calculation and retreat losses.

Airborne drops into an empty hex may be engaged by nearby units in reserve mode. After the combat, if the airborne unit has lost the combat, it will be destroyed.

Note that an airborne unit can lose a battle to airfield ground crew, flak attached to a city or a HQ unit. In this instance no units will appear listed for the defender in the combat report.

23.9.3. Air Drop Attrition

Airborne units conducting an air drop will undergo a series of checks to determine attrition losses. These checks are based on the type of terrain in the drop hex, the number of preparation points the unit had accumulated prior to the drop, presence of other units, proximity to an amphibious invasion hex, the experience of the unit and whether the drop is at night or in bad weather. If the drop hex contains enemy units, a special deliberate attack combat will take place.

First the unit may have elements damaged or destroyed due to losses to the air transports while en-route to the drop target hex. Next, there is a chance an element not yet damaged will be damaged during the drop based on the terrain in the target hex. The relative damage caused by each terrain type is as follows:

- Clear and Desert: 1
- Sand: 2
- Bocage: 3
- Tundra: 5
- Light Woods: 10
- Rough: 20

- Swamp and Forest: 25
- City: 40
- Light Urban: 50
- Heavy Urban: 60

It is quite possible to see units taking percentage damage due to the terrain equal to roughly one half of the relative number of elements. So landing in rough could lead to 10 percent of the dropping units being damaged just from the terrain (plus or minus a sizable amount).

In addition, elements that are not yet damaged may be damaged based on the unit's number of prep points if random (200)<(100-prep points).

Finally, once units end up in their final hex (either the drop hex or after a retreat if they lose a battle in the drop hex), any undamaged elements at this point must conduct an additional attrition check. First the following is added for each target hex or adjacent hex to the drop to arrive at an attrition value (AV):

- +15 if water hex or enemy unit (of any kind) in hex (+6 if hex is adjacent hex)
- If not item 1, then +10 if the hex is the target of an invasion (+4 if hex is adjacent hex)
- If not 1 or 2, then +5 if there is a friendly unit in the hex (+2 if hex is adjacent hex)

For each element in the airborne unit, a check is done and if random (200+experience of unit) < AV the element is damaged.

There will be extra attrition to air drops at night and during bad weather. At night, if random (10)>rnd(pilot skill which is experience modified by fatigue) then ground elements being transported by that aircraft will be damaged. Weather based attrition will occur to ground elements if random (100)<weather effect*5 where clear=0, rain=1,heavy rain=2, cold=3, snowfall=4, blizzard=5.

23.9.4. Air Drop Special Air Interdiction

Interdiction created by airborne regiments and brigades is 8 points per hex. This affects the drop hex and every hex adjacent when they drop. This additional air interdiction abstractly represents the confusion caused by airborne landings and the impact of paratroopers scattering into other hexes during the drop.

23.10. COMBAT RESULTS AND BATTLE LOSSES

23.10.1. Combat Result Effects

A ground element that is hit by enemy fire can suffer one of three adverse effects (or can escape with no damage).

Disruption: Disrupted ground elements can no longer fire and they will not contribute their combat value to the final CV computations. At the end of the battle they are set to normal but with additional fatigue so will take part in subsequent battles that turn but with progressively less effect (23.8.3).

Damage: Damaged ground elements are out of action and can no longer fire or be fired at. They no longer contribute to a unit's CV, and can be destroyed or lose their devices as a result of the determination of which side won or lost the battle.

Destruction: Destroyed ground elements are eliminated immediately, though men and devices may be captured and there is a ten percent chance that the manpower associated with that ground element will be disabled instead of being killed in action. Approximately 1 in every 25 men from destroyed elements will be captured as a result of combat.

In addition to the effect on Ground elements, any generic organic vehicles in the unit can be damaged or destroyed as a result of combat.

If a combat or support unit surrenders then all the elements are eliminated but some men and equipment might be deemed to have escaped (and will be placed in the pool). Equally, if the unit has shattered, again all the elements are treated as destroyed but a proportion of the manpower will actually be retained. This information can be seen in the Commander's Report (35.6)

23.10.2. Battle Losses

Battle losses are reflected in the Combat Resolution Display (37.1). Losses shown in the actual battle report are derived from the assumption that all the men and equipment in destroyed elements are killed or destroyed.

> ***Note that the battle loss screen can sometimes show more losses (especially in a surrender result) than appeared to be present in the battle. Most likely reasons for this are the loss of AA or Construction Units attached to a city or if there were additional routed or depleted units in the hex (these will not have taken part in the actual battle but may take losses as a result of the battle).***

Battle losses are also captured on the losses screen (36.2).

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The ‘Last Action’ column will reflect the data that was shown in the battle report.

In addition, as the phasing player moves combat units and causes units with zero CV to displace the “Last Action” will continue to increase until the next battle zeroes that column out and the values start again. Note this column only reflects elements that are destroyed as part of these activities (so not damaged or disrupted).

In some situations this might be an overstatement as a higher proportion of the manpower and weapons of elements destroyed this way (in effect, by being forced to retreat) will be returned to the pools.

Note that the “Last Action” column is zeroed out when the phasing player first goes to the map area at the start of a turn, and just before each battle.

The two Permanent Losses columns (current turn and total) seek to convert how the game engine handles losses (by element) to a calculation of losses in terms of manpower, guns, tanks and planes. Each time an element is destroyed a proportion of the manpower etc. may be treated as killed, disabled or captured (in part, depending on the circumstances of the battle (23.10.1).

> ***So while the immediate reports use the relationship of destroyed element to indicate all the components are killed, the permanent lost calculations take into the possibility that some escaped (and were returned to the pool). Equally some parts of a damaged element might be later treated as KIA. In the main, the battle report and the last action column will tend to over-estimate the permanent losses from a battle.***

Some losses are treated as disabled and over time one percent of the men listed as disabled are returned to the manpower pool per turn. Equally one percent of the total are converted into KiA to reflect the severity of their wounds. Thus, the disabled column will alter even if no other actions take place.

Note that although some disabled troops will return to duty, since their devices were destroyed this might be slowed and until they have returned to duty they still count for victory purposes (used in most scenarios, 29.2) and are reported as “permanent” losses.

Depending on the relative flow of new battlefield losses and earlier losses (who are more likely to have recovered and be returned to their units) then the ‘disabled’ entry on the loss screen may be negative (i.e. more men recovered from being disabled that turn than became disabled).

In combat, units can also take damage or disruption from enemy interdiction in the hex before the ground elements start engaging. The losses from interdiction during a combat will be listed in the combat report.

Losses caused by bombing in the air execution phase are shown at the end of that phase and carried forward into the current turn total. However, the displayed losses can be limited by phase using the options at the bottom of the screen:

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23.10.3. Damaged and Disrupted Elements

If an element is damaged then it might be subsequently either fully recover or be lost. Damaged manpower is best seen as men with significant wounds that require a degree of hospitalisation but most will return to their unit. The chances of being able to recover and repair damaged vehicles will in part depend on which side won the relevant battle.

Elements disrupted in a battle will recover at the end of that action. Some extra fatigue will be assigned to reflect the impact of light wounds or limited damage to equipment.

Note that elements disrupted in the air phase recover for the ground phase (19.4.6) but have additional fatigue as a result.

23.10.4. Impact on Morale

If a unit loses a battle it may also lose some morale. This can be up to 3 points if the unit fails both a check against its leader's morale rating and its own morale value.

Units that win a battle may gain 1 morale point, again relying on their leader morale value.

Note the chances of both these events happening will alter (sometimes dramatically) if the morale level is set over or under 100 when the game is set up.

23.11. DETERMINING THE WINNER IN GROUND COMBAT

At the end of all combat, the modified combat values for both sides are calculated and compared as a ratio (attacker/defender) to determine the winner and loser of the battle. If the displayed modified CV ratio is 2:1 or greater, the defender will be forced to retreat.

Note that due to rounding in the combat displays, odds of less than 1:1, for example 1:1.001, will be shown as 1:1.0. All of the defending units in a hex will be forced to retreat if the battle is lost. The attacking force will win the battle if the defenders are forced to retreat. The defenders will win the battle if they hold their ground.

The displayed modified combat values are rounded down to a whole number, but the odds ratio uses the actual numbers, which are in the 1,000's. As an example, a zero could be anywhere between an actual 0.0 and 999 and a 1 could reflect a value between 1,000 and 1,999. Occasionally there will be a zero in the odds ratio,

meaning that the unit was so weakened during the battle that its real (not rounded down) modified CV was zero.

23.12. EFFECT OF DEFENDER RETREAT RESULT

When defending combat units are forced to retreat, each unit first suffers retreat attrition. Ground elements in the unit have a chance of being damaged or destroyed, and some ground elements may be captured, with damaged ground elements being much more likely to be captured.

Retreating over unfrozen minor river hexside causes double retreat attrition, while retreating over an unfrozen major river hexside causes triple retreat attrition.

Next, each unit must check to see if it shatters or routs. A unit that is in Supply and forced to retreat may shatter at the conclusion of the combat instead of retreating due to a combination of low morale, experience and a low TOE percentage and is then no longer considered a viable combat unit.

A combat unit that is in supply and forced to retreat will rout at the conclusion of combat if the final combat value odds ratio is greater than the morale of the unit. For example, at the conclusion of a battle, a unit with morale of forty will rout if the attacker's adjusted CV is greater than forty times the defender's adjusted CV. The exception is that if a unit has a valid hex to retreat to, then it will not be susceptible to a rout as long as it passes a check where the unit Morale is greater than or equal to 40+Die (15).

> ***Note this means that units can rout as a result of combat even if they otherwise have a valid retreat path.***
>
> ***As a practical play note this rule will particularly affect vs AI games if the AI's morale is set to 120. Attacks by the AI are more likely to cause extra disruptions, lowering the defender's cv and increasing the chance of a rout.***

2309

This provides an example of this AI bonus. Here extra Soviet elements were disrupted at the end of the combat resolution and as a result the final odds exceeded the Soviet morale – converting a retreat into a rout.

An exception to this is if the unit is a division or smaller unit (less than 9 stacking points) that is defending alone in a battle (no other units in the hex or committed from reserve). In this case the morale check needs to be greater than or equal to 40+Die (30). This means that normally units with morale that is 55 or greater will never rout, however a division (or smaller unit) defending alone with morale between 41 and 55 will be more likely to rout, and between 56 and 70 will still have a chance to rout.

Units that rout will perform a displacement move (23.13) instead of a normal retreat. Support units suffer the same fate as that suffered by the unit they are attached to, although support units never remain routed.

Ground elements from units that shatter or surrender may be captured, or may escape. Ground elements that escape are returned to the production pool and will be listed as escaped in the battle tab of the commander's report (35.6). Some units that shatter or surrender will attempt to reform. Isolated combat units that shatter suffer the effects of surrendering instead of the effects of shattering.

Units that retreat or rout are automatically taken out of reserve mode.

There may be a combat delay movement point cost assessed in the defender's hex against any attacking units that move out of that hex during the current player turn (22.2.7).

Units on ships that are in a port hex that falls during combat will retreat out to sea (or will be destroyed if there is no hex to retreat to).

Units that have no valid retreat path will always either rout or surrender if forced to retreat.

23.12.1. Retreating More than one hex

In some circumstances the defender may be forced to retreat more than one hex. This is more likely if the final combat odds indicate an overwhelming victory and/or if the defender has low morale or experience.

23.12.2. Defender Retreat Path Priorities

Defending units that have not shattered or routed will then attempt to retreat to a friendly controlled hex using the following priorities.

- Retreating units will tend to retreat to hexes not adjacent to enemy units.
- They will try to avoid retreating into an over stack condition (i.e. a hex that already has three friendly units), but if they do, they must continue to retreat and take additional retreat attrition losses for each additional hex that they retreat through.
- Retreating units tend to retreat to hexes that cost fewer MPs to reach, have rail lines, have fort levels and contain fewer friendly combat units.

At the conclusion of the retreat, the retreating unit suffers retreat attrition once for each adjacent hex that contains an enemy combat unit.

23.12.3. Effects of Shattering

When a unit shatters, it is considered destroyed and removed from the map. Ground elements in the unit are affected as follows:

- Damaged ground elements are captured.
- Undamaged ground elements may be captured depending on their experience, the distance from their unit to an in supply friendly unit, and whether their unit is completely surrounded by enemy controlled hexes (If Rnd (60 + range in Hexes to an in supply friendly unit) > experience of ground element + Rnd (200*), the ground element is captured. *this value is 100 if the unit is completely surrounded by enemy controlled hexes).
- If the ground element is not captured then the ground element's AFV/Combat vehicles, devices and manpower are returned to the appropriate production pools.

Note that the battle report in the Commanders Report tabs will show how many men and equipment of a shattered unit managed to escape.

2310

Shattering is more likely if the defender has low morale or experience and is a non-motorized unit that is attacked by motorized units.

23.12.4. Effects of Surrender

When a unit surrenders (whether due to combat or in the logistics phase due to isolation) it is considered destroyed and removed from the map. Ground elements in the unit are affected as follows:

- Damaged ground elements are captured;
- Undamaged ground elements may be captured depending on their experience and the distance from their unit to an in supply friendly unit (If Rnd (120+range in Hexes to an in supply friendly unit) > experience of ground element, the ground element is captured);
- If the unit was isolated all the ground elements are captured.

If the ground element is not captured then the ground element's AFV/Combat vehicles, devices and manpower are returned to the appropriate production pools.

23.12.5. Effects of Routing

When a combat unit routs, it has its CV set to zero and then the unit performs a displacement move (23.13). Units can rout through a port to another port without additional impact (other than normal rout/retreat attrition).

Routed units may move but may not move adjacent to an enemy unit unless stacked with a friendly combat unit. Routed units do not participate in combat, but if part of a stack that is attacked and is forced to retreat, the routed unit will be shattered. Routed units do not have a ZOC and will not gain control of adjacent unoccupied enemy hexes.

Routed units are forced to make a displacement move if they are alone in a hex and are next to an enemy unit (if the routed unit is isolated, it will shatter). Routed units may not move via rail or naval transport. Routed units will not change their TOE, cannot receive replacements and cannot gain morale (12.1). Support units don't remain routed, but do take retreat attrition and displace if the unit they are attached to routs.

Each turn during the friendly logistics phase a routed unit will attempt to pass a range test to an HQ unit in its chain of command in which Rnd (range to the HQ unit) must be less than six. If this test is passed than the leader of the HQ unit attempts to rally the unit with a successful morale rating check.

23.13. DISPLACEMENT MOVES

A displacement move is a special type of movement by non-phasing combat units that have been routed or zero CV units that find themselves adjacent to an enemy combat unit.

There are several conditions that cause a unit to make a displacement move:

- A combat unit routs following a retreat result after combat
- A unit with zero CV finds itself adjacent to an enemy unit while not stacked with a friendly, non-depleted combat unit. This would include HQ units, on-map construction support unit, or a depleted or routed combat unit. Note that there are instances, such as if a unit becomes depleted during the air execution phase, where a zero CV unit can end up next to an enemy unit and not automatically displace. Displacement will then occur when an enemy unit moves next to such a unit
- In some cases when a unit with a zero CV is part of a stack forced to retreat due to combat.

A unit performing a displacement move takes retreat attrition, and then will displace to the hex containing the HQ unit to which it is attached, or to a hex adjacent to its HQ unit.

The displacing unit cannot move next to an enemy unit if there is no friendly combat unit in the hex. If it is not possible to displace to or adjacent to its HQ unit, or the HQ unit is greater than 10 hexes away, then the unit will displace to a nearby town, city or urban hex, generally to the east for the Soviets and to the west for Axis units.

A unit will not displace to a hex that has a non-isolated enemy unit within two hexes. Units will not displace to an isolated town, city or urban hex or HQ unit unless the unit is already adjacent to the HQ unit. Units that rout may only move to cities/towns that are less than 24 hexes away and which are on a linked rail line or are a linked port. If they are unable to rout move to a valid HQ unit or city/town, they will surrender.

On the first turn of any scenario, units will not displace to their HQ units, but instead only displace to nearby town, city or urban hexes. Support units that are attached to a displacing unit will suffer retreat attrition and move with the displacing unit.

> ***Note: voluntary relocation of a headquarters unit (21.11.9) has the same adverse effects as a displacement move, and the HQ unit will not relocate to its HHQ unit, but always to a nearby town, city or urban hex.***

23.14. SPECIFIC RULES FOR ISOLATED UNITS

The combat system treats isolated units in different ways to others. They are more likely to shatter or surrender after an adverse combat result and will usually shatter if forced to displace.

Admin and Initiative checks are twice as hard to make for isolated units. Players who desire to remove headquarters units from a pocket of isolated units rather than wait for the enemy to displace them can voluntarily relocate the HQ unit during their ground phase. Isolated units are limited to building fortification levels to no more than fort level two and may well lack the supply even for this.

Isolated on map units can change attachments only to HQ units inside the pocket with them, and only if within 100 MPs. Support units attached to isolated HQ units can only be reassigned to other HQ units in the same isolated pocket and only if within 100 MPs.

Isolated units are not eligible to be sent to any Theatre Box.

23.14.1. Isolated Hexes

Units and unoccupied friendly hexes are isolated if they cannot trace a path of any length to a railhead (which in turn links to a NSS) either overland or via the sea. Units cut off in the opposing players turn don't gain isolated status until the next player's turn in the logistics phase. Isolated hexes that are not occupied by a friendly unit, or adjacent to a friendly combat unit will often switch control to the other side automatically during the next friendly logistics phases (7.3.3).

23.14.2. Isolated Units and Depots

Depots in isolated hexes will lose five percent of their freight each turn in the logistics phase to reflect that some of the freight would not be material that is needed by the isolated units.

Isolated units can draw replenishment using non-vehicle methods (25.5.5). They can also draw freight from depots inside the isolated pocket by using vehicles already in the depot or by having the depot take vehicles from the units to use to distribute freight.

Isolated units cannot receive replacements.

Isolated units that are very low on supplies will suffer additional fatigue and damage to their elements during the logistics phase.

Isolated units will try to resupply themselves from any accessible depots to avoid isolation damage. During the logistics phase, isolated units will initially receive freight from depots that are in their hex or an adjacent hex, and they will follow the normal rules for obtaining this freight.

In addition, at the end of their turn, isolated depots will try to resupply any units that they can trace a path to (units inside the same pocket). They will attempt to fill up these units with 100% of their supply, fuel, and ammo requirements, spreading their freight out to all the units they can trace to.

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23.14.3. Isolation and Air-Resupply

A unit at the end of its turn that can trace to depots that have received a combined total of 500 or more tons of freight during the turn will be considered in supply (not isolated) during the enemy player's turn.

This allows air resupply to prevent units from facing isolation penalties when defending in combat, however, they will still be considered isolated during their player turn (when they might attack for example)

23.14.4. Isolated Unit Combat Value Penalties

When a unit is isolated, the CV value in combat divided by 2. If it fails a morale check triggered by the range to a friendly supplied unit, the units have their CVs reduced in combat by 3 instead of 2.

Isolated units in ports that have a fort level of 2 or greater do not suffer a combat penalty for being isolated. They still suffer normal penalties for any shortages of supply, fuel, or ammo.

23.14.5. Isolated Units Retreat and Rout Results

An isolated unit that ends its retreat adjacent to an enemy unit will surrender if Die (50) is greater than the morale of the unit. Units that are isolated will also surrender if they have no permissible hex to which to retreat. Combat units that are in supply will rout if they have no permissible hex to retreat to.

> ***Note: units cut off in the opposing players turn don't gain isolated status until the next player's turn in the logistics phase.***

Isolated combat units will not rout, but will surrender instead.

Isolated headquarters units will undergo a displacement move (23.13).

23.14.6. Isolated Unit Displacement

Isolated combat units will shatter if forced to displace. Isolated non-combat units performing a displacement move will suffer double retreat attrition but they can displace to a location where they are no longer isolated. This represents the fact that the assets of a non-combat unit, such as headquarters units, can be spread over a very large area and many of them would not actually be trapped when a pocket is formed.

23.14.7. Isolated HQs and attached Support Units

Errata (01.01.07)

If a HQ is displaced, either by combat or by player choice, all attached Support and Multi-Role units will be destroyed. Some elements may be allocated to the relevant pools to reflect those who managed to escape the encirclement.

23.15. RETREAT ATTRITION

When a unit retreats or displaces, it suffers retreat attrition, which can result in some of its ground elements becoming damaged, destroyed or captured. The extent of retreat attrition is based on the unit's current morale and the experience and fatigue

of the unit's ground elements. Units with higher morale and ground elements with higher experience and lower fatigue will suffer less from retreat attrition.

Damaged ground elements are more likely to be captured, dependent on their experience and whether the unit has a support squad ground element shortage. Damaged ground elements can also have their equipment destroyed while the manpower in the ground element is classified as disabled.

Organic generic vehicles can be damaged or destroyed as a result of unit retreat attrition.

Units that are forced to retreat across a river hexside will suffer double the normal retreat attrition for a minor river and triple the retreat attrition for a major river.

The amount of motorization of the unit, the morale of the unit, and the final odds of the battle all impact the retreat attrition suffered by defending units that lose a battle.

Defending units that retreat do have a chance to avoid retreat attrition. First the unit checks to see if the number of vehicles in the unit is greater than rnd(number of vehicles needed to fully motorize the unit). If it is, then the odds are changed to 1 to 1 and virtually no retreat attrition will occur. If the unit fails this check, it makes a morale check and if rnd(50)<(rnd(unit morale-50) then the effective odds are doubled for determining retreat attrition. If the unit fails the vehicle test, it gets one more chance to reduce the odds to 1 to 1 (no matter the result of the morale check just mentioned). The unit once again checks morale to see if rnd(50)<(rnd(unit morale-50) and if it passes this test, then the odds are reduced to 1 to 1 with the results above.

23.16. CAPTURED CITIES, DEPOTS, AND AIR BASE UNITS

When a town, city or urban hex changes control, factories, and other facilities, located in that hex will sustain damage. In addition, anti-aircraft units and construction units stationed in the city will either be destroyed or evacuated to their assigned HQ unit. Mobile anti-aircraft units assigned to cities that are not in isolated status may escape to a nearby HQ when that city is captured (21.5.3).

Depots and Air Base Units are fixed facilities that cannot retreat or displace. Enemy Air Base units that are captured will attempt to evacuate their Air Groups and then convert to an empty friendly air base unit (16.6.8).

When a depot is captured, most of the freight is destroyed (causing the destruction of some fuel and supplies from the player's pool), but a small amount of freight is captured resulting in the placing of fuel and supplies in that location for the capturing player's use. In addition, a small number of vehicles are destroyed and the rest are returned to the pool.

With the exception of depots in port hexes, captured depots are destroyed. If a port is captured, either an existing depot is transferred to the new owning player or one is automatically built with priority 3 in the hex.

> ***Remember that if a rail yard is captured it is likely to sustain damage. As long as this is damaged, any depot in the hex will operate at less than its full capacity.***

24. NAVAL AND AMPHIBIOUS OPERATIONS

2400

This section covers the various naval operations that can take place in WiTE2. This includes the naval transport of units and supplies, crossing contested ferry hexes and amphibious invasions.

Key Points:

- How Ports enable both the movement of supply and units;
- How Temporary Ports are created;
- How to move ground units by Naval Transport;
- How Naval Transport moves Freight;
- How to set up and conduct Amphibious Operations

Naval movement and operations in Gary Grigsby's War in the East 2 include naval transport, amphibious transport, assault and naval gunfire support. In addition, naval units can combine with air units (18.1.8) to generate interdiction over sea hexes, disrupting or denying enemy operations in that zone.

Eligible units may utilize naval or amphibious naval transport to move through sea and ocean water hexes. Ground Units can move by naval transport between friendly ports and by naval amphibious transport from a friendly port to assault any eligible coastal hex. A shipping pool of troop and cargo ships is used to move units and freight by sea using strategic movement points (SMP). Amphibious transport and assault is limited to non-armoured combat units, is conducted in the amphibious phase during the enemy player turn, and requires the use of amphibious headquarters units and a certain amount of preparation time over a number of turns.

When in Naval Transport mode (F3), Amphibious Transport mode (F4), or Air Transport mode (F9), assigned (pending) amphibious invasion and associated airborne landing hexes will be displayed on the map. Amphibious landing ground hexes will be shaded red, the water hexes Amphibious HQ units will move to will be shaded blue and airborne landing hexes will be shaded light blue. In addition, when in either naval movement mode, the remaining Port Capacity for friendly ports will be displayed on the map for each port with the number in the port circles on the map equal to 1,000 tons of remaining load/unload capacity.

When in naval transport or naval amphibious modes and a unit is selected for movement, the naval contested hexes will be slighted darkened and enemy controlled hexes will be dark. Movement through these hexes is allowed, but at greater attrition levels (6.8.8). Units cannot move through or adjacent to an enemy amphibious HQ unit while in naval transport mode.

Units loaded 'on ships' are automatically put into ready mode and cannot be put into reserve or refit as long as they are on ships.

Entrained units may not move via naval or amphibious movement.

24.1. TRANSPORT SHIPS

There are two types of ships used for naval transport, troop ships for units and cargo ships for freight.

Troop ships have a capacity of 1,000 tons of unit load and cargo ships can carry 1,250 tons of freight. Each transport ship in the pool may be used for one mission per turn. Cargo ships used during the supply phase may not be used during the action (move) phase. Transports will be removed from the pool and attached to Amphibious HQ units to allow amphibious movement. When in naval or amphibious transport mode, the number of available troop and cargo ships is displayed in the general information and city box in the right hand corner of the screen.

For the Axis player, the map is divided into three areas, Baltic, the Black Sea and the connected Sea of Azov. For the Soviet player, their naval assets are split between five areas: the Baltic and Black Seas, the Sea of Azov, Lake Ladoga and the Caspian Sea. Each of these sea areas has its own allocation of cargo, and, if appropriate, transport, ships.

Only the Soviet player has the ability to conduct amphibious invasions and only in the Black Sea region.

24.2. PORTS AND DEPOTS

There are two types of ports. Permanent ports are fixed pre-existing facilities that can be damaged, but will always be on the map. Temporary ports are established as a result of a successful amphibious invasion and represent the over the shore movement of units and freight at a beachhead that has been established by an amphibious landing.

24.2.1. Port Capacity and Damage

Each undamaged port has 15k tons of load/unload capacity. For example, an undamaged port level 2 will have 30k of capacity and will show a value of 30 in the port circle at the start of the turn when in F3 or F4 mode. Units cannot load/unload to/from ships at permanent ports unless sufficient port capacity is available. As port capacity is used up, the tonnage number in the port circle will decline. Loading/Unloading of freight in permanent ports also uses port capacity.

Ports with five percent or more damage will only operate at half of their normal capacity. A level 2 port with 20 percent damage would normally get 2*15,000*.8 or 24,000 tons, but because it is over 5 percent damage, it will only get 12,000 tons.

When temporary ports are captured they are destroyed and removed from the map.

On the turn a permanent port is captured by either player, a depot is automatically built with supply priority 3 in the hex. If an amphibious landing succeeds in capturing the target hex then a temporary port with a level 2 depot set to priority 4 will automatically be formed in that hex.

Ports have their port transportation capacity generated near the end of the logistics phase, so when a port is captured by regular ground combat rather than an amphibious invasion, it will not receive any capacity until the end of the next logistics phase, so no freight will enter on the next turn. Since amphibious invasions occur during the Axis player's turn, In the Soviet logistics phase of the turn of invasion, they will gain some port capacity, but not much tonnage as the port is damaged at the time it receives its capacity. The port will receive some freight dependent on its size and percentage of damage.

If the port capacity is not used up loading or unloading units during the movement phase, it will be available in the next logistics phase to unload/load freight.

Barrage Balloons – All ports are assumed to have barrage balloons that will impact any raid that is bombing anything in the port's hex. Aircraft bombing under 3,000 feet have a chance of being destroyed by the barrage balloon equal to two times the size of the port (so a port 3 means there is a 6% chance bombing aircraft will be destroyed). For night missions, the chance is tripled (so port level 3 has an 18% chance).

24.2.2. Inland Ports

Not all ports are directly on a sea hex. For example, Stettin in hex 143,164 traces a link to the Baltic via the Stettiner Haff. For an inland port to function, the player must have control of all of the land hexes along the river and/or ferry hexes between the sea and the port (both for unit and supply movement to/from the port).

2401

On the main part of the map both Nikolaev and Kherson are dependent on control over the river and ferry hexes stretching down to Ochakov for them to function.

2401a

24.2.3. Special Rules for Temporary Ports

Temporary ports are only created in target hexes that don't already have a permanent port, but if there is a size 1 or 2 port in the invasion target hex, the port will be immediately fully repaired upon capture.

Unloading of units in temporary ports does not use port capacity as the temporary port is simulating units and freight being offloaded at a beachhead. In all cases for loading/unloading, Transport ships must be available.

When a temporary depot is created (or a permanent port is captured) during an invasion, 250 tons of freight are placed in the depot for every cargo ship with the amphibious force being landed. . In addition, an airfield, with 50 damage points, will be created in the hex if it is clear terrain and freight from attached cargo ships will also be used to fill out the airbase units TOE

A temporary port can only survive if a naval HQ is in an adjacent sea hex, so if there is no amphibious HQ adjacent, the temporary port will cease to exist but any airbase in the hex will remain.

> ***Note: The Amphibious HQ can move during the Ground Phase with no effect. What matters is that at least one Amphibious HQ is adjacent to the temporary port during the logistics phase.***

Temporary ports may be used for strategic naval movement, but not for accumulation of preparation points for amphibious invasion.

Temporary ports are considered to be national supply sources for the purposes of determining isolation. Newly created airfield units and those created in temp ports are given a supply priority of 3 when they are created.

Freight coming ashore to a temporary port takes attrition based on the air weather value (Clear 0, Rain 1, Heavy Rain 2, Cold 3, Snowfall 4, Blizzard 5) and the following formula:

10+(weather value*15) %

So in rain, 25% of the freight shipped to the depot will be lost.

24.3. GROUND UNIT NAVAL TRANSPORT

Naval transport can be conducted by non-routed, non-frozen ground units. Each unit has a naval transport load cost listed in the unit detail window in tons. For that unit to use naval transport movement there must be sufficient troop ships available to conduct the applicable type of movement.

The number of troop ships required to transport the unit will be deducted from the troop ship pool for that naval zone every turn it uses naval transport movement, even if it just moves one hex. Units can end the turn at sea or in a port still loaded on ships.

Units on ships are automatically put into ready mode and cannot be put into reserve or refit as long as they are on ships. Though support units do not use naval transport movement per se, changes in attachment between HQ and combat units that are separated by sea and ocean water hexes will result in the use of freight points from port to port for each transfer.

24.3.1. Strategic Movement Points and Naval Transport Costs

All units have 200 Strategic Movement Points (SMP) per turn, including Static units, and this is used for naval transport. As described in section (22.4), there is an interaction between the available strategic movement points and tactical movement.

There is a variable SMP cost to load or unload from ships. Units without enough remaining SMP at the desired destination will be unable to unload and must remain ‘on ships’ until the next friendly movement phase.

To load a ground unit at a port the SMP cost is 50-(remaining capacity in 000s of tons/7.5). For example, a level 2 port 30k ton capacity remaining would require the loading unit to expend 50-(30/7.5) or 46 SMP. To unload a ground unit at a port the SMP cost is 150-(remaining capacity in 000s of tons/1.5).

24.3.2. Units on Ships Interaction with Enemy Units

If a unit on ships is in a port hex with no friendly combat unit stacked with it, it will make an offset move out to an adjacent sea or ocean water hex, without suffering any losses, if an enemy unit moves next to it. It will also make an offset move to an adjacent water hex if other friendly units lose a battle in the same hex and are forced to retreat. In addition, it will make an offset move to an adjacent water hex if it tries to move into a port that is next to an enemy unit if there is no combat unit already present.

Units in naval transport mode located on a coastal hex that was a temporary port can always move out to sea even if the temporary port subsequently is removed from play.

Enemy units that remain in a sea or ocean water hex 'in ships' at the end of their turn block the naval transport of friendly units through that hex. Units on ships in water hexes and the transports on which they are embarked will be destroyed if an enemy amphibious HQ unit utilizing amphibious transport moves adjacent

24.3.3. Inter-Theatre Naval Transport

There is no direct water connection between the various Lakes and Seas (apart from between the Sea of Azov and the Black Sea) in WiTE2. Thus each is treated as a separate region for game purposes.

24.4. CARGO SHIP FREIGHT TRANSPORT

Cargo ships are used to transport freight, normally between friendly ports during the logistics phase. Cargo ships are also attached to amphibious HQ units to deliver freight required to support amphibious assaults, to include temporary depots and air base units built as the result of a successful landing.

The number of ships in each sea area can be found on the production screen (36.3), as:

2401b

Further information about usage of cargo and troop ships in the logistics phase can be found in the Logistics Phase Log (36.9) under the 'Freight' sub-category:

2401c

Information about losses can also be seen on the ground loss tables (36.2.1)

24.5. TRANSPORT SHIP ATTRITION AND INTERDICTION

Ships may be lost, along with their cargo, whenever they are used for naval transport, amphibious transport, or for movement of freight during the logistics phase. Ships may also be lost when in an amphibious HQ unit. Note that for the purposes of this game, when a ship is described as being sunk, it actually represents ships sunk or damaged sufficiently to take them out of action for the rest of the game.

Half of any lost manpower in destroyed elements is place in the manpower transit pool.

Players will get a message on the screen if a troop ship is sunk during a naval transport move.

24.5.1. Logistics Phase Ship Attrition

Cargo ships used for movement of freight in the logistics phase have a one percent chance of being considered sunk but no freight will be lost as a result.

24.5.2. Naval Sea and Air Interdiction

Naval air and sea interdiction determines control of sea hexes through the interaction of naval air patrols, air superiority and fighter interception, and naval interdiction from ports and the impact on ships moving through those sea hexes. Remember that air superiority missions can be used to reduce the level of naval interdiction from the previous air phase.

In addition to the effect of naval air patrols (18.1.8), naval interdiction points are automatically projected from ports. Every port projects naval interdiction points approximately five to seven hexes out based on the port level, damage level, and weather. Ports within 5-7 hexes of each other will aggregate interdiction levels over some hexes.

Interdiction is also affected by the presence of Naval Task forces.

Ships conducting naval and amphibious transport and carrying freight in the logistics phase as well as the cargo they carry are subject to naval interdiction attrition based on the movement path they follow. Such losses will increase for every hex that is entered (and this will increase if the hex is contested or enemy controlled) and as he weather worsens (naval movement in blizzards or snowfall will lead to high levels of attrition).

Naval Interdiction values printed in sea hexes are displayed in brown for Soviet and grey for Axis. Control of a water hex is defined as having a map display adjusted interdiction level that is 2 greater than the enemy level. The map displayed values

are the true value that is a number from 0-99, divided by 10 and then truncated. The true values are displayed in the hex pop-up, but the values shown on the map are the truncated /10 values, and it is these that are used for determining naval control of a hex.

If the interdiction level is then less than 1, the presence of interdiction is shown by a simple symbol but the actual levels can be seen using the mouse roll-over.

2402

When interdiction is shown, enemy controlled sea hexes are shown in red, neutral are shown darkened, and friendly control is shown normally. The hex pop up will display current control as follows:

Hex control will be indicated by Axis, SU (Soviet Union), or Neutral, which indicates contested water hexes.

In the Action (Move) phase, if naval transport (F3) or amphibious transport (F4) mode is selected, then the impact of control of sea hexes on those modes of travel will be indicated as follows:

- Friendly controlled – nothing displayed
- Neutral – SHIPPING CONTESTED
- Enemy controlled – SHIPPING HEAVILY CONTESTED
- Enemy amphibious HQ unit and adjacent hexes – SHIPPING PROHIBITED

When a ship is sunk due to interdiction, the material on the ship is destroyed.

Errata 01.02.06 Until the Axis control a port on the Caspian Sea, every Caspian Sea hex will automatically receive 20 interdiction points at the end of each air execution phase (enough to make the hexes Soviet controlled).

24.6. AMPHIBIOUS NAVAL TRANSPORT

Amphibious naval transport (F4) includes preparation, amphibious movement to the target hex, amphibious invasion operations, to include landing attrition and assault combat to take the target hex, and establishment of a beachhead, to include a temporary port, depot and airfield.

Amphibious HQ units represent the naval forces, possibly made up of the transport ships and naval gunfire support needed to conduct an amphibious invasion and provide over the shore resupply through the beachhead.

24.6.1. Amphibious Invasions

Amphibious invasions may be initiated by Soviet Amphibious HQ units (21.11.1) in the Black Sea region using combat units to invade clear, woods, and city terrain hexes.

The steps involved in an amphibious invasion are first; having the amphibious HQ and units stacked in a port, target an enemy hex for invasion. After spending turns accumulating preparation points for this invasion, the HQ can be ordered to execute the invasion once it has accumulated at least 50 prep points.

The combat units themselves must have at least 30 prep points before they can participate in an invasion.

The invasion will then take place after the enemy player's next logistics phase. Armoured divisions and HQ units other than amphibious HQ units cannot participate in amphibious invasions (but all support units attached to the invading units can be used). Note that there is no restriction on these types of units utilizing regular naval transport to move to ports opened by a successful amphibious invasion.

Players can target hexes for amphibious movement no matter what the sea control status, i.e. even if the path goes through enemy controlled water hexes. Amphibious HQ units will be able to select INVADE if the path goes through enemy controlled water hexes, but this will see significant attrition to cargo and troop ships and their cargoes. A warning text box will display after the standard Amphibious invasion Y/N confirm message when the path is going through enemy controlled sea hexes: Amphibious path contains x enemy hexes – continue? Y/N.

When an invasion is ordered during the movement phase, the amphibious HQ and associated combat units conducting the invasion are moved out to sea to the hex next to the beach hex being landed at.

Amphibious invasions are executed after the enemy player's next logistics phase. If a target hex is unoccupied by enemy combat units then the amphibious combat units will move into and take control of the hex. If a target hex is occupied by enemy combat units then the amphibious combat units will attack the targeted hex from the sea hex adjacent to the targeted landing hex.

24.6.2. Amphibious HQ Units

Amphibious HQs are used for the amphibious movement of combat units and the naval transport of units and supply over beaches (when a port is unavailable). Amphibious HQs may have attached naval support groups representing ships to provide artillery support for amphibious assaults and ground combat in adjacent land hexes.

Amphibious HQs may only use amphibious and naval transport movement. They may never enter a non-port land hex. They may enter a ferry hex and assist units attacking over a ferry hex.

Errata 01.02.41

Amphibious HQs may no longer enter ferry hexes.

Neither enemy supply trace nor enemy naval transport can pass through hexes adjacent to an Amphibious HQ unit.

If an amphibious HQ unit moves next to an enemy unit at sea (on ships), the enemy unit as well as the naval transports on which they are embarked will be destroyed. When an amphibious HQ unit is ordered to invade, any enemy unit at sea along its path will be destroyed.

In addition, Amphibious HQ units will bombard any enemy units in adjacent land hexes at the end of that players air execution phase if they have any suitable elements attached, potentially causing damage to ground elements. At the end of the Soviet player turn air execution phase, each amphibious HQ unit with combat ships will automatically bombard all adjacent Axis ground units potentially causing damage to some Axis ground elements in both the combat units and any attached support units.

Level 1 and 2 ports that are adjacent to an amphibious HQ unit are immediately fully repaired in the Soviet logistics phase.

24.6.3. Number of Ships Attached to an Amphibious HQ

Troop and Cargo transport ships must be attached to amphibious HQs to allow amphibious transport movement. If the naval HQ is in a port then no supply or transport ships will be assigned.

Transport and cargo ships are moved from the ship pool to the amphibious HQ unit at the moment units are told to launch an amphibious invasion and can be seen listed on the unit detail screen for the HQ unit.

2403

The number of troop transports required for amphibious movement is equal to the number required for the naval strategic movement of land units for the land units that are invading. The number of cargo ships attached is equal to the number of troop ships.

If at sea, the number of troop or cargo ships falls below 10, then the appropriate ships will be taken from the pool and attached to the amphibious HQ to bring the number of troop and cargo ships back up to 10 (10 for each, although if there are not enough ships in the pool to reach 10, no ships will be moved from the pool).

Example: An amphibious HQ and an infantry division are given amphibious orders. The division has a transport cost of 22,000 tons. 22 troop ships and 22 cargo ships would be required for amphibious movement. For regular naval transport movement, only 22 troop ships are required

24.6.4. Amphibious HQ at Sea Attrition and Damage to Amphibious HQs

Amphibious HQ units that are at sea (defined as being in a water hex or a temporary port hex) during the logistics phase will suffer damage and transport ships attached to them may be sunk. The amount of damage will be related to the level of enemy interdiction in the hex and the air weather.

This damage can be repaired when in a permanent port during the logistics phase (the larger the port, the more damage repaired). The current damage of an amphibious HQ unit is shown on the right unit bar. Damage is added to an amphibious HQ unit at sea each turn.

Once an amphibious HQ unit's damage is greater than 99, it is permanently withdrawn from the game.

24.6.5. Moving units using the Naval Transport Mode (F3)

To actually move a unit between friendly held ports (i.e. Naval Transport), the F3 mode must be selected. Left click as necessary to select the unit(s), right click to load on ship and move, left click in unit bar or select movement mode (F1) to off load from ship. Note a unit can move from port and remain at sea or move from being at sea and enter a port during the movement phase.

Units can mix tactical movement (say to move to a port hex) with strategic movement during the ground phase. The current strategic movement point (SMP) allowance for a unit will always be displayed next to the SMP symbol just below the unit counter graphic in the unit bar.

With 'show movement allowed' enabled hexes the unit with the fewest movement points remaining cannot reach will be shaded grey. Impassable hexes will be shaded red. If 'show movement path' is enabled, then moving the mouse cursor over the hexes where movement is allowed will display a line of symbols, each with a number showing how many movement points the unit with the fewest remaining movement points would have left if it was moved to the hexes along that path.

Units cannot load/unload to/from ships at permanent ports unless sufficient port capacity is available.

The remaining Port Capacity for friendly ports will be displayed on the map for each port with the number in the port circles on the map equal to 1,000 tons of remaining load/unload capacity. To move the selected units to an allowed location, right click in the desired hex.

Units cannot move through or adjacent to an enemy amphibious HQ unit while in naval transport mode. Enemy units that remain in a water hex 'in ships' at the end of their turn block the naval transport of friendly units through that hex. Units on ships in water hexes and the transports on which they are embarked will be destroyed if an enemy amphibious HQ unit utilizing amphibious transport moves adjacent to them (16.6.2).

If a unit using naval transport ends the turn adjacent to an enemy unit or port it will automatically displace one hex out to sea during the logistics phase,

When in naval transport mode and a unit is selected for movement, the naval contested hexes will be slighted darkened and enemy controlled hexes will be dark. Movement through these hexes is allowed, but at greater attrition levels.

24.7. AMPHIBIOUS INVASION AND ASSAULT

During the amphibious phase in the enemy turn, the invading ground units will attempt to move into the target hex. First the invasion force transport ships and ground units undergo landing attrition. If the target hex has defending enemy units, the invading ground units will conduct a deliberate attack to capture the hex.

24.7.1. Preparation for Amphibious Operations

Eligible combat units that begin their turn in a port, stacked with an amphibious HQ that has targeted a hex for invasion, will accumulate amphibious preparation points (APPs). Units may accumulate a maximum of ninety APPs. The number of APPs that may be accumulated in a single turn is dependent on the size of the port and varies with the size of the unit as follows:

- Add truncated (port value/2)
- Add truncated (54/size of forces in hex) where each combat unit in the hex has a size value where Division=9, Independent Brigade=5, Regiments and Broken down division units (1/ 2/ 3/ regiments and brigades) =3 and a permanently motorized unit has 1 added to the size.

Amphibious HQs may not order an Invasion unless they have at least 50 prep points (no Invade button will be visible on the unit). Combat units must have at least 30 APP before they can participate in an invasion.

APPs will be set to zero whenever a unit completes an amphibious invasion or if the unit spends a logistics phase not in a permanent port hex or not stacked with an Amphibious HQ (moving from port to port will not cause the loss of prep points). Note that as long as a unit remains in a port in each logistics phase, it won't lose

prep points. It checks only during the logistics phase that it is in a port, and if not, that's when it would lose prep points.

Attaching a support unit to a unit prepping for an amphibious invasion will result in the loss of 10 preparation points, though prep points will never drop below zero.

Amphibious HQ units and units stacked with them will not gain prep points when in a temporary port, nor will an amphibious HQ gain prep points when not stacked with an invasion capable combat unit.

APPs limit the amount of damage that the unit incurs while making an amphibious move.

2404

In this case the Soviet 408 RD will accompany the Naval HQ in a planned invasion of Rumania. Note the unit has amphibious preparation points of 90.

If the amphibious transport mode (F3) is selected the target hex is shown in red. The two light blue hexes indicate pre-planned airborne missions in support of the landings.

2405

24.7.2. Amphibious Invasion Attrition

Several factors go into determining the number of troop and cargo ships lost during an amphibious invasion, along with the number of ground elements that are destroyed and damaged, before any ground combat against defending units in the invasion hex is resolved.

The number of ships lost is dependent on the enemy naval sea and air interdiction capability, the fortification level of the defending hex (and hexes adjacent to the water hex containing the amphibious HQ) and the weather. These adverse factors are partly offset by the number of Preparation Points possessed by the invading force.

24.7.3. Amphibious Landing and Assault

If a target hex is occupied by an enemy combat unit(s) then the amphibious combat units must fight their way ashore with a deliberate attack. Naval support groups attached to the amphibious HQ will contribute fire support. If enemy units are in the target hex, the attackers will come ashore one landing at a time in a randomly determined order.

When an opposed amphibious landing results in a combat, the defender's combat value is divided by a number equal to one plus the number of adjacent land hexes that are controlled by the attacking side.

So if there was one adjacent hex controlled by Soviet airborne units and one hex controlled by a force from an invasion that just successfully came ashore, the defending force would have its CV divided by 3 (1+2) when determining the final combat odds. With the exception of naval support groups attached to the amphibious HQ unit, support units in HQ units will not participate in amphibious landing combat,

During an amphibious invasion attack against a non-port hex, the defending units may only use the CV value of the largest unit in the hex, and if that unit is a larger than a regiment or brigade, it will only use 1/3 of that unit's CV value. All units will participate in the battle, but only the one unit will count in the after battle CV value that determines the winner of the battle. Axis units next to enemy amphibious HQ units are not eligible to come in to a battle from reserve.

If an amphibious assault fails, the ground units will remain 'on ships' in the same water hex with the amphibious HQ unit, representing the evacuation of the surviving assault forces back to the transport ships. All prep points are lost.

Amphibious HQ units will use their naval support units to fire into any combat where the defender in the combat is adjacent to the Amphibious HQ (they will fire as an attacker or defender, as long as they are adjacent to the defender's hex). Naval support units suffer disruption prior to their firing in combat when adjacent to enemy hexes with forts and/or ports. The amount of disruption is determined by adding up the fort levels of every enemy hex adjacent to the Amphibious HQ, and adding 1 for every enemy port adjacent to the Amphibious HQ. The larger this number, the greater the disruption. This represents the effects of enemy naval guns within range of the Amphibious HQ.

At the end of every Soviet player turn air execution phase, any amphibious HQ unit with combat vessels will automatically bombard all adjacent Axis ground units potentially causing damage to some Axis ground elements in both the combat units and any attached support units.

24.7.4. Hold at All Costs Defence

Defending units on a temporary port hex, or adjacent to a temporary port hex and also adjacent to a sea hex, will have their end of combat CVs multiplied by 4 when determining whether they retreat. I

If they hold, but would have retreated had they not received this bonus, they will instead suffer additional losses to reflect their fighting to the last to hold the beachhead. The existence of a temporary port is noted in the hex pop-up information.

25. LOGISTICS

2500

This section set out how the logistics system in War in the East 2 works.

Key Points:

- How the supply grid works;
- The role of Depots in the supply chain;
- The interaction between HQs and Depot capacity;
- How setting depot and HQ priority affects the allocation of freight and supplies

"Amateurs study tactics; professionals study logistics."

All units must have access to an adequate amount of supply and replacements to continue to function effectively. There are three types of supply in Gary Grigsby's War in the East 2; general supplies, ammunition and fuel.

These items are generated by each side's production system. In addition, replacements provide the manpower and equipment, in the form of ground elements for ground units and aircraft, pilots and aircrew for Air Groups, to replenish losses from combat and attrition.

In order for units to receive supplies during the supply/replacement segment of the logistics phase, they must be within range of a depot that has freight.

To receive replacements they must be able to not only trace to a depot with freight, they also must not be isolated.

In order for depots to receive freight, they must be connected to the supply grid. This is made up of permanent national supply sources connected by a rail network of undamaged rail line hexes to a depot in town, city and urban hexes. Ports can also be connected to the supply grid, allowing tracing of supply lines over water. The generic vehicles of the motor pool are used to bridge the gap between the depots and the ground unit requiring supply and replacements.

Freight is the common measure of all material transported by rail or over water hexes from port to port. Limited mainly by rail and cargo ship capacity, freight tonnage is sent, via ships and rail, for storage at depots where it can be converted to provide supplies, fuel, ammo, and replacements drawn from available pools.

Supply priority can be set for each headquarters as well as each depot. The amount of supply and replacements delivered is dependent on many factors, including the distance from the depot to the unit, whether the unit moved during the last turn, and vehicle shortages in both the motor pool and the unit.

Units can be in one of two supply states; in supply or isolated.

Isolation is caused by an inability to trace to a supply source that is connected to the national supply grid. Isolated units can still draw supplies from a nearby depot, and can be supplied by air (which can also mitigate some of the effects of isolation). Town, city and urban hexes that are isolated or lack a nearby supply source will suffer starvation damage to their manpower.

There are numerous sources of information regarding logistics in Gary Grigsby's War in the East 2 (6.9), such as the logistics phase event log screen (Hotkey- shift-

e), the view logistics information button (Hotkey- n) the show freight shipments (Hotkey- 8), the metrics screen (36.4), the Commander's Report (35), and the individual unit supply detail window (37.2 and 37.3).

25.1. THE SUPPLY/REPLACEMENT SEGMENT

During the supply/replacement segment of the general logistics phase units have multiple chances to be resupplied and/or receive replacements. Units attempt to draw freight to be converted into supply and replacements from the nearest depot, up to 30 hexes (and not more than 75 MP) from the unit. Once the closest depot is depleted of freight, a unit will try to obtain its remaining needs from the next closest depot.

A unit can only receive freight from up to five different depots in a logistics phase, although it will usually receive from only one or two in a turn.

Units that do not have the required support (21.2.2) may receive less supply and replacements, with the greater the shortage the greater the impact on deliveries.

25.1.1. Supply/Replacement Segment

The standard Resupply/Replacement segment is broken into many smaller segments in which units, depending on their supply priority and how much they have of an item relative to their need, may attempt to draw supplies, fuel, ammo, vehicles, and replacements from freight at nearby depots.

In each segment, the logic is that higher priority units always try first, but lower priority units will try to obtain some freight before the higher priority units can obtain large amounts (including overstocking). Whenever a unit qualifies to try to obtain supplies, it must pass administrative and support checks (15.5).

> ***So in a given phase, all units that meet the criteria will try to obtain supplies. Low priority units actually go first until they drop out of the system. Thus while high priority units may gain more supply than lower priority ones this will depend on how much supply is available locally.***

When successful, motorized units can gain more fuel, while artillery units can gain more ammunition in any particular sub segment.

For the unit to draw replacements, it must either be in refit mode (26.3) or pass both administrative and support checks. Also, if the ground element has less than 81 percent of need, and the unit is in refit mode, if it passes both administrative and support checks, it will generally receive a larger batch of replacements in any given sub segment.

Note that the supply need of units will change as replacements flow into/out of units in replacement phases to allow the unit to obtain additional required supplies after replacements arrive but during the same logistics phase. A supply priority 4 unit that did not move on the prior turn and is not adjacent to an enemy controlled hex will have an extra opportunity to replenish to a higher level. Replacements will always cap out at 100 percent of need and all Max TOE settings and TOE limitations will also be followed.

Combat Preparation Points also allow a unit to obtain and store more than 100% of its notional need for supply, fuel and ammunition.

25.1.2. Supply Sequence

Broadly the supply phase will follow this order:

- Freight will be moved from a NSS to the depots;
- Exporting ports will then send freight by sea to importing ports;
- Depots then will ship by rail to other depots.

25.1.3. Leader and Support Checks

Each phase sub-segment where a unit is eligible to attempt to draw freight to meet an item need, the unit must pass both an administrative leader roll and a support check. If the unit fails either, then this is counted as an Admin Failure (listed on the unit supply detail screen (35.2.2) and the unit will not receive anything in this sub-segment.

2501

In this case, the unit has passed its leadership checks but faces shortages as it is drawing supply from a depot (Klintsy) that itself has limited freight. This situation is not unusual for the Axis player by late summer 1941.

If it passes the checks, then it is free to receive all of the items that it qualifies for in the current sub-segment. Once the unit has accumulated four administrative failures, no further attempts at replenishment will be made.

Note that the more Combat Preparation Points in the unit (23.2), the greater the chance of passing leader administrative checks

25.1.4. Air Base Unit Resupply

In addition to the normal supply/replacement segment during the logistics phase, Air base units can receive fuel and ammunition only (no replacements or supplies) during the air execution phase. Each night during the 7 days of the air execution

phase, if an air base unit has less than 80 percent of needed fuel or ammunition, it will go through the same prioritized resupply routine as in the logistics phase.

Note that air base units set to priority 0 will never receive resupply. Equally airbases with no planes will request very little (often no) supply as it seeks to match its requests to need.

25.1.5. Resupply during Combat

During each round of combat, defending units in the combat with less than 60 percent of their needed fuel and/or ammunition or less than 40 percent of their needed supplies will attempt to draw freight to convert to the needed item(s) from nearby depots. Each resupply attempt may lead to receiving up to 20 percent of the total need of the type of supply (fuel, ammo, or supplies).

Note that attacking units cannot resupply during the combat phase.

25.2. THE SUPPLY GRID

The supply grid consists of five parts: national supply sources; the rail network; town, city and urban hexes on the network, ports, depots in town, city, urban, and airfield hexes; the motor pool; and, the shipping pool.

Supplies and fuel generated by the production system are stored in town, city and urban hexes on the rail network to be drawn upon by factories.

Factories don't necessarily need to be on a rail line, and can function if they are within 5 MPs from a working rail link. Much of City to City or City to Pool deliveries of oil and fuel are conducted by pipelines independent of the rail network. Half of all oil and fuel delivered in these cases do not use any rail capacity.

Supplies stored in a city cannot be used by units, which need to be supplied by a depot. Supplies stored in a city can be used by construction projects and fuel can be used for vehicles in a depot at the city.

Freight flows from national supply sources through the rail network and/or port to port to depots for conversion to supply and replacements when drawn upon by nearby units.

> ***Depot priority is important in this regard, depots will only send freight to another depot at a higher priority. The various NSS are set to 0 so will send to any depot at 1 or higher that needs supplies. A priority 4 depot will not send on supply to another depot.***

The ability of a unit to receive replacements and supplies/fuel/ammo, and repair damaged aircraft and ground elements is dependent on its location in relation to the supply grid, specifically the distance from the depot or depots from which they are drawing supply and replacements. All these functions are conducted automatically during the logistics phase (5.3.1).

At the end of the air execution phase, the supply grid is recalculated to account for changes in control of ocean and sea water hexes due to naval interdiction (24.5.2).

25.2.1. The Rail Network

A rail network consists of a contiguous path of friendly controlled undamaged rail line hexes connected to a functioning national supply source, or to a port that is considered connected to a national supply source, or a combination of the two. Ports are considered to be on the rail network even if there is no undamaged rail in their hex as long as they are connected via non-enemy controlled sea hexes to another port that is connected to a national supply source.

As an example, a series of undamaged Axis rail hexes can lead back to Riga which is, in turn, connected to a port in Germany that is itself connected by rail to a functioning national supply source, and all of these rail hexes are considered to be on the rail network.

2502

This shows part of the Axis rail net in the Ukraine in the summer of 1941 (using the rail damage map mode). In effect the Germans have a single repaired line (the green circles) so, for example, Vinnitsa is on the rail net.

A line of depots along this line will draw freight forward and supply airbases and combat units as needed.

Units can draw supply from depots that contain freight, although there are some limitations if the depot is isolated from the rail network. Note that rail hexes that are adjacent to enemy units are considered not to be functioning for the purposes of determining the rail network. These hexes may not be used for strategic rail movement but supply will enter those hexes by rail if appropriate.

In some limited map scenarios, rail hexes outside of the limited area can provide supply trace. This may prevent some units along the map edge from being isolated, and will also allow OKH and other HQ units positioned outside the play area to be considered in supply.

Rail usage due to freight movement is reduced during the logistics phase, so if a given rail branch is heavily used in one turn it might take a few turns for the impact to be removed.

25.2.2. Ports and the Supply Grid

A port is be considered to be connected to the supply grid if it can trace a path of ocean or sea water hexes that does not enter enemy controlled water hexes (7.3.6) to at least one other friendly port connected to the supply grid via rail lines.

Freight is transported between ports connected to the supply grid during the logistics phase by cargo ships from the shipping pool (24.4). This path may be blocked by naval interdiction and/or amphibious HQ units. Interdiction will block freight shipments, and can cause isolation (24.5.2), if the enemy has 2 or more interdiction levels in a sea hex than the tracing side (hex control).

Interdiction can also result in either partial loss of freight in transit or the prevention of any freight shipments leading to the isolation of any units in the port.

Ports with depots containing freight will be able to resupply units with supplies, fuel, and ammo as long as they have freight remaining. However, this in itself does not prevent isolation

25.2.3. National Supply Sources (NSS)

The establishment of a rail network and connection to the supply grid requires the tracing of a contiguous path of rail line hexes (and/or port to port connections over water) to a National Supply Source.

The depot is marked with a star (black or brown depending on the side).

2503

To function as a NSS a centre must also be able to trace a rail link to another NSS.

> ***In the late game, the Axis player is most likely to lose all these connections as the Western Allies advance (13.3) unless they are able to hold the Soviets back from breaking the direct connections between Berlin, Prague and Vienna.***

Axis on map National Supply Sources in the campaigns:

- Berlin
- Frankfurt
- Vienna
- Prague

Soviet on map National Supply Sources in the campaigns:

- Moscow

- Kazan
- Saratov
- Chkalov
- Chelyabinsk
- Sverdlovsk
- Krasnovodsk

Non-campaign scenarios that do not use the entire map area may have additional National Supply Sources added for each side.

Railyards located in the same hex as a National Supply Source will produce twenty times the tonnage capacity as regular railyards. For example, an undamaged level 2 railyard will produce 20k capacity (10k x 2) but, the same railyard in Berlin, a national supply source, would produce 400k capacity (200k x 2).

2504

National Supply Sources are permanent physical locations that represent the insertion point of production and logistics material from the virtual production pools, as well as freight tonnage. Each national supply source is set to generate 2.5 million tons of freight in each supply phase.

If a NSS is adjacent to an enemy unit, it will be reduced to 50,000 tons of freight and will not receive an automatic delivery of freight. It will continue to function as an NSS for determining whether units and hexes are isolated

A depot will totally cease to function as a NSS if it cannot trace a rail link to another on map NSS. Under these circumstances it will not prevent unit and hex isolation, although the depot may continue to store freight, after having the freight present reduced to 50,000

25.2.4. Loss of Axis NSS

If the Axis lose a NSS to either the Western Allies (by event) or the Soviets then destroyed units will no longer be placed in the National Reserve to refit. In addition, any frozen units will unfreeze in the next German turn.

25.2.5. Maximum Ranges

The maximum distance a unit can access a depot is cannot be more than 30 hexes away. Ideally, the routine will try to avoid paths that cost 75 or more movement points but such a path might occur depending on the circumstances.

These values will vary if the morale or logistics levels are set above 100.

Errata - Clarification (01.01.00): When tracing distance for freight movement from a depot to a unit, the number of MPs will never be more than 4x the number of movement points

25.2.6. Impact of Weather

Supply costs are charged using the motorized movement cost (38.6) so are variable according to the weather and road quality.

In addition, the impact of weather on Axis supply tracing is doubled up to the start of April 1942.

25.3. FREIGHT

Freight represents the generic capability to transport material through the supply grid. As such, freight is not converted to the actual material, whether as fuel, supplies, ammunition, vehicles or ground elements, until it is drawn upon by the end user. At that stage, the actual items needed are drawn from the production pools, if they are present.

For example, when one ton of freight is moved to a unit that is getting supplies, it is converted into one ton of supplies and at the same time one ton of supplies is consumed from the general supply pool (25.2). A shortage of needed material in a pool or a shortage of freight in a player's depots will have the same result of not being able to meet a unit's supply and replacement needs.

Freight can be damaged by air attacks and interdiction against railyard hexes with depots and when it is being transported, resulting in the damage or destruction of ground elements and the removal of supply from applicable pools (36.3.1).

Freight is composed of both different types of supply and replacement ground elements.

Supply is composed of three types: General Supplies (supplies); Ammunition; and, Fuel. Each type of supply is used for different purposes. In general, supplies are more important to non-motorized units and fuel is more important to motorized units, but all combat units require ammunition.

25.3.1. General Supplies

All units require supplies for food and general maintenance. Supplies also represent fodder for horses and thus are required by non-motorized units for movement (22.1.2). Note that the consumption of supplies for food and general maintenance occurs during the logistics phase prior to the turn. Many non-motorized units require more supplies for fodder that is expended during movement.

Since motorized units do not need supplies for horses, they require much less supply.

Supplies are also used to reduce fatigue in ground elements during the logistics phase.

25.3.2. Ammunition

All units require ammunition for combat. Combat units with a low ammunition percentage will suffer a significant decline in combat effectiveness (23.8.3), especially when attacking. In addition, units that are adjacent to enemy units during the logistics phase will use up approximately one percent of their ammunition to reflect scouting, patrols and low level combat.

Ammunition is not produced separately, but is initially considered integral to general supplies. General supplies are converted to ammunition when freight is delivered to units from depots.

Defending units have a chance of receiving additional ammunition shipments during any combat they are involved in. If this happens, any trucks used for delivery will not be available in the next friendly logistics phase and will be shown as 'used' in the supply screen.

25.3.3. Fuel

Motorized units require fuel for movement during the movement phase (22.1.2). Vehicles that are used to move freight from depots will also consume fuel during the logistics phase. This fuel can be drawn from fuel stored in cities in the same hex as the depot.

25.4. MOVING FREIGHT BY RAIL

25.4.1. Railyard Capacity

Railyards represent the rolling stock available for moving units and freight. If the railyard size is greater than 1, then each undamaged railyard factory point, or level, produces 10k tons of rail capacity per turn with the exception that railyards located in the same hex as a national supply source (25.2.3) will produce 200k tons of capacity per level per turn.

> ***Note that size 1 railyards do not contribute rail capacity but do aid the loading and un-loading of freight and units and influence the capacity of any depot in the same hex.***
>
> ***The opposite is true, you need to repair and integrate level 2 (or more) railyards into your rail net to have sufficient rail capacity to move both freight and combat units.***

Remaining railyard capacity will be displayed for each railyard when in rail move mode (F2) with the number in the rail circles on the map equal to 1,000 tons of remaining load/unload capacity.

> ***For example, an undamaged level 2 railyard with 20k capacity (10 x 2) will show a value of 20 in the rail circle when in F2 mode. If this has been used for freight or units then it will be reduced (subject to rounding).***

2505

This shows the current rail capacity of the three railyards in the Berlin region. West and NE Berlin each have level 6 railyards while Berlin itself is an NSS. Since it is also a level 9 rail yard its capacity is 1800 (the display only clearly shows the middle 2 numbers so at first glance looks misleading).

So a unit with a carry cost of 2,000 tons would decrease the number of the railyard capacity by 2 if it was in the same hex as the railyard when it started its rail move. There is an increase in the Strategic Movement Point cost (22.4.4) for the unit to entrain as the system goes further to find sufficient railyard tonnage capacity.

Note that for rail movement in the logistics phase of freight (either for the production system or movement to depots) also can cost additional railyard tonnage as the system goes further to find available capacity at other railyards. It also costs additional railyard capacity as freight moves depending on the SMPs needed to complete the move.

There is a 30 hex limit to how far from a unit or freight location a railyard can be in order to use its railyard capacity for rail movement.

In general, a unit or location separated from a railyard by ocean/sea hexes will not be able to draw on that railyard capacity.

25.4.2. Damaged Railyards

Railyard damage will reduce the amount of freight that would be shipped and unloaded at a railyard depot in the hex. There is a percentage chance equal to the railyard damage that the amount shipped to a railyard depot will be divided by 10.

If a railyard is damaged either due to being recently constructed or captured, then it will automatically try to assign any available construction unit to speed repairs.

25.4.3. Rail Transport and Freight

Freight is transported by rail during the logistics phase (5.3.1). Unlike ground units utilizing rail transport, freight has unlimited SMP's, but the amount of railyard tonnage capacity required to move the freight is variable and increases with distance from the railyard(s) and increased rail usage in particular hex(es).

Movement through undamaged rail hexes is possible even if rail usage is maxed out (22.4.3), but at a greatly increased cost in either SMP's (units) or railyard capacity (freight). Movement continues until railyard capacity is exhausted. Thus congestion results in less freight being moved by rail in the logistics phase to the extent that rail usage causes the railyard capacity to run out and freight deliveries to drop.

Freight can be moved into a rail hex adjacent to an enemy unit but not from one hex adjacent to an enemy unit directly to another hex that is also adjacent to an enemy unit.

25.4.4. Depot Priority and Rail Freight Allocation

In each logistics phase, depots will seek to gain freight according to the set priority. A priority 4 depot will generally receive much more freight than lower priority depots, while priority 1 and 2 depots will tend to receive very small amounts of freight. Exporting ports will generally be eligible to receive more freight than other depots. Except for ports, or depots containing an FBD/NKPS unit that did not move in the previous turn, it is rare for depots to receive near their freight capacity on any given turn.

Remember that single track rail lines only have 40% of the capacity of dual track lines (22.4.3) and thus have a critical capacity of 12,000 tons per turn. Once this critical usage is reached, there is a growing risk that the lines will still be congested in the next turn. Usage of the rail lines are only partially cleared each turn, so overuse on multiple turns can leave rails operating with much lower throughput on succeeding turns.

> ***Gameplay note: Player's should be wary of using up all the rail capacity on key single rail lines going to depots near the front to move units as this will likely reduce the amount of freight that can be moved up that rail line in the next logistics phase. Even worse, all this usage will not clear at the end of the logistics phase and will hamper movement for several turns.***

Note that depots set to priority 0 will not attract any freight but can still ship out any freight they have stored. Disbanding a depot will lead to the depot attempting to send out its freight to other nearby depots.

25.4.5. Freight Rail Movement between Depots

Depots will not send freight to another depot with the same or lower priority level. However, a lower priority depot that receives freight as it transits towards a higher priority depot will retain some if it is needed for nearby airbases.

25.4.6. Axis rail penalty

As noted in 8.6.1, Axis rail freight pays a higher cost from 22 June 1941 up to the end of March 1942.

When Axis trains are moving freight by rail, the MP cost for each hex is increased by 10 plus the snow level in Blizzard hexes. In non-blizzard hexes if the snow level in a hex is over 5, then the MP cost per hex will be increased by the snow level/2.

25.5. MOVING FREIGHT BY ROAD

Road movement mainly relies on trucks but sometimes units can draw supply using horses (25.5.5). Road movement will be used either when a depot needs more freight than can be allocated by rail or to move freight from depots to HQs and Units.

25.5.1. The Motor Pool

The motor pool represents the generic vehicles not yet in use by units or depots. All vehicles are “2.5 ton equivalents.” Vehicles are used by depots to truck freight to units. Vehicles move from the pool to depots as needed by the depots to deliver freight, and some portion of unused vehicles go back to the pool. Vehicles can also go from units to depots and the pool as the system tries to balance all needs. When a vehicle is returned to the pool, one ton of freight is placed in a nearby depot.

During the logistics phase vehicles will be re-allocated as needed back and forth between depots, units and the pool. This process does not happen immediately.

The production screen (36.3.2) shows the number of vehicles in units with the number in parentheses next to it being the total number of vehicles the units require. The number of vehicles in depots is also shown along with the number of vehicles in the pool.

2506

Vehicles are also used and stored by theatre boxes and this allocation is shown in the theatre boxes when the on-map view is displayed.

2507

In turn the Logistics Report (36.9) will show how many trucks notionally assigned to units have been used in the supply process – this can be found under the freight section of the report.

2508

In addition the depot tab of the Commander’s Report (35.7.3) can be used to identify which depots are using most vehicles and which have an excess (this may indicate

that their priority level is drawing in more freight than they actually need). The image below is sorted on 'unused vehicles' as an example:

2509

Vehicles are also drawn from depots by units that have a need. If there are not enough vehicles in units, depots, and the production pool to meet all of the needs, then the system will try to balance the different needs as best it can.

If a unit is short of vehicles for its own use it will retain any that are used to deliver supplies during the logistics phase.

Depots further from enemy units will return more unused trucks to the pool if the pool is short of vehicles

25.5.2. Emergency Use of Vehicles allocated to units

Units with more than 33 percent of their needed vehicles can use these vehicles to resupply themselves if there are no vehicles at the depot and none available in the motor pool.

Use of these vehicles in the logistics phase for supply runs to a depot will reduce the MPs the unit starts with in the turn as per section (22.1) (as they are considered unavailable when determining a unit's percentage of needed vehicles for MPs).

.

> ***Play Tip: Careless placement of combat units in relation to depots will cause your motorized units to lose lots of MPs in those turns when you are burning tons of fuel and running far from your supply grid. Don't forget you can conduct air transport missions to drop freight to combat units, although it is much more efficient to send to air transport to an airfield than to drop directly on a unit not on an airfield.***

25.5.3. Generic Vehicle Attrition

Vehicles in depots suffer attrition based on their activity during the supply and replacement segment moving freight from depots. Vehicles in units on the map suffer attrition during the logistics phase based on the amount of MPs expended by the unit during the previous movement phase. The above is specific to generic vehicles; AFV and combat vehicle breakdowns are calculated using reliability ratings (21.2.8).

25.5.4. Gaining Road Supply

The movement point cost for all supply path traces are calculated as if the path was being travelled by a motorized unit with a morale of 99 (38.7.1).

All motorized movement point costs are taken into account, including EZOC, weather, terrain, and river hexsides. Supply can be traced through an enemy ZOC as long as the hex is friendly controlled or pending friendly, though tracing supply this way will result in increased MP costs. Supply paths cannot be traced through enemy controlled hexes or across unfrozen impassable lake or river hexsides.

Normally vehicles are used for the delivery of supply and replacement to units from depots. When a vehicle is taking freight from a depot to a unit, it traces the range in both hexes and the MP cost to the unit. This is important as the further the path in MPs, the less can be carried by each vehicle and the greater chance of loss enroute.

When the range is close enough to deliver goods with animal drawn transport the MP cost will always be one.

Errata (01.01.00): When tracing distance for freight movement from a depot to a unit, the number of MPs will never be more than 4x the number of hexes

25.5.5. Using Horses for Supply

Axis and Soviet units can receive supply and replacements from a depot without having to use vehicles up to 3 hexes from the depot through the use of animal drawn transport. However, this will cost double the freight being delivered as the animal drawn transport is assumed to be consuming fodder (if the unit is isolated, it receives the delivery but does not pay double freight).

25.5.6. Axis Road Freight penalty

As noted in 8.6.1, Axis road freight pays a higher cost from 22 June 1941 up to the end of March 1942.

When carrying freight, Axis vehicles pay double the normal weather movement costs. They also pay an additional 8 MPs for each Blizzard hex entered.

25.6. MOVING FREIGHT BY SEA

25.6.1. The Shipping Pool

Each side has a shipping pool consisting of a number of troop and cargo transport ships. For both sides, their shipping pools are divided into the various sea zones. In the Baltic and Black Sea (including the Sea of Azov) both sides potentially have naval capacity but only the Soviets can have shipping on Lake Ladoga and the Caspian Sea.

The number of transport and cargo ships in each sea zone are displayed in several places, including the production screen (36.3.2), via the right click on a sea or port hex and accessing the sea zone info, and in the general information at the top of the screen when Naval Transport (F3) or Amphibious Transport (F4) mode is selected in the action (move) phase (T = Troop ships and C = Cargo ships). In this latter case the number displayed is the number of ships unused and available to be used at this moment.

2510

Cargo ships are used in the logistics phase to deliver freight, while transport ships are used during the movement phase to move units. Both are used by the one Soviet Amphibious HQ and in amphibious landings.

25.6.2. Port Depot Priority and Freight Allocation

All ports are set by the player to either export or import freight. A port set to export will usually receive freight by rail and then send this on to another port in the same sea area.

> ***A key issue to remember is that depots can only send freight to depots with a higher priority so your desired import ports must have a higher priority than your exporting port.***

You can swap a port between exporting and importing freight by right clicking on the hex, select ‘port depot’ which opens the ‘switch to export port’ option, this will allow you to swap the port between receiving or sending supplies.

2511

Alternatively a port status can be changed by clicking on the top left hand box or using the city detailed tab. The image below shows how you can toggle using the top screen.

2512

If you set a port depot to export, it will generally try to get more freight by rail so it can ship freight to other ports by sea. If you set it as an import port, it will not ship out freight by sea, but will try to draw freight from other ports depending on priority. If you do not want an import port depot to attract freight by sea you must lower its priority to 1 (could still get freight via rail) or 0 (it will draw no freight).

> ***For a port to export freight it has to be set at priority level 3 or lower. Due to how exporting ports acquire freight it can be useful to leave them at 1 or 2. Since exporting ports gain supply from the relevant NSS before other depots, setting a port to export can be useful as a***

means to pull in supply (even if none of this is actually sent out by sea).

25.6.3. Port Capacity

The maximum amount of tons of freight that a depot can receive via a port in a turn is equal to 7,500 * the damaged adjusted port level (as of the prior turn). The maximum amount of tons of freight that a depot can receive via rail is equal to 10,000 * the damage adjusted rail yard level (as of the prior turn).

For example, an Axis level 2 port with a level 1 railyard would have a capacity of 2x7.5 + 1x10 = 25k tons.

A depot will attempt to receive it's per turn maximum up to its storage maximum.

25.6.4. Cargo ships and the Civilian economy

As with the rail network, some shipping capacity may be used satisfying the civilian economy and for the wider movement of resources between cities. Thus players may notice some shipping usage even in sea areas where they currently have no freight moving between ports to supply their armies.

25.7. DEPOTS

Depots are an essential link in the supply and replacement chain. During the logistics phase they both receive and send on freight up to their capacity (4.10.5, 6.7.2 and 25.7.8). They also store freight and in the supply and replacement segment, freight is then drawn upon by units and converted to provide supplies, fuel, ammo, and replacements taken from available pools.

Depots can be created and disbanded by the players, with the exception of type 4 depots, which are permanent national supply sources (25.2.3), and temporary depots created by airdrops (22.5.1). Such temporary depots cannot be manually disbanded by the player, but will be removed from play once the freight is re-allocated (and this can be immediate if combat units are in, or adjacent to, the receiving hex).

Once created, a normal depot will remain even if it is cut off in subsequent turns (when it still might receive some freight as a result of air supply operations (23.14.3). If a depot is disbanded (or a temporary depot is removed), vehicles will be removed from the depot in the next friendly logistics phase. The freight will remain in the location (it will not show in the hex pop-up text), and it may be sent to units, but this will require vehicles to return to the depot.

There are two useful map views to understand both the deployment of depots and the flow of supplies. The logistics button or the n key will bring up a display of depot location and rail usage.

Selecting the '8' key displays blue, red and white lines on the map that will show the flow of freight from depots to units and depots to depots. Each unit keeps track of the depot that it received most freight from during the last logistics phase.

The red lines are drawn from the depot that sent most freight to a unit. Blue coloured lines display freight moved from ports to port while white lines display rail movements of freight between depots.

2513

This shows how the two map views can be combined (often it is better to use one or the other). In this case the Soviet depot at Alekseevka (1) is drawing supply from Svobida (2). The Soviet 8-13 Guards Rifle Division is drawing supply from Alekseevka (the red line) but the 6-11 Rifle Division at the top of the image is using a different depot (not shown but in this case it is Voronezh).

For this view, remember that the lines show the connection to the most important supply source, both units and depots may be taking supply from more than one source. So in the example below the 302 Mountain Division draws supply from two depots but only the link to Vyshny Volochek would be shown on the map.

2514

Note that depots will function less efficiently if either the railyard or port in the hex is damaged. In turn they will function more efficiently if a HQ (other than a type 4, High Command level HQ or any air HQ) is stacked in the same hex or a FBD/NKPS unit is in the hex for the entire turn and expends no movement points.

Depot Supply Priority: Each depot has a priority from 0-4, which can be set in the city detail window, through the general information and city/airfield box, in the Depot section of the Locations tab of the Commander's Report, or from the map by right clicking on a location and selecting the depot type.

2515

With the exception of depots set to supply priority 0, the higher the number the higher the priority for the depot to receive freight. Depots with higher priorities will be given the first chance to receive freight before railyard and/or port capacity is used up. Depots with priority 0 will not receive any freight from other depots in the logistics phase, so this setting should be used only when the player wants to drain a depot.

In addition if a NKPS or FBD rail repair unit spends the entire turn (and uses no movement points) on a depot then this will greatly increase freight deliveries to that depot in the next logistics phase. Note that this may reduce the allocation to nearby depots as it ensures the chosen depot has priority for deliveries.

2515a

This shows the impact of setting up a depot this way. The NKPS formation at Jablonowo ensures that all the possible capacity to acquire and pass on freight is being used (with this capacity enhanced by the presence of the Soviet Army HQ). To some extent this is done by distorting the local supply grid to allocate freight there but the effect is to have a depot close to the front line that functions at full capacity. Ideally, this would be at a location with a larger railyard (enabling even more capacity).

> ***This also shows how the best use for the NKPS/FBD formations is not always actively repairing rail lines. One strategy is to move such units every third or fourth turn so they can repair another stretch of rails and then create a new 'super' depot at their new location.***

When a non-port depot is created by a player, its priority is set to 3 by default. When a depot is created automatically in a port that is captured, its priority is set to 3 by default. When a port or temporary port depot is created, it is set to priority 4 by default.

25.7.1. Depot Types

When the toggle logistics info is on, depot hexes are displayed with an inverted triangle. Depot priority (0-4) will be displayed inside the depot symbol, with 0 in red, 1 in orange, 2 in yellow, 3 in dark green, 4 in light green. A symbol below each type of depot will also be displayed.

2516

There is a hierarchy of depots as follows:

- Depot 4 (Star symbol) – National supply source (25.2.3) – this is a permanent depot that cannot be disbanded and is the source of freight tonnage to be distributed to other depots.
- Depot 3 (white port symbol) – Export Port – this is a port that can be used as a source of freight to be shipped via naval transport over sea and ocean water hexes to another port.
- Depot 2 (blue port symbol) – Import Port Depot – this is a port that can receive freight over water.
- Depot 1 (Rail Line symbol) – Railyard Depot – This is a depot that receives freight via rail or road using trucks.

In the example above, the ports around Kobona are set to export (white) and Osinovets to import (blue). Other shown depots are all railyards (marked with a train symbol).

Player created depots will either be type 2 if in a hex with a port or type 1 for all other hexes.

Players can switch port depots from importing to exporting as required using various tools:

2517

If the port is selected, the port role can be swapped using the port symbol at the top of the screen or by right clicking on the hex and altering the port type as shown.

25.7.2. Creating Depots

Players can create a depot in a town, city, urban or airfield hex (in each case these must be on a rail line), or any other hex just containing a rail line at the cost of one AP point, and can disband eligible depots at any time. Whenever a depot is created in a rail line or port hex without an existing railyard, a level 1 railyard will be created with 100 percent damage at that location.

Depots cannot be created in a hex that is pending control unless there is an existing town, city or airbase in the hex.

As usual this can be done using the top of the game screen or by right clicking. As there is no existing depot in the hex, the display at the top has no location name (once a depot is placed it will have a name such as ‘Depot #3’).

2518

If this depot is not connected to the rail net it will not function but will build up the railyard so it can function normally once the rail connection is in place.

> ***Players Note: This rule means you can set up depots in advance of your rail heads and they will repair their railyard meaning they will function more efficiently when they are linked to the supply grid.***
>
> ***Reminder – a level 1 railyard does not create additional rail capacity (i.e. rolling stock etc.) but does affect loading and unloading costs of units and freight and determines the effective size of the attached depot.***

25.7.3. Automating Depot Creation

If the player wishes the process of depot creation can be automated.

To do this either depress the AI depot management tab or select CNTRL+C and up to a maximum of 10 new depots will be created (at a cost of 5 Administrative Points if all 10 are built) and the computer will also disband and change the priorities of existing depots (using the same strategy as it would for the AI player).

If you are using the automatic depot creation option, you will need to confirm you wish to do this and will then be reminded of the option every time you press F12 to end a turn.

2519

If the player has less than 5 AP points this procedure will not work and a warning message will be displayed.

> ***It is recommended this is not done till a player has completed all the rail hex repairs they intend to do in a turn.***

The same system is used by the AI in creating its own depots.

If an unmoved FBD/NKPS formation is in hex with a railyard then the automatic depot management routine will generate a depot (priority 4) if one is not already present.

25.7.4. Disbanding Depots

Depots can be disbanded at any time in the air or ground phases.

Disbanded depots will try to ship some of their freight by rail to other type 1 (rail yard) depots. Also, a small amount of the freight will be removed, a small amount will be destroyed (with destruction of fuel and supplies from the pool), and some will convert to fuel and supplies and be placed in the location.

25.7.5. Capturing Depots

When a depot is captured, most of the freight is destroyed (causing the destruction of some fuel and supplies from the player's pool), but some small amount of freight is captured resulting in the placing of fuel and supplies in that location for the capturing player's use. In addition, a small number of vehicles are destroyed and the rest are returned to the pool. With the exception of depots in port hexes, captured depots are destroyed.

25.7.6. Isolated Depots

Units in isolated areas (23.14.1) can also use freight in a depot. Depots in isolated hexes will lose 5 percent of their freight each turn in the logistics phase to reflect that some of the freight is not the material that is needed by the units that are drawing from it.

25.7.7. Depots and Truck allocations

There is also a limit to the number of trucks in any depot. The cap is depot capacity/10 so a railyard level 1 depot has a capacity of 10,000 tons and can have a maximum of 1,000 trucks. The cap is increased by 50% during the ground phase.

25.7.8. HQs and Depots

The maximum capacity of a depot can be increased temporarily if there are HQs stacked in the hex with the depot.

> ***Note that HQs improve both the capacity of the depot (i.e. the ability to receive and send on supply) and the amount of freight that can be stored at the depot.***

Some HQs can increase the depot maximum capacity by 100 times the number of support squads in the HQ, subject to limits due to the type of HQ. A type 2 HQ can increase capacity by up 35k, type 3 HQ can increase capacity by up 20k and type 4 HQ can increase capacity by up to 5k.

This has also an impact on the maximum number of trucks at the depot (which is the maximum depot freight divided by 10). As soon as a HQ is in the hex, the maximum capacities are changed and the new values will be shown in the rollover text.

2520

In this example, (1) shows the capacity of the depot when Army Group Centre is stacked in the hex and (2) if the HQ is absent.

Type 1 HQs (i.e. Stavka and OKH), Rail Repair HQs and Air Command HQs do not increase the depot maximum capacity

The bonus for a HQ placed on a depot can never add more than 4 times the damage adjusted depot capacity from the railyard and port values. This means a brand new depot created at a 0 railyard location will only be improved slightly till the railyard is built and starts repairing.

> ***In combination these rules are very important. If you can, make sure that every depot near the front line has a HQ stacked on it. Equally deploying units in REFIT mode on a depot with a HQ (not necessarily the one they report to) will ensure it receives as much new manpower and equipment as can be delivered.***

25.7.9. Rail Repair units and Depots

The German FBD and Soviet NKPS formations are usually used for manual repair of rail lines (21.6.1). However, if they are on a depot and did not move in the previous turn (and expended no MP, such as on rail repair), then that depot will attract a large

amount of additional freight compared to others on the same supply network. In addition, the cost of moving this freight will be reduced.

> ***As with the deployment of HQs, this gives the player a practical and powerful tool to influence the allocation of freight between depots and to draw supply to critical sectors. Combined with HQs, this can be a powerful tool for bringing a large amount of freight to a depot, potentially bringing in as much as 60k of freight to a depot in one turn.***

If an unmoved FBD/NKPS formation is in a hex with a railyard then the automatic depot management routine (25.7.3) will generate a depot (priority 4).

25.7.10. Depots and City Hexes

Errata – 01.02.13. An undocumented feature was that supply and fuel in a city hex could be converted to freight in an associated depot. Usually these are then returned to overall pools but if the city is isolated they will stay in that depot.

25.8. UNIT SUPPLY PRIORITY

Each HQ has a supply priority from 0-4 and, in turn, this will affect the supply priority of directly attached units. Units with the highest priority will have the first chance to receive supply and replacements. Units with lower priorities may be forced to try to get their supplies from more distant depots as depots run out of freight, and in most cases will not attempt to receive all of their requirements.

25.8.1. Supply Priority and Maximum Supply Allocation

Units linked to a HQ with a supply priority of less than 4 will not try to receive all the supply they notionally need. The chart below shows how unit supply priority will limit the extent that a unit will try to attempt replenishment during a particular supply/replacement segment.

Unit Priority	Percent of Need
4	< 90% (1)
3	< 90%
2	<70%
1	<50%
0	<30% (2)

Notes

(1) This is <110% if the unit did not move in the prior turn and is not adjacent to an enemy controlled hex.

(2) Air Base Units will not receive any supply or replacements if set to supply priority 0.

> ***Note: If the needed supply is not in local depots a unit will start to use its own trucks to gain supply up to the percentages above. Since these missing trucks impact both MP (21.1.2) and CV (23.8.3) it may leave your units with less mobility if they have a high supply priority. In effect, the unit will have the supply it needs but lack mobility so on some sectors you may find it useful to set your HQ priorities to relatively low levels.***

In addition, individual units can try to acquire freight up to 130% of supply and fuel needs and 180% of their ammunition needs if the following conditions are met:

- Report to a HQ with supply priority 4;
- Have 100 CPP;
- Do not move in the turn; and,
- Are not adjacent to an enemy unit.

25.8.2. Setting and Changing HQ Supply Priorities

Priorities are shown and set in the HQ Unit Detail Window (37.2), using the HQ counter (6.5.6) or through the supply priority function in the HQs tab of the Commander's Report (35.3) or by clicking on the supply priority for a unit in the CR screen. When an HQ unit changes its priority all units attached to that HQ unit (as well as all units down the chain of command under this HQ) will change to the same priority).

For example, if the 6th Army HQ unit is changed to supply priority 4, all the HQs directly attached to the 6th Army and down the chain of command will now have a supply priority of 4.

2521

Errata (01.01.03) The supply priority of naval units are automatically set to 4 at the start of every logistics phase.

25.8.3. Effect of Combat Preparation Points

Combat Preparation Points (23.2) also affect the proportion of supply and ammunition a unit will seek to hold during the logistics phase. Units with 100% CPP

can store up to 180% of their ammunition, and 130% of their supply and fuel needs if they are set at supply priority 4 and do not move.

In addition, the number of CPPs affects the chances of passing administrative rolls for resupply.

25.8.4. Air Base Supply Priorities

Air base unit supply priorities are set by the supply priority of the AOGs based there (if planes are present from more than one AOG then the one with the most is used). So the supply priority of an air base can alter during the turn as air groups are physically moved on the map or alter their command assignments.

By definition, if an airbase is empty it will be set to zero supply priority.

25.9. SUPPLY STATES

During the supply portion of the logistics phase, units of the phasing player are determined to be in one of two possible supply states: In Supply; or, Isolated.

25.9.1. In Supply

A hex is in supply if it can link to a functioning NSS. This can include tracing over water from one friendly port to another, but cannot go through enemy controlled hexes. Supply can be traced through enemy Zones of Control (EZOC).

If a valid path cannot be traced then the hex is considered Isolated but the unit is only considered to be isolated if the rules in 25.9.2 apply.

The counter in the unit bar and on the map will always be bordered in the appropriate colour if the unit is not in supply. These border colours will change if units change their supply state during the Action (move) Phase and will be red if the unit is isolated:

2522

Supply states are also displayed in the commander's report

2523

This shows all the isolated Soviet units (including the Cavalry Division above). These can be selected by using the 'Isolated' filter at the foot of the screen and selecting 'yes'.

Note a unit can be 'in supply' according to these rules but still lack all the supplies it needs for efficient movement and combat.

25.9.2. Isolation

If the unit does not qualify as in supply then it is isolated. This stage occurs if begins a friendly player-turn in an isolated hex.

Isolated units can only receive supplies, fuel and ammo through air transport drops to temporary depots or freight from isolated depots also in the pocket. Isolated units can draw replenishment using non-vehicle methods (25.5.5) or by using vehicles already in depots and units inside the pocket. Isolated units cannot receive replacements and will not return damaged ground elements to the production pool.

Isolated units that have 0 supply will have 75% of their elements damaged in the logistics phase.

See section 23.14 for combat related effects on isolated units.

> ***Players Note: You will need to stockpile freight in a depot if you expect to become isolated, as the depot will be able to distribute its freight to units in the hex or in a small pocket. You should also place depots in fortifications, ports or hexes that you otherwise wish to hold.***

The toggle unit modes/isolated button in the map information tab (25.9.1) will highlight map counters so that isolated units will be highlighted in red.

An isolated hex and any unit in the hex will cease to be isolated if it is relinked to a functioning NSS. At the completion of each air execution phase, and whenever a non-isolated unit moves, or a battle is resolved, hexes recheck their supply state. If one of these actions has reconnected the hex with a path of any length to a functioning NSS, then the hex will no longer be isolated. Whenever a unit occupies a hex that is not isolated, the unit is considered in supply. The current supply state of each unit is displayed in its detail window as either 'In Supply' or 'Isolated'

2524

25.9.3. Airhead Supply and Isolation

If the depots in a given pocket collectively receive at least 500 tons of freight via air-drops this will trigger 'airhead supply'. Units that can trace to these depots are not considered to be isolated in the next enemy turn but are treated as isolated in their own turn.

> ***Players Note: Dropping sufficient supply to meet this threshold will allow units that are cut off to survive for some time. They will slowly lose morale and suffer some of the effects of isolation but will not readily surrender to the attacker unless their morale is already low.***

Note this does not apply to the Soviet side in June 1941 (11.3.5)

25.9.4. Effect of Low Supply Levels on Units

The further a unit is from a depot, the less supply, replacement and repair will be received. The main impact of low levels of supply is the reduction of movement points through lack of supplies (non-motorized units) or fuel (motorized units). As units run low on supply they will tend to use up less supply. This causes a greater chance for ground elements to become damaged and destroyed during the logistics phase. Front line attrition is especially high for units that are running low on supplies.

A unit's combat value (CV) will be impacted by ammunition and fuel shortages (23.8.3).

The amount of ammunition on hand impacts both the overall combat effectiveness, especially of attacking units, as well as the number of shots in combat (23.8.1).

Low levels of supplies will impact the ability of a unit's ground elements to recover from fatigue.

26. REPLACEMENTS

2600

This section covers how units will receive replacements as a specific aspect of the wider logistics processes.

Key Points:

- How Replacements are allocated to combat and support units
- Refit Mode
- Usage of the National Reserve

The replacement part of the supply/replacement segment simulates the flow of men and equipment back and forth from the “home front” and the various production factories, through intermediate locations such as repair depots and hospitals, to the combat zone and the front lines.

Ground unit losses, whether combat or non-combat related, while expressed in terms of men, guns and AFV’s, are actually based on destroyed and damaged ground elements.

Ground elements consist of manpower combined with AFVs, combat vehicles or Armament Points, which represent all other weapons.

During the replacement segment, available manpower is matched with the equipment in the pools to form complete ground elements. Men and equipment from damaged ground elements are included in this process, but are treated slightly differently.

Approximately (with the exception of AFV ground elements – see 26.1.4) 25 percent of the manpower and equipment from damaged ground elements are returned to the transit pools each turn. Over time these will move to the active pools and become available as replacements in future logistics phases, representing wounded troops that are lost for short periods of time before being sent back to units, equipment that has to be repaired at non-divisional repair facilities that are then sent back to different units, and men transferred from one unit to another.

Isolated units cannot receive replacements.

Note also that replacements are sent as freight from depots along with supplies, ammo and fuel based on the priority set by the HQ unit that they are assigned and percentage of need (25.8.1).

26.1. RECEIVING GROUND ELEMENT REPLACEMENTS

The replacement part of the supply and replacement segment involves the return of damaged ground elements, return of excess support squads, refit, and normal replacement.

Units must be in supply to receive replacements. Routed units will not receive replacements.

Replacements coming into units will bring down the average experience for that type of ground element by a small amount. Experience reduction caused by replacements is based on the relative amount of replacements received. The higher the average experience of the elements, the less the decrease that can be expected as replacements are added. Experience levels in destroyed units being rebuilt will tend to be lower than high experience units receiving a steady stream of replacement ground elements.

26.1.1. Allocation of Losses to the Transit and Replacement Pools

First, 25 percent of all damaged ground elements (apart from AFV ground elements, see 26.1.4 below) from units are returned to the transit production and manpower pools to be made available to return as replacements.

However, only sixty percent of the manpower from the damaged ground elements goes to the transit pool; the other forty percent is placed in the disabled pool. All other things being equal, returning ground elements are more likely to be returned to their original units.

Damaged equipment, and manpower returned to the pool during the logistics phase are not available immediately to be used as replacements. Although they appear in the pool on the production screen, they actually are put in the transit pool.

At the start of each friendly logistics phase, 25 percent of the amount in the transit pool is moved to the available pool. This represents the lost time from the front of lightly wounded soldiers and damaged equipment.

When damaged ground elements are sent back to the pool, freight is placed in a nearby depot equal to one half of the freight tonnage of the ground element. Elements that are returning to the pool do not pay any shipping/rail costs.

26.1.2. Ground Element Replacements and TOE

The player can manually set the maximum percentage of TOE for which a unit's ground elements can receive replacements within a range between 50 and 100. Fortified Zone (21.2) units can be set below 50.

The supply priority of the unit (set by HQ unit they are attached to, see 25.8.1) impacts the chance of units getting replacements, and how much they will get in the same manner as supplies/fuel/ammo.

The supply priority interacts with the TOE percentage of the unit so that lower priority units will not fully fill up with replacements, even if all freight/manpower/equipment is available, while high priority can reach their set TOE (and occasionally exceed the this by a few elements).

26.1.3. Ground Element Replacement Availability

In order for units to receive replacement ground elements, these must be either in the pool, or, alternatively for ground elements, built from armaments points, there must be sufficient armament points in the pool to build the devices associated with that type of ground element.

In the case of damaged ground elements being returned to the pool, if there is already appropriate equipment in the pool to outfit the particular ground element, then no additional armaments points are used and instead the pool of that type of equipment is reduced by one for each element sent as a replacement. Also, there must be manpower in the active pool to match with the equipment and build out the ground element.

However, simply having the ground element equipment and manpower available doesn't mean they will get to the unit that requires replacements. Constraints in the supply network and the impact of interdiction can slow or stop this process meaning that ground element equipment and manpower might remain in the pool even though there are units that need them as replacements.

Units may replace a type of ground element in their TOE with other types if there are shortages and other suitable equipment is available (21.2.7).

26.1.4. AFV Ground Element Replacement Limitations and Equipment Losses

There are several special rules for AFV ground element replacements. The percentage of damaged AFV ground elements returned to the production pools varies based on the ground weather as follows:

- Clear – 22.5%
- Light Mud – 20%
- Heavy Mud – 10%
- Light Snow – 17.5%
- Snow – 15%
- Heavy Snow – 10%

In addition, there is a chance that the equipment from an AFV ground element (i.e. the 'tank', but not the manpower) will be destroyed rather than being returned to the pool. The chance that AFV equipment will be lost increases the further the unit is from a railhead.

26.1.5. Excess Support Squad Ground Elements

Starting in October 1942 Axis units can use ready support squads to "repair" damaged elements. Damaged rifle and motorized rifle squads can be repaired, 10 at a time in a unit. In this case half of the men in the damaged squads are put in the disabled pool. Enough support squads (2 or 3) are removed to replace these disabled men. Any excess men remaining are placed in the pool.

As an example, if a the squads require 10 men to be fixed, then 10 damaged squads would become ready, 50 men would go to the disabled pool, 3 support squads would be removed from the unit, and 10 men would be placed in the pool.

26.1.6. Panzer Replacement Battalions

The Axis player receives a number of Panzer Replacement Battalions in the National Reserve. These can be assigned to Panzer Divisions and the component assets will be absorbed into the host unit.

At that stage the Support Unit will be removed from play.

In effect, these provide the Axis player with a tool to allocate replacement tanks either to the Panzer divisions or to keep as Support Units and allocate to other formations as conventional Support Units.

> ***Given the problems especially in 1941 and later in 1942 of bringing replacements to front line formations via the normal freight system, using these to rebuild weakened Panzer formations is probably the best choice.***

26.2. AIRCRAFT AND PILOT REPLACEMENTS

26.2.1. Aircraft Replacements

Air Groups may receive replacement aircraft during the replacement segment. The air base unit to which the Air Group is attached must be in supply in order for the Air Group to receive replacements and any air group placed in the National Reserve (13.2) is always considered to be in supply.

The number of aircraft received is based on the amount of that model of aircraft available in the production pool and the need of the Air Group, which is defined as the difference between the maximum number allowed and the actual number of ready and damaged aircraft in the Air Group. Reserve aircraft will be reallocated during the replacement phase.

Damaged aircraft are not returned to the production pool, and can only be repaired at the air base unit to which their Air Group is attached (or in the reserve if the air group is transferred off map). However, if the air group changes base then any damaged planes are sent back to the production pool.

26.2.2. Pilot and Aircrew Replacement

Each turn every nation gets a certain amount of trained pilots added to their pilot pool with an experience level equal to the current air national morale (12.1 and 38.2). When replacement aircraft are assigned to units, manpower is deducted from the manpower pool to fill the pilot and associated air crew.

If there are not enough of these pilots available, then remaining vacancies will be filled with new pilots with an experience level set according to 12.3.2.

The number of trained pilots received each turn is listed in the Commander's Report in the pilots screen under the Air Groups tab (35.4.4).

26.2.3. Air Group Replacement Priority

Players can set the priority for Air Groups to receive replacements or to decide that a unit will not receive replacements. Trained Pilots (first chance at getting replacement planes and pilots and will only take trained pilots from the pilot pool), Priority (next chance at getting planes/pilots, will accept untrained pilots), Normal (last groups to get replacements, will accept untrained pilots), Restricted (no replacements). These settings can be changed on the CR air group screen en masse or by group, and also on the air group detail screen where the current replacement setting is shown.

2601

26.3. REFIT MODE

26.3.1. On Map Refit

Using the refit mode will help the chosen units to regain losses more quickly.

Units in refit mode on any depot will try to fill up to their MAX TOE percent in every supply sub-segment, drawing from other depots as well as the one in which they are located. Units in refit mode located in the same hex as a national supply source depot (type 4) will have access to virtually unlimited freight.

The unit still follows the supply priority order to determine when it attempts to get replacements, but as soon as there is a phase that matches the supply priority of the unit, the unit will receive replacements even if it is at a higher TOE level than the sub-phase calls for. Note that the bonus that refitting units in depots receive is only true for replacements, not for supply. They will go through the normal phases to draw supply based on priority.

However, a unit in refit with less than 81 percent of need, which passes both administrative and support checks will be allocated 40 percent of the supply need instead of just 20 percent, but they are dependent on supply priority limits, unlike the special refit replacement rule above. Since the needs of the unit are constantly being updated as it goes through all the replacement/replenishment phases, what will happen is that in the first phase a refitting unit on a depot will take all the manpower it can get. This will cause the need to go up for supply replenishment. In subsequent phases, the refitting unit will try to get the other items it needs as normal with the refitting bonus of 40 percent instead of the standard 20 percent.

The consequence is that a unit on a depot may obtain all the manpower it needs and be 100 percent of TOE but not have much in the way of needed supply. It may take longer to get those items, so having a high supply priority will help this situation, as will being near depots with lots of freight and capacity.

The mode button in the unit bar or detailed unit tab can be used to toggle individual units to refit mode.

2602

This can also be done using the Commander's Report (35.2.1).

Errata 01.02.32:

HQs on map and in the national reserve may now be placed into refit mode. This can be done on the CR screen or by right clicking on the unit within the Reserve box on the map

26.3.2. Refit in the National Reserve

The basic rules above will apply. So units in refit mode in the National Reserve will be able to gain additional supply and replacements compared to other units. In effect, units in the National Reserve will be treated as a priority for the receipt of replacement manpower and equipment. Note that this also means that HQ and Support Units in the National Reserve should be set to refit if they need to take on fresh elements.

This means that units in the National Reserve may obtain so many replacement elements that there are few, if any, left for on map units.

To prevent this happening, the player can set the status of all units in the National Reserve to READY thus slowing the flow of manpower and equipment to those units. In addition, the maximum TOE can be adjusted to below 100% to ensure that not all available resources are taken up by units in the National Reserve.

27. REINFORCEMENTS, AND WITHDRAWALS

2700

This chapter sets out the rules for the receipt of fresh units (reinforcements) and the scheduled withdrawal of units using the historical pattern of transfers to different Theatres.

Key Points:

- How Reinforcements, New Units and Rebuilt Units enter the game;
- Transfer of Units between Theatre Boxes;
- Unit Withdrawals.

27.1. RECEIVING REINFORCEMENTS AND CREATING NEW UNITS

Both sides receive complete new units as reinforcements during the game with these listed in the reinforcement screen (36.7). This screen can be filtered in various ways to help identify key data (such as withdrawals from the main game map).

2701

Destroyed Axis and Soviets units are usually allocated to the appropriate National Reserve and can be rebuilt as required. If they are then ordered to another Theatre, or to the map, this will be recorded in the reinforcements and withdrawals table.

27.1.1. Reinforcement Placement

Reinforcements appear as set out in the unit reinforcement and withdrawal info screen (36.7). There are three methods of reinforcement placement for on-map combat, multi-role and HQ units.

Where a unit transfer (such as to the map) is set by the scenario designers then usually it will also have a target hex set.

If the transfer to the map is voluntary, for example from the relevant national reserve, the target hex is either the appropriate national capital or indicated by setting the ‘Reserve TB Arrival Hex (13.2.1)

2702

This can be reset as many times as wished during the turn so that different units appear in different locations. Note that German units must appear within the 1941 German borders (including German occupied Poland) and Soviet units must appear within the 1941 Soviet borders. Stacking limits apply in this respect so if more than 3 units will be in a single hex the excess are usually brought in along the rail line leading back west (Axis) or east (Soviets). See the rules in 13.2.1 for all the relevant conditions.

Returning Axis-Allied formations will appear in (or as near as possible) to current German reserve arrival hex.

Newly arrived reinforcements on the map can be identified when the view unit modes button is toggled on (shift-r).highlighted in green.

2703

Recently arrived units can also be found via the Commander’s Report’s filter ‘Arrived’.

2704

Units arriving on the game map from other Theatres will appear close to the notional border with that Theatre. So Axis units arriving from Italy or the Balkans will appear near the SE edge of the playable area, Soviet units arriving from the Trans Caucasus theatre at Baku and so on.

27.1.2. Allocation of trucks to Reinforcements

In the Campaign games (only) reinforcements will draw their truck allocation from the vehicle pool. If there are insufficient trucks in the pool, they will enter with as many as were available and will need to be reinforced using the normal rules.

> ***Given this, it might be useful to allocate new units that will require a lot of trucks to appear in an NSS. If they arrive at some distance, they may not be able to gain sufficient trucks to acquire full mobility.***

27.1.3. Creating Fortified Zone Units

Fortified zones (20.5.1) can be created by either player by right clicking on the map

2706

From the tabs at the top of the screen (when a hex has been selected)

2707

Fortified zones can be placed in any friendly controlled hex, with the exception that Players may not build Fortified Zone units in hexes next to an enemy combat unit unless that hex is also occupied by a friendly combat unit. Fortified Zone units initially appear with no ground elements or supplies and will have to receive replacements and supplies to become active.

27.2. PRODUCTION OF NEW UNITS

Only the Soviet player can construct new Combat and Support Units. In this respect it is important to differentiate between units that have been destroyed and are being returned to the game, fixed reinforcements and completely new production.

27.2.1. Destroyed Soviet units that Return to the game

Any Soviet Rifle or Mechanized division destroyed before November 41 will return 4+Random(23) turns later as a Rifle division.

Destroyed Soviet tank divisions will return in 11 turns as a tank brigade

Returning Soviet units will be placed in the national reserve and can be deployed to the map when a player wishes to do so.

All these units will need to take on substantial reinforcements and ground elements in order to become combat ready.

Depending on how they were destroyed (surrendered in a pocket or shattered in combat), they may retain a few of their original elements such as the Soviet Rifle Division below.

2705

Rebuilding units will have their morale set to 30+ (national morale/4)+ random(national morale/4). This will never be lower than 30 or higher than 70. The initial experience for the ground elements in the unit will be set to 15+ (morale/2). This initial experience will affect the first batch of replacements that are received by the unit.

27.2.2. Rebuilding Axis Combat Units

Axis combat units that are destroyed will usually be placed in the appropriate National Reserve after a certain number of turns. These units will appear in the National Reserve with a maximum TOE of 0. The Axis player can then change this value when they wish to use resources to refit that unit.

Rebuilding units will have their morale set to 30+ (national morale/4)+ random(national morale/4). This will never be lower than 30 or higher than 70. The initial experience for the ground elements in the unit will be set to 15+ (morale/2). This initial experience will affect the first batch of replacements that are received by the unit.

Destroyed Axis units that are available for rebuilding are given a delay before they are placed in the national reserve related to their size, as:

- Division (including any broken down regiments) – 9 turns;
- Brigade – 5 turns;
- Regiment – 3 turns;
- Battalion or less – 1 turn.

German Infantry Divisions destroyed on or after August 1, 1944, will return to the reserve as a VolksGrenadier Division.

In non-campaign scenarios, destroyed units will not return to the game to be rebuilt

27.2.3. Reinforcements

Some reinforcements arrive on the map or a Theatre Box as fully equipped units. Others will appear as very weak formations and, as in 27.2.1 will need to spend time taking on reinforcements and new ground elements.

27.2.4. New Unit production

Only the Soviet player can build new units.

To access the screen to order units click on any Soviet controlled hex, press Shift+B or select the button on the screens at the top.

The build screen will then pop-up:

2708

Note that the list of units that can be built and the cost per unit and total number that can be in play at any one time will vary across the game.

On the left hand side are the names of the unit types, their cost in administrative points (9.2), the number that already exist in the game (in all locations) and the production limit.

Note that some units do not have an administrative cost but will still demand manpower and other resources to become combat effective.

Note also that some unit types share the same cost and production limit among similar types. So the various types of Soviet artillery regimental SU all have a common cap but the player can decide which type to build.

On the right hand side is the name that will be given to the new unit(s). Below this is the current TOE of that unit type (21.2.5) and how many of each ground element is currently in the production pool. This will show all the elements of that particular type, and all the feasible substitutes that the game engine might use.

Below this again is a complete list of all the existing units that share the same TOE type.

At the top of the screen, the player can opt to build between 1 and 10 of the chosen type by changing the 'Build 1x' indicator.

Note that after the build number the total number of men, guns and armoured vehicles in the new unit(s) will be shown as if the unit was at 100% of the TOE.

New units are initially assigned to the National Reserve.

The player can then make adjustments such as lowering the %TOE or setting the mode to ready rather than refit.

> ***Using these tools allows the Soviet player to control the process by which new units (whether returning, reinforcements or newly built) build up to full effectiveness. If all the units in the National Reserve are left on REFIT (especially in 1941 and early 1942) then they will all build up to their full TOE very slowly. Placing a small number on***

REFIT will ensure that resources are allocated to those units meaning they become combat ready much quicker.

27.2.5. Production of Soviet Air Units

The production of new Soviet air units is automated.

Up to 1943 only a few new Soviet air units will be created in the national reserve. After this date, units will be created to make use of suitable pools of aircraft, including those that have just entered production.

These new units can be retained and will train up over time, deleted or swapped to obsolete planes as the Soviet player prefers.

27.3. IMPACT OF ALLIED AND SOVIET GAINS IN GERMANY

If the Soviet player controls one of Essen, Frankfurt, Berlin, Vienna or Prague (whether by Soviet control on the map or the relevant regions being captured by the Western Allies), the following rules are in effect:

- German units that are destroyed will not return to the game; and,
- All frozen German units will unfreeze in the next German logistics phase.

Any German units due to transfer to a different Theatre Box will continue to do according to the set schedule.

27.4. UNIT WITHDRAWAL

27.4.1. Normal rules

If the option to use the enhanced control of the Theatre Boxes is not used (13.3.4) then unit withdrawals will follow these rules.

Certain units will be withdrawn from the game as specified in the Reinforcements and Withdrawals screen (36.7). A unit will shift into Withdrawing Mode between 4-6 turns prior to the date listed on the Reinforcements and Withdrawals screen. The unit will be withdrawn from the map during the logistics phase of the turn listed. When an on-map unit is withdrawn from the map, any support units attached to the unit will remain in the game by automatically transferring to the withdrawing units' higher headquarters unit.

Units scheduled to be withdrawn cannot be disbanded or merged. Units in static mode scheduled to withdraw will automatically reactivate in the same logistics phase as they are withdrawn, expending administrative points as for a normal reactivation. This reactivation may cause the number of available administrative points to go to zero, though they will never fall below zero.

Units scheduled to withdraw are removed immediately on their withdrawal date, regardless of their current TOE. This might lead to shortages in the destination Theatre as they may be weaker than needed to maintain a suitable commitment to that theatre. This includes units that were destroyed before their withdrawal date and never rebuilt in the national reserve.

27.4.2. Enhanced control

If the players opt to use full control then scheduled withdrawals and transfers can be cancelled if desired.

27.5. SOVIET UNIT CONVERSIONS

Over the course of the game some Soviet units will convert to a new TOE or type of unit. This is sometimes linked to the unit being destroyed or depleted in combat.

27.5.1. At-start Tank and Mechanized Divisions

Any Soviet Tank Division that shatters, is destroyed or becomes depleted will convert to a Tank Brigade and return 11 turns later in the National Reserve. If a Tank Division routs and then rallies there is a 20% chance it will be converted to a Tank Brigade.

Any surviving Soviet Tank Divisions will convert to Tank Brigades in March 1942.

Soviet Mechanized Divisions that shatter or are destroyed before November 1941 will return as Soviet Rifle Divisions. Any surviving Mechanized Divisions will convert to Rifle Divisions by March 1942.

Errata - 01.00.12: The conversion date for the Tank Divisions is Turn 32 (i.e. 25 January 1942). Surviving Mechanized Divisions will not convert to Rifle Divisions unless they are depleted. However, since they cannot upgrade over time it is likely they will steadily weaken.

27.5.2. Militia Units

Some Soviet units are formed as militia (DNO) units. These will all have converted to regular Rifle Divisions with the usual TOE by late January 1942.

These can be identified in the Commander's Report as they have a different OB structure to standard rifle divisions:

2709

27.5.3. Scheduled renames or reorganisations

Other Soviet units are set in the game editor to rename on a particular date. This will either happen as scheduled or earlier if the unit is destroyed. If the unit is destroyed it will return according to 27.2.1.

Note that Soviet units with later withdrawal dates are restricted in terms of being used to build up Corps or Divisions.

27.5.4. Converting Rifle Brigades to Divisions

After April 1942, two regular (not naval infantry) Soviet rifle brigades can be combined to form a new division. Brigades with a later withdrawal date can usually not be combined this way (unless the players are using Enhanced Theatre box control).

From March 1942, three Soviet airborne brigades can be combined to create a Guards Rifle Division.

27.5.5. Creation of Combat Corps

The Soviet player can begin creating Infantry and Cavalry Corps from December 1941, Tank Corps in April 1942 and Mechanized Corps from September 1942. The maximum number of each type will vary across the game.

There are two basic ways to do this. For Infantry and Cavalry Corps, if the elements are in the same hex on the map, then use the build-up button and the new unit will be created in that hex. Alternatively, the create new unit button will allow you to build the Corps using existing units in the national reserve (it will then deploy in the reserve) or fresh divisions/brigades will be created as the basis for the Corps. Note in this case, the new corps will have low morale and experience as it is based on freshly raised formations.

In December 1941 only 2 Infantry Corps can be created and these must meet the criteria for Guards status (in addition at this stage the Soviet player can create up to 8 Cavalry Corps). From June 1942, they can start to build any type of Infantry Corps up to the limit on the build menu.

Soviet Corps will be created with Guards status if at least 2 of the component elements had Guards status in advance.

The cost, and total number, of each type will vary substantively as the game progresses and the current limit and costs can be checked from the Soviet unit build screen (27.2.4).

Note that if a division or brigade will be withdrawn to another Theatre during the game it cannot be used to build a corps. Long term withdrawals are indicated in the Commanders Report or on the unit counter, as:

2710

The conditions for Corps creation of the various types are summarised below.

Type	Rules
Rifle	3 Rifle Divisions in the same hex or use the 'Build new unit screen' (37.5) and can use divisions in the reserve. For this purpose, Mountain, Militia and Motorized Rifle Divisions can also be used (but only if they are in the National Reserve). If so they will convert from their current TOE to that of a rifle division of the appropriate type.
Cavalry	3 Cavalry Divisions in the same hex or use the 'Build new unit screen' (37.5) and can use divisions in the reserve
Tank	2 Tank and 1 Motorized Brigade either in the National Reserve or directly attached to Stavka. Can only be built using the 'Build new unit screen' (37.5).
Mechanized	3 Motorized or Mechanized Brigades using the 'Build new unit screen' (37.5) and can use brigades in the reserve or directly attacked to Stavka. Once Mechanized Brigades are available then a Mechanized Corps can only be built with either 3 Mechanized brigades or 2 Mechanized and 1 Motorized brigade.

Note that in every case, if you build the units in the reserve, any missing element will be filled out using a freshly created formation. This will increase the price of creating the corps and lower the starting experience.

Addenda: 01.01.15 When a corps is created using 2 or 3 guards units, if an appropriate guards OB is not available, the newly formed corps will not be a guards unit. A data change in this version delays the first available Guards Tank Corps to December 1942, and the first available Guards Mechanized Corps to November 1942. So merging Guards brigades before these dates will not result in a guards corps.

Play note, it is very unlikely this will affect the creation of Rifle or Cavalry Corps as suitable Guards TOE are available when those become available.

Errata Undocumented rules

In addition to the rules above, a Soviet Rifle Corps can be formed with 3 rifle brigades. This will follow the usual rules for Guards/non-Guards status and will need at least one turn to refit to full strength.

27.5.6. Creation of Guards Units

Soviet Guards Armies are created according to the historical timescale.

Combat units may become guards if they have won sufficient battles with the exception of the 1941 at-start Tank and Mechanized Divisions. This process will commence from Turn 18 onwards.

There is no limit on the number of cavalry or airborne combat units that may become guards units. Heavy tank and rocket units are automatically allocated guards status when created.

Up to 35% of Motorized units can become Guards.

For non-motorized type units, the approximate percentage limit varies by year as follows: 1941 - 5 percent; January - June 1942 -10 percent; July - December 1942 - 25 percent; 1943 - 25 percent; 1944 and 1945 - 30 percent.

The size of the unit impacts the percentages, with larger units taking up more of the possible allocation than smaller ones. Thus a tank battalion that becomes a Guards formation will take up less of the 35% cap than a tank corps would.

The current proportion of Guards formations can be found in the Event log as:

2711

This will also list any renaming formations in that particular turn.

28. PRODUCTION

2800

This chapter sets how the production system in WiTE2 operates and the rules for factory damage, repair and relocation.

Key Points:

- Elements of the production system
- How elements are constructed and manpower and equipment combined
- How different types of factories operate
- Factory damage, capture, relocation and repair

28.1. OUTLINE

The production system in Gary Grigsby's War in the East 2 simulates the generation of war material, manpower, fuel and supplies that flows into each side's supply grid as replacements and supply for the war fronts. All production is based on various factories located in town, city and urban hexes. Resource, heavy industry, oil and fuel factories produce the basic materials used to run the production system and supply the forces.

There are two types of equipment production in the game: historical production for aircraft and AFV/Combat and generic vehicles based on a fixed amount each turn and demand based production for non-vehicle ground elements based on the difference between the non – vehicle TOE strength of a unit and its actual strength. However, the latter may also face a cap on total production (28.1.4) so that production does not meet the full demand.

Every aircraft, AFV and named combat vehicle has a build limit which caps the maximum number of frames or chassis that can be converted into elements each turn.

The manpower required is generated through manpower factories that represent the availability of able-bodied men for the armed forces. Factories can be damaged and repaired.

Though not directly part of the production system, ports and railyards are treated as factories that generate a certain amount of transportation capacity (25.4.1 and 25.6.1).

Once produced, supplies, fuel, oil and resources are transported through the supply grid to town, city and urban hexes where they are stored and can be drawn upon as necessary by the factories located in those particular hexes.

Other produced items are held in virtual pools until they are drawn upon to build Air Groups (aircraft), ground elements, and trucks. Each pool has an active (available) and in transit (currently unavailable) component (36.3.1). Ships (both transport and cargo) as such are not produced but are generated as reinforcements but appear in geographical pools for each sea area (24.4).

The two displays below show current German production on T7 of the 1941 Campaign. At the top, the pools show all the possible components, the second image only shows the portion that is 'active' – in other words that could feasibly be used in production this turn.

2801

2802

Each nation in the game has a set of pools used for building aircraft and ground elements. Polish and Czech factories are considered an integral part of the German pools and their production (and a portion of their manpower) is placed directly in the German pools.

2803

> ***Note that if you click on the nation (such as Germany) the main display will alter to only show the production from that particular country (or area). You can return the display to show all production by then clicking on 'All Areas'.***

Polish and Czech manpower factories can produce manpower for the Soviets if occupied by the Soviets. Soviet resources are used to build equipment and ground elements used by Polish, Czech and Romanian forces that are operating under Soviet command.

Production takes place for each side during their respective logistics phase.

There is no production of any kind during the first player-turn of turn one of any scenario (when the German is the first player then there will be Soviet production on turn one). Note that in scenarios where the Soviets are the first player, there is no Axis turn one.

Production in non-campaign scenarios that do not use the entire map and OOB is reduced for both sides by a certain percentage to account for production going to the off-map forces not involved in the scenario.

28.1.1. Summary of Information provided

The logistics log (36.9) contains several reports that track the moves of various resources from production to usage.

The first shows movement of resources between cities as the various items needed for industrial production are moved around:

2804

The second shows if any factories lack all the resources needed to operate at full effectiveness. In this case, shortfalls can either be related to a location being isolated from the main rail network or that a required input is in short supply across the system.

2805

This information is then summarised into a table that shows the proportion of each factory type in use, how much it produces, how much resource it consumes in production and how many factories are operating at restricted production, no production or are isolated:

2806

In turn, the Production screen (36.3) shows additional information. The basic table will show both total capacity (unmodified), how many production sites are damaged, how much is in the pool (by default this will be the total but can be filtered just to show the active amounts) and how much has been built all game. In the example below, 2 Soviet manpower factory points are damaged as they have only recently been recaptured.

2807

Clicking on one of the entries will bring up a more detailed screen listing all the production sites for that item. Delay indicates that the factory is not yet in full production.

2808

In turn clicking on the city name will take you to that location on the map.

The list of equipment pools in the production screen (36.3) is annotated to reflect their current status as follows:

- No longer in production ('#')
- Currently in production (no symbol)
- Not in production yet (**)

2809

The only factories that will be considered physically present in town, city and urban hexes are those currently in production.

Selecting an aircraft or ground element equipment listed in the production screen will bring up information on the element characteristics, where it is produced and the upgrade paths.

2810

28.1.2. Equipment Downgrades and Swaps

A ground element or Air Group can downgrade to a specific type of equipment if the production system determines that there is a shortage of current equipment that is unable to keep up with the demands of all of the units using that equipment and

there is an excess of older equipment in the pool. In this case a unit may downgrade its aircraft or equipment to the item that is back along the upgrade path. For example, a German fighter Air Group that had upgraded from the Bf 109F-2 to the Bf 109F-4, but then took heavy losses, might downgrade back to the Bf 109F-2 if the Bf 109F-4 pool was low and there were excess Bf 109F-2's available.

Under similar circumstances, Anti-Tank ground elements equipped with 75mm AT gun devices might downgrade back to the 47mm AT gun device.

In the swap sub-segment, the computer may also change out existing ground elements with ground elements of the same type (21.2). Depending on the unit TOE (21.2.7) it may look to use a different type of equipment than its preferred option. So a late war Soviet tank unit may use either the T34/44 as its medium tank or a lend-lease Sherman tank.

These changes are listed in the logistics report, as:

2811

28.1.3. Scrapping of Obsolete Equipment

Equipment that is no longer produced will begin to be removed from the production pool by scrapping after the last year of availability. Scrapping of obsolete equipment does not happen unless the equipment is no longer in a unit and no longer in the current TOE of a unit.

If these conditions are met, then an item can be scrapped. AFVs will not be scrapped if they are being used by any units in the game.

28.1.4. Production Constraints

Some production is made using generic resources (such as armament points). An important aspect of this is there is a cap on how many such elements can be produced in a given turn even if the resources exist to produce more.

These limits will vary across the game (as will the types of artillery and other guns) produced. The production in the previous turn can be found in the Logistics Log (36.9), as:

2812

In effect these generic elements are only produced when needed but may not be produced in sufficient quantities to meet all the demand.

> ***This will particularly affect the Soviet player in 1941 and 1942 when artillery production will be less than required to refit all the potential combat and support units. This means the Soviet player will need to be careful about how many units are placed to 'refit' in the National***

Reserve and whether it is worthwhile building extra units (even if they cost no administrative points to produce – 27.2.4). Related to this, historically production of Soviet heavy artillery was very low from late 1941 until 1944.

28.1.5. Equipment Exports

The export function in WiTE2 includes both the sending of equipment from Germany to its Axis Allies and the conversion of equipment within the armed forces of each side so that factories don't have to be setup for every variant piece of equipment.

For example, a factory may only produce Me 262A fighters, but a certain number will be automatically converted into the Me 262A-1a/U3 and then placed in the appropriate pool.

When exporting ground elements or aircraft, no more than one quarter of what is currently in the pool will ever be exported on a turn.

Exports in the previous logistics phase can be seen in the logistics log.

2813

28.1.6. Impact of Damage on Production

The interaction between damage levels and production depends on the actual size of the damaged factory. A factory of size 2 with 90% damage will have 1 point damaged and the other functioning. A factory with size 11 with 25% damage will have 2 points actually damaged.

In effect, the damage % is applied to the total number of production units in a factory and rounded down.

28.2. THE GENERIC PRODUCTION SYSTEM

Production is conducted by various factories located in town, city and urban hexes. Some factories are located off-map. Each factory point (level) will produce a certain amount of an item each turn if the town, city or urban hex it is located in is connected to the supply grid (25.2) and sufficient basic items are stored at the factory location for local use. There are three basic items required to allow the production system to run; resources, oil and manpower.

Resources are required by Heavy Industry factories to produce supplies and by synthetic fuel factories to produce synthetic fuel. Supplies are required by armament points and these are used, in turn, by, aircraft, AFV and combat vehicle factories to build the equipment for Air Groups and ground elements.

Oil, resources, supplies and fuel are normally moved over rail as freight. Much of city to city or city to pool deliveries of oil and fuel are conducted by pipelines

independent of the rail network, so that half of all oil and fuel delivered in these cases do not use any rail capacity tonnage, however there has to be a rail network link in order for the pipelines to be considered to be functioning. Vehicles may be used to transport a small percentage of city needs that are not able to be moved by rail or sea.

Oil is required by fuel factories to produce fuel to allow motorized units to move and generic vehicles to operate.

Manpower factories provide the men that are matched with equipment during the replacement phase to build complete ground elements that flow to the units.

There are two types of production rates used for factories. Some factories (Heavy Industry, Fuel, Synthetic Fuel, Vehicle and Armaments) have a multiplier for each year (1941-45) that is used to determine the amount of production for each factory point.

However, for aircraft, AFV, and combat vehicle factories the number of factory points of each type of factory in each town, city or urban hex will alter over time based on scripted changes.

The economic system forces supplies and fuel to route to cities to meet their civilian production needs. However, if a city does not have enough to meet its civilian production needs, there is no penalty as such, but see 28.3.4 for the risk that manpower might be permanently lost. Military production occurs before any civilian production. Civilian production can be seen in the logistics report (at the bottom of the freight sub-section).

2814

For named vehicles and planes, they are first produced as airframes or chassis and then additional equipment and weaponry is added as required for particular types of that particular tank or plane. So, for example, there is a generic Ju88 airframe and the different models of the Ju88 then alter this as required.

28.2.1. Resource Production

Resources represent the raw materials, such as coal, used by heavy industry factories to produce supplies and by synthetic fuel factories to produce synthetic fuel. The system automatically attempts to ship resources to railyards and then the resources are expended to activate the railyards (in effect the trains use up some coal in the process). Each resource factory point will produce 2500 tons of resources per turn.

Resources move as Freight just like other production items and if rail and/or port capacity is available, can be transported from all player controlled resource “factories,” to include those in occupied countries.

Resource production is modified by the following multipliers:

Year/Nationality	1941	1942	1943	1944	1945
German/Czech/Polish	1.0	1.0	1.0	1.0	1.0
Axis Allies	1.0	1.0	1.0	1.0	1.0
Soviets	1.75	1.75	1.75	1.75	1.75

This, and related tables, can be found by accessing the in-game editor (41). There, the relevant table can be found under the Nat/Weather tab and shows all these multipliers organised by nationality, as:

2815

28.2.2. Heavy Industry (Supplies) Production and Allocation

Heavy industry (HI) factories take resources and use them to produce supplies, which represent not only all the materials used in the production of armament points, but also the general supplies and ammunition used to supply units. Note that a shortage of resources (compared to notional demand) will mean that many HI factories operate at lower than maximum capacity.

Each HI factory point will produce a notional amount of 250 tons of supplies per turn at a cost of 1750 tons of resources.

HI production is modified by the following multipliers:

Year/Nationality	1941	1942	1943	1944	1945
German/Czech/Polish	0.4	0.9	0.9	1.1	0.9
Axis Allies	1.0	1.0	1.0	1.0	1.0
Soviets	1.0	2.0	2.5	2.7	2.9

Lack of resources will mean that not all potential factory production is used each turn and any factories lacking resources will be shown in the logistics log as:

2816

28.2.3. Armament Production

Armament factories take supplies and use them to produce armament points, which are maintained in a virtual pool. Armament points are drawn upon to build devices to equip ground elements.

> ***For example, the build cost of the devices for an 88mm Anti-Aircraft Gun ground element is 55 armament points, which includes one 88mm AA Gun and eight 7.92mm Kar 98 Rifles for the ground element's eight men. Since all these are produced using the generic armament production, the ground element will draw on the existing ready pools to complete the ground element.***

Each ground element has a build cost and this determines how many armament points are used in its production. Ground elements that use devices built using armament points be marked in the "CAPACITY" column of the production screen as 'ar:xxx':

2817

If the 'ar' is followed by a number then the production system will try to make roughly that many each turn (subject to available armaments) unless there are 10x that number of items in the pool. However, the set cap will not be exceeded regardless of resource availability.

If the description is 'ar:need' then production will vary according to demand and how many of that item are already in the pool.

Note that many of the listed items are actually made up of more than one weapon system. This can be found on the unit production screen and, for example, the actual weaponry produced for a 1942 Soviet Rifle Squad is:

2818

The production of the items that have a set capacity in the previous logistics turn can be found on the logistics tab under 'production' as:

2819

Armament factories and production information is listed under the "SPECIAL" section of the production screen.

2820

Elements built by armaments points will often be built ahead of their being used in order to stockpile the elements for future use. Being in demand by units in the field can increase the likelihood that elements will be built to stockpile.

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Armament points are used to produce the chassis for aircraft, AFV or combat vehicles which are then built at individual factories.

Each Armament factory point will produce a notional 200 armament points at the cost of 50 tons of supplies. Armament point production will be modified by the following multipliers:

Year/Nationality	1941	1942	1943	1944	1945
German/Czech/Polish	3.75	5.15	5.15	7.50	7.50
Axis Allies	1.0	1.0	1.0	1.0	1.0
Axis Held Countries (2)	1.0	1.0	1.0	1.0	1.0
Soviets	3.0	3.0	3.0	3.0	3.0

Note

(1) Axis Allies (Rumania, Hungary, Finland, Italy, Slovakia, and Bulgaria) produce armaments for their own pools. None of this production goes to Germany.

(2) Includes armaments factories in Axis held France, Belgium, the Balkans, Norway and the Netherlands, This production goes directly to the German pool and built numbers.

28.2.4. Synthetic Fuel Production

Synthetic Fuel factories take resources and produce synthetic fuel, which is added to the overall fuel stores pool. Each synthetic fuel factory point will produce a notional amount of 500 tons of fuel per turn at a cost of 2000 tons of resources. Synthetic fuel production will be modified by the following multipliers:

Year/Nationality	1941	1942	1943	1944	1945
German/Czech/Polish	1.0	1.4	1.4	1.4	1.4
Axis Allies	1.0	1.0	1.0	1.0	1.0
Soviets	1.0	1.0	1.0	1.0	1.0

28.2.5. Oil and Fuel Production

Oil factories (oil fields) produce oil that is then either stored or used by Fuel factories (refineries) to produce fuel, which is also stored in town, city and urban hexes on the

supply grid until drawn upon. The normal production rate for oil factories is 1,000 tons of oil per factory point per turn. Each fuel factory point will produce 250 tons of fuel per turn at the cost of 500 tons of oil.

Oil and fuel production is increased by the following multipliers for oil and fuel factories:

Year/Nationality	1941	1942	1943	1944	1945
German/Czech/Polish/Axis Allies (apart from Rumania)	1.0	1.0	1.0	1.0	1.0
Rumania	0.8	0.8	1.0	0.85	0.85
Soviets	2.0	2.0	2.0	2.0	2.0

Captured oil and resource factories will produce as normal if the hex is connected to the wider supply grid. Captured Soviet oil and resource sites will build at a maximum of 50% of the Soviet multiplier shown above.

28.2.6. Vehicle Production and Repair

Vehicle factories use supplies to produce generic vehicles, which are placed in the motor pool (25.5.1). From there they are drawn to meet the needs of either the motor pool or individual units.

Year/Nationality	1941	1942	1943	1944	1945
German/Czech/Polish	0.5	0.7	0.6	0.6	0.5
Axis Allies	1.0	1.0	1.0	1.0	1.0
Soviets	1.0	0.55	0.55	0.55	0.55

Each vehicle factory point (modified as above) will produce 10 vehicles per turn at the cost of 50 tons of supplies. Note that vehicles produced by Axis Allies will be placed in the German Motor Pool.

All vehicles, also known as trucks, are considered as 2.5 ton equivalents. Individual vehicles that are damaged are returned to a virtual pool for repair. Once repaired, they are added back into the motor pool. Repair takes place during the logistics phase.

The repair rate for the Germans is 5% in 1941/42 and 10% for 1943-45. For the Soviets, the repair rate is 25%. This reflects the relative lack of standardized equipment that was a major problem for the Germans.

Errata 01.02.39:

Soviet vehicle mobilization during the first 10 turns of the war will now mobilize 60% of the original number of vehicles. Instead of 260,000 vehicles mobilized, The Soviets will mobilize 156,000 vehicles

Errata 01.02.41

Soviet lend lease allocation per turn reduced as follows:

1943 - 4500 -> 2500

1944 - 6000 -> 4000

1945 - 1500 -> 1000

28.2.7. Naval Production

For both sides this is abstracted.

On the first turn of each month both sides will receive reinforcements of cargo and troop ships. Germans get 1 of each in the Baltic and Black Seas each month. The Soviets receive 1 transport in the Black and Baltic Seas each month. They also receive 4 cargo ships in the Black Sea, 2 in the Baltic and Caspian Seas, and 1 in the Sea of Azov and Lake Ladoga each month. In addition, as long as they have a friendly port for these sea zones, each side will receive enough cargo ships to have a minimum of 5 cargo ships each turn (the Germans only ever have ships in the Black and Baltic Seas regardless of if they have captured ports on other sea zones).

28.3. MANPOWER PRODUCTION AND MIGRATION

Population is a permanent characteristic of a town, city or urban hex and is provided for reference. A population point represents 50,000 people (in the town, city, urban hexes or surrounding area).

Manpower, represented by factories in town, city or urban hexes, is produced at a variable rate dependent on nationality and the year. Manpower factories can be damaged, destroyed, or can migrate to other town, city and urban hexes.

Each nation has a separate manpower pool. Polish and Czech manpower generated for the Germans is placed directly into the German pool. The number of men added to each nation's manpower pool is determined each turn by taking the number of available manpower factory points times a manpower production multiplier.

Manpower is maintained in the pool until the system draws men from it to match with equipment to build ground elements. Manpower multipliers are as follows:

Year/Nationality	1941	1942	1943	1944	1945
Germany(1)	1.0	6.0	12.0	14.0	8.0
Axis Allies	10.0	11.00	10.0	10.0	8.0
Soviets	33.0	41.0	20.0	9.0	9.0

Errata - Clarification, Axis Allies in this table only refers to Hungary and Rumania, the relevant values for the other Allies are set out below:

Year/Nationality	**1941**	**1942**	**1943**	**1944**	**1945**
Finland	**10.0**	**3.0**	**3.0**	**3.0**	**3.0**
Italy	**3.0**	**3.0**	**3.0**	**3.0**	**3.0**
Slovakia	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**

German manpower will be increased as various events (40.15) occur. Some are related to actions on the Eastern Front and other due to Western Allied progress in the West Front theatre box.

Note (1) Includes Axis Czech and Poles, but only ten percent of this manpower (by location) is actually placed in the German pool. Manpower recruited from Luxembourg is allocated at the normal rate as if it was a German nationality manpower centre.

Remember that the manpower generated by a country has to cover all the demands it faces both on the map and in the various Theatre Boxes.

28.3.1. Manpower Evacuation and Migration

Manpower factory points of German or Soviet nationality town, city and urban hexes may evacuate/migrate when the hex is captured by enemy units. For purposes of migration, each manpower factory point represents 50,000 people. There is no limit to the amount of migration that can occur in a turn.

The more manpower factory points in a hex, the better the chance some will migrate. When manpower factory points migrate, they will try to move to another town, city or

urban hex (including off map cities) at least 14 hexes away from an enemy unit. Town, city or urban hexes re-captured by friendly units will not undergo migration.

28.3.2. Manpower Factory Damage and Destruction

Manpower factory points can be damaged and/or destroyed whenever combat occurs in a town, city or urban hex, and whenever control of a town, city or urban hex changes.

Manpower factories can also be damaged and/or destroyed through lack of supply (28.3.3).

28.3.3. Manpower Losses due to Poor Supply

Every turn town, city and urban hexes must trace supply and will suffer a starvation damage percentage equal to the supply path MP cost minus 5. For example, suppose a city has to trace 13 MPs to the nearest railhead due to a combination of destroyed rail, contorted lines and enemy ZOCs. This would result in the city adding 8 percent each week to its manpower damage percentage.

Manpower factories recover 3 percentage points per turn, so the net increase in damage would be 5 percent per turn. If a town, city or urban hex cannot trace a supply path and is isolated it takes 25 percent starvation damage every turn.

When a town, city or urban hex's manpower reaches 100 percent damage, additional damage may cause the permanent loss of manpower factory points from the hex. Town, city and urban hexes will only take starvation damage if a supplied enemy unit is within four hexes of the hex. This will be offset if they can trace a path of friendly ground hexes to a railhead of four hexes or less, regardless of enemy ZOC or the number of MPs to the railhead.

Manpower production centres that are isolated will not produce any manpower till they are linked back to the main supply networks (25.9.2).

28.4. AIRCRAFT, AFV AND COMBAT VEHICLE PRODUCTION

The chassis for aircraft, AFV and combat vehicles are built at individual factories by using Armament Points, with one item being built for each factory point. In WiTE2, aircraft and AFVs are built as airframes or chassis which are subsequently converted to actual combat planes and vehicles.

For example, assuming sufficient resources are available, the He 111 factory in Rostock, with a capacity of 23 factory points, will build 23 He 111 airframes every turn.

2821

Aircraft, AFV and combat vehicles include installed devices, but will not become complete ground elements until they are matched with manpower for the crew, during the replacement segment.

28.4.1. Production of Airframes and Vehicle Chassis

The production screen shows the capacity to build each type of basic airframe or chassis each turn as:

2822

Clicking on the airframe or chassis will take you to a list of the factories that currently produce that item.

2823

The airframes and chassis are converted to particular planes or vehicles.

Each tank or combat vehicle currently in production has a capacity indicated as ch:000. The number after the 'ch' is the maximum number of chassis that can be converted to actual vehicles in any one turn.

Each aircraft type currently in production has a capacity indicated as af:000. Again the number after the 'af' is the maximum number of those planes that are produced each turn.

The cost of building a chassis is taken as supply points. Each supply point is the equivalent of a quarter ton of supplies and each build cost (for the chassis) demands 1/16 ton of supply. So a chassis with a build cost of 40 will use 2.5 supply points.

2824

The actual building of the combat element requires armament points. For example a Bf 109F-4 has a build cost of 388 so requires 388 armament points to produce one such aircraft. The total production cost includes the frame and supporting items such as the 20mm cannon and 2 7.92mm MG17 as installed devices as well as integral aircrew.

2825

The cost of a given vehicle or plane can be seen in the commanders report in the Equipment screen (35.8) as well as by opening up the detailed tab for the unit type (37.6).

Once produced, each aircraft of a specific type is placed in a separate pool until it is drawn upon as a replacement. AFV and combat vehicles go to their specific AFV/Combat Vehicle pool until the system determines that both the need exists to build that type of ground element and sufficient manpower is available.

Note that ground elements that have a build cost of 9999 will never be produced.

28.4.2. New Aircraft types

A new plane model cannot be used to re-equip existing air units for the first month after it enters production.

For the Soviet player, it may be used to equip completely fresh air units that have been raised in that period and allocated to the National Reserve.

28.4.3. Usage of Damaged Equipment

Damaged equipment and manpower returned to the pool during the logistics phase are not available immediately to be used as replacements. Although they appear in the pool on the production screen, they actually are put in a “transit pool”.

At the start of each friendly logistics phase, 25 percent of the amount in the transit pool is moved to the available pool. This represents the lost time from the front of lightly wounded soldiers and damaged equipment.

While the default setting is to show all pools, the production screen can be toggled to display only the amount in the active or transit pools. The example below shows some of the tanks in the German transit pool in early August 1941.

2826

28.4.4. Aircraft, AFV and Combat Vehicle Factory Expansion and Build Limit

Aircraft, AFV and combat vehicle factories may be able to increase their capacity to convert frames and chassis by adding additional factory points over time.

Factories may alter in size over the game according to scripted events.

Each type of Aircraft or AFV/combat vehicle ground element equipment has a build limit that will cap expansion at a fixed number of items per factory location per turn.

28.4.5. Factory Production

Each type of aircraft or ground element equipment factory has a start production date (first year/first month) and may have a stop production date (last year/last month) Factories with a stop production date will disband when the end of the last month in the last year is reached. Production of new types of aircraft or ground element equipment can occur in two ways. Some new types will appear as new factories when their start production date is reached.

For example, the German Panther A medium tank will commence production in September 1943 with a newly built factory in NE Berlin. Other new types will start production as a result of an existing type of factory being redesignated. Multiple changes of a factory to a new type are possible over time, with the old type ceasing

production when the new type starts. Continuing the example, the Panther A factory in NE Berlin, with a build limit of 11 will be upgraded to produce the Panther G, with a build limit of 10 in May 1944. Change of role for a factory only happens after an aircraft or ground element reaches its final month of production (until then it keeps producing the older item).

28.5. PORT AND RAIL YARD CAPACITY

Ports and Railyards are treated as factories in terms of capture, damage and repair, with the exception that ground combat in a hex does not cause any damage to a port.

Damage to railyards and ports will reduce their tonnage capacity and ports with five percent or more damage will only operate at one half of their normal capacity.

Ports and Railyards play only a peripheral part in the production system, but are a critical part of the supply grid and serve as logistics hubs for naval and rail transportation.

Ports will automatically attempt to secure supplies to be kept at the city hex where the port is located.

28.6. FACTORY CAPTURE, DAMAGE, AND REPAIR

Factories will be captured and damaged or destroyed when the city hex that they are located in becomes enemy controlled. Factories can also be damaged by strategic bombing. Damaged factories will be repaired automatically, but the player can use priority repair to focus additional repair efforts on specific factories. Port and Railyard factories (levels) in hexes with depots have an automatic priority repair function.

28.6.1. Captured Factories

Factories in captured town, city and urban hexes can be damaged or destroyed. With the exception of manpower, port, railyard, resource, heavy industry, fuel, synthetic fuel and oil factories, all other factories in captured hexes are destroyed and permanently removed. Those not removed will be damaged.

With the exception of manpower factories, factories that remain will receive a variable amount of damage (damage will be added to the factories equal to 25+random(75) percent (not to exceed 100 percent)). In addition, oil factories are always set to 100 percent damage when captured.

Captured oil and resource factories will commence producing once damage has been repaired to be less than 50 percent, assuming the hex is linked to the applicable supply grid. No other captured factories will produce. Captured factories will produce at the rate of their actual nationality, except that captured Soviet oil and resources will build at only ½ the Soviet multiplier.

Note that Soviet factory evacuation will occur as set out in section 28.7.

28.6.2. Factory Damage

In addition to capture damage, all factories can be damaged by the strategic bombing (bomb city) air mission (18.1.5).

Damage is applied to an entire factory, not to individual factory points. The damage level of a factory is also the probability that the factory will not produce on a given turn.

For example 100 damage means no production, while 25 damage means 25 percent chance of no production and a 75 percent chance of full production. For example a FW-190 aircraft factory with 12 factory points, or size 12, which had 40 damage would have a 60 percent chance of producing 12 aircraft and a 40 percent chance of producing 0 aircraft.

28.6.3. Factory Repair

Factories will automatically repair themselves during the logistics phase at a rate determined by the type of factory.

Factories located in isolated hexes cannot be repaired.

Note that Manpower is repaired like other factories to reflect the disruption effects of general bombing on the population. Not only is remaining population less effective at production, they also have to be put to work repairing damage and taking care of the displaced population.

Manpower repair represents the reduction of disruption effects over time.

Type of Factory	Repair Rate per Turn
Oil, Resource	1%
Heavy Industry, Synthetic Fuel, Fuel	2%
Armament, Vehicle, Manpower, Aircraft and AFV/Combat Vehicle, Port, Railyard	3%

There is an adjustment to the repair percentage based on the size (number of points) of the factory as follows:

- If factory size is 1-3, multiply basic repair rate x3
- If factory size is 4-6, multiply basic repair rate x2

28.6.4. Priority Factory Repair

The priority factory repair functions allows player to use construction support units to focus repair efforts at the cost of admin points. Players may pay 1 AP and set a factory for priority repairs by accessing the city detail window (37.13) from the general information and city/airfield box (6.2) and then selecting the damage level of the factory they desire to institute priority repair.

An asterisk indicates that priority repairs have been instituted and selecting the damage again will terminate priority repairs.

Setting a factory to priority repairs will result in HQ units automatically assigning construction support units to the hex during the logistics phase. This is the same process as automatic rail line repair (21.6), and there is a limit to the distance that the automated construction units will operate from the HQ unit that they are attached, based on command range (21.11.4).

A support unit may only work on one factory per turn and no more than 25 percent of the damage to a factory can be repaired during the logistics phase.

Additional repair units may be called to the hex. Also, since regular repairs are conducted after priority repairs, and they happen even when priority repairs have been completed, once the damage level gets very low, continuing priority repairs can be very inefficient, with only a small amount repaired by priority repairs. Priority repairs may never repair more than 20% of the damage of a factory in a single turn.

28.6.5. Port and Railyard Factory Priority Repair

Hexes with depots will automatically attempt to find construction units to attempt priority repairs on ports and railyards in the hex. This does not cost APs and it will not have the factory item flagged with an asterisk (only player directed priority repairs will flag the factory item in the city detail window). This function is set at a lower priority than any player directed priority repairs.

Both the HQ unit supplying the construction unit and the location being repaired must be in supply.

Damaged ports and railyards at depots will only get automatic priority repair from a construction support unit if the item is damaged at over 30 percent, (if a port and railyard, then if the combined damage is over 30% then it will try to get help). Also, for repairs at depots, a construction unit can split it's time to help repair both the port and the railyard, with the port getting the priority between the two.

28.7. SOVIET FACTORY RELOCATION

In WiTE2, the process of Soviet factory relocation in the face of Axis gains in 1941 and 1942 is fully automated.

Basically those factories that were historically redeployed can be moved (and will usually do so automatically) and those that were overrun cannot be relocated.

These factories will evacuate in one of three ways:

- The Soviet player can manually evacuate them early;
- They will relocate on the historical date; or.
- They will relocate if the Axis capture their location.

If they are evacuated using the first or third manner they will take more damage and longer to come back into full operation.

Factories being relocated take up rail capacity during the logistics phase.

Information about factory relocations can be found in the Factory Navigation panel (ctrl-n):

This will produce a screen that shows all the factory changes planned, including dates for relocation, upgrade, change of production and expansion:

2827

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28.7.1. Manual Evacuation

To manually redeploy factories select the 'factory navigation panel (either the button at the top, or using cntrl-n, or right click on a hex, select map information > FactoryNavigation).

In this window, if you click on the "Move to…" text (shown in yellow) you will be given the option to order the immediate movement of the factory.

2828

In this case, the T-60 production in S Stalingrad is due to move to Kastnoarmeisk in 20 turns. Clicking on that entry brings up the dialogue shown and the ability to force the factory to move this turn.

28.7.2. Automatic Evacuation

This will happen either at the historical date when a factory was moved or if the Axis captures the location before this date.

28.8. PRODUCTION TO OTHER FRONTS

Given the use of the various Theatre Boxes, in effect WiTE2 reflects the totality of the war effort of both the Soviet Union and Nazi Germany and their allies. As such

production is not allocated outside of the game but instead is also used up by the demands of other theatres than the main focus of the struggle between the two powers.

However, Germany will transfer planes, tanks and armament points to their various allies. The latter will happen if Germany has greater than 100,000 armament points at the start of the production segment of the logistics phase, any Axis allied nation with less than 1,000 armament points will be provided 1,000 armament points from the German armament pool.

29. VICTORY CONDITIONS

2900

Focus:

This section explains how the game can be won using the scenario set victory conditions.

Key Issues:

- Rules for winning a campaign game scenario;
- Rules for winning a shorter scenario;

There are two systems for determining victory in Gary Grigsby's War in the East 2, one for campaign scenarios, and a second for all other scenarios, which cover short time periods and usually a smaller area than the entire map.

Current Victory point (VP) totals for both campaign and non-campaign scenarios are displayed in the General Information and City/Airfield Box (6.2).

29.1. CAMPAIGN SCENARIO VICTORY CONDITIONS

Campaign scenarios start at different points during the war, but all can last as long as August 1945.

For campaigns that start in June 1941 the system basically encourages the Axis player to try and capture more cities (either take them earlier, take cities that historically were not occupied, or hold them for longer). In turn, when the Soviet player regains the initiative, they too gain bonus points for capturing cities in advance of the historical schedule.

For campaigns that start later than June 1941, the VP scores are initially set on the basis of the progress of the historical war.

29.1.1. Key Concepts

The campaign victory system relies on two key concepts.

Initiative.

At any stage of the game, only one side has the initiative. This side will gain VPs as below as they capture cities and lose VPs if their opponent manages to retake a city.

Initiative Switchover can happen to the Soviets between October 1 1942 and July 1 1943 whenever the German score is 10% or more below the German High Water Mark score. If this has not already happened then the initiative will switch on July 1 1943. Once initiative switches, it never switches back.

Once the initiative changes, the VP score is recalculated using the value of the cities held by the Soviet player at any stage, plus any bonuses for cities that were historically lost but not in the current game.

German High Water Mark (HWM)

This is the highest score ever obtained by the Germans throughout the game. At the time that the initiative changes, the Axis HWM score is frozen, and the Soviets begin to score points (in the same way the Germans have been scoring).

> ***Note that this rule uses the highest score the Germans have achieved at any stage of the game, NOT the score on the turn when the initiative changes.***

The example below is from January 1942 during the Soviet winter offensive and the Axis have lost some cities they originally captured (so their High Watermark exceeds their current VP score):

2901

29.1.2. Detailed Rules

Certain cities are marked as victory locations and each of these cities is given a base victory point value.

Bonuses will be given for capturing cities based on comparing to the historical capture date. A maximum of 6 bonus points can be earned per city. If the city is captured on the historical turn, a bonus of 3 is scored. One additional point is earned for each week earlier the town is taken, and 1 is lost for each week late. So taking a city 3 turns early would score 6 points, and 2 turns late would score 1 point.

Once scored, bonus points will never be lost, but the base points are lost when the city is lost. If a city is retaken, these base points are regained but the bonus points can only be awarded once in the game. If historically a city changed hands more than once (such as Kharkov) then the first capture date (by that side) is the one used to determine the bonus.

Cities that were never historically taken by the Germans will generate the maximum early capture bonus if captured by the Germans at any stage in the game. However, if such a city is retaken by the Soviets there is no bonus for early recapture simply the value of the city itself.

Soviet capture bonuses can be earned while the Germans have initiative when the Soviets recapture a city. When the initiative switchover occurs, Soviet cities (with historical capture dates) never taken by the Germans are considered recaptured by the Soviets at the time of the Initiative switchover for determining Soviet bonus points.

> ***The effect of this rule is to encourage a Soviet player to trigger an early switchover of initiative while the German player gains from delaying this as long as possible.***

All points up to the change of initiative are scored by the Germans. Any positive (either from events or the bonus for retaking cities) scoring by the Soviets at this stage become negative German points, and any negative Soviet points become positive German points. Later in the war when initiative changes, only the Soviets score points and any Axis points are used to reduce the Soviet's score.

29.1.3. Accessing Information

To access information on which cities are Victory Point locations, their value and the historical capture turn, right click on the map, select map information>victory locations or press Shift+v.

You can also access this information by toggling the Victory location tab on the top edge of the screen:

2902

When this map mode is in use, the relevant locations will show the base victory value for each location and the bonus that would be awarded if the city was captured this turn. In the example above (from the German T1 of the 1941 campaign), Riga is worth 10 VP and if it falls this turn will generate a bonus of +4.

The current VP score and which side has the initiative can be seen on the Victory Screen as

2903

This is, again, from the T1 Axis perspective. So the Axis player starts with 370 VP from cities held at the start, will win a sudden death victory if they have 700 VP on 1 October 1941 and face a sudden death defeat if their High Water Mark is below 525 on 1 January 1942.

In addition the Victory screen has a list of all the cities that generate a VP score and the historical turn on which they changed hands (this is shown as '0' if that city was never captured by that side.

2904

Note that many cities have a capture date for both sides reflecting the ebb and flow of the actual war.

In addition to the main Victory Conditions screen, a summary of the current situation can be found on the turn summary screen (36.16).

29.1.4. Victory Conditions

WiTE2 can be won due to the sudden victory conditions, the capture of Berlin, the in-game situation at the end of 1944 or by reaching the scenario end date.

Sudden death victories can come from:

- Axis Sudden Victory (Axis quarterly check value achieved), this gives a Decisive Axis Victory

- Soviet Sudden Victory (Soviet quarterly check value achieved) gives a Decisive Soviet Victory (if it happens before or on 31 December 1944) and a Major Soviet Victory (if it happens after 31 December 1944 and on or before 1 April 1945)
- Axis Sudden loss will occur if they did not have a High Water Mark score of at least 525 by 1 January 1942 and 575 by October 1942 (note they do not need those scores on those dates but to have achieved them at some stage). Note this will not be applied if the Axis side is controlled by the AI.

The fall of Berlin gives the following outcomes:

- If the Soviets take Berlin then this is a Decisive victory if on or before 31 December 1944, a Major Soviet Victory (if after 31 December 1944 but on or before 1 April 1945), a Marginal Soviet Victory (if after 1 April 1945 and on or before 31 May 1945) or a Draw (if it falls after 31 May 1945 but before the scenario end date)
- If the Western Allies take Berlin then this is a Decisive victory if on or before 31 December 1944, a Major Soviet Victory (if after 31 December 1944 but on or before 28 February 1945), a Marginal Soviet Victory (if after 28 February 1945 and on or before 31 May 1945) or a Draw (if it falls after 31 May 1945 but before the scenario end date)

If on 31 December 1944 the Soviets fail to have matched the Axis high water mark score and the Western allies control no German territory, this is an Axis Major Victory.

Finally if the game reaches the scenario end date without triggering any other victory condition then the result is an Axis Marginal Victory. The end dates vary with the scenario:

- 1941 Campaign – 1 August 1945
- Stalingrad to Berlin Campaign – 1 July 1945
- Vistula to Berlin Campaign – 1 June 1945

The rules for the Sudden Victory conditions can be found by accessing the Victory Point screen, as:

2905

29.2. NON-CAMPAIGN SCENARIO VICTORY CONDITIONS

Victory conditions for most non-campaign scenarios are based on control of victory locations, usually specific town, city or urban hexes for each side, and cumulative losses in men, guns, AFVs and aircraft.

Victory points for control of victory locations are awarded each player-turn (twice per complete turn) and there is also a separate victory point award for controlling victory locations at the end of the scenario.

Victory locations can be applicable to both sides or be specific to one side only. Victory point locations can be displayed by selecting the Toggle Victory Locations button in the map information menu tab. Red flags are Soviets VP locations, black flags are Axis VP locations, and black and red flags are VP locations for both sides.

2906

In this case, this shows the victory locations in the Road to Minsk introductory scenario.

Losses are based on the number of men, guns, AFV or aircraft that must be destroyed for the opposing side to gain one victory point. This base number for losses can be further modified for each side by a certain percentage. Note that only outright losses count for this not damaged elements.

For example, the scenario may be set up so that each player will “earn” 1 VP for each 1,000 men lost by the other player, but if the Soviets player has a twenty percent modifier, the Axis will not gain a victory point the Soviets have lost 5,000 men. Victory levels for non-campaign scenarios are based on the ratio of the side with the most points to the side with the least points.

2907

Again from the same scenario this shows the VP scoring for city occupation and combat losses.

This ratio is shown on the screen along with either an Axis or Soviets VP Advantage and the number (to one decimal place) or “No significant VP advantage” if the ratio is under 1.1.

Victory levels are as follows:

- Decisive Victory – ratio greater than or equal to 5.0
- Major Victory – ratio less than 5.0 but greater than or equal to 2.0
- Minor Victory – ratio less than 2.0 but greater than or equal to 1.1

- Draw – ratio less than 1.1

Note: Each side will start a non-campaign scenario with a minimum VP point score of one.

The Appendices gather together further information on how to play WiTE2. Some of this you may never need to check but in combination they will help orientate you to the game, provide detailed information on how to read the various information screens and the underlying rules that regulate unit movement and combat.

The appendices can be seen as being broken into the following groups:

Focus	Appendix	Contents
Context	Players Notes	Designed to give you an overview of how the game works, help you see the differences to WiTE1 and WiTW and provide hints on gameplay options.
	Developer's Notes	A short discussion on the development process behind WiTE2.
	Evolution of Armour	Background context on the evolution of a key part of both armies across the war.
Definitions	Glossary of Terms and Abbreviations	
	Unit and Element types	
Commander's Report		How to use and read this critical source of information
Information tabs		How to interpret the information presented in the various information and administrative tabs at the top of the game screen.
Interface Windows		How to read the various detailed screens including those on the unit tabs, those that pop up when carrying out game actions and how to read screens such as the after battle reports.
Significant Tables		Most of the information in this section is designed to supplement the discussions in the main manual. All

		the relevant calculations are carried out by the game for you but the information here may help you to plan operations or to interpret what happens when you move units.
Miscellaneous	Hot key list	A list of the hot keys in the game
	List of Events	A list of the events that may occur during the game
	Using the Editor	A guide to some information that may be useful that can only accessed from the game editor.
	Credits	

30. Appendix A – PLAYER'S NOTES

The discussions below are designed to help players interpret the detailed rules elsewhere in the manual. In addition it might help orientate players with experience of either/or WiTE1 or WiTW as to what is different.

30.1. DIFFERENCES FOR PLAYERS OF WITE1 OR WITW

If you have played War in the West, you will recognize elements of the air war design and the logistics system. However, significant aspects of the game are totally different. For players of WiTE1 key differences are the air and logistics system, the layout of the map and the OOB. In addition the under-lying combat system has been completely redesigned.

This section works as a quick guide to the major differences if you have played one (or both) of the previous titles. The information is presented very briefly as the rest of the Player's Notes set out the implications of the new rules for both players with previous experience and those new to the Gary Grigsby War in the … series of games.

30.1.1. Played WiTE1 but not WITW?

The discussion in this section assumes knowledge of the WiTE rules and the conventions that have emerged in playing that game.

Issue	References	Key Features
22 June 1941 Rules	11.2	Note the difference between the rules that affect AGN and AGC and those that affect AGS. The D1 air base bonus does not apply later in the week so it is worth planning your air operations to exploit this to the maximum.
Administrative Movement	22.2.1	An important tool to bring units up to the front relatively well rested. Only moving in hexes that were friendly controlled (and that have no enemy interdiction) at the start of your turn brings advantages of speed, lack of fatigue and retention of combat preparation points.
Administrative Points	9.2	Unlike in WiTE1, you do not use these to transfer units between HQs or re-assign HQs. Equally there is no practical limit to how many can be

		stored for later use.
Airborne Operations	22.5.3 and 23.9	Note that these need to be planned 2-3 turns in advance and the target specified. Note also all the functionality about how they are set up and executed is completely different.
Air War	Chapters 16-19	Completely different. Airbases are on the map and have variable capacity. Air missions are (mostly) ordered during the air planning phase and executed during the air phase. So there is much more need for pre-planning of your air operations compared to WiTE1. Note that ground support missions and air transport are resolved in the movement phase.
Air Operational Groups	16.3	These are the basic tool for managing your air force, in one sense they form a role similar to the air base counters in WiTE1.
Air Transport	18.1.9 and 22.5	The method for setting this up and executing missions is completely different.
Artillery Brigades		The Soviet artillery brigades that can be built from early 1942 are all treated as off map SU not as on map units.
Assault HQs	21.11.2	Can be used to improve the performance of a number of Axis Army or Soviet Front HQs. Units attached (either directly or indirectly) gain in terms of the speed they regain CPP and the chance to pass leadership checks but are penalised by being able to only create level 1 fortifications.
Being Attacked	22.1.3 and 23.2.2	Note that if a unit is attacked, then its MP in the next turn may be reduced. Equally being attacked can reduce the CPP in the unit (and being forced to retreat will remove all CPP). In effect, spoiling attacks can be a very effective tool.
Combat Delay	22.2.7	The time spent fighting in a hex will generate a combat delay for any unit that moves out of a hex where the battle took place. The delay is 1 MP per

		hasty attack and 3 MP for a normal attack. This can be avoided in certain circumstances.
Combat Preparation Points	22.1.1, 22.2.2, 23.2 and 25.8.3	CPP primarily boost the notional CV of attacking units, making it more likely they will pass the 2-1 threshold and thus win a battle. There are substantial secondary advantages to having a high CPP and the rules for how to build up, retain and lose CPP are very important. Indirectly CPP affect almost everything from movement to supply to actual combat.
Command Points	21.11.3	Note if you attach units to a HQ of a different nationality this will cost additional command points, in effect lowering the Command Capacity of the HQ. In turn this will apply all across the HQ chain affecting corps, army and front/army group command capacity.
Commander's Report	Chapter 35	The layout (and functionality) of this is substantially different to that in both WiTE1 and WiTW
Depots	25.7	Note that depots are crucial not just for storing supply but also for its receipt and transmission on to combat formations. The capacity of the associated rail yard or port is very important as is the ability to boost this by placing combat HQs and your rail repair HQs on depots. Also keep a few depots in the rear along rail lines from the NSS to the front to ease re-supply.
First Winter Rules	8.6.1	The main impact on the Axis forces is in terms of attrition losses and more difficult movement of freight both by rail and road.
Game Interface	Chapter 6	This has been fully reworked since WiTE1 was released.
Garrison Requirements	13.4	These are not directly part of WiTE2. Instead the partisan war is conducted in the Soviet Union Garrison Theatre Box and the need to maintain forces in other theatres reflected in the event system and the various Theatre Boxes.

Heavy Woods	7.2.1	In WiTE2 these are substantial barriers to motorized units (including supply trucks) especially in hexes with poor roads. Plan your operations with this in mind.
HQBU		No longer in the game – but read the rules on Combat Preparation Points (23.2)
Interdiction	22.2.3	Air interdiction in a hex can both cause losses to any unit (including supply trucks) that move through the hex and, at certain levels, increase the movement cost for leaving that hex. Also any interdiction (anything over 0) will stop administrative movement in the hex.
Logistics	Chapter 25	This is very different relying on finite capacity rail lines (with this determined by both the available rolling stock and railyard capacity), Depot size, type and priority and HQ priority settings. Read the players notes below for some idea of the main issues and how to manage logistics in WiTE2.
National Reserve	13.2	This can be used for both ground and air units. Units in the National Reserve and set to REFIT will be prioritised for the allocation of new equipment and/or replacements.
Naval Invasions	Chapter 24, especially 24.7	Note these need to be planned 3-5 turns in advance against a specified target hex. These are only allowed in the Black Sea and by the Soviet player only.
Mild Winter Rules	8.6.2	The winter of 1943-44 was relatively mild and this will affect the weather. In particular the degree of freezing of major rivers and snow levels in hexes combined with the risk of short term thaws.
Partisans	13.4	These do not appear on the map. Instead Axis security forces are allocated to the Soviet Union Garrison Theatre Box. Failure to control the partisan effort will see the loss of freight and possibly on-map interdiction.
Rail Lines	22.4 and 25.4	Note that dual track rail can carry 250% more freight than a single track rail line.

Rail Repair	21.6.1	Note that the range of Support Units that can be used for automatic rail repair is much more limited than it was in WiTE1.
Reassigning Units	15.5.6	While this no longer costs administrative points, units will face a penalty for any admin rolls during the full turn that a unit has been reassigned to a different HQ (including reassigned support units).
Retreat Results	23.12	Note that if the final odds are overwhelming, a unit may retreat 2 or more hexes rather than just one. Equally units that are low on morale, experience or TOE may face catastrophic losses if forced to retreat.
Roads	22.2 and 25.5	Each hex is coded for the quality of the road network. Good roads mitigate the effect of poor weather or particularly difficult terrain. For the most part the effect of roads is handled naturally as you select movement paths but it is worth using the road overlay display (7.2.6) when planning an offensive.
Soviet Army HQ Creation	27.2	There are several new rules in this respect. First you cannot create Army HQs in WiTE2. Second many will be created by converting existing Corps or Reserve Army HQs. Third Soviet Guards Armies are converted according to a historical schedule.
Soviet Corps HQ disbands and renames	27.5.3	Note that many of the at-start Soviet Corps HQ will not disband but instead convert to Army HQs. Since you cannot build Army HQs in WiTE2, it is essential not to disband the Corps.
Soviet Corps Formation	27.5.5	Note the rules for this are different both as to the component parts and where a corps can be created. In particular, Soviet Tank Corps can only be formed within the National Reserve. Also note that the Soviet player can form up to 2 Guards Rifle Corps in late 1941.
Soviet Factory	28.7	This is fully automated. Only those factories that were historically moved can move, they will

Evacuation		evacuate at the historical date or earlier at a cost in productivity if the player decides to do this manually. If the Axis player captures a city with a factory that can be evacuated it will be automatically moved (at a cost of more damage and delay in returning it to production).
Soviet Tank Brigades	21.5	Note that these are now off-map SU only and cannot be deployed on the map. When building Soviet Tank Corps, the brigades must be first assigned to the Soviet National Reserve (or report directly to the Stavka).
Support Unit assignments	21.5.1	In WiTE2 there are many more SU available, especially as most brigades are treated as MRU (i.e. can be an on-map CU or off-map SU). Note that Soviet Rifle Divisions can now be directly assigned a SU.
Stack Selection	6.7	The process of selecting all the units in a stack is different. Double clicking on the top unit or pressing the spacebar and single clicking will select the entire stack, otherwise just the top unit will selected. Repeated single left clicks will change the order that units are stacked in a hex.
Theatre Boxes	Chapter 13	These reflect either theatres where the Soviets and Axis powers are at war but where the combat was at low intensity (Arctic, Finland and Norway), are the location of the Partisan War, regions where the Axis are at war with the Western Allies or where the Soviets need to keep substantial reserves.
Weather System	Chapter 8	This is much more variable due to the interaction of weather fronts with the concept of prevailing weather. Equally poor weather in the form of rain hampers military operations but is not the overwhelming effect of rain/mud from WiTE1.

30.1.2. Played WiTW but not WiTE1?

In addition to the issues identified below, be aware of the scale of WiTE2. In WiTW, even after the Western Allies invade France, the number of divisions, and the effective map area, is relatively small.

Issue	References	Key Features
Air Directives	Chapter 17	Note that practically there is no limit to the number that can be set for each air command.
Air Operational Groups	16.3	While much of the air war will be familiar, the role of AOGs is important. In effect they are the tools you use to manage your air forces and, together with Air HQ Commands, allow a considerable degree of automation.
Air Transport	18.1.9 and 22.5	The method for setting this up and executing missions is completely different. This includes how you order and carry out airborne assaults.
Assault HQs	21.11.2	Can be used to improve the performance of a number of Axis Army or Soviet Front HQs. Units attached (either directly or indirectly) gain in terms of the speed they regain CPP and the chance to pass leadership checks but are penalised by being able to only create level 1 fortifications. Note the resulting command capacity bonus also applies to any HQ that is attached to the Assault HQ.
Combat Preparation Points	22.1.1, 22.2.2, 23.2 and 25.8.3	CPP primarily boost the notional CV of attacking units, making it more likely they will pass the 2-1 threshold and thus win a battle. There are substantial secondary advantages to having a high CPP and the rules for how to build up, retain and lose CPP are very important. Indirectly CPP affect almost everything from movement to supply to actual combat.
Command Points	21.11.3	Note if you attach units to a HQ of a different nationality this will cost additional command points, in effect lowering the Command Capacity of the

		HQ. In turn this will apply all across the HQ chain affecting corps, army and front/army group command capacity.
Commander's Report	Chapter 35	The layout (and functionality) of this is substantially different to that in both WiTE1 and WiTW
Heavy Woods	7.2.1	In WiTE2 these are substantial barriers to motorized units (including supply trucks) especially in hexes with poor roads. Plan your operations with this in mind.
National Reserve	13,2	This can be used for both ground and air units. Units in the National Reserve and set to REFIT will be prioritised for the allocation of new equipment and/or replacements.
Partisans	13.4	These do not appear on the map. Instead Axis security forces are allocated to the Soviet Union Garrison Theatre Box. Failure to control the partisan effort will see the loss of freight and possibly on-map interdiction.
Ports	20.6	In WiTW units in a port were deemed to be automatically within the command range of their HQ. This allowed the player to stack up to 3 combat units in the hex and retain full control. This does not apply in WiTE2 as the new City Fort unit type allows over-stacking in port hexes.
Rail Lines	22.4 and 25.4	Note that dual track rail can carry 250% more freight than a single track rail line.
Retreat Results	23.12	Note that if the final odds are overwhelming, a unit may retreat 2 or more hexes rather than just one.
Roads	22.2 and 25.5	Each hex is coded for the quality of the road network. Good roads mitigate the effect of poor weather or particularly difficult terrain. For the most part the effect of roads is handled naturally as you select movement paths but it is worth using the road overlay display (7.2.6) when planning an offensive.
Theatre	Chapter 13	These are more important than the East Front box

Boxes		in WiTW and reflect either theatres where the Soviets and Axis powers are at war but where the combat was at low intensity (Arctic, Finland and Norway), are the location of the Partisan War, regions where the Axis are at war with the Western Allies or where the Soviets need to keep substantial reserves.

30.1.3. Played both WiTW and WiTE1?

In this case, you are relatively well prepared to play WiTE2. Scan the issues in the sections above, and read the strategy tips and key rules below.

30.2. KEY RULES CHANGES THAT AFFECT GAME PLAY

A number of rules that have a major influence on gameplay are now different.

30.2.1. Factory Evacuation

This is now largely automated with factories evacuating either at their historic date or when threatened. Evacuation cannot be stopped simply by placing a city in a zone of control as was common in WiTE1. Equally a factory that was historically not evacuated cannot be moved.

There are three ways in which a factory can evacuate (in all cases the factory must have a scheduled evacuation turn showing in the factory navigation menu in order to evacuate):

- Based on the evacuation schedule listed for the factory in the factory navigation menu.
- For any factory that has an evacuation listed, the player may initiate an immediate evacuation. The factory will take additional delay and damage over the normal evacuation delay/damage due to moving before the evacuation date.
- For factories with an evacuation date, the computer will initiate an emergency evacuation when the city is captured. The factory will take additional delay/damage in addition to the damage caused by normal evacuation.

30.2.2. Unit Movement Costs and Administrative Movement

Players should note that moving in hexes previously held by the enemy is more costly and inflicts higher fatigue. Thus converting hexes to your control (or denying this) can increase the speed of units following behind (such as the Axis FBD rail repair units) and reduce their fatigue.

Also units moving in friendly territory will be better placed to regain Preparation Points after they move. The key is to make their final hex one that was friendly controlled at the start of the turn and not in an enemy ZoC. In addition, they will need to have some SMP remaining. Learning how to balance the urge to move as far as possible against CPP retention and recovery is a key part of good gameplay.

However, note that the Administrative Movement bonus is cancelled if there is any enemy interdiction in the hex – this includes interdiction with an actual value less than 1.

30.2.3. Combat Preparation Points

Note that units gain more CPP per unused Strategic Movement Point (SMP) when in a friendly hex rather than a pending enemy hex (i.e. one you have captured this turn).

Since prep points also reduce fatigue, stopping in a friendly hex has a big impact on unit status. Moving one hex into an enemy hex can use lots of MPs and lots of fatigue for that 1 hex, and then the prep points gained will be much lower for each MP remaining. Those prep points will reduce unit fatigue in the next logistics phase. So stopping and resting units in a friendly hex is an important part of unit management in WiTE2.

In effect, if a unit has not moved very far this turn, has few CPP and high fatigue then players are strongly advised to leave it in a friendly controlled hex unless there is a real need to move it further.

The obvious impact of gaining combat preparation points is in terms of the offensive capacity of a unit. However, there are a number of secondary gains, including:

- units will reduce fatigue more quickly if they have a higher level of combat preparation;
- units at 100% combat preparation can acquire and store up to 150% of its supply needs;
- units with higher combat preparation will make better use of support unit allocation in combat (this affects both the attacker and the defender).

Note the interaction between retaining CPP and Administrative Movement. Especially for the Germans in 1941, if you want your infantry to be capable of

launching an offensive when they catch up with the armoured spearheads then trying to minimise the loss of CPP in movement is essential.

Remember that you lose all CPP if you are forced to retreat and a proportion if attacked in force (even if you win). Thus spoiling attacks, if you think your opponent is building up for an offensive, can be very effective.

30.2.4. Roads

In previous games in the series, roads are not directly modelled. In WiTW road quality was set at the national level. In WiTE2, each hex on the map has its own default road quality and the few paved roads in the Soviet Union are modelled. This can create corridors of faster movement – especially in poor weather turns.

30.2.5. Poor Terrain

Linked to the new rules on roads, note the higher movement costs for Mountain, Heavy Wood and Sand hexes compared to WiTE1 and WiTW. In particular motorized movement into these hexes, in regions with poor quality roads, is difficult.

When advancing in such areas, remember that trucks, and thus supply, pays motorized costs.

30.2.6. The Weather System

As noted in the rules, the Soviet player has two advantages in this regard. The weather in the following German turn will be identical to the Soviet turn (so the weather in the Soviet phase of T3 will be same as the weather in the German phase of T4). In addition, the Soviets will have more accurate forecasts of weather in their next turn.

For play purposes, it is worth noting that while rain/mud will slow movement and reduce combat power, it does not lead to the complete cessation of all military activities as tended to happen in WiTE1.

Again, bear in mind that the better quality road networks mitigate many of the movement costs due to poor weather.

30.2.7. City Fort Units

The ability to create these – in effect to overstack in some city and urban hexes – has a major influence on defensive play. This will allow the major sieges (Odessa, Sevastopol and Leningrad) to take place and make large cities major obstacles. On the other hand, some such locations can be bypassed and surrounded.

It will also allow the German player to create the various fortresses that broke up the Soviet offensives from 1943 onwards.

30.2.8. Construction Units

Note that apart from the AI-controlled rail repair units, these do not appear on the map but instead will be attached to the relevant hex (airfield, depot or population center) and carry out their repair mission. They will be sent back to their HQ once they have completed their task.

30.3. STRATEGY TIPS FOR BOTH PLAYERS

30.3.1. Logistics

Rail Capacity

There are a number of aspects to the logistics system to take into account. First, and probably most important, the capacity for a given rail hex is limited. A single track line can only easily support the transfer of a limited amount of freight and units (this can be exceeded but at an escalating cost in terms of rail capacity). In particular, transferring units along a single hex line will quickly increase the cost of strategic movement and limit any subsequent freight movements.

This means that for both sides, some sectors will be hard to reinforce and will tend to be quiet due to the challenge of supplying active combat forces on such a sector.

In any planning of operations, always remember that single track rail lines have only 40% of the capacity of a dual rail line.

Port Capacity and supply transfer

Assuming you have enough shipping, and control the seas via naval interdiction, sending supplies via ports can be very effective. There are two aspects to bear in mind. All ports can be set to either ‘send’ or ‘receive’ supplies. Second supply will move from a lower priority sending port to a higher priority receiving port.

As an example, if Danzig is set to send and at priority 1 it will move supplies to Riga if that is set to receive and at least at priority 2.

Depot Placement

The placement of depots is an important part of game play. Given that the western regions of the Soviet Union lacked the infrastructure of Western Europe both players will have to rely on a number of small depots rather than a few very large ones. To reflect this, the highest capacity of an Axis or Soviet depot is 60,000 tons (apart from National Supply Sources).

Depots still need to be connected to operate but can be created outside the friendly rail net. This allows a player to ensure that the needed railyard is fully functional before the depot is actually in full use.

Note also that depots can be created on any hex with a rail line – not just in named towns and cities.

In addition, remember that units within 3 hexes of a depot do not use trucks to draw supply (if there is enough supply in that depot – remember units will draw from more distant supply sources if the nearest ones lack freight).

Depots, HQs and rail repair units

The maximum capacity of a depot can be increased temporarily if there are HQs stacked in the hex with the depot. Basically, if you can, always place your HQs on a depot as this will improve the functioning of the depot and reduce the resupply cost for any Support Units in the HQ.

Having depots large enough to attract and retain a large number of attached trucks is important. This prevents units from losing MPs due to having to use their own trucks for resupply efforts.

When drawing supply down a long rail line from a National Supply Source you will need a network of intermediate depots. These can be left at a low priority but help with the storage and transmission of freight.

Related to this, bear in mind the difference between using HQs and your rail repair counters to affect the supply system:

- A HQ will increase the capacity of a depot, thus more supply can be stored or sent on to local combat formations. However, the depot will be assigned freight using the normal routines and wider shortages may well mean that the full capacity is not used;
- A rail repair unit increases the importance of the depot relative to others on the same network. Thus that depot will allocated freight before the others and to some extent will claim supply that would have gone elsewhere in the supply network.

Depot Priority

How you set your depot priorities is important. Basically a depot will only send freight to a depot with a higher priority level (there is a small exception in that intermediate lower priority depots will claim some freight if there are nearby airfields that are in active use).

So for a port to export supply, it cannot be set to level 4. In general, since exporting ports are a priority in the supply system you can safely set them to level 1 or 2 as they should claim enough to be able to support the network of importing ports.

If you do not want a port depot to import freight by sea, set it to level 1 and leave it to ‘import’ freight. That way it may still take some supply from the rail system (if it

needs it for local airbases). If you set it to level 0, it will take no supply from the network.

30.3.2. Reserve Theatre Boxes

The Reserve Theatre Boxes for both sides can be seen both as a generic training region and a place to rebuild units damaged in combat.

You can use the various filters in the CR to determine which units will refit (if any). In general units will refit more quickly in the National Reserve than on map but you need to balance this against the delay in moving to/from the map and that such transfers also cost you rail capacity.

30.3.3. Unit Refit and Recovery

Units in contact with the enemy will not refit and will tend to weaken due to attrition.

However, this can be partly mitigated through having a high level of CPP.

To receive substantial reinforcements a unit needs to be not only in 'refit' mode but its relation to the supply grid is also very important. If a unit is to refit on the map, the best location is on a depot, stacked with a HQ and in refit mode. Assuming the depot itself can draw sufficient freight this will speed the process.

The alternative option is to move the unit back from the front line and to the off map reserve.

Note that units in the reserve and set to refit will be the priority for available equipment. It is possible that these units may take up all that is available leaving little if anything for on map units. To manage this, ensure you are careful how many units in the reserve are set to refit at any one time.

30.3.4. Events

The event system relates to the Theatre Boxes and on-map issues. Thus one sequence of events models the gains of the Western Allies first in North Africa, then Italy and then in Western Europe and into western Germany. Others reflect the shifting intensity of the campaign in the Arctic or the Allied strategic bombing campaign.

Others affect the rules for the surrender of various Axis-Allied nations.

Equally some reflect the shifts in the Soviet war effort and the various ways in which the Red Army was restructured from late 1941 to 1943 and provide bonus allocations of Administrative Points to ease the restructuring process.

30.3.5. The Map

This is very different to WiTE1.

There are more hexes.

The new supply rules create bottlenecks – you can only supply so many units at the end of a single track rail line … even if you have depots.

The new rail rules make it very hard to redeploy substantial number of units in a given turn … and if you fill up the rail capacity on a given link with units very little (if any) supply will pass to that sector in the next logistics phase.

Stay out of heavy woods (if you can).

Use the road overlay when planning offensives. The game system handles the process of calculating actual movement costs etc. but this can help if you are thinking about where to attack as better roads ease supply costs.

30.3.6. Victory Conditions

Note that the Axis player gains victory points up to the point where the initiative is deemed to have changed hands (usually in late 1942 to early 1943). After this the Soviet player gains and has to ensure they have a certain level by the start of 1945 or the game ends with an Axis marginal victory. Pay close attention to the dates for when certain cities changed hands and try to maximise (or minimise) the bonus for early capture.

30.4. TACTICAL TIPS FOR BOTH PLAYERS

This section highlights a few rules that are important when actually carrying out your operations. Some of these are already identified in the 'differences' and 'key rules' but are repeated here for completeness.

30.4.1. Avoiding Combat Delay

Combat delay can be a major problem, especially when you are trying to convert a breakthrough into an encirclement. Setting aside the special T1 rules (11.2) the only way to avoid this penalty is if the final odds are 10:1 (or more) and that there is no enemy unit (including the original defender) still adjacent to the hex.

In effect if you want to achieve a clean breakthrough you need to attack units either side of the key hex first and then hope that the defender retreats more than one hex – something that is more likely if you can attack in overwhelming strength.

30.4.2. Impact of Road Movement

Again there are times when being able to move as fast as possible in enemy terrain is critical. Note that if the hex has poor roads, then German mobile divisions will pay 3 MP per hex (if the hex was originally enemy controlled) for clear terrain rather than the expected 2. It can be very useful to use the road display map mode when planning a move into enemy controlled terrain.

30.4.3. Brigade and Regiment movement costs

Note that these unit types must pay at least 3 MP to enter an enemy controlled hex (regardless of roads) but pay the normal movement cost to enter a pending hex. This means that using broken down regiments to complete an encirclement can be inefficient and it is often better first to move a complete division behind enemy lines and then follow up with brigades or regiments to fill in the encirclement.

30.4.4. Administrative Movement and hex ownership

The interaction of these two concepts is important.

Movement in hexes that were controlled by the player at the start of the turn is faster (assuming no interdiction is present) and generates less fatigue than movement into pending (captured) hexes. This applies to both unit movement and supply movement.

More importantly, if a unit ends its turn in a hex that was friendly controlled at the start of the turn it will regain more preparation points and shed more fatigue. Thus, quite often, stopping movement in a pre-controlled hex rather than a pending hex will mean that units are far more combat ready when they finally come into contact.

Especially for the Germans in 1941 this means it is important to use the mobile units to capture territory that will flip to your full control the next turn. Thus the infantry marching in the wake of your spearheads will be much more useful when they finally arrive at the front.

30.4.5. Combat Preparation Points and Movement

This is closely related to the point above. Units with a high number of CPP have a chance to pass a test that removes the negative impact of fatigue and of failed initiative and administrative tests on their movement allowance. Thus on balance a formation that moves up keeping its CPP relatively intact will move faster over multiple turns.

30.4.6. Motorisation

It is worthwhile deciding to motorize a few infantry units. For the Germans something like a regiment or two per Army Group in 1941 will provide considerable additional mobility. For the Soviets perhaps one rifle division for the main Fronts once they return to the strategic offensive in late 1942.

This is expensive in terms of trucks and admin points, but the additional mobility can make a substantial difference.

30.4.7. Retreat Rules

The combat engine in WiTE2 has been completely rewritten compared to the earlier games but units that retreat can still suffer substantial losses. This will mostly happen to low morale and/or low experience or if the unit is forced to retreat through multiple ZoC. In that case retreat losses can escalate rapidly.

Equally if a unit is forced to retreat more than once in a turn, it is possible that its losses will increase as it loses cohesion.

This particularly affects the Soviets in 1941-2, Axis Allies and German infantry units later in the war and allows the player to damage their opponent even if they do not create a pocket and force the units to surrender in a later turn.

In effect, the focus on creating pockets that was such an aspect of WiTE1 is less important, sustained pressure can badly weaken your opponent.

30.5. GAME MANAGEMENT

This may give you some idea of how to manage a typical turn.

Since you start with the air phase it makes sense to start a turn by setting low morale, high fatigue or weakened units to rest (or even send back to the reserve – if you are using the AI-assist this will be done automatically for weakened units).

Every few turns, review what planes are in use. You might want to upgrade to newer models but also you may need to downgrade to older types if you are running short. For the Soviets, after the first phase, use the obsolete I-series fighters as training aircraft in the national reserve and preserve your modern fighters for front line formations.

If you are controlling the air force manually, consider whether to move any Air Commands or AOGs. If you are using the AI-assist, review your stances, priorities and which HQ they are ‘following’.

Before starting your ground phase, it maybe worth reviewing your Support Units (use the Commanders Report) and move any that have a low TOE % either back to the OKH or Stavka or the reserve to refit.

At some stage in the ground phase, review your reserve and see if there are units you can move to the map, this may mean resetting the arrival hex one or more times as you do so.

Towards the end of the ground phase, check that your HQs are deployed within command range and that, if at all possible, they are stacked on depots.

At this stage, you may want to build any new depots and review the priority of your existing ones.

It is also worthwhile to use the Commander's Report to check for units that have just arrived or that are loaded on trains. It can be easy to overlook these if your focus is on the front lines.

You can conduct air supply at any point in the ground phase, but generally it is best done towards the end.

30.6. THE AIR WAR

Players used to WiTW will recognize the basic principles of the air war in WiTE2. However, it is worth noting that neither side can generate the sort of comprehensive airpower that the Western Allies can from 1944 onwards.

In particular, the Soviet Union east of the Dneipr, had few major airbases in 1941. Since both sides tend to have relatively short ranged fighters and tactical bombers, it is important to start building a network of airbases early in the game.

A secondary advantage to an airbase network is that air delivery of supplies is far more effective if the target hex contains an airbase.

30.6.1. Some key missions

Especially if you have had no experience with the WiTW air rules it is useful to bear in mind how some missions operate and when they are appropriate. Note that not all these missions are available for all Air Operational Groups depending on their command assignments.

- Ground attack-interdiction and ground attack-unit. The first of these missions will tend to attack moving targets (this can include units that move, attack, retreat, support a battle from reserve status as well as the movement of supply). It will not tend to inflict heavy losses when first conducted. The second is designed to damage/disrupt the enemy immediately (so is useful if you then plan to attack that hex) but will generate much lower levels of actual interdiction.

- For interdiction missions you are often better using agile planes with many bombs or rockets. For unit attack missions, planes with larger bombs will often be more effective and level bombers are very valuable in this role.

- Ground support. Is actually flown in the ground phase and only if the designated units are in combat. Note you can link GS to any level of HQ from a Front/Army Group to a single corps. The more precise you are, the more control you have over where the air support is actually flown. Equally being prepared to reset the parameters in your air doctrine screen can be useful to avoid excess losses (17.4.3).

Note that the rules for fighter auto-interception, especially in the context of GS missions are very different to both WiTE1 and WiTW (18.1.3 and 18.1.10).

In addition, do not over-use your reconnaissance assets. Both sides have substantial numbers in the early game and run short by the mid-game. Often low level reconnaissance, enough to detect if enemy units are present is all you need. If not, then both sides may lack much intelligence of behind the lines build-ups from 1943 onwards.

30.6.2. Air Operational Groups

Air Operational Groups (AOGs) are the main tool for managing your air force in WiTE2. They provide considerable functionality and are the only way you can redeploy your air units (either manually or using the AI-assist).

Note that if you have ticked the AI-assist option, you cannot change this in a MP game. In that case, air directive creation and unit redeployment will happen when you press the F12 button to either initiate the air phase or end the game turn.

Otherwise you can mix using the AI-assist and a degree of manual control as you wish.

30.6.3. AI Air Assistance

The detailed information in sections 17.1 and 17.2 provides a good basis for understanding how this function works. In addition it is worth stressing two key points.

First, AOGs will usually only move on the map when you redeploy the HQ they are set to 'follow'. Note that moving the air command HQ makes no difference in this regard.

Second, air doctrine is probably more important than when playing with manual control. If you set your own air directives, the values in the air doctrine are used to initially fill out the mission parameters but in practice can be over-written as you desire for that particular directive. The AI-assist uses the doctrines to create the air directive. So it is useful to review those settings as the game progresses. The default values may be sufficient but you may find that either your air losses are too high or missions not very effective and amending those variables might improve performance.

30.7. PLAYING AGAINST THE AI

These short notes summarise some aspects of how the WiTE2 AI behaves and the effect of changing difficulty settings (especially for morale).

How you choose these levels is your own choice. In early games, don't give the AI too many advantages (you may find 100-100 perfectly adequate) as you work out

the game systems. Once you feel confident, it is probably best to set the AI (for morale at least) at 110 and if it will be doing the bulk of the attacking then at 120.

30.7.1. AI Help Levels

The performance of the AI will improve due to how you set the various levels. Morale is particularly important. However, the effect for the AI is not just an improvement in relative importance it gains additional bonuses the higher you set the help value.

110 enables the AI to use a different set of movement rules on the defensive. This is essential if it is to manage its defensive deployments so should be seen as a standard choice once you have some understanding of the game.

The 120 value is particularly important in this regard. At this level it will automatically pass all leader checks. This alone is a major gain beyond the notional gains of inflating specific values.

In addition, at 120, the AI will gain particular combat bonuses which will increase the number of disruptions it generates during a combat.

30.7.2. AI on the defensive

On the defensive the AI will ignore most movement restrictions in its own territory and prioritise forming a stable line if the morale value is set to 110 or higher. It will try to move by the normal rules below this level.

The main exception to this is it will move using standard movement points if it needs to pass a hex that is covered by enemy ZoCs, such as:

3000

If the Axis turn ended with the situation above, those Soviet units will be moved by the AI (assuming it has a morale level of 110 or higher) without regard to the movement rules.

However, if the turn ended as below, and the AI failed to broaden the gap by counter-attacks (which it mostly likely will) then the partially encircled units will be forced to use their normal MP. In that case the Soviet tank division will probably escape but the security and rifle division will be fully encircled in the next turn.

3001

In effect, if it cannot create a ZoC free exit route from a partial encirclement, then it is unlikely to be able to escape, if it can manage this, then it is likely that most AI controlled units will be able to fall back.

If it believes that the relative ratio of forces is even (or in its favour), it will tend to form its line in contact with the player. If it believes it is outnumbered, it will tend to a line one or more hexes back as it seeks to fall back.

30.7.3. AI on the offensive

In general, on the offensive the AI operates by similar movement rules to the player. It pays the cost of hexes it enters and uses up MP as it moves and attacks.

If in a scenario (or phase of the longer game), the AI is expected to be on the strategic offensive, it is suggested that it is given at least 110 morale. Depending on your expectations, you may find a higher level will produce a more balanced game with the AI able to sustain an attack.

As noted above, at 120 morale it gains some specific combat bonuses.

30.8. A SUMMARY OF THE LOGISTICS SYSTEM

30.8.1. The flow of supply

The impact of freight and unit movement is shown by an increasing SMP cost for each hex. For a dual rail this increase caps at +6 once 30,000 tons of freight have gone down that hex.

> ***To stress, 30,000 (+) usage, does NOT stop any further movement, it just makes it expensive in terms of usage of SMPs.***

For units, you can see this reasonably clearly. A unit grabs enough train stock to move (it matches its load factor), you get 200 SMP (some of this might be spent loading onto the trains), it can move till its expended this allocation. So it could move 200 hexes if there is no penalty (see 22.4.3 of the main manual on the details). It can move 100 hexes if usage is already in the 5000-9999 turns (i.e. each hex costs 2 SMP, this is for a dual rail) and only 28 hexes if every hex was at capacity.

The impact is clear enough, another unit sent down the same track will either move less far or arrive at its destination with less SMP.

However, for freight the effect is a bit less clear. Not least as this is all conducted in the logistics phase and you see none of it actually being done. In theory every ton of freight has up to 200 SMP and moves as above, the obscure bit is where this SMP comes from and how does congestion influence the outcomes.

Freight obtains SMPs from level 2 or higher rail yards - in this context think of these as representing rolling stock. A given bit of freight will try to grab rail capacity from as near as possible (up to 30 hexes away). For a player it is impractical to either estimate this or influence what goes on. You could in theory take a single hex on the map and add up all the level #2 railyards in 30 hexes (along rails), but the problem is

(especially for the distant railyards) is that they are providing rolling stock to more than just your chosen hex.

> ***This cannot be stressed too much. Only railyards of 2 or more actually generate rail movement capacity. Thus capturing, repairing and integrating these locations into your rail system should be part of your early game planning. Especially for the Axis player in 1941 and the Soviets once the Axis starts to fall back from 1943 onwards.***

So at a practical level, every ton of freight has a notional 200 SMP, but after some time the local rolling stock is fully allocated (the equivalent of running out of load to move your combat units). As it moves it lays down usage on the rail net and as this increases so does the cost - or in other words a later ton of freight can't move as far. In the end you run out of rail capacity to push freight down a given line.

If you are the Soviets and the front line is within 10 hexes of Moscow, your depots will get the freight they need (up to their capacity) simply as Moscow has a huge railyard and you use up relatively little of your SMP stock - even if the local rails are congested. If you are trying to supply units on the Volkhov, you are probably reliant on one or two single track lines that have no large rail yards to hand. Or in other words, you will run out of SMP stock very easily.

When estimating rail line usage, remember that unit moves happen before the logistics phase but their rail usage is not cleared till the end of the logistics phase. So if you have just sent several Corps down a single track rail line very little freight is going to squeeze along behind them.

It is also worth remembering that not all usage is cleared during the logistics phase. So if you have run a sector of your rail net at over capacity, it will have less capacity in the next turn.

30.8.2. Depots

Related to this, remember that depot capacity matters - even if more freight could be delivered it won't if the depot is already at its processing capacity.

This is also why you want a network of intermediate depots from NSS to the front line. These provide a resting point for freight that lacks the SMP to complete its journey, they also provide unloading capacity, so that freight can be stored here for the units to pick up.

30.8.3. Influencing the system

You cannot really influence the flow of supply except in how you set up your depot network and being careful over troop movements.

However, you can significantly influence the effectiveness of your depots.

First a HQ on a depot (especially an Army Group or Front level one) will have a significant impact on the capacity of that depot. Capacity influences both the ability to unload and send out freight as well as storage.

Second, leaving an unmoved FBD/NKPS unit on a rail yard depot will effectively distort the pattern of freight delivery. That particular depot will be seen as more important than others (of equal importance) in the local network and more freight will be allocated to that location (at the expense of other local depots).

In combination these two units will boost capacity (throughput and storage) and assigns rail cap to meeting that capacity.

> ***A good scenario to test these concepts is to take the Soviets in the Vistula-Berlin scenario. The need to supply a large army, with many mobile formations, that can advance rapidly is a real challenge. The identification of key depot locations is the key to success,***

This will happen anywhere on the map but is more valuable in certain locations. Particularly, (a) it is more effective multiplying the effect of a large railyard; and (b) if the local rail capacity is limited, say at the end of a single track rail line, you can boost capacity and priority all you like, very little is going to happen.

On the other hand a high priority depot with a rail repair unit and HQ(s) can be critical to bring supply to a given location. Locations such as Minsk for the Germans in the early 1941 battles or any major rail yard for the Soviets after 1943 can make the difference between your key offensive being supplied or your units too weak to sustain an attack.

30.8.4. HQ Priority

Be careful about setting too many HQs with too high a priority level. This aspect works slightly different to depot priority (as that really is about supply of freight) as this is used to set the demand.

At worst, a high priority HQ (and its attached units) will do its best to find the freight it needs to meet the set level of supply in the unit (25.8.1). If this freight is not available locally it will use more and more of the trucks in its combat units to find that freight (25.5). In the end this lack of trucks (even if they have actually delivered the freight needed) will badly hamper your combat values (23.8.3) and movement points (22.1). In effect, you can have a unit that is less effective than if it had received a lower allocation of fuel and ammunition due to being set to a lower HQ priority.

Given the complexity of the supply system this is not easy to work out but basically if you are operating at the end of a single track rail system (or have a lot of mobile formations in a particular sector) then you do run the risk of units becoming less useful simply as they seek out the supply they need.

The other reason to set HQ priority relatively low is that this allows freight to build up in the local depots. If you then set a higher priority just before an offensive your units will at least have the benefits of a one-off supply allocation.

30.9. AXIS STRATEGY

This section and the discussion on Soviet options reflect ideas and views of various beta-testers of the game. The discussion is designed to bring all the various specific rules and advice into some rough guidance on how the game fits together.

30.9.1. Overall options and factors to consider

Before committing your units on the first turn you should have an overall strategy to guide your choices. Clearly the deployment is historical and that may encourage you to keep the original plan. Other options are to weaken AGC to improve either (or both) of AGN and AGS with extra assets.

One key element to your planning is to study where the VP locations are, which you think you can capture early and how this might alter your force allocation. Given how the concept of the High Water Mark and Initiative Change interact, you cannot be too cautious in your overall plans for 1941.

Come the end of the 1941-42 winter you will need to decide on the focus and goals of your 1942 summer offensive.

At start, AGN will struggle to take Leningrad due to the heavy woods and poor transport links. To have any chance of this, you will need to maximise the local supply network (to sustain your mobility) and allocate extra air support. If you decide that Leningrad is out of reach, then think about your practical goals. At the least, you should be aiming for Novgorod, the line of the Luga and to cut the main Moscow-Leningrad dual track rail line.

An early capture of Pskov is essential, when it falls it may be more effective to stop your FBD there to improve logistics rather than keep on repairing northwards. Estonia should fall easily and the ports will help your supply situation.

AGC will probably determine your overall strategy. If you want to seriously threaten Moscow you cannot weaken AGC in the early turns. Try constantly to look for opportunities to outflank the Soviets and to push past Smolensk (which can be turned into a major fortress if you give the Soviets too much time).

Placing a depot in Minsk and repairing its railyard is essential for the battles from Smolensk to Vitebsk and Bryansk. Again, it is useful to hold one of your FBDs static here rather than prioritise rapid rail repair.

The South is where it is easiest to attack because of the open terrain. The VP locations will force a Soviet player to fight west of the Dnepr or lose a lot of VP

bonus scores. Gaining ports can really help your supply and be prepared to divert forces to clear Odessa and Sevastopol. If the Soviet player is prepared, they can turn both into substantial fortresses which will tie up 11 Army for a number of turns. You may also need to allocate extra air assets to isolate both ports.

Think carefully about when you will pause your 1941 offensive. The winter rules are more nuanced than in WiTE1 and you may need to attack after the autumn muds to disrupt the Soviets and to gain the VP needed to avoid a sudden death defeat in January 1942 (29.1.4)

Be careful as both Soviet cavalry and tank and mechanized divisions can be very mobile (if weak). A poorly secured flank risks them disrupting your supply lines.

For 1942, you need to think about how to maximise your victory points so as to optimise your 'High Water Mark'. The German army should recover from the winter battles and you should have a good rail and depot network close to the front. The historical focus on the south may be an attractive option but this may also be a good chance to take Moscow and the large VP cities behind it. In a reasonably balanced game, it is likely that the second half of 1942 is your best chance of an automatic victory.

At some stage the initiative will change. If they are careful, the Soviets will build some very strong stacks making almost any position hard to hold. On the other hand, Bielorussia and the region around Novgorod are excellent defensive terrain. The south is more open and requires pre-building defensive lines.

As 1943 progresses, your infantry will be more and more a purely defensive force. At this stage, think carefully about how you use your Panzers. If they are on reserve reaction they may stop some Soviet attacks but you will find they have very low MP and combat values for your turn. In effect, there is a trade-off between immediate response to Soviet attacks and retaining a counter-attacking force.

As the war crosses back over the 1941 border you can start to use the City Fort concept against your opponent. At one level this can generate real strong points but you run the risk of encirclement. If the game runs into 1945, be aware you will lose vital cities to the Western Allies. In the end this will destroy your logistic network as you will have no functioning National Supply Sources.

30.9.2. T1

For the air war, the preset Air Directives are effective and will destroy a substantial amount of the VVS at the forward air bases. If you choose to amend these, remember that air base bombing is of little value after D2. Ground Support can be useful as you are likely to face Soviet reserve reactions but be prepared to turn it on and off as you make your turn (it is unlikely to be needed when just attacking border fortification units).

If you want to amend the missions then your Bf-110s and Stukas are very useful aimed at the nearest airbases, the Ju-88s are useful for the next group and your long range bombers can hit bases along the Dnepr.

Remember that damaged Soviet planes will be destroyed if their air base is over-run so you should be able to destroy more planes during the ground movement phase.

On the ground, you have three basic goals: pocket as much of the Soviet army; secure the rail lines and movement corridors; and, push towards Pskov and Smolensk. You can limit combat delays by ensuring the resulting battle ended at 10:1 or better, in some circumstances it may be better to attack with overwhelming force to achieve this rather than minimise your commitment.

For AGN, the main goal is to secure the rail line to Daugavpils. Most players will clear the coastal ports in Latvia but you will need to decide whether to divert forces to clear Riga or to prioritise reaching the Daugava to prepare your move towards Pskov.

It might be useful to add some formations from Pzr Grp 3 to AGN, either for T1 to complete the encirclements or as reinforcements to ensure an early attack towards Pskov.

AGC needs to generate a large pocket west of Minsk (which should fall easily on T1) and clear the rail lines running from Brest-Litovsk north and Kaunas eastwards. How far you can push beyond Minsk will depend on your force allocation as you may want to release some Panzers to either AGN or AGS.

A key issue for AGC is to secure the Brest Litovsk-Minsk rail (at least the western end) so your FBD can use administrative movement on T2. Keep this out of Soviet control if you can when screening the pockets.

The other issue is whether you want to risk a single continuous pocket from the border to near Minsk or break this up. A single pocket frees up more or your units and may allow you to reach the Berezina but if it is broken you have a major problem. On balance it may be better to separate the Bialystok portion of the pocket from the section west of Minsk.

AGS. Be aware that the Soviets are better prepared here so there are likely to be more reserve reactions and higher movement costs. Seek to secure Lvov and the dual rail line leading to it. Much of your motorized units are frozen on T1 so you have limited options. If you drive south, there is a risk of releasing the Soviet Southern Front forces so it may be better to attack towards Rovno as historically and assess your options on T2.

On the other hand, the Soviet forces in the south are more likely to start to collapse from T4 onwards as you apply sustained pressure. So early pockets are not as important as they have become in WiTE1.

30.9.3. The Air War

Whether you use the AI-assist or manual control, be prepared to concentrate your air force. This will mean ceding substantial regions of the front to the VVS as you lack both numbers and range to do anything but support the key sectors.

In the main, leave your longer ranged bombers as far back as possible (so if using AI-assist, link the air commands to rear area HQs). Ensure your transport aircraft are clustered around well supplied depots so there is freight to bring forward.

In terms of missions, you will find that Ground support is the most effective use for Axis bombers. You can lose a lot of aircraft doing GS so use it only for the important attacks, in such cases, heavy GS makes quite a difference.

The Ground attack mission is probably of limited use in 1941 but as the war progresses, interdiction missions are useful for disrupting Soviet offensives.

Naval Interdiction can be very useful especially for your naval air units and any unit with Ju-88s (for their mine laying loadout). Naval interdiction is probably more effective than port bombing so can help isolate Odessa and Sevastopol and disrupt supply movement across Lake Ladoga.

The short range reconnaissance units are very useful for low intensity, wide area style missions. They will give you some idea of the layout of the Soviet defences. Your longer range reconnaissance units should be targeted at particular areas where you really need better detection levels for making your plans.

Your allies have some useful planes but all suffer for low replacements and relatively low morale. Ideally they should be either working with the main Luftwaffe formations (for protection) or on a quiet sector.

30.9.4. Supply

It is worth restating that while you want to push your rail head as far into the Soviet Union as you can, equally leaving a FBD on a depot might generate more supply in the short term. In this respect, Pskov can be critical for the moves towards Leningrad, Minsk for any fighting around Smolensk. There is a constant trade-off between using them for rail repair and using them to enhance the effectiveness of your depots. In addition, there are 7 R.A.D. SUs that will repair rail lines. Put them with a low level HQ to manage where they do their repairs. These can be particularly useful for AGN as they can connect the broken links between rails you captured intact.

You will become very reliant on your trucks. These will be needed to maintain your supply lines and the mobility of your units. As such, think carefully about advancing through high cost terrain with poor roads. You may make gains, but there will be a long term cost to your trucks as they try to bring supply across such terrain.

Note also that many Soviet players will seek to deny you the advantages of administrative movement (which also influences supply costs) by generating low levels of interdiction with their airforce.

Finally, while replacement manpower is moved as part of freight, in practice it has lower priority. So weakened units will not refit very effectively at the far end of your logistics network and you may need to be prepared to send them away from the front to recover.

One consequence of this is that Panzer divisions near the front will struggle to replace lost tanks. The replacement Panzer battalions offer one solution if they are left to refit in the National Reserve. While it may be tempting to use these as normal Support Units, if they are attached to a Panzer division they will merge and reinforce the host unit (26.1.6).

30.9.5. Ground combat

There are several issues to bear in mind.

First, the shown CV is an indication of combat effectiveness but is not definitive. Particular issues include:

- Any unit with morale below 50 will have an inflated displayed CV in that it is correct but they will lose many elements during combat. Likewise Axis Panzer units will have a deflated display CV because of their high morale and tanks (the system makes very little distinction between the type of tank actually in use, so the formations that use Czech or French tanks may take heavy losses against Soviet T-34s and KV-1s).
- Isolated units have their display CV halved, but in practice their CV only drops slowly. So the first turn of Isolation their actual CV will be higher than suggested, while after a few turns or it will begin to drop.
- Sometimes you can guess at an enemy CV better by looking at the unit type and the terrain/fortification level than by looking at the displayed value, so if you see a Soviet Infantry Division in open terrain with a CV of 5 or so it is likely to be incorrect.
- CV is a rough measure, an obsolete BT-7 adds the same notional value as a T-34, so sometimes an enemy unit may be stronger than you expect.

Also numbers count, so a Brigade in Heavy Woods (even if well dug in) will often lose if attacked by several infantry divisions, even if the CVs suggest otherwise.

30.9.6. Playing the AI

First you need to understand how the AI plays. Units that are not pocketed or caught up in Zones of Control have unlimited movement (except on NORMAL setting – 100 morale for the AI), so the AI will attempt to rebalance the whole front line every turn. In 1941, as the Soviets it likes to have two solid lines of units but will use just one if that is all that the troops it has available. All of them will be on Reserve so you can expect lots of activations.

Activations are a real problem. To counter this first ZOC everything within range on the front line before making any attacks. Broken down motorized divisions are good for this. Other tactics you can use are attacking at huge odds (defenders will not activate if the odds are too bad) or doing less critical attacks first to absorb some of the activations.

The AI will not do many attacks up to T4 so use this period to advance into contact with your Panzers every turn (broken down units will do) so that the infantry can follow up quicker. Pockets can be sealed with weak units.

Later the AI will start doing some attrition attacks and attempting to break pockets so your pockets need to be stronger. AI attacks can be used to work in your favour, set some Pzr divisions on Reserve and a few heavy failed attacks can really weaken the Soviet front line at a critical position. But remember that MP used in reserve combat will be taken from the next turn's MP allowance so you need to decide how to balance this.

30.10. SOVIET STRATEGY

Broadly, the first phase of 1941 is a matter of survival but you need to control their advance or you will lose a lot Victory Points and find the Axis close to Moscow and Leningrad with their army still intact.

You can expect to lose almost all of the border units north of the Pripyet in the early turns. On the other hand South-Western Front should be able to manage a fighting retreat back to Kiev.

In the main, as your army recovers, a defence in depth is more effective than one that relies on a single strong line. Your main choice is where you allocate your reinforcements, most will probably have to go to Moscow and Leningrad but do not completely neglect the south.

In the north in particular use the terrain. The Axis will struggle to advance far in heavy woods (even against light resistance) and as they move closer to Moscow and Leningrad their supply situation will worsen (so they will have less MP). There are a number of sectors where 2 rifle divisions well dug in using poor terrain will effectively block any Axis moves. The problem is you lack the resources to do this consistently and, in the end, any such line will be outflanked.

In terms of defensive deployments, city forts allow the stacking of many units, just be cautious that they are not then cut off by a wider Axis advance. You should create these at Leningrad, other major ports and Moscow. Due to the rules for their creation, you need to start planning such a commitment at least 2 turns before it will be needed (20.6.1).

During the first winter, you will struggle to mount a coherent offensive. It is usually better to regard this as a chance to regain some key terrain, weaken the Axis forces and create a number of Guards formations. Also most German losses will be 'damaged' due to frostbite and supply problems. Around 15% of these losses will have returned to the front line units by June 1942.

The summer of 1942 will see a major Axis offensive and they will start close to your critical cities, with a much better supply situation than they had in 1941. They will have to decide between the VP rich options in the south or Moscow and/or Leningrad, so once they are committed you can try to match their build up. The rail net from Moscow to Stalingrad and the Caucasus is poor so you may struggle to send significant reserves and to maintain an effective flow of supplies.

At some stage, the initiative will change. Attacking in the south has the advantage of relatively clear terrain and being able to take Romania out of the war. However, it is a long way to Berlin and the critical Axis National Supply Sources, so you also need to attack in Bielorussia. This is difficult terrain but in the main the Axis side will struggle to replace their losses while you can often add fresh units.

Some of the advice in the German notes apply equally to the Soviets, especially after you regain the initiative in late 1942. By 1944, it will be the Axis that is trying to cope with the reduced combat value of low morale formations and using terrain to create barriers that you need to move around.

30.10.1. Managing the Red Army - 1941

You will lose most of your at-start units and for most of 1941, your rifle divisions will be weak (remember if they have under 50 morale they may shatter or take very heavy losses) In particular, remember that low morale units can lose a lot of their apparent CV during a battle making them more vulnerable than they appear.

However, both the cavalry and the tank or mechanized divisions have the advantage of high MP values. These can be invaluable for raids into the Axis rear area and to disrupt their supply network.

Remember that tank brigades are off-map support units but can be effective either held at an army HQ or allocated to a combat unit. Rifle brigades are often at their most useful directly assigned to combat units, they can be used to create near impregnable defences in key hexes.

From December 1941 you can build two Guards Rifle Corps and a number of Cavalry Corps. You will also receive the first of a number of bonus administrative points to help with this and a manpower boost. By the end of the year you will have two NKPS formations that can help either with rail repair or the effectiveness of your depots.

In the main in 1941 don't build new units. The game system will generate shells for many Support Units and you lack both manpower and equipment to fill out all the formations that are in your national reserve.

Generally it is better to send weak units back to the reserve but you may need to keep some on the map to assist with setting up fall back fortification lines. The combat engine is unforgiving for units that are low on TOE, morale or experience.

In some sectors (1941 along the Volkhov, 1942 in the Caucasus) you will really struggle to replace losses in your combat formations. Be prepared to either cycle weakened units back to the National Reserve (so keep a reasonable reserve of combat ready formations there) or to merge your rifle brigades into weakened rifle divisions. By mid-1942 you should have enough AP to do this and to replace the brigade in the reserve to train up again.

30.10.2. Managing the Red Army - 1942

By mid-1942 you should have cleared the backlog of rifle divisions needing to be refitted and other support units. Early in 1942, build some motorized brigades as you will need these for your tank corps and they are very useful as attached Support Units to give a better infantry/tank balance to the Tank Corps TOE. Beyond this keep a close eye on your equipment pools as some units will take many turns to come up to strength. You will have a near permanent shortage of heavy artillery into 1944 so be careful about creating units that need a lot of this, for the most part concentrate on artillery SU that will draw on the 76mm guns. Equally mortars are an acceptable compromise as these become readily available.

When merging units to form Corps remember (unless you are playing with full Theatre Box control) that those due to withdraw at any stage cannot be combined to make up Corps. On-map you are limited to just merging conventional Rifle Divisions, in the reserve you can merge both militia and mountain divisions into Rifle Corps (these will then be redesignated as conventional rifle divisions).

You will encounter a few issues as your TOE changes from late 1942. In particular, the 'Corps' artillery SU completely changes its equipment and will be sent to the national reserve to refit as a result. To make this worse, you will then find it hard to refit them due to a shortage of heavy artillery (and this will last into 1944).

At the end of 1942, you will notice the build options shift substantially. In particular, it is no longer possible to raise fresh rifle divisions or brigades, so make sure you have

as many of these as you think you will need. You can still raise fresh infantry formations but in the form of Rifle Corps.

30.10.3. Managing the Red Army -1943 and onwards.

The TOE for the 1944 changes, especially the Corps will provide you with very powerful units. A stack of Guards Rifle Corps, with appropriate attached Support Units can break down all but the most powerful defensive line. The problem is they will steadily weaken as they advance and gain fatigue and lose their CPP. Equally the 1944 armoured TOEs finally provide your Tank Corps with a degree of defensive resilience.

Operationally, there are a few aspects. First, well rested, a stack of Rifle Corps can break almost any front line. At best aim to make your basic offensive tool a 3 hex wide gap in the German lines so your mobile assets can exploit. Second, really until mid-1944, your Tank Corps are not very good defensively, adding motorized or mechanised brigades as SU will help, but your Cavalry Corps can often be better for actually holding ground if you fear a counter-attack.

Finally, you need to use all the tools in the logistics system, especially the deployment of the NKPS. Done well this can even supply your army in Hungary so that you retain reasonable levels of mobility.

If you do this well, you can supply a large army in Poland and Eastern Germany. Even so, be prepared to accept regular pauses to rebuild your CPP and adjust your depot networks.

As a general piece of advice, the two late war campaign starts (Stalingrad-Berlin and Vistula-Berlin) are excellent to explore this evolution of your offensive capacity. Having some idea what works best once you have the initiative may improve your approach to rebuilding your army from mid-1942. Furthermore, Vistula-Berlin is an excellent chance to explore how to build a logistics network that can sustain a large mobile army backed by a substantial air force. Add to this, both are intriguing games in their own right.

30.10.4. Managing the Red Army – using the National Reserve

The National Reserve is of more importance to the Soviet than the Axis player. Partly as you will build far more formations but it is also a useful place to send weakened units (especially from supply poor regions) to refit. A reserve of the equivalent of one or two Combined Arms armies can be useful to allocate to a sector in the face of a sudden emergency.

In terms of the reserve, remember that units on refit will have an absolute priority for replacement equipment. So be careful not to starve your on map units and equally not too spread your use of the refit status too widely. Usually setting a few units of

the key types to refit each turn will see them recover their TOE in a turn or so and thus be ready for deployment to the map.

Be aware that freshly raised units may quickly fill out their TOE but will have low experience for a number of turns. Unless you have a pressing need, these are probably best left in the reserve till they are ready.

30.10.5. HQs

From T6, the at-start rifle and mechanized corps HQs start to either disband or convert to army level HQs. The cavalry corps HQs remain available till the end of 1941 and can be useful for extending command ranges or simply improving the capacity of rear area depots.

Remember you do not pay administrative points for changing the command structure of HQs so keep your armies and fronts logically ordered. Equally, if you are used to WiTE1 be aware at the start a lot of Soviet HQs start with a very low TOE and it takes quite a while to come up to 100%. So your commanders will be less effective and its worth retaining the handful of pre-war mobilised HQs for your best commanders and most critical sectors.

In early 1942, you will gain a number of Reserve HQs. Most of these will later on become normal Combined or Tank Armies so do not disband them. Even if you assign no units to them they can be very useful placed on depots to increase the logistics capacity.

30.10.6. Air war

In 1941, the VVS cannot fight the Luftwaffe directly. Having said this, you will need to contest their operations if only to inflict attrition or to protect key sectors. More generally, low level interdiction can be very effective as it can be applied where the Luftwaffe is weak and it denies the Axis side administrative movement.

In terms of ground support, remember that simply committing bombers will inflict some disruption beyond that caused by actually hitting ground targets.

Retraining a number of fighter-bomber formations as bombers can be effective as the rocket load out can help with generating interdiction. Later on these can convert to the very useful Yak-9T.

Be prepared to leave a lot of the VVS in the national reserve and rotate formations. Bringing too much to the map will worsen your supply situation. Also remember that low experience units in the reserve will fly training missions. Once these reach an acceptable level you can scrap them (thus placing the pilots in the appropriate pool) or bring them to the map.

As you retreat in 1941 you will steadily run out of airbases. Start the construction of level 1 airbases behind the Volkhov, at Moscow and along the Don very early on. You may want to manually assign construction units to speed this up. Expanding some to level 2 will help with the deployment of your level bombers. If the chosen hex is close to an NSS, you will find the airbase completes quickly. Do not try to expand level 2 airbases in a sector that has poor supply.

One challenge with the VVS is the shifts in the air command system over the game.

Some of this is related to the regular shifts in Air Unit size from the at-start 60 to 20 and then the increase that happens in late 1942. The latter may bring in a lot of inexperienced pilots unless you have carefully built up a reserve of trained pilots. The best solution is then to transfer the affected formations to the National Reserve so they can train.

The other issue is that some AOGs will disband during the game. This happens substantively when the 1941 SADs are removed in early 1942. At that stage the attached air units will default to being under the direct command of the relevant Air Command. If you are using the AI-assistance, these will be automatically assigned to appropriate AOGs (but there are gaps, especially for ground attack formations). If you controlling the air war manually you will need to find the relevant air units (easiest done using the Commanders Report) and manually link them to new AOGs.

By 1943, a combination of much better planes and the weakening of the Luftwaffe, should see the initiative in the air shift. If the Luftwaffe heavily concentrates on a sector you will still lose most battles but then you have a free hand elsewhere. In the main, a mixture of ground support, reconnaissance and interdiction bombing are the most useful missions. In addition, bombing railyards will hinder Axis logistics. It will probably not be until mid/late 1944 that you will overwhelm the Luftwaffe, up to then you have to accept an unfavourable loss ratio on key sections.

It should be stressed, bringing in substantial GS in the form of well escorted Il-2s is critical to your offensive power. Such an attack can badly weaken even a strong German position before your infantry are committed to combat.

The other switch in early 1943 is that your air groups will mostly expand from around 20 to 32 planes each. This might cause problems with your aircraft pools and it maybe an idea to swap some less common plane types for those that are more readily available. In addition, the demand for extra pilots will lower the average experience of many formations (if they are left to normal replacements). Be prepared to swap such air groups back to the reserve to train and regain their experience.

Your reconnaissance planes need careful management. In 1941 these can seem to be limitless but you do not receive many replacements so that initial stock needs to be carefully managed. To minimise losses, it is usually sufficient to know the rough

layout of Axis forces behind the lines so a low intensity, 2 day a week, broad sweep should be sufficient.

As with the German player in 1941, be careful not to move too much of the air force too close to the front lines if you are on the offensive. This might mean you rely more on your level bombers and the few longer ranged fighters (mostly lend-lease) till your depots catch up.

30.10.7. The Axis AI

The comments in 30.7, especially 30.7.3 apply here. Once you feel comfortable with basic game play, the AI really needs to be set at 110 for morale and preferably at 120 if it is to sustain an offensive.

It will seek to make pockets but its main tool is the ability to inflict heavy losses on weak units. So you can expect to see entire armies collapse in a particular turn in the summer of 1941 and again in 1942.

The AI will make a general decision in April 1942 to attack in the south or towards Moscow.

Once you regain the initiative, many of the comments in section 30.9.6 apply in reverse. Remember that in its own terrain the AI can rebalance its front line each turn so expect to find a breakthrough fairly quickly screened. It will also make a number of strategic withdrawals when it feels it is in danger of being cut off.

31. Appendix B – DEVELOPER NOTES

In tracing the lineage of War in the East 2, you have to go back to SSI's June 1984 release of War in Russia. That was the first time that Gary designed a game covering the entire Great Patriotic War, as Russians came to call it. As a fan of SPI's War in the East boardgame, circa 1974, I considered myself lucky to be able to work with Gary on War in Russia. Two more Gary games would follow covering the war, Second Front (1990) and War in Russia (1993). All of these games had both players plot their moves and then resolved them simultaneously.

Fast forward to 2000 when Gary, Keith Brors and I formed 2by3 Games. At that time we wanted to shift gears and make a sequential turn based Eastern Front game, and do it on a grand scale with divisions and 10 mile hexes. The enormous scale of the war cried out for a game of similar scope. We also wanted it to be enjoyable for players that just wanted to push pieces around. Gary's interest in logistics made him want to have the computer track the number of tons of supplies and troops moving down rail lines. He felt this would be necessary to provide the realism needed to simulate the difficulties the Germans had supplying their armies in the Soviet Union. As initial work began on the map, Keith and Gary set to work writing the code that would track the movement of supplies. Within a few months it became apparent that this was not going to be possible without slowing the game down to a crawl. At that point the project was shelved and we decided to move on to Uncommon Valor and War in the Pacific. Games that didn't deal with rail lines, but had their own issues of massive scale.

Eventually the desire to work on an Eastern Front game got the better of us and in 2008 a decision was made to restart work on War in the East with some simplification of freight movement down rails. It was a compromise, but one we were willing to make. The 2010 release of WitE was successful and we immediately started work on War in the West. An early decision was to switch to a tile based map, and to create a map covering all of Europe and North Africa. We knew eventually we wanted to continue the series beyond Western Europe, and by going to a tile based system it would be much easier for us to continue to improve the map with additional layers of data and corrections to existing data. It was this early decision that made WitE2 possible.

It was with WitW that Gary's idea of tracking freight in tons was made a reality. Although covering a large area, it was smaller in scope than WitE and most of the logistics issues were focused on getting freight onto the continent via ports. Having researched the logistical issues of the Allied Armies in Western Europe, Gary designed a system for depots and freight shipments. During that time Pavel focused on improving the simplistic air system in WitE, something essential to simulate the

Allied strategic bombing campaign, ground interdiction, and importance of air forces for sea control.

With the release of WitW in late 2014, we felt it was time to bring these concepts to the Eastern Front. We were also very happy to benefit from Pavel's enhanced WitW weather system that was brought over and adapted to WitE2. Given the tiled map, we were better able to display the weather, and we were also able to relatively easily add double rails and road quality at the individual hex level. This led to a more complex matrix of MP costs by terrain and road quality, and eventually led us to add administrative movement. Wanting to open up the game, and better produce the offensive tempo of the war, Gary added the combat preparation system. Pavel, building on Gary's East Front box in WitW built out a complete system of Theater Boxes for the "off-map" areas, as well as an event system for tracking and influencing these other areas. He also added the AOG system as a way to make the large Soviet air force more manageable for players to control.

It's hard to believe that the first basic alpha test games of WitE2 were played in 2016. Over the past four years, in addition to the new game systems created, an enormous effort by many went into building an ever more authentic and detailed database of the weapons, units and events of the war (and yes into trying to document all of this work). While that effort was ongoing, Gary continuously tweaked and improved the AI's ability to play the game, and keep it challenging for players of all skill levels. In the past year the AI was extended to provide air and depot management assistance to players if desired.

Yes, this game is huge, but if you take it one small scenario at a time, and use the AI's help while learning the game systems, one day you'll find yourself playing the largest land campaign in history, and worrying about whether your depots are bringing in the freight needed for victory. Whether you see this game as the culmination of 6, 10, 20 or 37 years of development, all of us who have worked on this project hope you enjoy it.

32. Appendix C – THE EVOLUTION OF ARMOUR DURING THE WAR

The launching of Operation Barbarossa on June 22, 1941 triggered an arms race between Germany and the Soviet Union that would not only shape the course of armored warfare in World War II but the post-war development of armored vehicles as well. By the end of the War the outlines of what would define the modern main battle tank were beginning to emerge from the maelstrom of armored combat that emphasized a balance of firepower, protection, and mobility. Although a wide variety of armored vehicles would be developed, often to fit specialized roles, this triumvirate of firepower, protection, and mobility would characterize the most successful designs.

The purpose of this article is to examine the various armored fighting vehicles that fought on the Eastern Front so players of WAR IN THE EAST II will have a better understanding of not only the vehicles themselves but also the role they played in armored vehicle development. For the sake of brevity and relevance to the theme of this article only fully-tracked armored vehicles will be examined. The various armored cars and armed halftracks used on the Eastern Front, while important in their unique roles, had little influence in the broader armored conflict being waged. The armored fighting vehicles, hereafter AFVs, in service or entering service in each year of the conflict will be examined in turn following the format of year, adversary, and vehicle class accordingly. While the primary focus will be on German and Soviet AFVs, Axis allied and Western Allied Lend-Lease vehicles will also be covered.

32.1. 1941

32.1.1. AXIS ARMOR

Light Tanks:

Panzer Ib – Every nation that produced tanks in World War II produced an equivalent to the machine gun-only Panzer I and they could all be generously described as a disappointment. The reason for this disappointment was twofold: first, these tanks were almost uniformly too thinly armored for the role they were expected to play resulting in high losses; and second, these tanks had little or no anti-armor capability making them virtually useless against enemy armor. Illustrative of how bad this situation was, in the Spanish Civil War Panzer Is had to be escorted into combat by towed anti-tank guns! Given these weaknesses, that over 200

Panzer I were even still in service in 1941 exposes the chronic shortage of first-line tanks confronting the Germans as they embarked on a war against the largest tank army in the world.

L3/35 – The L3/35 was the Italian equivalent to the Panzer I, but with the L3/35's twin machine guns mounted in the hull front rather than in the turret making it somewhat less effective. The Hungarians built a licensed version of the L3 called the Ansaldo re-armed with Hungarian machine guns.

R-1 – The R-1 was a Czech made CKD AH-IV purchased in 1936 mounting one machine gun in the turret and another in the hull. It was unfortunately even more lightly armored than either the Panzer I or the L3.

Panzer IIa, c, & f – The Panzer II was designed for reconnaissance and armed with the same 20mm KwK30 gun used by German armored cars, but due to the shortage of battle tanks at the beginning of World War II it also functioned as a light battle tank in the early campaigns. The Panzer II with its 20mm gun would have been woefully inadequate in the battle tank role had it not been for the German introduction in 1940 of tungsten-cored ammunition known today as APCR (Armor Piercing Composite Rigid) and in the game by its U.S. Army World War II designation of HVAP (High Velocity Armor Piercing). HVAP nearly doubled the armor penetration of the 20mm KwK30 but not without limitations. Due to an HVAP round's light weight relative to its mass and velocity, the round lost both accuracy and penetration faster than a convention armor piercing (AP) round at longer ranges. In addition, since Germany had no domestic source of tungsten, which had other military and industrial uses, the allocation of tungsten for anti-tank ammunition was limited. So while HVAP ammo allowed the Panzer II to punch way above its weight, its availability couldn't be counted upon. Another drawback to using the Panzer II as a battle tank was its thin armor. Experience in the Polish Campaign resulted in the Panzer IIc receiving 20mm of additional bolted on armor for the turret and hull front facings, while the Panzer IIf was built with a front turret and hull armor basis of 30mm. While HVAP ammo and extra armor helped, the continuing decline in the utility of light tanks caused the Germans to de-emphasize the use of the Panzer II after 1941. The majority of panzer divisions at the start of the 1942 summer campaign contained less than half the number of Panzer IIs as in 1941.

T-26E – This misleadingly named tank was actually a Vickers 6 ton tank acquired by Finland in 1936 from Britain. Know as the Vickers Type E in its original configuration with a licensed Bofors 37mm gun, after the Winter War of 1939 -1940 the tank was re-armed with a 45mm gun salvaged from captured Soviet T-26s and renamed T-26E. The T-26E was employed in infantry close support and as a light battle tank. Although outdated even by the standards of 1941, the T-26E served throughout the entire War.

L6/40 – The Italian L6/40 benefited from experience already gained in combat both before and during the early part of World War II. The L6/40's armor protection was on par with a Panzer IIf and its 20mm gun compared well to its German counterpart except for the lack of HVAP ammo. Although it entered production in 1941, the L6/40 didn't officially replace the L3/35 in Italian Celere divisions until 1942. All-in-all, the L6/40 was a decent light tank, one of Italy's better efforts.

R-35 – The R-35 was an infantry tank acquired by Rumania from France before World War II and supplemented with additional Polish R-35s that fled into Rumania before Poland's surrender. The vehicle is notable only for its armor protection which was substantial for a pre-war light tank. Slow and armed with a practically useless 37mm low velocity gun, the R-35 was totally out of its element in the Rumanian armored division and was mercifully retired as a battle tank when the division was re-organized in 1942.

Toldi I & II – These were essentially the same tank with only minor improvements in the later model. The Toldis were based on a licensed Swedish design armed with a Hungarian 20mm gun and with limited armor protection like an early Panzer II. They were suitable only for reconnaissance.

Panzer 39H 735(f) – This tank was the former French H-39 light cavalry tank captured when France fell in 1940. Like all French tanks, it had better than average armor for the time but disappointing mobility and firepower. The characteristic French one-man turret crippled the Panzer 39H's rate of fire, and the armor penetrating power of its 37mm gun was subpar for this caliber. The only Panzer 39Hs to serve on the Eastern Front were with the 211th Panzer Battalion in Finland.

Medium Tanks:

Panzer IIIe, f, g, h, & j – The Panzer III was Germany's premier medium battle tank from the beginning of World War II until mid-1942. Despite its success in the early campaigns, the Panzer III always seemed a bit behind the developmental curve. Nothing illustrated better the predicament of the Panzer III than the fact that four different versions of the tank rolled into Russia in June, 1941. The first version, represented in the game by the Panzer IIIe, was still armed with a 37mm KwK36 gun; the second version, represented by the Panzer IIIg, was armed with the 50mm KwK38 gun; the third version, represented by the Panzer IIIf (upgraded from its original 37mm gun) and Panzer IIIh, had the 50mm gun plus 25mm of additional bolted on armor to front hull and turret facings; finally the fourth version, represented by the Panzer IIIj, had the 50mm gun and 50mm of base frontal armor. While the upgradeability of the Panzer III design was admirable, the fact that Germany lacked the capacity to bring all models up to the current standard before the start of

Barbarossa was telling. Incredibly the Panzer III could have been even better (see further on).

Panzer 35(t) – The Panzer 35(t) was the 37mm gunned Czech LT vz.35 confiscated by the Germans when Czechoslovakia was occupied in 1939 and adapted for German use by the addition of another crewman to serve as loader. Technically a light tank, the Panzer 35(t) was used by the Germans as a medium tank out of sheer necessity. Although it performed reasonably well in the previous campaigns, by 1941 the Panzer 35(t) was feeling its age and was withdrawn from German service by the end of the year. Rumania had purchased the LT vz.35 from the Czechs before World War II; known in Rumanian service as the R-2, it remained in front line service until 1944.

Panzer 38(t), & E – The Panzer 38(t) was another Czech designed tank under development when Germany occupied Czechoslovakia. Put into production at German direction, the Panzer 38(t) sported an improved 37mm gun comparable to the German 37mm KwK36 and was mechanically one of the most reliable tanks in German service in World War II allowing its chassis to be used for a number of different vehicles discussed further on. From November, 1940 on the Panzer 38(t)E, F, & G models (represented collectively by the Panzer 38(t)E in the game) were built with additional armor protection. The Panzer 38(t)E was also used by Slovakia (LT-38), Hungary (T-38E) and Rumania (T-38). Although by then long obsolete, the various Panzer 38(t) models were still in service in 1944 in secondary roles.

LT-40 – The LT-40 was an export version of the LT-38 developed for Latvia before its annexation by the Soviet Union and sold back to Slovakia. It was initially committed to combat without its main gun armament. The LT-40 finally received its 37mm gun at the end of 1941 and served as a light battle tank until Slovakia's withdrawal from the War in 1944.

Panzer IVc, d, e, & f – The four different models of Panzer IV in or just entering service in June of 1941 differed substantially only in armor protection with each subsequent model being better armored than its predecessor. As a medium close support tank the Panzer IV could, and did, support the motorized infantry but its primary mission was to protect other tanks from enemy anti-tank guns and other heavy weapons; the Panzer IV's 75mm low velocity gun provided a good balance between weight of shell and rate of fire when engaging these "soft" targets. When forced to defend themselves, these early Panzer IVs could destroy or at least disable enemy tanks with their AP round. As subsequent models will demonstrate, the Panzer IV was arguably the most important German tank of World War II.

Panzer B-2 740(f) – This tank was the former French B-1bis heavy tank used as a medium tank by the Germans. It was the most heavily armored tank in German service in June, 1941 sporting both a 47mm high velocity gun in its one-man turret and a 75mm howitzer in the hull. While the 47mm gun was decent by French

standards, after the B-2's armor, the 75mm howitzer was probably the tank's best feature and the Germans were impressed enough with the B-1bis to press it into service as escort for its flame tank variant (see below).

Panzer 35-S 739(f) – This tank was the former French Somua S-35 medium cavalry tank widely regarded, incorrectly, as the best medium tank in the world in the spring of 1940. While not the best, the Panzer 35-S was a good tank in 1940 that had become only a just adequate tank by 1941 and that was in an army that was about to find itself considerably behind the Eight Ball in tank development. Armed with the same 47mm gun as the B-2, again in a one-man turret, the Panzer 35-S was employed alongside the Panzer 39H in the independent 211th Panzer Battalion.

Flame Tanks:

Flammpanzer II – To assist in the reduction of fortified positions, the Germans modified a Panzer II by replacing its gun turret with a small turret mounting a single machine gun, and mounting flamethrowers on either side of the hull front. Unfortunately, with only 30mm of armor the Flammpanzer II was too thinly armored to function in such a close combat role and suffered heavy casualties. It was withdrawn from service at the end of 1941.

Flammpanzer B-2(f) – The Flammpanzer B-2(f) was a French B-1bis modified by replacing its bow mounted 75mm howitzer with a flamethrower. With up to 60mm of frontal armor the B-2 was a much better choice for a flame tank than the Panzer II, but its employment on the Eastern Front was short-lived due to the difficulty of maintaining the tank outside of France.

Tauchpanzers:

Tauchpanzer IIIf, g & IVd – The tauchpanzers were not amphibious tanks but rather "submersible" tanks originally conceived for the proposed invasion of Britain (Operation Sea Lion). Modified for river crossings, the tauchpanzers were used for the assault crossing of the Bug River on June 22, 1941. Once across the river, the tauchpanzers operated as conventional medium tanks. Due to the amount of preparation and reconnaissance necessary to successfully employ the tauchpanzers, the submersible tank concept was not repeated by the Germans in any subsequent campaigns. In the game the Tauchpanzer functions the same as its non-submersible counterpart.

Assault Guns:

Stug IIIb – When Germany was originally conceiving its panzer force in the early 1930s it planned on the majority of tanks being assigned to independent panzer battalions for the support of the infantry divisions and only three panzer divisions being created. In the subsequent years leading up to World War II, the Germans went all in on creating panzer divisions at the expense of non-divisional independent panzer units. This almost complete diversion of tanks to the formation of panzer divisions left the infantry without any dedicated armor support. To satisfy this need Erich von Manstein had proposed a specialized armored vehicle for infantry support as far back as 1935. Despite the technical and operational criticisms raised by the panzer experts like Heinz Guderian, the decision was made to divert a portion of Panzer III chassis production to the creation of the Stug III assault gun. Like the Panzer IV close support tank, the Stug IIIb had a low velocity 75mm gun but fixed-mounted in the hull and enclosed in an armored superstructure. As Guderian rightly pointed out, the limited traverse of the fixed-mounted gun meant the entire vehicle had to be pivoted to engage targets outside its arc of fire. In addition the Stug carried only a little better than half the rounds of a Panzer IV and possessed no machine gun for close defense. Despite these drawbacks the Stug III was an immediate success and would go on to become the single most produced fully-tracked German AFV of the War.

Tank Destroyers:

Panzerjaeger I – Already in the first campaigns of World War II anti-tank guns had proven invaluable to German mobile operations, but traditional towed anti-tank guns took precious time to unlimber and position and nearly as much time to limber back up. The solution to this problem was to mount an anti-tank gun on a tank chassis in place of the turret to provide speed of action and sorely needed cross-country mobility. In the case of the Panzerjaeger I, a Czech 47mm anti-tank gun was mounted on the chassis of the now obsolete Panzer I to produce a tank destroyer that could hit harder than any German tank of its time. While the Panzerjaeger I could throw a punch, it wasn't very good at taking one. Its armor protection was meager to say the least with no overhead or rear protection whatsoever. The Panzerjaeger I and the other "open-topped" tank destroyers that would follow it had to rely on stealth and the greater reach of their guns for protection.

Panzerjaeger 35R(f) – The Panzerjaeger 35R(f) was a French R-35 modified into a tank destroyer in the same manner as the Panzer I. Compared to the Panzerjaeger I, Panzerjaeger 35R(f) benefited from a better armored hull but, like all formerly French AFVs, it was mechanically ill-suited to the rigors of the Eastern Front.

Self-propelled Artillery:

sIG33 – Technically the sIG33 was a self-propelled 150mm infantry gun mounted on a Panzer I chassis. It was undeniably the ugliest, most ungainly AFV in German service. The sIG33 was overweight and poorly protected but its 150mm gun was highly effective in both direct and indirect fire roles. With no true SPA in service in 1941, the sIG33 filled a need for mobile artillery in the few panzer divisions lucky enough to receive them.

32.1.2. SOVIET ARMOR

Light Tanks:

T-26 M1931 – The T-26 was based on the British Vickers 6 ton tank, a design rejected by the British Army. The M1931 design was unique in having two cylindrical turrets mounted side-by-side with a machine gun in each which didn't make the T-26 M1931 much, if at all, better than its foreign counterparts. What is perhaps most notable about this tank is that any were still in service in 1941.

T-26 M1933 & M1937 – The T-26 M1933 was the first Soviet tank to mount a 45mm gun. With this gun, a tank design the British had rejected became the best light tank in the world at the time. The M1937 model was a bit faster and carried more ammo. Designed to provide tank support for Soviet infantry the massive re-organization of Soviet tank forces in the wake of the German Blitzkrieg forced the T-26 into the role of light battle tank, a role for which it had neither the mobility nor proper crew training to perform; as a result T-26s were slaughtered in staggering numbers. From being the single most numerous tank in the Soviet inventory on June 22, 1941, the T-26 virtually ceased to exist by mid-1942.

T-38 M1937 – The numerous rivers, streams, lakes, and wetlands in the Soviet Union led the Red Army to develop amphibious tanks. The problem Soviet designers soon discovered was that a tank light enough to float wasn't much of a tank. Thinly armored with only a single machine gun as armament, the T-38 M1937

amphibious tank was better than no armor at all in a cross river assault but just barely. In the game, the T-38 M1937 is just another machine gun-only tank and a rather poor one at that.

T-40 M1941 – The T-40 M1941 amphibious tank improved on the T-38 M1937 with better armor protection and a 12.7mm DShK heavy machine gun as well as a 7.62mm DT coaxial machine gun. The 12.7mm machine gun gave the T-40 M1941 as least a minimal anti-armor capability. Although light enough to be airlifted and organic to the airborne brigades, the T-40 M1941 was actually never used in an airborne operation and was removed from the airborne brigade's TO&E in October, 1941. Most T-40s served in a conventional light reconnaissance tank role alongside the T-38 and later T-60 until being phased out of service in 1942. Thanks to its 12.7mm machine gun, the T-40 was the best machine gun tank used on the Eastern Front but that's not saying much.

T-50 M1941 – The T-50 M1941 was the best least known tank of World War II. Part of the new generation of Soviet tanks and intended to replace the T-26 as the Red Army's light infantry support tank, the T-50 outclassed all other light tanks on the Eastern Front and many medium tanks as well. The T-50 had superb armor protection for its class, better than average mobility and a three-man turret unheard of in a light tank, but was plagued by mechanical reliability issues with its engine as well as being too expensive and time consuming to build. Given the declining utility of light tanks in the face of rapidly evolving anti-tank technology, building the T-50 was a luxury the Soviets couldn't afford in the midst of a war. Little is known of what became of the T-50 after 1941 but it likely was withdrawn from service due to its engine problems.

T-60 M1941 – The T-60 M1941 design abandoned the amphibious capability of its T-40 predecessor in favor of better armor and armament. Intended for reconnaissance, the T-60 was completely out of its element when pressed into service as a light battle tank due to the weak armor penetration of its 20mm TNSh gun and still woefully inadequate armor protection. When properly used, the T-60 proved quite useful thanks to its good cross-country performance over soft ground. With around 6,000 produced, the T-60 M1941 quickly became ubiquitous on the battlefield from late 1941 thru 1943.

BT Tanks:

BT-2 – The BT tank series represents such a unique chapter in tank development that it warrants separate consideration. In the early 1920s American automotive inventor, J. Walter Christie began developing tanks for the U.S. Army. His efforts culminated in the T3 "convertible" tank which could operate on road wheels as well

as tracks. Thanks to its innovative suspension system the T3 exceeded 25 mph on tracks, a speed unheard of at the time. While acknowledging the T3's innovations, which in addition to its speed and convertibility included sloped armor, the U.S. Army rejected the design as too mechanically unreliable, too poorly armed, and too weakly armored. The short of it was that the T3 just didn't fit with the Army's tactical doctrine. By a 1920 Act of Congress, American tank development was the exclusive purview of the infantry branch and the infantry saw tanks purely in terms of infantry close support. The Army simply saw no need for a fast tank and parted ways with Christie. Failing to get the Army to accept the T3, Christie turned to foreign buyers and found an eager one in the Soviet Union. Christie licensed the T3 design to the Soviets and it became the basis of the BT fast tank series. The BT-2 M1931 machine gun-only version of the BT-2 featured two machine guns mounted together in the turret similar to the Panzer I and another machine gun mounted coaxially. The coaxial machine gun seems a bit redundant since the tank commander in the one-man turret couldn't easily fire it and the twin-mounted machine guns at the same time. The BT-2 M1932 had a two-man turret and was armed with a very advanced for its time 37mm high velocity gun. The BT-2 M1931 was no worse off in terms of armored protection than any other machine gun tank in 1941, but the BT-2 M1932 was seriously under- armored for its battle tank role and even the M1932's 37mm gun was by then dated.

BT-5 M1934 – The BT-5 was the first version of BT tank series to be armed with a 45mm gun and also featured a machine gun mounted in the turret rear in addition to the standard coaxial machine gun. The BT-5 was no better armored than its predecessor, a major weakness the BT series was never able to really address.

BT-7 M1937, BT-7M M1939 & BT-7A – The last versions of the BT tank series featured slightly better armor protection than previous models and the BT-7M received an engine upgrade. The BT-7A was a close support version which replaced the 45mm anti-tank gun with a 76.2mm low velocity gun. The BT tanks are sometimes dismissed as little more than part of the developmental process that would lead to the T-34 but the BTs ranked among the best tanks in the world in the 1930s. Second only to the T-26 in numbers on June 22, 1941, BT tanks were likewise virtually wiped out in Barbarossa. The disappearance of BT and T-26 tanks from the battlefield in 1942 relegated them to a few paragraphs in the history of armored warfare, but during the crucial early months of the War in the East they were the backbone of the Soviet armored force.

Medium Tanks:

T-28 M1934, T-28 M1938, & T-28E – The Soviet tank development plan of the early 1930s envisioned a three pronged approach to armored warfare; light infantry

support tanks (T-26) for direct support of the rifle divisions, fast tanks (BT) for armored exploitation, and heavier armed tanks (T-28 & T-35) for breakthrough operations. The T-28 M1934 was armed with a 76.2mm low velocity gun and coaxial machine gun in the main turret and another machine gun in the turret rear plus two more machine guns in small turrets on either side of the hull front. In a tank battle, however, the T-28 M1934's 76.2mm KT-28 gun left a lot to be desired. The KT-28 gun lacked both accuracy and armor penetration. To solve this problem the T-28 M1938 model replaced the KT-28 with the 76.2mm L-10 medium velocity gun. The L-10 gun had significantly greater armor penetration than the KT-28 gun and better accuracy as well. While the gun upgrade made the T-28 the best armed tank of the pre-war period, the tank possessed an Achilles' heel, insufficient armor protection. In the 1939 Winter War with Finland the Soviets discovered that the T-28's armor (a maximum of 30mm) could be penetrated by Finish 37mm anti-tank guns. In response the Soviets hurriedly up-armored the T-28 with up to 50mm of bolted-on armor. This upgraded model, designated T-28E, fought in the second half of the Winter War. In a world in which the T-34 didn't exist, the T-28E would have been regarded as the best medium tank of the early war years; instead it gets barely mentioned, if mentioned at all, in the history books of World War II.

T-34 M1940 & T-34 M1941 – The T-34 was the first tank to achieve that long sought balance of firepower, protection, and mobility that would characterize successful tank designs thereafter. From the moment the first tank rolled out of the factory in 1940 until at least mid-1942, the T-34 was the best tank in the world by almost every standard. The second element in the Soviet tank modernization program, the initial M1940 model was armed with the 76.2mm L-11 medium velocity gun but was soon followed by the M1941 model sporting the significantly superior 76.2mm F-34 medium velocity gun. Although the maximum armor of the T-34 was a surprisingly modest 45mm, excellent sloping nearly doubled its effective strength. Most impressive of all for a tank weighing nearly 30 tons was its road speed of over 30 mph thanks to its Christie-type suspension and its powerful diesel engine. Both models of the T-34 outclassed anything the Germans had in 1941 and triggered a tank development arms race between Germany and the Soviet Union whose effects would reach far beyond the Eastern Front. If it weren't for its use of the less efficient two-man turret and nagging mechanical reliability issues, the T-34 would have been the perfect tank. In the modern colloquial, it was a "game changer".

Matilda II – The Axis invasion of the Soviet Union spawned an unlikely military co-operation between the communist state and capitalist Britain. Despite Britain being hard pressed in North Africa, Winston Churchill realized that if Hitler should succeed in subduing the Soviet Union he might become unstoppable. Churchill was therefore determined to do everything he could to help Stalin's war effort. As part of that help, Britain sent Matilda and Valentine infantry tanks to the Soviet Union in the fall of 1941. The Matilda II had gained fame for its valiant but unsuccessful counterattack at Arras, France in May, 1940. With up to 78mm of frontal armor and

the excellent 40mm “2 pounder” gun, the Matilda II was a quite formidable tank for 1940. The choice of the 2 pounder for the Matilda’s armament was a curious one for an infantry tank given the lack of a high explosive shell being issued for this gun. Apparently the main role envisioned for the Matilda was protecting the infantry from enemy tanks; for actual infantry support it had only its coaxial machine gun to rely on. Always plagued with mechanical reliability issues, the Matilda II was already outdated by Soviet standards in 1941 but sheer necessity kept in service through 1943.

Valentine III – Although no better armed and not as well armored as the Matilda II, the Valentine III was nevertheless well liked by the Soviets for its outstanding mechanical reliability. Despite being brand new in 1941, the Valentine III, like the Matilda II, was edging near obsolescence with its 2 pounder gun. Unlike the Matilda, the Valentine’s turret design could accommodate heavier armament in the future. While nobody’s candidate for best tanks, the Valentine III and, to a somewhat lesser extent, the Matilda II helped plug a whole torn in the Soviet tank force by the German invasion until Soviet tank production could recover from relocation and get up to speed.

Heavy Tanks:

T-35 M1935 – If the T-50 was the best least known tank of World War II, then the T-35 was the worst best known. This multi-turret gargantuan looked more like something conceived by a 1930s science fiction writer than a practical tank. A crew of ten manned a 76.2mm K-28 gun and coaxial machine gun in the main turret, two diagonally opposed sub-turrets in front and rear corners of the hull with 45mm guns and coaxial machine guns, and another two sub-turrets with just machine guns on the opposite corners. Another machine gun was mounted in the rear of the main turret for good measure. All this firepower was for naught in a tank that was chronically unreliable and protected by a maximum of only 30mm of armor. Committed to battle in Southern Poland in the opening days of Barbarossa most of T-35s either broke down or fell victim to the Luftwaffe before ever getting into action. The few T-35s that reached the battlefield were quickly knocked out. The “land battleship” concept that had inspired the creation of the T-35 had its roots in the ponderous tanks of the First World War, but the concept had been overtaken by the rapid advances in anti-tank weaponry in the 1930s. The T-35 reputedly made an encore appearance at the Battle of Moscow before disappearing into history.

KV-1 M1940 & KV-1 M1941 – The KV heavy tanks were the third element of the new generation of Soviet tanks designed to replace the T-28 and T-35 in the breakthrough tank role. At the time that the KV-1 M1940 went into production the French Char B-1bis was regarded as the best heavy tank in the world. A quick

comparison of the B-1bis and the KV-1 shows it was no contest as to which tank was the true best; the KV-1 M1940 was markedly superior to the B-1bis with a better main gun, better armor, and better mobility. The KV-1 M1940 was armed with the same 76.2mm L-11 gun used on the T-34 M1940 and boasted up to 80mm of frontal armor. Save the use of HVAP, the KV-1 M1940 was practically impervious to any German AFV mounted gun in 1941. Based on faulty intelligence reports that the Germans were introducing significantly more powerful anti-tank guns than was actually the case, the KV-1 M1941 was up armored with additional bolted on armor to a maximum of 135mm rendering the tank all but impregnable to anything short of an 88mm anti-aircraft gun. The extra armor however slowed the KV-1 M1941 down somewhat and further overloaded an already stressed transmission. The KV-1 M1941 replaced the L-11 gun with the similar 76.2mm F-32 gun for mass production. The KV-1 was as much a shock to the Germans as the T-34, but a lower production rate made it less impactful in comparison.

KV-2 M1940 – As demonstrated in the Winter War of 1939 -1940 the 76mm tank guns of the T-28 series were inadequate in dealing with heavily fortified positions like those of the Finnish Mannerheim Line. The new KV-2 mounting a 152mm howitzer in a massive turret proved an effective “bunker buster”. The KV-2 was certainly an imposing beast and its howitzer would definitely demolish any tank unfortunate enough to be hit by it; however this is where the superlatives end. KV-2 was slow and seriously overloaded. The KV-2 lacked the maneuverability to operate effectively with other tanks and its huge bulk made it a prime target for anything the Germans could throw at it. The KV-2 made its biggest splash in the opening days of Barbarossa shrugging off hits from German tank guns like an elephant swatting flies, but its defects outweighed its combat value and it was withdrawn from service in 1942.

Tanks Destroyers:

ZiS-30 – Extraordinary circumstances warrant extraordinary measures and nothing demonstrates this better than the hurried production of the ZiS-30. The vehicle consisted of a 57mm anti-tank gun mounted on a T-20 armored artillery tractor. The 57mm ZiS-2 gun was an excellent weapon, the best anti-tank gun shy of an 88 in the field at that time. The vehicle itself however was on the slow side and poorly armored. The ZiS-30 had a small production run of only 100 vehicles. Committed to action at the time of the Battle of Moscow, surviving ZiS-30s served well into 1942. Opinion of the ZiS-30’s combat value was mixed enough for the Soviets not to bother producing another vehicle mounting the 57mm gun (the SU-57 was the American T-48 armed halftrack with an American 57mm gun).

Flame Tanks:

OT-130/133 – The OT-130/133 was a T-26 which had its 45mm gun replaced with a flamethrower. The modification was made without any increase in armor protection consequently resulting in high losses. Within weeks of the start of Barbarossa the OT-130/133 began being withdrawn from service.

32.1.3. SUMMARY OF 1941

The over-weaning arrogance of Hitler and his high command and their utter contempt for the capabilities of the Red Army is reflected in the lamentable state of the German Panzerwaffen (armored force) on the eve of Barbarossa. The decision to double the number of panzer divisions in preparation for the Russian campaign forced the retention in service of many tanks that were second rate, if not outright obsolete. Not only was German tank production in 1941 anemic compared to what would be possible later in the War, but with the exception of the Tiger tank, there were no new tank designs in development. The presumption of victory before the fact was going to lead the Germans to the brink of disaster.

A substantial reason the Germans avoided a worse calamity than what befell them in the Soviet counteroffensive of December, 1941 was the parlous state of Soviet tank forces at the beginning of what the Soviets would call the Great Patriotic War. As mentioned previously, the Soviets had conceived a sound approach to tank development and armored warfare strategy. This approach was thrown into disarray first by Stalin's murderous purge of the Soviet officer corps which killed not only the men behind the strategy but the strategy itself, and then the massive re-organization of Soviet tank forces in the wake of the German blitzkrieg victories in Poland and France. Instead of tank units being based on the three distinct roles embodied in the tank designs themselves, all the various tanks were thrown together in the new tank and mechanized divisions. These new divisions were an unmitigated failure and would be gone by early 1942, but the new generation of tanks was an almost unanimous success. In overall design terms the T-34 and KV-1 were at least a year ahead of German tank development. The Germans would find themselves playing catch up for some time to come.

32.2. 1942

32.2.1. AXIS ARMOR

Light Tanks:

Toldi IIa – Although production of the Panzer II continued into 1942, the Germans scaled back its use to a single company and would not build light tanks again until late 1943. By contrast, the Hungarians upgraded their Toldi II by adding more armor protection and 40mm gun. The 40mm gun made the Toldi competitive with the Soviet T-70, but with only 80 produced its impact was minimal.

Medium Tanks:

Panzer IIIL – Originally Hitler had ordered that the Panzer IIIj be armed with the more powerful 50mm KwK39 L/60 gun, the so called "long 50mm". When he discovered that his order had been ignored he became outraged and demanded that the upgrade be made immediately. Swapping out the 50mm KwK38 for the 50mm KwK39 was easier said than done. Not only did production of the new gun have to be brought up to speed, but a new gun mount and modifications to the turret would also be required. As a result, Panzer IIIjs with the long 50mm didn't start reaching the front until early 1942. To avoid confusion between the two models, the Panzer IIIj with the 50mm KwK39 gun was subsequently renamed Panzer IIIL. Capable of penetrating the frontal armor of the T-34 up to about 500 yards with conventional AP, the 50mm KwK39 was undeniably an improvement over the 50mm KwK38 but only partially redressed the balance between the two tanks. The T-34's 76.2mm F-34 gun could still penetrate the frontal armor of the Panzer IIIL at over 1,000 yards.

Panzer IIIm – The Panzer IIIm was the final battle tank version of the Panzer III series. Aside from somewhat increased armor protection and deep wading capability, it was identical to the Panzer IIIL. From an initial force of less than 100 Panzer IIIs at the time of the invasion of Poland, by 1942 the Panzer III had grown into the mainstay of the German Panzerwaffen. Technically efficient and reasonably reliable, the Panzer III had proven itself in battle after battle. While rarely the best tank on the battlefield, it was always a good one.

Panzer IIIn – When the Germans decided to convert the Panzer IV into a battle tank (see below) the need arose for another close support tank to replace it. The answer was to modify the turret of the Panzer III to accept the 75mm KwK37 low velocity gun. The new Panzer IIIn got an added bonus in the introduction of High Explosive Anti-tank (HEAT) ammunition. HEAT, known at the time as hollow charge or shaped

charge ammunition, doesn't need to rely on muzzle velocity to penetrate armor; rather it is an explosive charge that explodes inward forming a jet of high velocity hot gas that burns through armor like a super blowtorch. HEAT allows low velocity guns like the 75mm KwK37 to achieve significant armor penetration at any range the gun can score at hit. While never intended to function as a battle tank, HEAT ammo did allow the Panzer IIIn to defend itself against enemy armor.

Panzer IVf2 – Even before the first Panzer IIIL reached the Eastern Front, the Germans knew it wasn't the answer to the T-34. A completely new battle tank was necessary, but that tank would take many months to develop. In the interim, a stopgap had to be found and that stopgap turned out to be one of the best armored vehicle development decisions the Germans made in the entire War. The Germans decided to upgrade the Panzer IVf right on the production line to a battle tank by replacing its low velocity 75mm KwK37 gun with the high velocity 75mm KwK40 L/43 gun. This gun could penetrate the frontal armor of a T-34 at over a 1,000 yards which combined with better accuracy gave the Panzer IVf2 a slight edge in gunnery. With better armor protection and better mobility, the T-34 was arguably the better tank but the Panzer IVf2 certainly narrowed the gap.

Panzer IVg – The initial production model of the Panzer IVg was essentially identical to the Panzer IVf2 (and represented by such in the game) but the late model Panzer IVg featured increased armor protection which further evened the balance with the T-34.

Turan I – The Turan I was based on a Czech design that the Hungarians acquired after the German annexation of Czechoslovakia. Although production began in 1941, the Turan I did not enter service until the first Hungarian armored division was formed in the spring of 1942. Armed with the same 40mm gun used on the Toldi IIa light tank, it was under-gunned by 1942 medium tank standards. On the plus side the Turan I had decent armor protection and above average mobility.

Heavy Tanks:

Tiger – Without a doubt the Tiger tank is the most famous tank of World War II eclipsing even the fame of the T-34 and the American M4 Sherman. Although the Germans had kicked around the concept of a heavy tank as far back as 1937, it was in terms of an assault tank for breaking through the Maginot Line. The idea for a heavy battle tank arose in the aftermath of the French campaign of 1940 where the Germans discovered that the only weapon that could reliably deal with heavily armored British and French tanks was the 88mm anti-aircraft gun used in an anti-tank gun role. It logically followed that the best solution to enemy heavy tanks was to mount an 88mm gun in the turret of a tank. The problem was that a gun as large

as an 88 required a very large turret which in turn required a very large chassis to carry it. Since the enemy was likely to respond in kind, the new tank would also have to be heavily armored itself. The tank that emerged from these design requirements in the late summer of 1942 gained a mythic reputation that exaggerated its strengths and glossed over its weaknesses. The Tiger's greatest strength was its 88mm KwK36 gun. This gun allowed the Tiger to outrange and out hit all of its enemies until at least 1944. While the Tiger's armor was impressive by German standards, it was comparable to contemporary Soviet heavy tanks. The Tiger's greatest weakness was its subpar mechanical reliability. Many Tigers with little or no battle damage were lost to mechanical breakdowns. The Tiger's mechanical issues were aggravated by its sheer weight (56 tons) which made the tank difficult to recover when it did break down. Properly employed the Tiger was indeed a fearsome tank but all too often its advantages of superior range and firepower were ignored in favor of the sheer muscle of its armor to smash through enemy defenses. Such tactics could result in unnecessary losses which the Germans were in no position to absorb, especially with a tank as complex and time consuming to build as the Tiger. The Tiger's fame is manifest but its actual combat effectiveness relative to its cost remains debatable.

Flame Tanks:

L3/33 Flame Tank – Although the flame tank version of the L3 light tank pre-dated World War II, it did not arrive on the Eastern Front until the 1942 with the Italian Eighth Army. The vehicle was produced by simply replacing the L3's machine guns with a flamethrower. Very effective against poorly armed Africans in Italy's invasion of Ethiopia, on the Eastern Front in 1942 it would have been a death trap.

Assault Guns:

Stug IIIf – At the same time that the Germans were upgrading to a high velocity gun on the Panzer IV, the same upgrade was being made to the Stug III. The Stug IIIf was a Stug IIIb rearmed with the 75mm StuK40 L/43 gun, the assault gun version of the Panzer IVf2's 75mm KwK40 L/43 gun. The Stug IIIf also added a machine gun mounted on the commander's cupola for defense against aircraft and enemy infantry. The high velocity gun broadened the role of the Stug III from infantry support to all-around armored fighting vehicle capable of taking on the best enemy tanks.

Stug IIIf/8 – The Stug IIIf/8 soon followed on the heels of the Stug IIIf with better armor protection and an upgrade to the 75mm StuK40 L/48 gun. Since the Stug III had originally been seen exclusively as an infantry support vehicle, it had not been produced in large numbers and the Germans struggled through 1942 to increase production. Only just over 600 Stug IIIfs and f/8s were produced before production switched over to the Stug IIIg at the end of the year.

StuIG33B – The Germans first attempt at making an assault gun mounting the proven 150mm infantry gun was a disappointment. The StuIG33B was slow and even with up to 80mm of frontal armor, a bit under-armored for its assault role. Only twenty-four StuIG33Bs were produced, twelve of which were sent to Stalingrad and lost there along with rest of Sixth Army. The other twelve, intended for Stalingrad, arrived after Sixth Army was encircled and fought with German relief forces outside the pocket. Lessons learned from the StuIG33B would be put to good use in the development of the far more successful Sturmpanzer IV.

Tank Destroyers:

Panzerjaeger II – The historically correct name for this vehicle was 7.62cm PaK auf Fahrgestell Panzerkampfwagen II; that mouthful neither fits in the game name field nor is it terribly descriptive. Since the vehicle was a panzerjaeger and build on the Panzer II chassis, it was christened Panzerjaeger II for purposes of War in the East II. As the T-34 and KV-1 became more prominent on the Eastern Front the effectiveness of the Panzerjaeger I with its 47mm gun diminished accordingly. To address the issue the Germans converted some of the large number of excellent Soviet 76.2mm field guns captured in the great encirclement battles of 1941 to anti-tank guns and mounted a portion of these on the chassis of Panzer IIs being phased out of service. While only around 200 Panzerjaeger IIs were produced, they were an immediate success and remained in frontline service until early 1944.

Marder II – Rather than a conversion from a tank, the Marder II was built original as part of the diversion of the Panzer II chassis from tank production to other uses. The Marder II was the first tank destroyer to receive the powerful 75mm PaK40 anti-tank gun. Reliable and effective, over 700 Marder IIs were built and they served on all fronts until the end of the War.

Panzerjaeger 38(t) – The Panzer 38(t) tank with its 37mm gun was already edging into obsolescence at the start of the Russian Campaign and was being phased out of production by the spring of 1942. As part of the continued utilization of the

Panzer 38(t) chassis, the 76mm PaK36 anti-tank gun (ex-Soviet field gun as above) was mounted on the chassis to produce the Panzerjaeger 38(t) tank destroyer.

Panzerjaeger 38(t)H – In November, 1942 the Panzerjaeger 38(t) was upgraded with the 75mm PaK40 and designated Panzerjaeger 38(t)H. All four models of tank destroyer put into production in 1942 shared the same strengths and weaknesses of the open-topped tank destroyer. They were all armed with a powerful, long-ranged anti-tank gun able to dispatch a T-34 at 1,000 yards or more but all were too weakly armored to function in much other than a purely defensive role.

Semovente L40 da 47 – Production of the Semovente L40 actually began in 1941 but the first vehicles weren't sent to the Eastern Front until early 1942. Built on an L6 light tank chassis the Semovente L40 was reasonably well armored for an open-topped tank destroyer, but its 47mm gun was virtually useless against a T-34. The Semovente L40 had no business being on the Eastern Front, and for that matter neither did the poorly equipped Italian Army in general.

Self-propelled Artillery:

Nimrod – The Nimrod was produced by mounting a Bofors 40mm anti-aircraft gun on the chassis of the Hungarian Toldi tank. The Nimrod was a quite respectable self-propelled anti-aircraft gun, a good two years ahead of its German equivalent.

32.2.2. SOVIET ARMOR

Light Tanks:

T-70 M1942 – It would be an understatement to call the T-60 a disappointment. The T-60 was deficient in just about every area, prompting a replacement as soon as possible. The replacement came in the form of the T-70 M1942. The T-70 was in most respects an outstanding light tank. It was armed with the proven 45mm gun now enhanced with an HVAP round dubbed "arrowhead" by Soviet tank crews due to its shape. When available, this HVAP round enabled the T-70 to engage German medium tanks at close range. Except for the now defunct T-50, the T-70 was also the best light tank on the Eastern Front. Aside from being a bit slow for a light tank, a major drawback of the T-70 was the continued use of a one-man turret. The one-man turret crippled the T-70's rate of fire and that could be fatal in a tank duel. The T-70's greatest drawback had nothing to do with the design of the tank, but with how

it was used. Like its T-60 predecessor, the Soviets insisted on using the T-70 to supplement the T-34 in the new Soviet tank brigades. Light tanks just couldn't hold their own against medium tanks which is why the Germans were de-emphasizing use of the Panzer II. The Soviets desperately wanted to rebuild their tank forces, and light tanks that could be built quickly and cheaply had to be part of the solution.

M3A1 Stuart – Communist Russia was just as anathema, if not more so, to capitalist America as it was to Britain, but war makes strange bedfellows so the United States followed Britain's lead in providing aid to the Soviet Union. Under tremendous pressure to build up its own armored forces, the United States didn't have much to send in the way of tanks, but it was producing sufficient quantities of the M3 light tank to divert a portion to the Soviet Union. The British, who had officially designated the tank the Stuart, were so fond of the tank that their tank crews unofficially nicknamed it Honey as in "she's a honey of a tank"; the Soviets did not share that enthusiasm. While exceptionally reliable, Soviet tank crews found the M3A1 design dated. They considered the tank under-gunned, under-armored, and with inadequate cross country performance. Then there was the fact that the Stuart required twice as many men to crew but didn't deliver twice the combat effectiveness of the T-70. How much of this criticism was postwar sour grapes versus actual sentiments of Soviet tank crews is impossible to know, but the Soviets were genuinely displeased enough to turn down U.S. offers of the M3A1's M5 replacement.

Medium Tanks:

T-34 M1942 – At the end of 1941 the Soviets faced two realities: their tank losses in the battles with Axis forces had been staggering by any measure, and their T-34 medium battle tank was superior to anything the Germans had. To rebuild their tank strength as quickly as possible, the Soviets made the crucial decision to exploit their current technological advantage by foregoing any improvements to the T-34 that could negatively impact production and introduced "efficiencies" to maximize T-34 production accepting the concurrent reduction in quality control. The resultant T-34 M1942 was somewhat less reliable than its predecessor but produced at a higher rate allowing T-34 M1942 production to outstrip German medium tank production by 5-to-1 or better. The T-34 M1940 & M1941 may have delivered the first shock to the Germans, but it was the T-34 M1942 which began to turn the tide of armored warfare on the Eastern Front.

M3 Lee – The Soviets may have disliked the M3A1 Stuart light tank but they absolutely detested the American M3 medium tank called the Lee by the British but to Soviet tankers referred to it as "grave for seven brothers". When production of the M3 began in mid-1941 it was a better than average tank, but by early 1942 when it

showed up on the Eastern Front its flaws were becoming more apparent. Compared to the T-34, the M3 was slow with poorly sloped armor, a high silhouette, and an inefficient armament arrangement. The 75mm M3 gun in the hull was on par with the 76.2mm F-34 but had limited traverse to the right and none to the left. The 75mm gun couldn't fire at all when the tank was hull down limiting the tank's firepower to the 37mm turret gun. Finally there was those "seven brothers"; despite nearly twice the crew, the M3 didn't deliver the combat effectiveness of a single T-34. These drawbacks notwithstanding it must be remembered that the M3 Lee was still equal or superior to most Axis medium tanks in 1942.

Heavy Tanks:

KV-1s M1942 – As mentioned previously the KV-1 M941 had been heavily armored to counter a threat that didn't exist in 1941 and barely existed in 1942. To reduce weight and increase overall performance the new slimmed down KV-1s was introduced in the late summer of 1942. The KV-1s was faster and more reliable than the KV-1 M1941 but considerably less well armored, a trade off that was questionable given improving Axis anti-tank capabilities. One change that was unquestionably an improvement was the upgrade of the main armament from the 76.2mm F-32 gun to the superior 76.2mm ZiS-5 gun. Less than 1,200 of the KV-1s were built before production was halted in favor of better armed and armored heavy tanks.

Churchill IV – The third model of British infantry tank to be provided to the Soviets, the Churchill IV was comparable to the KV-1s in armor protection and boasted the new 6 Pounder gun just entering service in British tanks. Like all British infantry tanks, the Churchill IV was slow and its 6 Pounder (57mm) had limited anti-personnel effect. Thankfully, unlike the Matilda and the Valentine, it had two machine guns. With only 258 tanks received, the Churchill IV would have been so rare on the Eastern Front as to be a novelty.

Flame Tanks:

KV-8 – The disappointing performance of the thinly armored OT-130/133 had not dulled Soviet interest in flame tanks. Quite to the contrary, the next effort was about as far from the vulnerable OT-130/133 as one could get. The KV-8 was a modification of the KV-1. A bit of an odd duck, the KV-8 replaced the KV-1's 76.2mm gun with a combination mount of a 45mm gun and a flamethrower. The 45mm gun gave the KV-8 a modest anti-tank capability that was completely lacking

in vehicles like the OT-130/133 or Flammpanzer II but was of questionable value in a tank so well armored. What exactly was going to take on this tank that the 45mm gun would have been effective against? With only a 137 produced, it appears the Soviets were also skeptical of the KV-8.

OT-34 – Far more numerous and successful than the KV-8, the OT-34 retained the T-34's 76.2mm gun in favor of mounting the flamethrower in the hull in place of the bow machine gun. This armament configuration allowed the OT-34 to function as a flame tank while still being a full-fledged battle tank. Nearly 1,200 OT-34s were produced, an indication of just how successful the OT-34 was.

32.2.3. SUMMARY OF 1942

In 1942 the Germans introduced three assault guns, four tank destroyers, and six tanks. In contrast the Soviets introduced five tanks, two of which were simply armament variants of existing tanks. At a glance one might look at that difference and think that Germany was a hot bed of AFV development while the Soviet Union trailed behind. As shown above the truth of all that German innovation was that Germany was scrambling to close the technology gap with the Soviet Union which in contrast was content to sit on its development lead and produce T-34s as fast as possible. Throughout 1942 the German Panzerwaffen continued to be a mixed bag of old and new AFVs while the Soviet tank force was rapidly discarding pre-war tanks and concentrating production on a handful of new designs. As the initiative shifted to the Soviets in the fall of 1942 and the weight of all that Soviet production fell on Axis forces, the wisdom of stressing quantity at the expense of quality improvement became more apparent.

32.3. 1943

32.3.1. AXIS ARMOR

Light Tanks:

Panzer IIL Lynx – Although the Germans had removed the Panzer II from front line service by 1943, they still saw the need for a light tank for reconnaissance. The Lynx was very different from the Panzer IIs that preceded it; the Lynx was larger, heavier, but somewhat less well armored. Thanks to its interleaved suspension system, the Lynx could achieve a road speed of 37mph. After the initial 100 Panzer IILs with the 20mm KwK38 gun were produced the rest of the production run was to have been armed with the 50mm KwK39, but then the decision was made to cancel production. While a 50mm gun on the Lynx would have undoubtedly made the tank more combat effective, the expense of building a new light tank at all in 1943 was questionable and doubly so for Germany.

Medium Tanks:

Panzer IVh – Generally regarded as the definitive late model Panzer IV, the Panzer IVh was armed with the 75mm KwK40 L/48 gun making it slightly better armed than the Panzer IVg. Along with the Panzer IVf2, Panzer IVg, and later Panzer IVj, the Panzer IVh formed the backbone of German panzer units from 1943 until the end of the War.

Panther D – Although the Panther would earn the debatable post-war reputation as the best tank of World War II, the underdeveloped Panther D's rush into service for Operation Citadel (Battle of Kursk) resulted in a reliability nightmare. Electrical and engine problems plagued the Panther D throughout its service and the Panther D's performance in the Battle of Kursk can only be described as underwhelming at best. Flaws aside, for a tank that was designed and developed in just over a year, the Panther was nevertheless an amazing engineering achievement. Its sloped armor gave the Panther better frontal armor protection than a Tiger on a tank that weighed substantially less. While its own weight was still considerable, the Panther could go faster and had better cross country mobility than the Panzer IV. The Panther's most impressive feature was its 75mm KwK42 L/70 gun. This gun could penetrate the frontal armor of a T-34 at over 2,000 yards and was superior even to the Tiger's 88. Kursk was an inauspicious debut for a tank that would go on to be legend

.Panther A – The Panther A went a long way to correcting the flaws of the Panther D. The version depicted in the game is a blend of the early and late model vehicles. Aside from increased reliability, the most obvious change with the Panther A is the addition of the unpronounceable Nahverteidigungsgerat close defense system. Basically a grenade launcher capable of firing either smoke or anti-personnel rounds, the Nahverteidigungsgerat was evidently useful enough to be included on almost all late-war German AFVs.

Turan II – In an attempt to upgrade its combat effectiveness, the Hungarian Turan tank was re-armed with a low velocity 75mm gun similar to the gun used on the Panzer IIIn. While the 75mm gun's HEAT round had superior penetration to the AP round of the Turan I's 40mm gun, it came at a considerable loss in accuracy. The real value of the Turan II was in providing close support with its 75mm high explosive rounds. Whether the Turan II represented an improvement over the Turan I is something of a moot point considering how badly both tanks were outclassed by Soviet tanks in 1943.

Flame Tanks:

Flammpanzer III – The mixed success of flame tanks in 1941 had not dulled German interest in such vehicles and in preparation for the upcoming Kursk Offensive, 100 Flammpanzer IIIs were produced by removing the main gun and replacing it with a flamethrower. Somewhat better armored than the Panzer IIIm, the Flammpanzer III was effective but its utility declined as the Germans were pushed over to the defensive on all fronts.

Assault Guns:

Stug IIIg – When one thinks of German assault guns the Stug IIIg naturally comes to mind. The Stug IIIg was the most prolific German fully-tracked AFV with over 9,000 produced. Since its introduction the Stug III had gone from useful to indispensable as Axis forces were pushed on to the defensive and the infantry could not rely on the increasingly threadbare panzer divisions for support. So important was this vehicle that by late 1943 the Stug IIIg had been made organic to German infantry divisions. Along with the Panzer IV, the Stug III deserves the distinction of being one of the most significant AFVs produced by Germany in World War II.

StuH42 – With the introduction of the Stug IIIf, the Stug III's role was shifting more and more to that of a tank destroyer. To provide an assault gun more oriented to close support, the Stug design was modified to mount a 105mm howitzer. This weapon provided significantly more high explosive firepower than a 75mm gun making the StuH42 an immediate success. While not intended for armored combat, the StuH42's 105mm howitzer could also fire AP and HEAT ammo in self-defense. The 105mm HEAT round in particular could defeat the armor of most Soviet and Allied AFVs.

Sturmpanzer IV – At the beginning of 1943 Adolf Hitler was seriously considering stopping production of the Panzer IV tank and relying exclusively on the yet-to-enter production Panther tank. Heinz Guderian, the newly appointed Inspector General of

Armored Troops, managed to talk Hitler down from that drastic action but couldn't prevent the increasing diversion of Panzer IV production to things other than tanks. One of the first products of that diversion was the Sturmpanzer IV that mounted a 150mm infantry gun in the Panzer IV hull. A major improvement over the unsuccessful StuIG33B, the Sturmpanzer IV was well armored and as mobile as a Panzer IV.

BT-42 – The Finns' knack for getting the most out of captured equipment failed them somewhat with the adaptation of the BT-7 tank into an assault gun. An obsolete 114mm howitzer was mounted in a makeshift turret on a BT-7 tank chassis to produce the BT-42. Not only was the BT-42 seriously under-armored for the assault gun role, but when committed to combat it was discovered that its HEAT round was defective. Given its weak armor, the BT-42 would have been much more usefully employed as self-propelled artillery taking advantage of the 114mm howitzer's indirect fire range.

Zrinyi II – The Hungarian Zrinyi II mounted a Hungarian manufactured 105mm howitzer in the hull of a Turan tank. Better armed than the Turan II tank, the Zrinyi II was a very respectable effort but only 60 were ever built.

Tank Destroyers:

Nashorn – The Nashorn (Rhino) was an open-topped tank destroyer mounting the newly developed 88mm PaK43 L/71 gun on a Panzer IV chassis. The long range and accuracy of the 88mm Pak43 was the ideal weapon for a thinly armored tank destroyer like the Nashorn allowing it to obliterate Soviet armor well beyond the range Soviet AFVs could effectively hit back. Perhaps because it lacked the pretense to being anything other than a tank destroyer, the Nashorn was a highly successful vehicle with over 600 produced.

Ferdinand – At the other extreme of the lightly protected Nashorn was the Ferdinand, one of the most heavily armored vehicles to see combat in World War II. The Ferdinand was the tank destroyer compliment to the never-built Porsche Tiger. It carried the same 88mm PaK43 as the Nashorn but enclosed in a fully armored superstructure up to 200mm thick. The thick armor allowed the Ferdinand to close to a range that would have been suicidal for the Nashorn but it was still a tank destroyer, not the assault vehicle the Germans tried to employ it as at Kursk. Without any defensive armament and the limitation of a fixed-mounted gun, the Ferdinand was vulnerable to being put out of action by minor damage. A track blown off by an anti-tank mine or damage to the gun or gun mantle and the massive Ferdinand was defenseless. Following its disappointing performance at Kursk, the

Ferdinand was eventually withdrawn, overhauled with a bow machine gun added, and rechristened the Elefant.

Marder III – The Marder III was the last and most produced of the German open-topped tank destroyers, built on the proven Panzer 38(t) chassis. Unlike its predecessor, the Panzerjaeger 38(t), the Marder III's chassis had the engine moved to the middle and the fighting compartment moved to the rear allowing for a shorter, and therefore more concealable, profile. Given that the vehicle was usually deployed in a defilade (hull down) position, the Marder III had only the bare minimum of hull armor. Armed with the 75mm Pak40, it could destroy most enemy AFVs at 1,000 yards or more.

TACAM T-60 – Noting the success of the various German open-topped tank destroyers, the Rumanians followed suit in developing the TACAM T-60. Using the chassis a Soviet T-60 light tank, the TACAM T-60 mounted a captured 76.2mm F-22 field gun. It served in the tank destroyer companies of the Rumanian tank regiments in 1944.

Self-propelled Artillery:

Wespe – Early plans for the panzer division envisioned the entire divisional artillery consisting of 105mm self-propelled guns; this never happened and it wasn't until 1943 that the Germans got around to producing genuine self-propelled artillery. The Wespe (Wasp) was built by mounting a 105mm howitzer on a Panzer II chassis. It was mobile and effective, but not produced in sufficient quantity to fully replace the towed 105mm howitzer in the mobile divisions.

Hummel – The Hummel (Bumble-Bee) was another utilization of the Panzer IV chassis mated this time with the highly effective 150mm sFH18 howitzer. Given the reach and throw weight of its howitzer, the Hummel was arguably the best self-propelled artillery piece of the War.

sIG33 Grille H & Grille K – The ungainly sIG33 had been successful enough for the Germans to keep working on the concept of a self-propelled heavy infantry gun. The next attempt, based on a Panzer II chassis, was a developmental headache that produced only 12 vehicles all of which were sent to North Africa in 1942 and subsequently lost there. Far more successful was the use of the chassis of the Panzer 38(t) to produce the sIG33 Grille. The H model used the original rear engine chassis with the 150mm gun forward mounted. The K model used the modified mid-engine chassis with reduced armor protection and the gun mounted towards the rear of the vehicle. Both versions served together from 1943 on providing dedicated fire support for panzer grenadier regiments.

Flakpanzer 38 – The Germans had been mounting anti-aircraft guns on half-tracks since before 1939 but the Flakpanzer 38 was the first fully-tracked Flakpanzer. Using the mid-engine Panzer 38(t) chassis, the Flakpanzer 38 had a 20mm Flak38 gun with all-round traverse in a rear fighting compartment. The single 20mm gun was the Flakpanzer 38's major drawback, particularly in late 1943 when aircraft were becoming increasingly better protected. Despite its weak firepower, the Flakpanzer 38 filled a need until the better armed Moebelwagen entered production in 1944.

32.3.2. SOVIET ARMOR

Medium Tanks:

T-34 M1943 – The last and best of the 76mm gunned T-34s, the T-34 M1943 had improved armor and perhaps more importantly, improved reliability over its predecessors. Its only drawbacks were the continued reliance on the increasingly outdated 76.2mm F-34 gun and the continued use of the two- man turret. Even though an HVAP round for the F-34 was becoming available in 1943, it was still scarce and, as mentioned previously, was limited in effective range. These limitations notwithstanding it must be remembered that the T-34 M1943 was better than any version of the Panzer III and able to go toe-to-toe with late model Panzer IVs.

M4A2 Sherman – The decision by the U.S. Army to only use gasoline powered Shermans made the diesel powered M4A2 available for lend-lease shipment. Despite being one of the best 75mm gun versions of the Sherman, the Soviets were not impressed with the M4A2. Its 75mm M3 gun was no improvement over the T-34's F-34 gun and it had a tendency to catch fire due to poor positioning of its ammunition; also the narrower tracks of the Sherman made it difficult to maneuver in mud and snow compared to the wide-tracked T-34. What the Sherman did have that the T-34 didn't was an efficient three-man turret and excellent reliability.

Valentine IX – Although the Soviets admired the Valentine III for its outstanding reliability, its 2 Pounder gun was seen as a major drawback. The Valentine IX corrected this problem with a new 6 Pounder which was both accurate and hard-hitting. The Valentine IX was still hobbled by poor mobility and its turret crew was reduced to two men to accommodate the larger gun. On the balance the Valentine IX was an improvement over the Valentine III, but less of one than would have been hoped.

Heavy Tanks:

KV-85 – The Soviets had struggled with the KV tank series since its introduction. The KV-1 M1940 and M1941 were slow, mechanically unreliable, overweight, and under-gunned. In an attempt to address these issues, the KV-1s had lighter armor and a slightly better gun, but arrived on the battlefield at a time when the Germans were improving both their anti-tank capability and their armor protection. The result was a tank that was not significantly better armored than a T-34, no better armed, and slower. Then the Tiger tank showed up. The KV-1s was so overmatched by the Tiger that the Soviets needed a solution and needed it fast. In the short term the answer was the KV-85. The KV-85 was basically an improved KV-1s with a new turret mounting the 85mm D-5 gun. The 85mm was almost a match for the Tiger's 88 and could penetrate the Tiger's frontal armor with conventional AP at over 500 yards. Less than 150 KV-85s were produced before production was halted in favor of the new IS tank series.

IS-1 M1943 – The first model in the new IS (Iosif Stalin) series, the IS-1 mounted the 85mm gun turret of the KV-85 on a better designed and armored chassis. Only a handful of IS-1s were produced before production switched over to the significantly superior IS-2 reducing the quite capable IS-1 to little more than a footnote in IS tank development history.

IS-2 M1943 – After years of painstaking development the Soviets finally found their definitive heavy tank in the iconic IS-2. Armed with the massive 122mm D-25 gun that could penetrate the armor of all but the heaviest German AFVs, the IS-2 M1943 finally gave the Soviets a tank that could perform the roles of both breakthrough tank and battle tank. The IS-2 wasn't without its flaws; only 28 of the large 122mm rounds were carried and they were excruciatingly slow to re-load. Given the Soviet practice of devoting a sizeable portion of a tank's ammunition to high explosive rounds, those 28 rounds didn't give the IS-2 a lot of ammunition for tank fighting. Doctrinally speaking however, battle tank was a secondary role for the IS-2; its main purpose was to smash through enemy fixed defenses and it did that quite well. Entering production at the end of 1943, the IS-2 M1943 didn't start reaching the front until early 1944.

Assault Guns:

SU-122 – Impressed by the Stug III, the Soviets decided to take a page from the German playbook and developed the SU-122 by mounting a 122mm howitzer in hull of a T-34. Entering production at the end of 1942, the SU-122 was very mobile, but a bit under-armored, and the 122mm M-30S howitzer lacked long range accuracy limiting its anti-tank capability.

SU-152 – For all its flaws as a tank the KV-2's 152mm howitzer provided impressive hitting power that was sorely missed after the KV-2 was withdrawn from service. To provide that much needed firepower a 152mm ML-20S gun-howitzer was mounted in the hull of a KV tank. The 152mm ML-20S had superior accuracy and penetrating power to the 152mm M-10 used on the KV-2 providing both "bunker busting" and very credible anti-tank capability for the SU-152. The only serious drawback of the vehicle was its armor protection which was weak compared to its German counterpart, the Sturmpanzer IV.

Tank Destroyers:

SU-76 – The classification of the SU-76 as a tank destroyer understates the actual wide-ranging role of this AFV. Armed with the versatile 76.2mm ZiS-3 gun, the SU-76 could function as a self-propelled infantry gun and even indirect fire artillery in addition to tank destroyer. Built on a lengthened T-70 tank chassis, this initial version of the SU-76 had overhead armor protection for the gun crew. Unfortunately the vehicle proved mechanically unreliable due to engine problems and production that started in December, 1942 was terminated by September, 1943 with less than 800 vehicles produced.

SU-76M – To solve the mechanical problems of the original SU-76, the SU-76M received new, more powerful engines; it also dispensed with the superfluous overhead armor cover for the gun crew compartment which made the crew feel less cramped and improved visibility. The reworked SU-76M was an immediate success, ultimately being produced in numbers only exceeded by the T-34.

SU-85 – The highly successful up-gunning of the Stug III hadn't gone unnoticed by the Soviets and they copied the concept with the SU-85. The new 85mm D-5 gun was mounted in the hull of a T-34 tank to produce a very effective tank destroyer/assault gun. Compared to the Stug IIIg, the SU-85 was about as well armored and considerably more mobile. The 85mm D-5 was slightly superior to the 75mm StuK40 in armor penetration and the larger caliber provided greater high explosive punch. Thanks to superior gun optics, the Stug IIIg still had an advantage in accuracy but the SU-85 was a close second.

SU-57 – Although armed halftracks are excluded from this analysis, the SU-57 warrants discussion because it is classified as a light tank destroyer due to the organizational mechanics of the game system. As already mentioned, the SU-57 was the American T-48 armed halftrack rejected by the U.S. Army and provided under Lend-Lease to the Soviets. Its 57mm M1 gun was the American version of the British 6 Pounder. The 57mm gun and the fact that the Soviets didn't have to build the vehicle were really the SU-57's only merits.

32.3.3. Summary of 1943

The ingenuity and improvisation that had characterized Axis tank development efforts in 1942 carried over into 1943 with AFVs like the Nashorn and the Hummel, but also saw continued development of completely new AFVs as in the Panther. With the introduction of the Panther and the slow migration of the rest of their tank force from the Panzer III, the Germans can be said to have closed the technology gap with the Soviets and actually pulled somewhat ahead. The Panzer IVh was at worst an even match for the T-34 M1943 and the Panther outclassed anything the Soviets had in the field. Although the Germans had gained the technological edge in 1943, the Soviets hadn't been sitting on their hands either. The KV-85, IS-1 M1943, SU-85, SU-122, and SU-152 were all important advancements in Soviet armor development and the IS-2 M1943 portended even worse things to come for the Axis in 1944. Finally there are the numbers. The Soviets had been out-producing the Germans since before the start of the Russian Campaign and increasing numbers of German AFVs had to be diverted to the Italian Front and the anti-invasion build up in the West from mid-1943 on. With each passing month the Soviet numerical advantage was increasing and improving German technology couldn't overcome that advantage.

32.4. 1944

32.4.1. AXIS ARMOR

Light Tanks:

Aufklaerungspanzer 38 – Despite the cancellation of the Panzer IIL program the Germans hadn't completely given up on light tanks. In yet another adaption of the versatile and reliable Panzer 38(t) chassis a handful of reconnaissance tanks were produced by replacing the original tank turret with an armored car-style open-top 20mm gun turret. Although inferior to the Lynx, the Aufklaerungspanzer 38 being a conversion of an existing Panzer 38(t)E was extremely cheap to make, a factor to be valued by the Germans in 1944.

Vanatorul de care R-35 – In an effort to breathe new life into the obsolete French R-35, the Rumanians rearmed some of the tanks with Soviet 45mm guns off captured BT-7s. What value in 1944 this upgrade could possibly be is a mystery. The 45mm gun was clearly superior to the pathetic 37mm gun originally on the R-35 but still virtually useless against the Soviet armor of 1944. Miraculously some of these vehicles survived long enough to fight on the Soviet side after Rumania changed allegiance.

Medium Tanks:

Panzer IVj – The final Panzer IV battle tank was superficially identical to its predecessor. The changes to the Panzer IVj were designed to make the tank cheaper to produce without detracting from its combat power. The principal change was the electrical power traverse for the turret was replaced with a manual hand traverse. Top armor was increased and the Nahverteidigungsgerat added. After the Tiger and the Panther arrived on the scene the Panzer IV faded from the limelight, yet it was without a doubt the most important tank produced by Germany in World War II. From the beginning of the War until the end the Panzer IV, in one form or the other, was continuously in action. The Panzer IV's long service life was a testament to the durability and versatility of its design.

Panther G – With the model G, the Panther finally reached maturity. The Panther's reputation as the best tank of World War II is based on the Panther G. The Panther G was more reliable than its predecessors; all Gs were fitted with advanced gun sights; and side armor was slightly improved. Like all Panthers, the Panther G had higher than average susceptibility to ammunition fires but otherwise outclassed all other medium tanks to see combat in the War.

Heavy Tanks:

King Tiger – Despite its fearsome reputation the case could be made that the Tiger was outdated from the moment it was introduced. Lack of sloping reduced the effectiveness of its armor and even the Tiger's dreaded 88mm gun was a pre-war design inferior to the Panther's 75mm. After only a little more than a year in service the Tiger was beginning to encounter Soviet AFVs that matched or outclassed it. To maintain their edge the Germans needed something new and they found it in the King Tiger. Its thick, well-sloped armor was virtually impervious to frontal hits and the King Tiger's 88mm KwK43 L/71 gun could penetrate the armor of almost all Soviet AFVs at 500 yards or greater. Even though it was significantly heavier than

the Tiger, the King Tiger's road speed was only a couple miles per hour less and it was actually a bit more reliable. On the negative side, King Tigers were expensive to build, expensive to operate, and too insufficient in numbers to be significant beyond the tactical level.

Assault Guns:

Stug IV – Just entering production at the end of 1943, the Stug IV used the Panzer IV chassis to produce a vehicle that was only slightly better armored and no better armed than a Stug IIIg. It is more appropriately viewed as an augmentation rather than a replacement for the Stug IIIg.

Tank Destroyers:

Jagdpanzer IV – The Jagdpanzer IV was the tank destroyer equivalent of the Stug IV but with better armor protection. By 1944 the roles of German assault guns and tank destroyers were becoming increasingly blurred with the distinction being more an organizational one than a tactical one. Nothing illustrates that better than similarity between the Jagdpanzer IV and the Stug IV.

Jagdpanther – The best tank destroyer of World War II, the Jagdpanther used the chassis of the Panther tank to produce a vehicle that was very mobile, well armored, and exceedingly well armed. The 88mm PaK43 was the same weapon used on the Nashorn and Ferdinand/Elefant pared with an excellent gun sight to give it devastating effectiveness.

Jagdpanzer 38 Hetzer – The Germans never seemed to run out of ways to re-purpose the versatile Panzer 38 chassis and the "Hetzer" was probably the most successful adaptation. Engineers somehow managed to squeeze the 75mm Pak39 gun into the small Panzer 38 hull, and excellent sloping magnified its relatively thin frontal armor. Cheap to make, effectively armed, and reliable, the Jagdpanzer 38 was the most economical of German tank destroyers/assault guns and built in numbers second only to the Stug IIIg.

Jagdtiger – At the other extreme of the tiny Hetzer was the massive Jagdtiger. The heaviest and most heavily armed tank destroyer to see combat in World War II, the Jagdtiger was a fortress on tracks but with less than a 100 built by March, 1945 far too rare to have more than tactical significance. There is no record of the Jagdtiger serving on the Eastern Front proper, however four Jagdtigers surrendered to Soviet forces in Austria in May, 1945.

Jagdpanzer IV/70(V) – Historically this vehicle was known as the Panzer IV/70 but to avoid confusion with the Panzer IV tank it was renamed for War in the East II. In the game it represents both the V and A models. It was better armored than the Jagdpanzer IV and armed with the 75mm StuK42 version of the 75mm L/70 gun used on the Panther. Though not as formidable as the Jagdpanther, the Jagdpanzer IV/70(V) was considerably cheaper to produce resulting in a vehicle that was both economical and highly effective.

TACAM R-2 – The TACAM R-2 was built on the chassis of the obsolescent R-2 light tank and armed with a captured Soviet 76.2mm ZiS-3 gun. The TACAM R-2 saw no action on the Axis side but did serve with Rumanian forces fighting with the Soviets after Rumania changed sides.

Self-propelled Artillery:

Moebelwagen – To provide greater firepower than the Flakpanzer 38, the Moebelwagen was produced by mounting a 37mm Flak43 gun on a Panzer IV chassis. The major drawback of the Moebelwagen was that the armor shields which protected the gun crew had to be dropped to operate the gun. Despite this limitation over 200 Moebelwagens were produced, a testament to their effectiveness.

Wirbelwind – The next version of a Flakpanzer on the Panzer IV chassis mounted a quad 20mm Flak38 in a rotating turret. The massive volume of fire of the quad 20mm made the Wirbelwind very effective engaging unarmored or lightly armored ground targets but the limited ceiling of the 20mm gun hampered its anti-aircraft capability. Only a 100 Wirbelwinds were produced before production was cancelled.

Ostwind – The Moebelwagen had proven effective but vulnerable. To correct this issue the Ostwind mounted the same 37mm flak gun in a rotating turret on the Panzer IV chassis. While the single 37mm couldn't put out the weight of metal of the quad 20mm, it was longer ranged, more accurate, and hit harder. Unfortunately for the Germans, less than 50 Ostwinds were produced before the War ended.

Sturmmoerser – The only non-tank use of the Tiger chassis, the Sturmmoerser mounted a 380mm rocket launcher. Classified as an assault rocket mortar, only 18 Sturmmoersers were produced before the War ended. The Sturmmoerser was a highly questionable use of the Tiger chassis.

32.4.2. SOVIET ARMOR

Medium Tanks:

T-34/85 M1944 – Ever since the introduction of the Panzer IVf2 in the spring of 1942, the Soviets had been losing technological ground to the Germans. By late 1943 the argument that quantity would trump quality was sounding increasingly hollow to the men who had to face German armor and something needed to be done to redress the tank technology balance. The answer arrived in 1944 in the form of the T-34/85 M1944. The T-34/85 was armed with the 85mm ZiS-S-53 gun, an equivalent to the 85mm D-5 gun used on the KV-85 & IS-1. The gun was mounted in a new, larger three-man turret that finally addressed the efficiency issues of the previous two-man turrets. Armor protection was also improved and, most important of all, a new, higher magnification gun sight was installed improving the effective range of the 85mm gun. When casual students of World War II think of the T-34 it is most likely the T-34/85 they have in mind and not the ground breaking T-34 M1940. This is not surprising given that the T-34/85 served post-war with Soviet forces into the 1950s and long beyond that with client states. One-on-one the T-34/85 was still not a match for the Panther but at a production rate five times that of the Panther greater quantity and improved quality allowed the T-34/85 to triumph.

M4A2(76)W Sherman – When the T-23 medium tank, replacement for the M4 Sherman, was cancelled in favor of prioritizing development and production of the M26 heavy tank, the T-23's 76mm gun turret was adapted for use on the Sherman; at the same time the designers also definitively addressed the problem of ammunition fires in the Sherman. The interior of the Sherman was re-configured to move the ammunition lower in the hull, and into bins made of quarter inch armor plate surrounded in a jacket of water connected to a reservoir. These modifications were collectively known as "wet storage". All Shermans built from 1944 on received the wet storage modifications, including the M4A2(76)W provided to the Soviets. Unlike previous American tanks, the M4A2(76)W was well received by Soviet tank crews. Decently armed, robust and reliable, the M4A2(76)W fell somewhere in between the T-34 M1943 and the T-34/85 in combat performance. The M4A2(76)W Sherman was a good, if not exceptional, tank that was overshadowed on the Eastern Front by the vastly more numerous T-34/85.

Flame Tanks:

OT-34/85 – The success of the OT-34 made the OT-34/85 a natural follow-on. As in the OT-34, the bow machine gun of the T-34/85 was removed and replaced with a flamethrower. Being somewhat better armored and considerably better armed than the OT-34, the OT-34/85 was one of the best flame tanks produced in World War II.

Heavy Tanks:

IS-2 M1944 – The IS-2 had already made a reputation for itself in the M1943 model when the improved M1944 model was introduced in mid-1944. The IS-2 M1944 featured increased frontal armor and an upgraded gun sight similar to the one used on the T-34/85. These improvements increased the survivability and combat effectiveness of an already very formidable tank. If the T-34 was the sickle cutting through the Wehrmacht, the IS-2 was the hammer beating it down.

Assault Guns:

ISU-152 – When the KV tank series went out of production the Soviets began building the ISU-152, essentially the same vehicle as the SU-152 but using the IS tank chassis. The ISU-152 used the same 152mm gun as the SU-152 and added a 12.7mm DShk machine gun for air defense. Correcting the only serious flaw in the SU-152, ISU-152 was considerably better armored although slower as well. Superior to the StuH42 and the Sturmpanzer IV as an assault gun, the ISU-152 was also a decent enough tank destroyer to earn the nickname “Beast Killer”.

ISU-122 – Another vehicle that blurred the line between assault gun and tank destroyer, the ISU-122 mounted the 122mm D-25 gun in the hull of an IS-2 tank. Its virtue was that of all such vehicles, cheaper to build than its parent tank but packing almost equivalent firepower.

Tank Destroyers:

SU-85M – The SU-85M was the SU-85 now built on the T-34/85 chassis which provided superior armor protection and reliability at a slight cost in mobility.

SU-100 – The best Soviet tank destroyer of the War, the SU-100 was armed with the 100mm D-10S gun on a T-34/85 chassis. As an anti-tank gun, the 100mm D-10S outperformed all other Soviet guns including the 125mm D-25. In terms of armor penetration, the 100mm D-10S was superior to the German 75mm L/70 firing conventional AP and packed a significant HE punch as well. The negative to this powerful and mobile vehicle was that it arrived too late in the War (November, 1944) to make much of an impression.

32.4.3. Summary of 1944

For all practical purposes the technology battle between Germany and the Soviet Union reached its climax in 1944. The Germans had pretty much ironed the bugs out of the Panther design and introduced a new heavy tank that reclaimed their edge in that category. They had also added a flurry of new assault guns/tank destroyers that ranged from the highly practical and economical Hetzer to the dubious and expensive Jagdtiger. The very diversity of these designs was as much a bane to the Germans as it was a boon. To already frayed logistical and maintenance systems, even more AFV models were added while the only thing that went out of production was the Panzer IIL. By contrast, all of the Soviet AFVs entering service in 1944 were highly successful upgrades of existing models that placed little additional strain on their support systems. The T-34/85 narrowed the combat advantage of the Panther and completely outclassed the Panzer IV while the IS-2 M1944 was far more useful and practical than the King Tiger. Both Soviet tanks were being produced at around five times the rate of their German counterparts which more than compensated for any deficiencies in quality.

32.5. Conclusion

Neither Germany nor the Soviet Union introduced a new AFV to combat in 1945 before the War in Europe ended on May 8th. Although a number of prototypes, most infamously the 188 ton Maus (Mouse), were in various stages of development, none of these German AFVs reached series production. On the Soviet side, the T-44 entered production at the end of 1944 but was never committed to combat. A heavily armored alternative to the T-34/85 with up to 120mm of frontal armor but the same 85mm gun, production of the T-44 was given a low priority in favor of the T-34/85. In 1945 two prototypes of the T-44 armed with a 100mm D-10 gun were produced but this gun configuration was never adopted for series production. The War in Europe ended before the IS-3 could see any combat against the Germans. Because War in the East II can extend beyond May, 1945 the IS-3 is included in the game. The IS-3 featured a re-designed hull and turret with radical sloping that gave the vehicle effectively Jagdtiger-like protection at two-thirds the weight. Significantly better armored than the IS-2 M1944 and equally well armed, the IS-3 foreshadowed the direction of Soviet armor design in the post-war years.

In June of 1941 the Germans were caught flatfooted by a Soviet technological advantage that was neither anticipated nor even conceivable. The next three years

saw the Germans scrambling to close that technology gap with a session of upgrades and new designs. While these efforts were a qualified success they did not elicit the immediate response from the Soviets one would have expected. Almost unchanged from its introduction in 1940, the 76.2mm gunned T-34 remained the Soviets principal medium battle tank until early 1944 when it was upgraded with an 85mm gun. Essentially the Soviets fought the entire War in the East without introducing into combat a new medium tank design. They did belatedly introduce a new heavy tank design in the IS series, but except for SU versions of the various tanks that was it. Had the Germans chosen to fight the War with just the tank designs in service in 1941 it is questionable whether the T-34/85 and IS-2 would have ever needed to exist. Soviet armored warfare strategy came to relying on out-building rather than out-engineering the Germans. Only when the disparity in quality became unacceptably great did the Soviets react.

The struggle for armor supremacy on the Eastern Front also influenced tank design in the West leading to the emergence of a new generation of American and British tanks. The M26 Pershing which went into action in February, 1945 and the Centurion I, which arrived at the front too late to see combat, were both reactions to the Panther, Germany's response to the T-34. By the end of the War the design dynamics of firepower, protection and mobility first established in the T-34 M1940 had forged the beginnings of the modern main battle tank. While the honor of the world's first main battle tank deservedly goes to the post war T-54, one can see the seeds of that concept taking root in the T-34. The inescapable conclusion therefore is that while the Panther may or may not be the best tank of World War II, the T-34 is unquestionably the most important tank in the history of armored warfare.

33. Appendix D – GLOSSARY OF TERMS AND ABBREVIATIONS

33.1. GLOSSARY OF TERMS:

Concept	Description
Administrative Point (Ch 9)	A key game concept that affects the ability to build depots and airfields and many combat units. Can also be spent to hasten the repair of captured facilities such as ports, railyards and manpower points. Also used to change commanders and to designate certain HQs as 'assault HQs'.
Administrative Movement (22.2.1)	A form of movement that costs less than normal movement and creates less fatigue for each hex entered. Only possible in hexes that were friendly controlled, and have no enemy interdiction, at the start of the turn.
Air Directive (Ch 17)	General orders given to an Air Force headquarters unit for a type of mission such as ground support or strategic bombing. These can be created either by the player or the computer and, in turn, the computer automatically creates the actual missions that are flown during the air execution phase.
Air Mission (Ch 18)	The specific flight of a number of Air Groups to a specific target to conduct a specific mission. Many air missions are generated as a result of the execution of an air directive, however, some air missions are conducted by the computer (such as interception) or manually set by the player (i.e. air transport missions in the movement phase).
Air Operational Group (16.3)	A collection of one of more air groups and used to allocate planes to air directives and rebase on the map.
Air Phase (5.3.2)	The stage in the game turn where the computer carries out the bulk of the ordered air missions.
Armoured Fighting Vehicle (AFV)	Various summary displays refer to AFV's. For game purposes, the AFV designation generally is given to tanks, tank destroyers, and self-propelled guns. The following types are specifically designated as an AFV: "Light Tank", "Medium Tank", "Heavy Tank", "CS Tank", "Flame

	Tank", "Assault Gun", "SP Artillery", "DD Tank", "MSW Tank", "Engineer Tank", "SP Inf-Gun", "Tank Destroyer", "Hvy Tank Destroyer", "Infantry Tank", "Cavalry Tank", "Hvy Cavalry Tank", "Hvy Assault Gun", "Lt Tank Destroyer", "HT – CS Howitzer"
Assault HQ (21.11.2)	Allows you to increase the command capacity of a given HQ for the expenditure of administrative points. Note this does not change the underlying TOE of the HQ.
Attached Unit	A unit that has been assigned to a headquarters unit, or in the case of support units, directly attached to an eligible combat unit. Unit attachments define the chain of command of units from a High Command level headquarters unit through any intermediate headquarters units down to combat and support units by which command and control (C2) is exercised through the headquarters unit's leaders.
Attrition	Damage and losses to men and equipment not directly caused by player initiated combat. Attrition occurs during the phasing players logistics phase and when units are moved on the map.
Axis	The group of nations, led by Germany, that fought against the Soviet Union. The Axis side consists mostly of forces from Germany and Romania and also a large contribution from Italy, Slovakia, Hungary, Bulgaria and Finland.
Chain of Command	The hierarchal organization that determines the subordination of one unit to another to allow the flow of orders and support. The chain of command starts with a High Command level headquarters unit and is defined by the attachment of other headquarters, support, combat and Air Groups to form either a direct link or a series of linked headquarters units by which the leaders in command of the headquarters units exert command and control. The Order of Battle displays the current chain of command for the phasing player's forces.
Combat Delay (22.2.7)	The additional costs to leave a hex if there has been a battle there earlier in the turn.
Combat Unit (21.3)	Any on-map non-HQ unit is treated as a Combat Unit (CU) apart from specialist rail repair formations.
Combat Preparation Point (22.1, 23.2 and	Reflects the advantages that rested troops have over those who have been engaged in sustained combat. The attacker CV is inflated by 1% for every CPP for the purposes of determining the combat odds (and thus the chance to win a battle). In addition,

25.8.3)	units with 100 CPP have advantages in terms of the commitment of support units and their ability to store additional supplies. CPP also affects supply and Movement Point calculations.
Combat Value (23.1)	Numerical value assigned to a ground unit that is used to determine the results of a battle and represents its ability to take or hold territory, e.g. “boots on the ground.” The unit CV is equal to the sum of the individual CV’s for each ground element in the combat or support unit. CV is not a fixed value; it is a calculated value that can only provide players an idea of the combat ability of the unit. Combat values can be inflated by Preparation Points.
Command and Control (C2)	The method by which forces are controlled to allow orders and information to flow up and down the chain of command. In Gary Grigsby’s War in the East 2, C2 is exercised by the leaders in the headquarters units that other units are attached to through the use of leader rating checks.
Command Capacity (21.11.3)	A numerical rating, expressed in command points, which delineates the number of combat units that can be attached to a headquarters unit without affecting its performance. If this normal capacity is exceeded, the leader of the headquarters unit will suffer penalties when conducting leader checks.
Command Point (21.11.6)	A value assigned to each combat unit based on its size, e.g. regiment, division, corps. Headquarters units have a command capacity expressed in command points that determines the number of combat units that can be attached without affecting the performance of that headquarters unit leader.
Commitment (23.6)	The process that determines which eligible support units and reserve mode combat units participate in a battle. Reserve mode combat units and support units attached to headquarters units must pass a series of checks to be committed to battle, while support units directly attached to combat units participating in a battle are automatically committed.
Depot (25.7)	A key part of the logistics system, depots are locations for the storage and transhipment of freight by rail and ships to other depots, or by vehicles (trucks) or foot (animal drawn transport, organic vehicles) to units, to include airbase units. There are four types of depots that can be set to five different priorities (0-4). Freight stored at depots is converted to supply stocks or replacements (manpower and equipment) when it is shipped from

	a depot to a unit.
Device	A specific item of war fighting equipment that is either installed in an aircraft, AFV or combat vehicle for operation by the crew, or that are used by the manpower in all other ground elements. Most devices are weapons, to include bombs, rockets, rifles, machine guns, artillery, AA and AT guns, but devices also include electronic warfare systems and aircraft drop tanks.
Detection Level (10.2)	A measure of how much is known about the content of a hex and any units that might be in that hex.
Die (x)	The computer simulates the roll of a die, with an equal chance to roll a number from one to x.
Equipment	General term for war fighting material that includes aircraft, AFV, combat vehicles and their installed devices as well as all other devices that are part of ground elements.
Events (13.5)	General term for the way in which WiTE2 simulates either the shifting of the war on other theatres or triggers particular changes within the game. Can be set to occur on a fixed date or when certain conditions are met.
Factories (28.2, 28.3 and 28.4)	Generic term for all items that either produce manpower and materiel for production or supply or provide capacity for strategic movement. Factories are located in town, city and urban hexes and include manpower, ports, railyards, resource production, fuel and oil production, armaments production, vehicle production, heavy industry and individual aircraft, armoured fighting vehicle, and other combat vehicle production.
Fortification Defence Modifier (20.4)	The total defence modifier to the combat value of defending units, which is a combined value that takes into account both the terrain fortification level and any man made fortification level in the hex.
Freight (25.3)	Standard unit all material is converted to for transport through the supply grid. Measured in tons, freight is a capability that resides in depots starting with national supply sources and is essentially limited only by the availability of rail, sea, and vehicle transport. Material is transported as freight through the rail network or port to port both to and from factories and production pools and to depots for delivery by vehicles and intrinsic transport to units where it is converted to supplies and replacements.

Ground Element (21.2)	Individual squads, guns, AFV's, or other combat vehicles such as halftracks and armoured cars and associated manpower that are the building blocks of ground units. The type and number of ground elements comprising a ground unit are specified in the Table of Organization and Equipment (TOE) for that unit.
Ground Phase (5.4)	The stage of the game turn where the player moves ground units, conducts attacks and some air missions take place.
Guns	Devices that are individual ground weapons of 20mm size or greater, with the exception of most mortars. Usually any device that has the word 'gun' in its name, but howitzers, Heavy Mortars (160mm or greater) and Multi-Barrel Rocket Weapons such as the Nebelwerfer are also designated as guns.
High Water Mark (29.1)	The highest number of VPs held by the German player in any turn before the initiative changed. Used to determine whether the game proceeds into 1945 or stops at the end of 1944 in a German victory.
Initiative (29.1)	Only one player has the initiative, and thus actively accumulates Victory Points at any one time. Depending on Soviet progress after October 1942 this will switch sometime between the Autumn of 1942 and July 1943.
Multi-Role Unit (21.4)	A unit that can switch from being an on-map combat unit to a support unit and vice versa.
Named Location (6.4 and 6.8)	Can refer to any hex on the map that has a town (or larger) or one of a depot, airfield or port.
National Morale (Ch 12)	A measure of the basic training and combat capacity of the various armies involved in the War.
National Reserve (13.2)	One of the Theatre Boxes in the game. Each side can allocate both ground and air units to the reserve to ease the process of refitting and training new units or those that have been damaged in combat.
National Supply Source (25.7.1)	A type 4 Depot that acts as an ultimate source of supply. The establishment of a rail network and connection to the supply grid requires the tracing of a contiguous path of rail line hexes, which can include over water from port to port, to a national supply

	source. See 25.2.3 for a list of national supply sources.
Unit level Order of Battle	Equivalent to TOE (OB). OB's are Tables of Equipment (TOE) that list the notional number and specific type (i.e. Panzer IIIm) of ground elements contained in a ground unit. OB is the term used in the game editor, while TOE (OB) is used for in-game screens and windows.
Armed Forces level Order of Battle	The OOB screen displays the command and control (C2) structure of each side's forces, starting at the high command level and tracing ground and air unit attachments down to the individual support and Air Group.
Pending (7.3)	Used to describe hexes that have been captured during the turn and that will become friendly controlled at the next Logistics Phase.
Port Capacity	Expressed in tons, this is a measure of a port's transportation capacity. Each undamaged port level (number of port 'factories') generates 15000 tons of port capacity.
Preparation Points	Can refer to Combat Preparation Ports (23.2) which are used when a unit can rest before engaging in combat or the time spent preparing for an airborne (22.5.3) landing or naval (24.6) invasion.
Railhead	Any friendly controlled undamaged rail line hex connected to a rail network.
Rail Network	A contiguous path of friendly controlled undamaged rail line hexes connected to a national supply source.
Rail Capacity (25.4.1)	Expressed in tons, this is a measure of railroad transportation capacity. Each undamaged railyard level larger than size 1 (number of railyard 'factories') generates 5000 tons of railroad transportation capacity.
Random(x)	The computer generates a random number from 0 to x-1
Railroad Repair Value (21.6,1)	A numerical value based on the maximum number of construction support units attached to a railroad repair HQ unit that delineates the maximum number of hexes a railroad repair unit can be from a railhead and still repair damaged rail line hexes.
Railroad Repair Cost (21.6.1)	The cost in movement points for a railroad repair HQ unit to repair a damaged railroad hex.
Reserve	An aircraft assigned to an Air Group that is categorized as

Aircraft (16.4.3)	'unready' and will not participate in air missions. Reserve aircraft are not counted against the maximum number of aircraft allowed in a particular Air Group.
Select	In interface terms, select means to left click with the mouse on a unit, button or link.
Soft Factors (6.5.11)	The various factors that can be displayed on the top left corner of an on-map counter.
Soviets	Principally the resources and combat units of the Soviet Union. Later in the war some units of non-Soviet nationality formations become available but are treated as Soviet units for all practical purposes.
Supplies (Ch 25)	The type of supply used for food, maintenance and horse fodder. Ammunition, though a separate type of supply, is not produced separately, but is broken out from supplies based on unit need. Also referred to as general supplies.
Supply	The overall term for consumable logistical items required by units to function effectively. There are three types of supply; general supplies, ammunition, and fuel.
Supply Grid	The physical infrastructure used to transport and store supply and production resources. The main part of the supply grid consists of national supply sources connected by a rail network of undamaged rail line hexes and includes stockpiles of supply in city and urban hexes as well as stockpiles in depots for the provision of supply and replacements to units. Ports can also be connected to the supply grid, allowing tracing of supply over water. Units must be able to trace to the supply grid to be in supply. To be in supply, units need to trace to a national supply source hex or to a port that can connect to a port (not through enemy controlled water hexes) that can trace to a national supply source.
Supply Priority (25.8)	Can be set for HQs, Depots and Airbases and determines the proportion of needed supply the unit will try to obtain in the logistics phase.
Support Unit (21.5)	Single purpose independent battalions, brigades and regiments of various types. With the exception of construction battalions, which can be automatically detached to repair rail lines, support units will not appear on the map, but will be attached to headquarters and certain combat units and will be listed in the detail window of the

	unit to which they are attached.
Support Squad Ground Element (21.2.2)	Ground elements that provide the administrative and logistical backbone required for a unit to operate effectively. Note that, despite the similarity in name, support squads and support units are different entities.
Theatre Box (Ch 13)	A generic term for various off-map boxes. These include national reserves for both sides, inactive sectors, sectors where the Germans are fighting the Western Allies, sectors where the Soviets and Axis forces are in direct opposition and the partisan war.
Tables of Equipment (21.2.5)	Lists the number and type of ground elements contained in a ground unit. TOE is used as a general term for all TOE's in the game, whether they are notional or actual, generic or specific. The TOE window displays a prescribed and actual unit TOE with generic types of ground elements (i.e. medium tank)
TOE (OB) (21.2)	Table of Equipment that uses the OB from the game editor, displaying specific types of ground elements (such as a T34/85).
Unit Box Type	Symbol inside the unit counter graphic displaying the type of unit, such as infantry, armour or artillery.
Vehicle (25.5)	Generic vehicles, also referred to as trucks, are used by units, supply depots, and the production system to transport ground elements and freight. All vehicles are considered as 2.5 ton equivalents.
Western Allies	The group of nations and units, including the UK, Commonwealth, US, Free French, and Polish, that fought the Axis nations on the Western Front in WWII. In WiTE2 this aspect of the Second World War is conducted in the various Theatre Boxes.

33.2. LIST OF ABBREVIATIONS:

Abbreviation	Meaning
AA	Anti-Aircraft
AD	Air Directive or Air Division
AFV	Armoured Fighting Vehicle
AIAV	Amphibious Invasion Attrition Value
AOG	Air Operational Group
AP	Administrative Point
APP	Amphibious Preparation Points
C	Clear (weather)
CC	Command Capacity
CLV	City Labour Value
Co	Cold (weather)
CP	Command Point

cP	Polar Continental
CPP	Combat Preparation Point
CR	Commanders Report
cT	Tropical Continental
CU	Combat Unit
CV	Combat Value
DL	Detection Level
EZOC	Enemy Zone of Control
FOW	Fog of War
GA	Ground Attack
GS	Ground Support
HHQ	Higher HQ
HQ	Headquarters Unit
HR	Heavy Rain
KIA	Killed in Action
mA	Arctic Maritime
MD	Military District

MP	Movement Points
mP	Polar Maritime
MRU	Multi-Role Unit
mT	Tropical Maritime
NM	National Morale
OKH	Oberkommando des Heeres
OOB	Order of Battle
PBEM	Play by Electronic Mail
PP	Preparation Points
R	Rain
RRC	Rail Repair Capacity
RRV	Rail Repair Value
Sf	Snowfall
SMP	Strategic Movement Point
SU	Support Unit
SU	Soviet Union

TOE	Table of Equipment
ZOC	Zone of Control

Note that **Stavka** is not an abbreviation, it is a proper word in Russian. Traditionally it referred to the 'tent of the Supreme Commander' in medieval Russian armies and was marked with flags to make it easier to find. The title was then used by the Russian Imperial Armies after 1915 and re-established by the Soviet Union after the German invasion to designate the supreme command.

34. Appendix E – UNIT DESIGNATIONS AND COMBAT VALUE

Below are listed the size, type and associated unit counter symbols, national and elite unit colours, and ground element type and combat values that can be found in the game.

34.1. UNIT SIZES

Symbol	Size
3400	I = Company
3401	II = Battalion
3402	III = Regiment
3403	X = Brigade
3404	XX = Division
3405	XXX = Corps
3406	XXXX = Army
3407	XXXXX = Army Group, Soviet Front, High Command

34.2. UNIT TYPES AND SYMBOLS

Symbol	Unit Type	Symbol	Unit Type
3408	Air Headquarters	**3419**	Fortified Zone
3409	Air Landing	**3420**	Headquarters
3410	Amphibious Headquarters	**3421**	Infantry
3411	Anti-Aircraft	**3422**	Machinegun
3412	Anti-Tank	**3423**	Mechanized
3413	Armor	**3424**	Motorized Infantry

3414	Artillery, Mortar,	**3425**	Mountain Infantry
3415	Aviation (Air Base Unit)	**3426**	Parachute (Airborne)
3416	Cavalry	**3427**	Rocket
3417	Construction/Labour	**3428**	Security
3418	Engineer	**3429**	Self-Propelled Artillery

34.3. UNIT COLOURS

Example	Unit Type	Example	Unit Type
3430	Grey = German Army Unit	**3437**	Pale Blue = Rumanian Unit
3431	Light Blue/Grey = German Air Force Unit	**3438**	Blue = Finnish Unit
3432	Black = Elite German SS Unit	**3439**	Light Brown = Soviet regular unit
3433	Black/Grey = Non-Elite German SS Unit	**3440**	Red = Soviet Gds Unit
3434	Dark Yellow = Italian Unit	**3441**	Light Brown = Soviet Polish Unit
3435	Green = Hungarian Unit	**3442**	Light Brown = Soviet Czech Unit
3436	Cream = Slovakian Unit		

Note that in addition to nationality, unit counters have different colours to show their current command chain. These can be modified by the player (37.2) as they wish.

34.4. GROUND ELEMENT TYPE AND COMBAT VALUES

All ground element types (except naval guns) have a minimum of 1 CV. Individual ground element Combat Value weighting factors:

Ground Element Type	CV Weight Factor	AFV Type
Self-Propelled Artillery	3	Yes
Heavy Self-Propelled Artillery	3	Yes
Self-Propelled Infantry Gun	5	Yes
Half Track Close Support Howitzer	5	Yes
Light Tank Destroyer	5	Yes
Foreign Light Tank Destroyer	6	Yes
Tank Destroyer	5	Yes
Heavy Tank Destroyer	5	Yes
Assault Gun	5	Yes
Heavy Assault Gun	6	Yes
Self-Propelled AT gun	7	Yes
Amphibious Tank	3	Yes
Recon Tank	7	Yes
Light Tank	7	Yes
Foreign Light Tank	7	Yes
Medium Tank	9	Yes
Foreign Medium Tank	9	Yes
Heavy Tank	9	Yes
Close Support Tank	9	Yes
Flame Tank	9	Yes
Cavalry Tank	9	Yes
Close Support Cavalry	8	Yes

Tank		
Infantry Tank	9	Yes
Self-Propelled Flak	3	No
Self-Propelled AAMG	3	No
Half Track AT Gun	3	No
Half Track MG Section	5	No
Half Track Mortar	3 (some have 2)	No
Half Track Close Support Howitzer	3	No
Half Track Recon	4	No
Light Armoured Car	2	No
Armoured Car	4	No
Foreign Armoured car	4	No
Heavy Armoured Car	4	No
Close Support Armoured Car	3	No
Support Squad	1	No
Labour Squad	1	No
Machine Gun	1	No
Flamethrower	2	No
Security Squad	2	No
Partisan Squad	2	No
Rifle Squad	3	No
SMG Squad	3	No
Assault Squad	3	No
Bicycle Squad	3	No

Ski Squad	3	No
Naval Squad	3	No
Cavalry Squad	3	No
Motorcycle Squad	3	No
Motorized Infantry Squad	3	No
Airborne Squad	3	No
Engineer Squad	3	No
Mechanized Engineer Squad	4	No
Mechanized Infantry Squad	4	No
Mechanized Recon	3	No
Infantry-AT	1	No
Light Mortar	1	No
Mortar	1	No
Heavy Mortar	1	No
Light AT Gun	1	No
AT Gun	1	No
Heavy AT Gun	1	No
AA Machine Gun	1	No
Light Flak	1	No
Medium Flak	1	No
Heavy Flak	1	No
Light Artillery	1	No
Artillery	1	No
Medium Field Gun	1	No

Heavy Artillery	1	No
Super Heavy Artillery	1	No
Naval Gun	0	No
Rocket	1	No
SP Rocket Launcher	1	No
Unarmoured SP Rocket Launcher	1	No
Infantry Gun	1	No
Heavy Infantry Gun	1	No

35. Appendix F: COMMANDER'S REPORT (CR)

The Commander's Report can be accessed from the info screens menu tab toolbar (6.2), Hotkey- 'c' or by right clicking on any map hex and selecting 'information'.

It is a multi-tabbed list of information on units, headquarters units, Air Groups and pilots, leaders, battles, equipment and battles that can be sorted and filtered in numerous ways. Various screens and windows have links to, or are linked from, the commander's report. In addition, some unit settings can be changed for both individual units and groups of units using this screen.

The report allows you to access 7 different screens:

3500

When initially selected, the Commander's Report (CR) default view will be the unit tab main view. Subsequent selection of the CR will bring up the screen with the last view selected by the player (i.e. the player won't have to start over every time they bring up the CR).

The currently selected tab will be in white text. In the example below the 'Battles' tab has been chosen.

3501

35.1. USING THE COMMANDER'S REPORT

Each tab has a similar layout and this allows you to focus on the level of detail you need, move from the CR to the map to view units or to export the table to .csv format (where you can open using a spreadsheet).

The tab is divided into five sections. The example below is taken from the 'Unit' tab.

- Summary Information;

3502

- Functions;

3503

- Column Headers and filters;

3504

- Data;

3505

- Footers.

3506

Note that the game will remember your last design of a given tab and show this when you re-open the tab.

The current set of filters are shown on the bottom left hand side of the screen

3507

Here the CR has been told to only show those units that meet the criteria set in terms of Size (divisions etc.) and Unit Status (refit, reserve etc.).

These filters can be removed individually or by pressing ‘clear all’.

In addition, to ease loading if the number of rows exceeds 1,000 the data will be split across multiple pages as:

3507a

This is unlikely to have much practical impact as usually you will use a combination of filters, sort and/or search to find the sub-set of data you are interested in.

35.1.1. Functions

3508

This allows you to use the CR to carry out functions that will affect all the displayed data in the main table. So, as an example, you could set all the selected combat units to refit using this option.

If you click on a function button a drop down list of all the options becomes available as:

3509

Selecting one will affect all the currently selected units (in this case). So at one extreme you can order your entire army to adjust in a particular way or you can use the filters so only a few (or perhaps just one) units are selected.

35.1.2. Column Headers and Filters

3510

To access this you need to click on the arrow to the left and then a full list of the available filters will be shown.

You can change the columns being displayed using the show/hide function, note that this particular CR is set not to show city details.

At the top is a series of criteria you can use to filter. You can build up quite complex selection rules but you can only work on one criteria at a time.

As an example, if you select size: You do this first by clicking on the symbol to the right of the name. That will then generate the ability to select one, some or all the sizes of units. The number after the title indicate how many of that particular type are in the display.

If you just click on say ‘Size’, you will filter the CR on that criteria adding or removing some formation sizes as you wish (so you could just hide Companies or you could just show divisions or any combination of the two approaches).

3511

Some options need a text string and in this case you will need to enter sufficient text to either include or exclude those units you are interested in.

3512

3513

This will mean that only units reporting to a HQ with the text string III are shown on the data section.

Note that if you make a selection using one filter this is retained when you open a new filter option. So if, for example, you filter to only show units in a particular morale range, these units will be the only ones shown if you select a new filter criteria.

35.1.3. Data

This is the main part of the CR tab. Once you have selected your filters and column headers, all the relevant data will be shown here. Each tab is laid out differently and is described in detail later in this appendix.

All the units shown will be affected by any actions such as to change their mode or supply priority.

Usually clicking on the unit name will take you to that unit or location on the map.

Clicking on another entry will usually mean the CR now only shows the units that meet that criteria. Here, LVI Motorized Corps was clicked and only the units that report to it are now shown.

3514

Note the summary information at the top has now changed. It reflects that you have 15 units selected and collectively these contain 81,137 men.

35.1.4. Footer

3515

The options here will allow to make further choices about the information displayed and to select units that meet particular criteria.

Usually these show or hide units that don't meet certain criteria. So if you only want to see the 'Isolated' units, then selecting 'Yes' will hide all the non-isolated units.

35.1.5. Export

Almost all these screens can be exported as CSV files using the 'export' button at the top of the screen. The files will be placed in the dat\csv folder of your game setup.

35.2. UNITS TAB

This is probably the most frequently used tab, capable of displaying all of the phasing player's ground units (headquarters, combat, and support) and consisting of two views (main and supply detail views) as well as three functions and offering a large range of display and filtering options. The basic overview has been shown in 35.1.

Left clicking on any unit name will take you to the unit on the map.

If possible, the unit can be transferred either to another Theatre, the main Map or the Reserves (this will not be shown if the unit is ineligible to be transferred).

Supply Details will show the detail of current and received supply for that unit (in effect, the information that can also be accessed using the other tabs at the top of the CR screen).

35.2.1. Units Tab Main View

At the top of the screen is row showing the number of units currently selected and then number of men, guns, AFV and aircraft assigned to the selected units. These numbers will change as units are filtered or sorted out of the view.

3516

The following information is provided. Note that not all the columns may be visible at any time and all of them can be used to set filters if you want to focus on particular aspects:

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Column Title	Contents
Unit Name	Units names are colour coded according to their function. The main differences are to use light green for off-map support units, orange for HQ units, yellow for on map combat units and blue for air base and air HQ units.
Nat (Nationality)	Lists the nationality of the unit.
Size	Indicates the size of the unit and can be filtered to show just divisional units for example.
Type	Provides information on the type of unit. HQ units are listed by specific type (i.e. Corps, Army, Army Group, High Command, etc.).
OB	Indicates the current TOE being used for the unit
HHQ (Higher Headquarters Unit)	Name of HQ unit to which the unit is directly attached.
ThBox	Shows if the unit is on the 'Map' or in one of the Theatre Boxes.
DtHQ (Distance to HQ in Hexes)	Distance to HQ is the difference between the command range of the HQ unit to which the unit is attached and the distance in hexes from the HQ unit to the attached unit.
Men, Guns, AFV in Unit	These 3 columns display the number of each item internal to that unit (attached units not counted).
AC (Aircraft in Airbases)	The number of aircraft in Air Groups attached to the air base unit.
Mrl (Morale), Average Experience (Exp) and Fatigue (Fat)	The current average value for the unit, this can be sorted or filtered to only show the units with morale in a particular range. Note that for experience and fatigue it is possible that some elements may have different values to the unit average.
CV (Combat Value)	The current combat value of the unit as displayed on the unit counter.
Prep	The current level of Combat Preparation Points held by the unit

%TOE (Unit Table of Equipment (TOE))	The percentage of the unit's TOE currently in the unit.
TOEM (Maximum TOE Percentage Setting)	The maximum percentage of a unit's TOE to which it can take replacements. Selecting the current percentage will bring up a dialog box allowing the player to set the TOEM% for that unit. These values can also be altered using the Max TOE% function at the top of the screen
Status	Shows if the unit is in refit, ready, reserve, unready, depleted or loaded (on trains or ships).
SPri	If the unit is a HQ or airbase, this will show the current Supply Priority
MP	The movement points left for the unit
WTurn	When the unit is next due to be moved to a different Theatre.
WDest	Which Theatre Box it will be moved to
WStat	The current status of units due to withdraw. This will change to 'yes' shortly before the move and will affect the options available with that unit.
TtOB (Number of Turns until next TOE(OB) Upgrade)	The number will be 0 if the upgrade is commencing that turn. Selecting the number will bring up the TOE Upgrade window (37.10) for that unit.
Elt (Elite Status)	Lists Axis and Soviets elite units and other special types of Axis units using the following abbreviations: G= Soviets Guards, E=Axis Elite, SSE=SS Elite, SS=Non-elite SS, LW=Luftwaffe units. Selecting one of the abbreviations will select and list just those units with that particular status.
Won and Lost	These columns list the number of wins and losses that the unit, or its attached units if a HQ unit, has accrued. Note the lost screen is normally not visible due to space limitations.

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In addition, the Units Tab in the CR has a number of options both above and below the main screen. These allow the player to select what is shown and/or carry out actions on a number of units at any one time.

At the top of the screen are four Functions tabs:

3517

These allow the player to make changes to the relevant status of all eligible units that are currently listed as follows:

Option Title	Contents
Transfer	Will transfer all the eligible units to the chosen destination (the drop down will bring up a list of the active Theatre Boxes for that side).
Supply Priority	Selecting brings up a dialog box that allows the player to change the supply priority of all listed HQ and air base units to a setting from 0 to 4 (25.8). Note that air base units set to zero priority will not be resupplied.
Max TOE%	Selecting brings up a dialog box that allows the player to change the maximum TOE percentage setting of all listed units. For all but fortified zone units and air base units that can have maximum TOE below 50 percent, entering a number below 50 or above 100 will revert to 50 or 100.
Refit/Reserve	Selecting brings up a dialog box that allows the player to change the status of displayed combat units to Refit or Reserve (if eligible) status. Selecting '0' will return the units to Ready or Unready status. The status of Static units cannot be changed.

At the bottom of the Units Tab are three clusters of options and tabs as:

3518

On the left hand side, the options allow the player to select which units are displayed according to various criteria:

Option Title	Contents
Isolated	Can be toggled between No or Yes (if both are selected all units are shown)

Static	Can be toggled between No or Yes (if both are selected all units are shown)
Frozen	Can be toggled between No or Yes (if both are selected all units are shown)
Arrived	Can be toggled between No or Yes (if both are selected all units are shown)
On Map	Can be used to select units on the main Map, support units, multi-role units or units off the main Map. On Map (combat units/HQs on the map) Support (support units that are in units/cities on the map) Multi (Multi-use units that are on the map or in units/cities/city forts on the map) In Fort (combat units/HQ in city forts) Transfer (units that are in the process of transferring between map/TBs) Off Map - All others, basically units that are in a TB
Can Transfer	Can be toggled between No or Yes (if both are selected all units are shown) If Yes is chosen, those units meet the rules to allow a transfer from one Theatre to another or between the Map and a Theatre Box.

In the centre, the player can select or deselect unit types. If Select All is shown the all the units are displayed. This box will be empty if any of the other boxes are deselected. In addition it can be used to tab between showing all and showing no units.

3519

In the example below, Arm and Mech units have been removed:

3520

Index

On the right hand side are more selectable criteria that can be used to control which units are displayed on the main screen. These effectively duplicate filters that can be selected from the main part of the display.

3521

Option Title	Contents
Morale	Clicking on the numerical values allows you to limit the range of units displayed. For example, you might use this to prevent low experience, low morale Soviet units being moved from the Reserve to the Map.
Experience	
Fatigue	

35.2.2. Unit Tab Supply Views

The supply view provides much of the same information found in the unit supply detail window (37.3). The filters and some of the column headings are the same as for the Main tab.

Column Title	Contents
Unit Name	Units names are colour coded according to their function. The main differences are to use light green for off-map support units, orange for HQ units, yellow for on map combat units and blue for air base and air HQ units.
Nat (Nationality)	Lists the nationality of the unit.
Size	Indicates the size of the unit and can be filtered to show just divisional units for example.
Type	Provides information on the type of unit. HQ units are listed by specific type (i.e. Corps, Army, Army Group, High Command, etc.).
OB	Indicates the current TOE being used for the unit
HHQ (Higher Headquarters Unit)	Name of HQ unit to which the unit is directly attached.
Men, Guns,	These 3 columns display the number of each item internal to that

AFV in Unit	unit (attached units not counted).
AC (Aircraft in Airbases)	The number of aircraft in Air Groups attached to the air base unit.
Sup %	The current % of supply in the unit
Sup	The current number of supply in the unit
SupN	The level of supply needed by the unit
SupR	The amount of supply received in the last logistics phase
Fuel %	The current % of fuel in the unit
Fuel	The current number of fuel in the unit
FuelN	The level of fuel needed by the unit
FuelR	The amount of fuel received in the last logistics phase
Ammo%	The current % of ammunition in the unit
Ammo	The current number of ammunition in the unit
AmmoN	The level of ammunition needed by the unit
AmmoR	The amount of ammunition received in the last logistics phase
Veh%	The current % of vehicles in the unit
Veh	The current number of vehicles in the unit
VehN	The level of vehicles needed by the unit
VehR	The amount of vehicles received in the last logistics phase
MenR	Replacement manpower received in the last logistics phase. Note this can be negative if attrition losses exceeded replacements.
SupCons	Amount of supply consumed in the last logistics phase
AdminF	The number of times the unit failed to receive supplies or freight
HQPen	The net penalty value for failed rolls and other failures in the logistics system

35.2.3. Using the Units Tab to carry out bulk actions

One important use of the Commanders Report is not just to view or search for units but also to carry out actions on a group of units that meet any set criteria.

This is very useful when you want to reset (or redeploy) a substantial number of units at any one time.

This section provides examples of how to carry out some bulk actions, it is not meant to be a complete list but to provide ideas of how to use the CR to ease the administrative aspects of managing your army.

Finding Units.

One simple use of the CR is to find either a particular unit or group of similar units on the map. At the most basic, sorting on Unit Name will place the units in an alphabetical-numeric order and simply scrolling down will find a given unit. However, this is relatively inefficient and you can use the various selection options (as above) to simplify the search.

If we know something about the unit that can help (e.g. if it is isolated or has just arrived this turn) but assuming it is a normal unit, the following steps will help to find a given Soviet artillery formation.

There are various ways of doing this depending on what is known. The most comprehensive approach is to set the Formation Type to 'Art' only.

3522

We can then use 'size' to only show regiments:

3523

We can then use other columns such as the OB list or HHQ to refine the search. If we know the unit is an Army Gun Artillery Regiment, clicking on that OB type will further limit the search:

3524

This produces a list of 20 units, which can be readily viewed manually.

3525

Not that at the bottom of the screen are all the filters we now have active:

3526

Reset Maximum TOE

The CR is particularly useful when you wish to do bulk changes to either every unit in the army or units of a particular type. All this can be done unit by unit but the CR is often more efficient.

In this case, let us set the maximum TOE of the Soviet artillery units selected above to 75%.

Select the Max TOE% function and this dialogue appears:

3527

Enter 75 and click on the tick box.

The maximum TOE for all Soviet artillery units is now at 75%.

3528

Those units with a current TOE over this limit will now shed excess elements in the next few turns (in one turn if in the national reserve) and will not take on any replacements till this adjustment is complete.

Selecting Low TOE Units

This can be done for a variety of criteria such as morale, experience, TOE and the basic steps are the same. This type of bulk selection can be very useful for the Soviet player in the early turns when you might want to detect and return a large number of units to the National Reserve so they can refit or simply remain as shell formations with no risk of their destruction as the Axis advance.

Here we want to identify just Support Units that are under 50% TOE.

The first step is to use the On-Map filter just to select ‘Support’, as:

3529

Then use the %TOE column filter to select those between 0 and 50%, as:

3530

Clicking on the numerical range will allow us to set a new minimum and maximum range, such as:

3531

In this case, for simplicity, we will move as many of these units to the National Reserve as we can. Some will not be eligible due to the rules in section 13.1.3.

For convenience we will use the ‘Can Transfer’ filter to determine those that can be moved:

Index

3532

Click on the transfer command and select ‘Soviet Reserves’ and all the eligible units will be transferred.

3533

The units are now set to transfer (and can be seen in the reinforcement schedule if you want to double check).

3534

Move units to/from the National Reserve

The ability to do bulk moves to/from the map and the National Reserve (or other Theatre) is one way the CR can save a lot of time. This is probably especially valuable for the Soviet player.

Units can be moved between theatres either by changing the HHQ on the units own counter or by using criteria to select a group of units and then moving them all.

The example above shows how to move units from the map to the reserve. In this case we will move Soviet Rifle Divisions with morale over 45 and TOE of at least 90 to the map. This process is similar to the above and uses various filters.

3535

This gives 4 units that can be moved.

3536

Select Transfer>>Map and confirm.

3537

Note that all those units will go the hex (or as close as possible) selected for units to arrive form the Reserve. In practice you might not want all the divisions at the same location and in this case might want to use additional criteria to break them up into two or more batches (resetting the arrival hex each time).

Remember that in this case, you will always return to the same screen and filters each time you re-open the CR.

35.3. HQs (HEADQUARTERS UNITS) TAB

This tab lists all the phasing player’s headquarters units including rail repair units and amphibious HQs.

Index

This tab has much less information than the units tab but as with all screens you can choose which columns you wish to have displayed.

3538

35.3.1. HQ Tab View

Directly underneath the HQs tab will show the total number of HQ units currently selected. The following information is provided by column headers, all of which can be selected to sort their columns:

Column Title	Contents
Unit Name	Selecting the HQ unit name will take you to the unit on the map.
Nat (Nationality)	Lists the nationality of the unit. Selecting a nationality will set the 'Nation' filter and list just those units of that nationality.
Size	Shows the level of the unit command
Type	Unit type, which corresponds directly with the unit formation type unit display filters.
HHQ (Higher Headquarters Unit)	Name of HQ unit to which the HQ unit is directly attached. Selecting the name of the HQ unit selects and lists just the HQ units that are attached.
ThBox	Which Theatre Box or the Map where the unit is located
Aslt (Assault)	This shows eligible Axis armies or Soviet Fronts set to assault mode. Any lower level HQs assigned to that army or Front are described as 'In Aslt' Aslt will indicate that HQ can be moved to assault status
Men, Guns, AFV, Aircraft in Unit	These four columns list the total number of each item in the HQ unit and all of its attached units. Selecting one of the numbers brings up the applicable Formation Inventory Window, which breaks down each item by number and type of ground element or aircraft (35.3.2).
Leader	Lists the leader in command of the HQ unit. Selecting the leader's name brings up the Leader Detail Window. Closing the detail window selects the HQ unit location and brings up the HQ unit detail window.

SupL (Support Level)	Lists the current support unit level for that HQ unit). Selecting the current number or Lck (Locked) brings up a dialog box that allows the player to reset the support level for that HQ unit between – 1 and 9, with – 1 changing the setting to Locked.
CU (Combat Units) and SU (Support Units)	These two columns display the number of each type of unit attached to the HQ unit. Note that Support Unit numbers do not include construction type units. On map MRU units are not shown in either column, off map MRU are shown in the SU column.
ComPt (Command Points)	This number is the difference between the number of command points of combat units attached to the HQ unit and the HQ unit's Command Capacity (CC) (21.11.3). A negative number indicates that the number of command points of the units attached exceeds the HQ units CC.
Pri	Shows the current supply priority for the HQ (if that is appropriate)
Frzn (Frozen)	A non-zero number indicates that the HQ unit is frozen for that number of turns.

For this screen you have two options to carry out alterations to unit status. These function in the same way as the options on the Unit screen:

3539

35.3.2. Formation Inventory Window

These windows can be left clicking on the number of men, guns, AFV or aircraft in the applicable column of the HQs tab.

3540

Each formation inventory window provides the following information. Note that each category can be expanded to provide more details:

3541

Column Title	Contents

Name	Displays the name of the headquarters unit that has command and control of the listed forces.
Men, Guns, AFV, Aircraft	Displays an icon followed by the number for each of the four categories. The selected category (i.e. AFV) is in red text; the other three categories are in blue text and can be selected to change the formation inventory to that category.
Type of Ground Element/Aircraft	This column lists either the ground element (men, guns, AFV) type or aircraft type with expand and collapse ([+]/[-]) capability by each type or for all at once. Expanding a type (e.g. medium tank or fighter) will display a list of the specific ground elements or aircraft models along with the applicable silhouette. Selecting a specific ground element will take the player back to the main units tab filtered to display just the units that are subordinated to the HQ unit that contain that ground element. Selecting a specific aircraft model will take the player to the Air Groups tab filtered to display just the Air Groups that that contain that aircraft model. Expanding or collapsing the display will change the presentation in the other three columns.
NAT (Nationality)	This column is blank until a ground element or aircraft type is expanded. Then for each specific ground element or aircraft model, their applicable nationality will be displayed.
READY	This column displays the total number of ready ground elements or ready and reserve aircraft of each type. If a type is expanded, a sub-total for each specific ground element or aircraft model will also be displayed.
DAMAGED	This column displays the total number of damaged ground elements or aircraft of each type. If a type is expanded, a sub-total for each specific ground element or aircraft model will also be displayed.
TOTAL	At the bottom of the window the total overall number, as well as the total number of ready (ready/reserve for aircraft) and the total number of damaged ground elements or aircraft will be displayed.

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35.3.3. Functions

The main view of the HQs tab has a functions section with two selectable functions that allows the player to change the status of all eligible units that are currently listed as follows:

Support Level: Selecting brings up a dialog box that allows the player to change the support level of all listed HQ units to a setting from – 1 to 9, with – 1 resulting in a Locked setting.

Supply Priority: Selecting brings up a dialog box that allows the player to change the supply priority of all listed HQ units to a setting from 0 to 4.

35.3.4. HQ Display Filters

3542

Selecting ‘Clear all Filters’ will not only clear all current filters, but also any active column header sorting.

Option Title	Contents
Nation	Can be toggled between the various nationalities that make up the player’s army
HQ Type Filters	Most of the HQ display filters are type filters, with on/off toggles that allow the player to determine the type of HQ units to be listed. They can be toggled individually or globally using the ‘All’ or ‘None’ filters. All air headquarter units, regardless of actual type are filtered under ‘AirCom.’
ThBox	Select All will show all HQs regardless of their theatre, otherwise these filters can be used to select one or more Theatre Boxes or the main game map.

35.4. AIR GROUPS TAB

This tab lists all the phasing player's air units. As with all the tabs, it can be used to carry out functions, sort on specific variables and change the displayed columns.

This is probably the most complex page in the Commanders Report but can be used as an important tool to manage your airforce.

You can change the basic view of the form using the options at the top of the screen:

3543

Function	Consequences
Air Groups	Will display the data with the named air group(s) on the left hand side.
AOG	Will display the data with the named Air Operational Group(s) on the left hand side.
Pilots	Will change the display to show the pilots rather than air groups. This layout is described in more detail below.
Pilot List	A list of all the historical pilots, their current allocation and experience and whether they have been killed or are still available.

35.4.1. Air Groups

As with most screens, this offers a number of functions that are useful for managing your air units.

3544

Remember that any selected function will be applied to all the displayed air units (unless otherwise prevented by the game rules).

Function	Consequences
Transfer	Will transfer all the selected units to the National Reserve. You will need to confirm yes/no when you do this.
Add Pilots	Will add pilots to all the selected units. A second pop-up will allow you to only add 'trained pilots'.

Disband	Will disband all the selected units. You will need to confirm yes/no when you do this.
Replace	Will change the rules used by the selected air units to determine how they will seek to replace lost pilots. A second box will appear with the options to set this as ‘normal’, ‘restricted, ‘priority’ or ‘trained pilots’.
Change Upgrade	Will change the air units between manual or automatic upgrades
Mission Setting	Will set the air units to carry out night and day, night only, day only missions, or rest for the next turns.

As in the other displays the filters work at two levels. You can select what you wish to filter on and then retain all, or some, of the units. Finally you can filter again in the data display by clicking on say the aircraft type.

You can also set many columns to only show air units that meet specific criteria such as a certain % of ready aircraft.

Filter options include:

Filter	Consequences
AIR GROUP	Allows you to select some or all of your air groups
NAT	Allows you to select some or all of your nationalities
SIZE	Allows you to select some or all of your air group sizes
AIRCRAFT	Allows you to select some or all of your aircraft types
LOADOUT	Allows you to filter between those air groups set to auto select their loadout and those you are controlling manually.
TYPE	Allows you to select some or all of the types of your aircraft such as FB or LB etc.
FB	Shows if a fighter bomber air unit is trained as a fighter or bomber formation
AIR HQ	Allows you to select some or all of your Air HQs
AOG	Allows you to select some or all of your Air Operational Groups

AIRBASE	Allows you to select some or all of your airbases. The filter will also indicate how many air groups are currently at that particular airbase.
Transfer	Indicates if the air unit is due to transfer to the map or a different Theatre Box.
X, Y	Allows you to select airbases using their map co-ordinates
ThBox	Allows you to select all the air groups in a particular theatre.
AD	Allows you to select some or all of your air groups by their allocated air directive type
NAVAL	Allows you to select your air groups that are categorised as naval only
MIS	Allows you to select your air groups in terms of when they will fly a mission (divided between day only, day and night and night only or rest). This value can be changed for all selected air groups using the function 'Mission Setting'.
UPG	Allows you to select your air groups by their allocated upgrade mode (auto or manual)
RPL	Allows you to select your air groups by their allocated replacement criteria
EXP	Allows you to select your air groups by their experience level
MOR	Allows you to select your air groups by their morale level
FAT	Allows you to select your air groups by their fatigue level
Depl	Indicates if the air unit is treated as depleted. This information is used by the automatic air management routine to determine if the unit should be sent to the appropriate national reserve.
RDY	Allows you to select your air groups by the number of ready planes they have available
RES	Allows you to select your air groups by the number of planes set to reserve status
DAM	Allows you to select your air groups by the number of planes that are currently damaged

MAX	Allows you to select your air groups by the maximum number of planes they can have allocated
PLT	Allows you to select air groups that have missing pilots or no missing pilots
KILL	Allows you to select air groups depending on how many kills have been allocated to them
TRVL	Allows you to select air groups depending on how far they have travelled this turn
Del	Shows the number of turns an air unit is frozen for (if appropriate)

The data along the base of the screen will show how many items are selected using your current filters. As with other screens, you can also select a number of filters using these options.

3545

35.4.2. AOG Screen

This repeats many of the columns for the Air Group screen. However it starts with the left hand column showing either the AOG or Air Command.

3546

Other new columns include:

Filter	Consequences
Aircraft	Will list all the planes currently in that AOG or Air Command
Type	The type of planes in that AOG or Air Command. Some AOGs can only have particular plane types. If more than one type is present this is shown as MIX.
H AOG	The Air Command a given AOG reports to
Air HQ	The on map Air Command the AOG reports to
CP	The current command points used by that AOG or Air Command
CPL	The maximum number of command points available for that AOG or Air Command

Stance	If using the AI air assistance this will determine how the AOG/Air Command moves on the map when the HQ they are following moves
FHQ	If using the AI air assistance this will determine which ground HQ the AOG/Air Command will follow
Nav	Will show the number of Naval operations that AOG/Air Command has
APri	If using the AI air assistance this will determine how many air units are assigned
Air base	Shows all the airbases used by air units under that command
AD	Shows many Air Directives that Air Command/AOG is assigned to
Mis	If using the AI air assistance this will determine the type of missions the component air units will undertake

Again at the foot of the page are some filters that can be used:

3547

35.4.3. Pilots

This screen provides an overview of the number of pilots by nationality.

Column	Content
NATION	Shows the nationality of each group of pilots
TOTAL	The total number of pilots for that nationality
READY	The number of pilots who are ready to be allocated to planes
WOUNDED	The number of pilots who are currently wounded
CAPTURED	The number of pilots who have been captured
KIA	The number of pilots who have been killed in action
FREE	The number of pilots who can be allocated to planes

POOL	The number of pilots who could be allocated to planes
+TRAIN	The number of trained pilots added to the pool each turn
Miss to Ready	The difference between your number of pilots and number of ready planes
Miss to Max	The difference between your number of pilots and total number of planes

3547a

35.4.4. Pilot List

This screen provides an overview of the performance (and fate) of the historical named pilots in your air force.

35.5. LEADERS TAB

This tab lists all the phasing player's leaders that can be assigned (command) headquarters units. It consists of only one view, with no functions section.

Column Title	Contents
Name	Leader's name in last name, first name format. Selecting a leader's name will bring up the Leader Detail window
Nat (Nationality)	Leader's nation
Rank	The leader's current rank. Selecting a leader's rank will bring up a filtered list of just those leaders with that rank.
Unit	If the leader is currently in command of a headquarters unit, the HQ unit's name will be listed. Otherwise this column will have a hyphen (-).
Leader Ratings	These seven columns display the current leader ratings (15.3) in the order of Political (Pol), Morale (Mrl), Initiative (Ini), Administration (Admin), Mechanized (Mech), Infantry (Inf), and Air.
Restr	Displays any restrictions regarding the type of headquarters units that the leader can be assigned. Restrictions are Ground Only

(Restrictions)	(GO), Air Only (AO), Ground and Air (-) and SS Only (SS).
MaxC (Maximum Command Level)	Displays the maximum level of headquarters unit a leader can command. Maximum Command levels are Corps/Army (C/A), Army Group (AG), and High Command (HC).
DisC (Dismissal Cost)	Displays the cost in administrative points to dismiss the leader.
Vic (Victories)	Displays the current number of victories (wins) that the leader has earned.
Def (Defeats)	Displays the current number of defeats (losses) that the leader has earned.
Fate:	Displays whether a leader is active (alive) or dead. Active leaders are marked with a hyphen (-). Dead leaders are marked as either killed in action (KIA) or executed (EXC) upon dismissal.

In addition, the Leaders tab has a number of display filters:

3548

35.6. BATTLES TAB

3549

This tab lists all the battles that have taken place during both the phasing player's current turn and the proceeding non-phasing player's turn. The default listing is in the exact order they were conducted.

There is a Ground view and an Air view, the difference being in the type of losses displayed.

Underneath the Battles tab you can see the total number of battles currently selected. This number will change as battles are filtered or sorted out of the view. This tab does not have a functions section and there are no specific display filters, only the 'Clear All Filters' link, which will clear any active column header sorting.

35.6.1. Ground View

Column Title	Contents
Hex	Lists the hex location where the battle took place in X, Y coordinates. Selecting the location will bring up the map area with the battle hex selected and the combat resolution report for that battle displayed.
Near	Displays the name of the closest town, city, urban hex or other named location to the battle
Attk (Attacker)	Displays the side, Axis (Ax) or Soviets (SU) that initiated the attack. If a hyphen (-) is displayed, this indicates an isolated unit that surrendered during the previous logistics phase.
Result	Displays the result of the attack or air mission
Type	Displays whether ground attacks were deliberate or hasty (23.4). Air missions will be marked with a hyphen (-).
Attacker and Defender	These two headers each have three column headers underneath them that display the composition of the forces involved on each side. The three columns in the ground view list the number of men, guns, and armored fighting vehicles (AFV) present in the battle
Attacker and Defender	These two headers each have three column headers underneath them that display the losses for each side. The three columns in the ground view list the number of men, guns, and armored

Losses	fighting vehicles (AFV) lost.
DMenE, DGunE, DAFVE	If the battle ended as a surrender or shattered result, these columns will show how many of the defenders escaped (and were returned to the relevant production pools).

As usual there are a few filter tabs below the main display.

3550

35.6.2. Air View

Column Title	Contents
Hex	Lists the hex location where the battle took place in X, Y coordinates. Selecting the location will bring up the map area with the battle hex selected and the combat resolution report for that battle displayed.
Near	Displays the name of the closest town, city, urban hex or other named location to the battle
Attk (Attacker)	Displays the side, Axis (Ax) or Soviets (SU) that initiated the air mission. If a hyphen (-) is displayed, this indicates an isolated unit that surrendered during the previous logistics phase.
Result	Displays the result of the attack or air mission
Type	Displays whether ground attacks were deliberate or hasty (23.4). Air missions will be marked with a hyphen (-).
Attacker and Defender	These two headers each have three column headers underneath them that display the composition of the forces involved on each side. The three columns list the number of fighters, bombers and other (utility) planes involved in the battle
Attacker and Defender Losses	These two headers each have three column headers underneath them that display the losses for each side. The three columns list the number of fighters, bombers and other (utility) planes lost in the battle

35.7. LOCATIONS TAB

This tab lists all of the town, city, urban hexes and other named locations controlled by the phasing player, both on and off map. Underneath the Locations tab will display the total number of locations currently selected. This number will change as locations are filtered or sorted out of the views. There are three views available in the Locations tab.

3551

The Storage view (default) displays supply, resources and oil stored at the location compared to the requirement for those items as well as the number of air base units and anti-aircraft support units.

The Industry view displays the number of factory points of each general type of factory and any damage to those factories.

The Depot view displays depots by location and type and provides supply priority, freight and vehicle status. This tab does not have a functions section.

All of the views have the following column headers:

Column Title	Contents
Name	Displays the name of the closest town, city, urban hex or other named location.
Nat (Nationality)	Nationality of the town, city or urban hex. Control of a hex by the opposing side does not change nationality. Selecting a particular nationality within this column will bring up a filtered list of just the town, city or urban hexes of that nation.
Hex	Lists the current hex location of the town, city or urban hex in X, Y coordinates. Off-map locations are marked with an asterisk (*). Selecting a location will bring up the applicable city detail window and for on-map locations will select the hex. For off-map locations, the previously selected on-map hex will remain selected.
Pop (Population)	Displays the permanent population of the town, city or urban hex.

All the tabs can be filtered according to the nationality of the hex.

35.7.1. Locations Tab: Storage View

The storage view consists of the following additional column headers:

Column Title	Contents
AB Size	Size of the airbase at the location (if any)
SU	The number of support units assigned to that location
Current Storage and Storage Requirements	These eight columns display the amount in tons of supplies (Sup), fuel (Fuel), resources (Res), and oil (Oil) currently stored in the hex as well as the required amount of supplies (SupR), fuel (FuelR), resources (ResR), and oil (OilR) needed by the town, city or urban hexes, which is based on the number and type of factories located there.

35.7.2. Locations Tab: Industry View

Under each column are shown the number of factory points for each type of resource at that location.

For aircraft and AFV/Combat vehicle factories, the number of factory points is the sum of all those types of factories since it is possible for a given location to produce more than one type of vehicle or aircraft.

If a factory type has suffered damage, the percentage will be displayed in parentheses next to the number of factory points of that type of factory.

Column Title	Contents
AFV	The sum of the AFV factories at the location
Air	The sum of the aircraft factories at the location
Man	The current population of the location
HI	The number of Heavy Industry factories at the location
Oil	The number of Oil producing factories at the location

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Fuel	The number of Fuel processing factories at the location
SFuel	The number of Synthetic Fuel factories at the location
Res	The number of Resource production factories at the location
Veh	The number of Vehicle factories at the location
Arm	The number of Armament factories at the location
Rail	The number of Rail yards at the location
Port	The number of Port capacity at the location

35.7.3. Location Tab: Depot View

3553

The depot view consists of five additional column headers that display the following information:

Column Title	Contents
Depot	Lists the type of depot as National Src (National Supply Source) (Type 4), Export Port (Port Supply Source) (Type 3), Import Port (Type 2), or Railyard (Type 1). A dash (-) indicates that no depot currently exists in that town, city or urban hex.
Priority	Current supply priority of the depot. Selecting the number allows the player to set that depot's supply priority from 0-4 if the depot is located on map. Selecting the check box or the 'Enter' key without inputting a number will change the supply priority to 0.
Freight	The amount of freight in tons currently stored at that location
Unused Vehicles	Vehicles assigned to the depot that are still available for the transport of freight in the turn.
Used Vehicles	Vehicles assigned to the depot that have been used to transport freight this turn and are no longer available.
UnitSup	The number of units drawing supply from that depot in the last turn

35.8. EQUIPMENT TAB

3554

This tab is a reference database that provides information on all equipment and devices included in the game for both sides. There are three views; ground elements (default), aircraft, and weapons (devices). Depending on the view selected, underneath the Equipment tab will display the total number of ground elements, aircraft, or weapons (devices) currently selected. This number will change as equipment is filtered or sorted out of the views. For the ground element and aircraft views, the player can compare two different ground elements or aircraft by using the ground element or aircraft 'Compare' windows.

At the bottom of the page are a set of filters that can be used to restrict the display to certain types of elements or weapons

35.8.1. Equipment Tab: Ground Elements View

This view has the following column headers:

Column Title	Contents
Ground Element	Lists the name of each ground element. Selecting a ground element will bring up the ground element compare selection window.
Nat (Nationality)	Lists the nationality of each ground element.
Class	Lists the broad type for that element, the game may use this information when assigning an alternative element if something is missing from the TOE and not available in the replacement pools.
Type	Lists the specific type for the ground element.
SDate (Start Date)	Lists the month and year that the ground element equipment went or will go into production.
EDate (End Date)	Lists the month and year that the ground element equipment stopped or will stop production.
Upg (Upgrade)	Displays whether the ground element will be upgraded by listing the identification number (ID) of the upgrade ground element from the game editor ground element editor section (game editor .pdf). If a ground element does not have an upgrade, this column will be marked by a hyphen (-). Selecting the upgrade ID number will bring up the ground element compare window with the

	ground element compared to the upgrade ground element.
Ground Element Characteristics	These six columns provide the number of men (Men), the tactical speed (Spd), size, fuel usage (Fuel), ammunition usage (Ammo), and reliability rating (Rel) for the ground element.
Production Information	These two columns provide the cost in supplies to build the equipment in the ground element and the maximum number of the equipment that can be built (BldLim) at a single location.
Armour	The armour rating of an AFV/Combat vehicle expressed in terms of front (FArm), side (SArm), and top (TArm) armour.
Load	Lists the load cost for rail, naval and air transport (if applicable) of the ground element.

35.8.2. Equipment Tab: Aircraft View

3554a

This view has the following column headers:

Column Title	Contents
Aircraft	Lists the name of each aircraft model. Selecting an aircraft will bring up the aircraft compare selection window.
Nat (Nationality)	Lists the nationality of each aircraft.
Type	Lists the functional type for the aircraft.
Air Profile	Lists the broad type for that element, the game may use this information when assigning an alternative element if something is missing from the TOE and not available in the replacement pools. This is also used when determining what planes can be assigned to some particular AOGs.
SDate (Start Date)	Lists the month and year that the aircraft went or will go into production.
EDate (End Date)	Lists the month and year that the aircraft stopped or will stop production.
Upg (Upgrade)	Displays whether the aircraft will be upgraded by listing the identification number (ID) of the upgrade aircraft from the game editor ground element editor section (game editor .pdf). If a

	aircraft does not have an upgrade, this column will be marked by a hyphen (-). Selecting the upgrade ID number will bring up the aircraft compare window with the aircraft compared to the upgrade model.
Aircraft Characteristics	These columns provide the number of aircrew, including the pilot, in the aircraft, the maximum speed (SpdM), cruising speed (SpdC), climb rate, maximum altitude (Alt), maximum load, endurance (Endr), range, ammunition load and fuel load.
Production Information	These two columns provide the cost in supplies to build the aircraft and the maximum number of the aircraft that can be built (BldLim) at a single location.
Armour	Lists the armour rating for the aircraft.
Rel (Reliability)	Lists the reliability rating for the aircraft.

35.8.3. Equipment Tab: Weapons (Devices)

Column Title	Contents
Weapon	Lists the name of the weapon (device). Selecting an entry in this column will take you to the Ground or Aircraft tab and show which make use of that weapon
Type	Lists the type of weapon/device (e.g. heavy gun, general purpose (GP) bomb, radar detector, drop tank, etc.). Selecting a particular type within this column will bring up a filtered list of just that type of weapon (device).
Weapon (Device) Characteristics	These columns provide information on the weapon (device) load cost, effect (Eff), range (Rng), accuracy (Acc), range ceiling for AA guns (Ceil), rate of fire (RoF), blast radius (Blast), anti-air target (AAir) efficiency, anti-soft (ASoft) target efficiency, anti-armor (AArm) target efficiency, target penetration (Pen) efficiency, High Explosive Anti-Tank (HEAT) efficiency, and High-Velocity Armor-Piercing (HVAP) efficiency.

35.8.4. Compare Window

The compare window allows the player to look at the information contained in the applicable equipment view of two different ground elements or two different aircraft. This window can be accessed either through the name or the upgrade column. This function cannot be accessed from the 'Weapons' Tab.

If using the name column, the compare window brings up the selected ground element or aircraft on one side and a list of all other ground elements or aircraft on the other side. Selecting a ground element or aircraft will bring it up to complete the compare window. For the ground element view, there is a 'Same Class' check box that lists just the ground elements listed under the type header. Un-checking the box will allow the player to select from all ground elements currently selected.

If the upgrade column is used to access the compare window, it will automatically bring up the upgrade ground element or aircraft model on the other side of the compare window.

Each side of the compare window has four sections as follows:

3555

Section	Contents
Name	Name, type silhouette, country flag and picture.
Weapon (Device)	Contains the same information as in that view of the equipment tab for the currently selected weapon (device). Ground element or aircraft detail section containing the same information as in that view of the equipment tab for that ground element or aircraft. The one exception is the upgrade field, which will list the name of the upgrade rather than the ID number. In addition, selecting the upgrade name will bring up that ground element or aircraft as the other side of the compare window.
List of Weapons (Devices)	Shows all the weapon systems the ground element or aircraft could use in the same format as the ground element or air group detail window. The currently selected weapon (device) will be in orange text and its details will be shown as described above. Selecting the name of a weapon (device) will change the detail section to display its details.

It is worth bearing in mind that the weapon statistics on this tab may be different to those in the main Commander's Report. In this case, those underlying values are

modified by the platform (element) they are mounted on and if this was inefficient they will be lower. Thus the Soviet 152mm gun has lower values when mounted on a KV-2 compared to an ISU-152.

36. Appendix G –INFORMATION AND ADMINISTRATION SCREENS

This appendix provides detailed information on the various screens accessible at the top of the playing area when in either ‘Info Screens’ Mode or the Administration Mode (6.2).

All these screens can be accessed from the tabs at the top of the game map (when the Info Screen Mode is selected), via hotkeys or by using the map (right click on any hex, >> Info Screens and then select the desired screen)

While most of these access pop up screens that in turn allow further action a couple amend the view of units on the map to convey information about the state of your command or supply infrastructure. In this respect the Theatre Box screens are best seen as a hybrid between part of the map and an information screen.

36.1. ORDER OF BATTLE

36100

This screen can be accessed from the info screens menu tab toolbar or Hotkey- ‘o’ or by right clicking on any hex and selecting ‘Info Screens’. In this example, the ‘Theater Boxes’ section has been expanded (the arrow points down) and the total split across the 4 active boxes.

The screen can be divided into two main sub-sections

36.1.1. Left Hand Display

At the top of this screen, all HQs that are set to assault status (21.11.2) are listed.

Below that, when first opened the display will show the supreme HQ(s) (21.11.1)for that side (multiple if this is for the Axis player), air base information, the number of men and equipment in transit between Theatres and the numbers in the off map Theatre Boxes.

For each category the number of infantry, guns and afvs in that command or location are displayed.

This display can be collapsed or expanded by pressing the arrow keys on the left hand side.

If the [>] button next to the command is clicked the screen will show all the commands that directly report. In turn this can be opened to show more and more detail or filtered using the tabs at the bottom of the screen.

36101

36102

The display for Air HQ units will be slightly different. This shows the types of planes in that command.

If this is opened to show more detail then it will show the attached Air Operational Groups and the model and number of ready aircraft.

36104

Selecting a ground unit name will close the OOB screen and take the player to the applicable unit’s detail window. Closing the detail window will take the player back to the map area and the hex that the unit is located in will be selected unless it is an off-map support, in which case closing the support unit detail window will take the player to its HQ unit. Air Groups do not have a link to their detail window.

At the bottom of the screen are check boxes that allow the player to filter six different types of units in and out of the OOB display. The unit types are support, combat, construction support, air group, air base, and amphibious HQ. Default setting is all units included in the OOB.

36105

36.1.2. Right Hand Display

The right side of the OOB screen provides a graphic display of the status of Axis (Germany, Axis Allies) and Soviet army and air forces by showing the number of men, guns, AFV and aircraft in the format xxx (xxx), where the first number is the total number and the second number in parentheses is the number that are ready (undamaged).

Forces are divided between those present on the main map, those in the national reserve and the total (in all theatres). In the example below, the Germans have approximately 1.9 million men in other theatres. For the Soviets, the left hand information shows they have 2.3 million in other theatres and their relative allocation split between the Reserve and the other locations.

36106

36.2. SHOW LOSSES SCREEN

36200

This screen can be accessed from the info screens menu tab toolbar, Hotkey- 'l' or by right clicking on any map hex and selecting 'Info Screens'.

The losses screen provides the phasing player with a summary of each side's current casualties (damaged and destroyed) and permanent losses in terms of men, guns, tanks and planes. A per turn listing of destroyed or disbanded units is also provided. There are a total of three screens (ground losses, air losses, and destroyed and disbanded units) that can be accessed as part of the Show Losses Screen.

36.2.1. Ground Losses

This screen will be displayed by default when the losses screen is first accessed in a given playing session.

The screen is split into two sides. The left hand side provides details on losses by ground element and the right hand side provides an overall summary of losses so far.

As discussed in section 23.10.2 this is divided into three columns. Last Action refers to the last battle actually fought in that turn and will be reset to 0 when a new attack is launched. In between these actions, losses may accumulate if elements are destroyed due to enemy interdiction or as a result of displacement moves as the phasing player's combat units move adjacent to zero strength enemy units (and HQs).

36201

The left side of the screen lists permanent losses by individual type of Ground element displayed in the following columns:

Title	Contents
Nationality	Shows the nationality of the lost Ground Elements
Ground Element type	Gives the exact type of Ground Element including the make of tank or vehicle if this is appropriate.
Permanent Losses	This is split into three columns: Last action; Current turn; and, total. The battle losses will show the results from the most recent

	battle. In the example shown the Germans have just lost some artillery and vehicles in a battle.

The right side of the screen lists losses in numbers of individual men, guns and AFV's for each side displayed as follows:

36202

Losses for the Axis side are at the top and for the Soviets lower down the screen.

Title	Contents
Last Action	This is derived either from the last battle or losses that occur in movement. Losses shown here use the assumption that all manpower and equipment in a destroyed element will be killed or permanently destroyed.
Current Turn and Total	This estimates losses based on the number of elements destroyed or that lose a portion of their strength back to the pool. Since this takes account of manpower being returned to the pool it is a more accurate tally than the recent battle column.

Manpower losses are then broken down into four categories of Killed, Captured, Wounded and Disabled.

Some scenarios may start with manpower allocated to the Disabled pool to reflect earlier fighting and these men may return to their units over time.

Wounded and Disabled manpower can recover and return to the active pools or be moved to the killed pool over time (23.10.2). Thus even if there is no on-map action the 'Disabled' total will vary as some are deemed ready to return to their combat units and others are now dead.

At the bottom of the screen are a number of filters that will affect what is shown in the current turn column in particular:

36203

Using the example above, choosing the Axis Ground Phase filter, as:

36204

Will alter the display to show losses this turn, as:

Index

36205

Note the current turn figures are now below those shown for the only battle undertaken (Last Action). This is due to a better calculation of the relationship between destroyed elements and actual losses.

36.2.2. Air Losses

36206

The left side of the screen is identical to the layout of the Ground Losses screen. The top of the right hand side uses the same categories but differentiates between losses in terms of Pilots KIA and then planes broken down in the categories of: Fighter; Fighter Bomber; Tactical Bomber; Level Bomber; Recon; and, Transport.

Below this is a table that shows the reason for the losses including Air Combat; Flak; Lost on the Ground; and, Operational.

Again, if desired, this can be filtered by phase.

36.2.3. Destroyed and Disbanded Units

This screen provides a by turn list of each unit destroyed or disbanded for the phasing player. Disbanded enemy units will not be displayed or reflected in the totals.

36207

The left side of the screen lists each turn with the number of friendly units destroyed and disbanded, (this will include any merged units) as well as the number enemy units destroyed that turn. Select the arrow keys to expand or fold each turn.

36209

Under each turn are the following columns:

Turn number

Nationality

Name of unit

Unit type

Disband, where disbanded units are indicated by an ‘X’ in that column.

The right side of the screen lists the running totals of destroyed units for each side by type. Friendly disbanded units are included in the total, but are not broken out as

such. The three totals presented are previous turn, current turn, and overall game totals. Enemy disbanded units are not included in this screen.

36210

36.3. PRODUCTION SCREEN

36300

36.3.1. Left Hand Side

On the left hand side of this screen, the player can see current production and reserves of manpower, productive capacity and the elements that make up their air and ground units.

The filters at the bottom of the right hand side can be used to alter the presentation of information. If ‘all pools’ is set to active, the headings will change. This view is particularly useful as it gives a view of the manpower and equipment readily available as opposed to being in ‘transit’ between the production and replacement systems.

36301

If, for example, the ‘all pools’ filter is selected it will first only show the resources that are in the active pools (i.e. could be assigned to elements this turn) and then those in the transit pools (often manpower recovering from wounds or equipment being repaired). This will be shown by altering the Pool column title:

36302

The screen is divided into four sections:

- Manpower
- Special
- Air
- Ground

Manpower shows the number of centres that produce manpower each turn, how many of these are damaged (if none this will show as -), how many men are in the pool and how many have been ‘built’ since the game start.

Special shows the output of all factories other than those that produce air or ground elements.

Left clicking on one of the ‘special’ rows will take you to a display of all the available production centres.

36303

Closing this tab will return you to the main Production Screen.

The Air section is divided into two parts. At the top are shown the actual named air planes currently (or previously – you can vary this view using the Production Filter) in production. Beneath this list is a list of the airframes that are actually produced. These are converted to named aircraft during the production process (28.4).

Now obsolete production is marked with a # and production that has not yet started with **.

36304

Left clicking on an airplane model or ground element will take you to a tab that indicates how the automatic system will upgrade it and a summary of the main characteristics.

36305

The ground section is laid out in a similar manner but some equipment is produced in specialist factories and others using the generic resources available.

36306

In this case, the code ch:xx indicates that production occurs at specific locations. ar:xx indicates that production uses generic resources but there are two variants of this. :need implies no production unless there is demand (and it is also possible that production will not meet demand) ar:xx indicates per turn production of that element.

For both air and ground, changing the production filter alters the view. If this is set to 'On' (as above) then only elements currently in production will be shown. If this is set 'Off' then elements no longer being produced (marked by a #) or that have yet to enter production (**) are also shown.

The units column shows how many units (in all theatres) use that element and the number in brackets [-4] indicates the shortfall between available elements and the number needed to fill out the TOE of all those units.

Clicking on the units number (if more than 0) brings up the relevant Commander's Report tab showing all the units using that element, as:

36307

36.3.2. Right Hand Side

36308

At the top is an indicator of how factories in particular national regions contribute. If you click on one of these, the information on the left will be amended to only show

the data relevant to that nation or region. So, in the example below, selecting Finland will just show the resources available to Finnish elements.

36309

Below this is summary information on available manpower centres, the stores and active pool for the main resources.

Supply, Fuel, Ammo and Trucks in units are shown, the numbers in parenthesis are the amount needed to ensure that every unit has 100% of its requirements.

Also shown is information on the distribution of trucks outside the combat units and the available naval assets.

36310

In addition to the filters at the base altering the view, two will take you to a new display

36311

If the Ground Element Map is chosen, you will be taken to a new screen.

36312

This will provide detailed information about any gaps between the TOE of your units and allocated resources. It will show how many are missing, how many are being refitted, how many are available in the active and transit pools, how many have been built.

If you click on the [+] option, you will be shown more details such as the types of medium tanks in use. As:

36313

Clicking the [+] button again will bring up a list of the units using that equipment (this is divided into units set to refit mode and those not), as:

36314

Clicking on a unit from that list will take you to unit tab for that unit and the appropriate map location or theatre box.

If you close the Ground Element Map screen you will be returned to the production screen.

Index

Production charts will take you to a summary of production, needs, usage and stored for the main parts of the logistics system.

36315

Each resource has four graphs. These show were that resource is needed, how the available stock is used, where it is produced and where it is stored.

So supply is needed to produce ammunition, supply units and for factory maintenance. It is currently used in the production of armaments, unit and factory upkeep. It is all produced by Heavy Industry. The bulk of the current stock is held in the general pools but some is stored in cities or has been converted to ammunition or supply and kept by combat units.

Again if you close this, you will be returned to production screen.

36.4. METRICS SCREEN

As with many of these screens, the Metrics screen uses a number of conventions that are common across most. On the left hand side is a list of all the possible displays, this can be expanded or condensed by pressing on the > button.

36400

The main screen will show the currently chosen chart (by default it will open with the Victory Points screen, as:

36401

Most screens have some tabs at the bottom that allow you to alter the display (whether just to see the Axis or Soviet values or both) and whether to include the actual values on the graph, just to show the last 10 turns or the variation in the values between turns.

36.4.1. Victory Points

This screen includes four options:

36402

The Initiative player is a simple screen that records the turn on which the initiative changed. The Axis High Water Mark screen shows how this increased up to the turn when the initiative changed (and it was then frozen for the rest of the game) and the Sudden Victory Points shows the sudden death value that applied at each turn.

36.4.2. Order of Battle

This is divided into four main sections each with four different screens.

36403

The basic screens will show all the men, guns, AFV and aircraft possessed by each side. The sub-sections just reduce this to show the on-map, in theatre box or in transit between theatre numbers.

Each screen has a similar layout

36404

In this case it shows total manpower for the Soviets and Axis sided over the last 10 turns of the game. The sub-sections allow you to track this by those on map, in the theatres or in transit between theatres.

36.4.3. Losses

The losses screen has a similar layout of 8 screens repeated across 4 sub-sections.

36405

The displayed information is similar for each possible screen but the main one will show all losses regardless of the actual phase and the other options show the losses in a particular phase.

36406

36407

In this case the top image shows all losses in the last 10 turns and the lower image those that occurred in the various logistics phases. Note that since each game turn has two of these, the data is shown in four lines.

As an aside, the negative values for the Axis in their logistics phase reflects that more men were deemed to have recovered from their wounds (and were returned to the active pools and combat units) than were wounded in those phases.

36.4.4. Production

This is divided into 10 separate screens, each with similar layouts. Some of the screens show the current stocks and others the current demand.

36408

So the example below shows the supply levels required by both sides over the last 10 turns.

36409

36.4.5. Theatre Boxes

This display will be different for the Axis or the Soviet player as they have different Theatre Boxes (you can only view those you own).

The Axis list is:

36410

The Soviet list is:

36411

Index

Each gives access to the same set of metrics:

36412

Some of these options give the raw numbers of men, planes and so on, others show whether you meet the basic requirements and others track those requirements.

So below are the Axis air commitment to North Africa, the % against the required garrison and the value required to meet that garrison:

36413

36414

36415

These values effectively track the information available on the Theatre Box screens.

36.5. ON MAP INFORMATION

A number of map displays are available that provide extra information about units, their status and links. This section overviews some of these and how to read the relevant information.

In particular, these views can be accessed from the various information tabs.

36.5.1. Command Efficiency

36500

This view provides a quick overview of your command structure. Units that are in command range of their immediate HQ and report to the level of HQ that is expected (so an Army for the Soviets and Corps for the Axis) are shown in green. If in turn that HQ is in range of its next HQ in the chain this becomes a dark green.

In the example above, the Soviet units on the left of the screen are in full command, those to the right have gaps in their full command chain.

If the unit is shown in yellow it is within 5 hexes of its immediate HQ but this is not at the level expected so there is a malus on leadership tests (15.5.3). In the example, the Soviet units in yellow are reporting directly to a Front HQ.

Finally if the unit is outlined in orange it is more than 5 hexes from its immediate HQ and thus gains no command bonuses.

These values also take into account if the HQ is overloaded (adversely affecting any leader rolls – 15.5.3) and the range to a higher level HQ.

Errata

The Command Range Modifier is slightly different than set out above. When determining the modifier, instead of subtracting 5 from the range before determining the modifier, you subtract the following:

Corps HQ – 5

Army – 10

Army Group/Front – 15

High command - 20

36.5.2. Command Quality

36501

This also provides a quick overview of your command structure but is a little bit more complicated than the efficiency view.

Each HQ is given a notional value based on the quality of the commander (and different values are used for motorized and infantry units so units in the same army may be shown differently). This value is calculated for all the HQs in the chain.

In turn units are shaded green, yellow, orange or red depending on the resulting values (and the values are affected by the range modifiers in 15.5.4).

36.5.3. Supply Priority

36502

This screen is relatively straightforward Units outlined in bright green report to a HQ at supply priority 4, dark green at 3, yellow for 1 or 2 and red if the command is set at 0.

The outline can drop one level if the units have problems in terms of command quality or efficiency as this will adversely affect the amount of supply and ammunition they will receive in the logistics phase due to failed administrative leadership tests.

36.6. WEATHER SCREEN

36.6.1. Main Screen

36600

The weather screen can be accessed from the info screens menu tab toolbar, Hotkey- 'w' or by right clicking on any hex and selecting 'Info Screens'.

The default view is to show the current weather conditions for the entire map area, both playable and non-playable.

Across the top of the screen are options to 'Show Dominating Weather Table', the current turn (given as a date), and the next turn (again shown in date format).

The options on the right hand side allow the player to use the map to show one of the ground or air weather, the climate zones or the road network. Whichever is chosen will provide a key to interpret the colour codes used on the main display.

In every case, the main display will show any weather fronts currently on the map. These will show whether the front is High or Low pressure and its area of origin (8.1).

The forecast is not accurate for either side but due to their own knowledge, and information provided by the Western Allies, the information made available to the Soviet player will be more reliable (8.2).

36.6.2. Road Screen

36601

If this option is chosen the display will change to reflect the road network on the map. This provides a quick overview of where the better roads are in the Soviet Union.

36.6.3. Dominating Weather Table

The Dominating Weather Table provides information on the normal weather to be expected in each weather zone according to the time of the year.

36602

The chart uses the following letter and colour codes:

- Clear: C (Yellow)
- Rain: R (Grey)
- Heavy Rain: Hr (Olive)

Index

- Cold: Co (Light Blue)
- Snowfall: Sf (Blue)
- Blizzard: Bz (Dark Blue)

As set out in the weather section, the dominating weather is affecting by any prevailing fronts to generate the actual weather that affects a given hex (8.1.1). It is modified by any fronts that affect a given region but otherwise this is the most likely weather pattern in a given climate zone for a particular month.

36.7. REINFORCEMENT AND WITHDRAWAL SCREEN

36700

This screen can be accessed from the info screens menu tab toolbar, Hotkey- 'i' or by right clicking on any hex and selecting 'Info Screens'.

The screen consists of three parts, ground units, air groups and AOG reinforcements and withdrawals. The initial screen displays the ground reinforcements and withdrawals.

The basics of using this screen are similar to that of the Commanders Report.

The columns shown can be altered to remove those you are not interested in.

36701

The display can be sorted to only show particular unit types (say Infantry) or for a particular group of turns.

36702

Here, for example, the display could be set just to show turns 100-101.

At the bottom are a number of filters that can also be applied to limit the information shown:

36703

36.7.1. Units Screen

This screen shows the name, relevant turn, type and strength of each unit (note the same unit can appear many times in the full screen). The type of move being undertaken. This will be one of:

Arrived – for units that have arrived at their destination this turn;

36704

Clicking on a unit name will bring up a simplified version of the usual unit tab:

36705

Reinforcement – a freshly raised unit being added to either the map or a Theatre Box;

In transit – units that are currently in transit between locations. Note that units ordered from the National reserve to the Map will be shown with this designation, such as:

36706

Transfer – an existing unit being moved from a Theatre Box to the Map, between Theatre Boxes or from the Map to a Theatre Box.

Disband – the unit will be disbanded (and the component parts placed back in the pools)

Rem – the unit will be removed from the game.

From/To indicate the Theatres or Map that are involved in the move (if relevant). Hex indicates the arrival hex (if on map). If you click on the map hex, you will be taken to that location on the map.

36.7.2. Air Groups

The information for air units is similar.

36707

Most freshly arriving air units will be assigned to the national reserve but some will be placed on the map. If you use the automatic AI management of the air war (17.1.1) these units will be assigned automatically to your Air Operational Groups. If you control this manually, you will have to assign the air units yourself (17.3.1).

As with the units screen, a set of filters are available at the bottom of the screen:

36708

36.7.3. AOG

You need AOGs to manage the air war (whether this uses the AI-assist or is done manually). This screen shows the creation, transfer or disbands of AOGs as the war progresses.

36709

When ‘on map’ AOGs may not always be in use but are available to have air groups assigned either by the AI routine or manually.

36.8. COMMANDERS REPORT

See Appendix 35 for details

36.9. LOGISTICS PHASE REPORT SCREEN

36.9.1. Freight

This section reports on the allocation of supplies, freight and manpower to on map HQs of army level or above.

The top section is divided into three, showing allocation direct to high command (21.11.1) HQs, direct to Army Group/Front HQs and then to Armies. Note that for the High Command and the Army Group HQs this only covers units (on map and support units) that directly report to that HQ. The Army information covers all subordinate commands (Corps) as well as direct allocation to the HQ.

In each case the information shows supply needed, supply received, supply lost in transit, Freight received, replacement manpower received and freight lost in transit.

369100

Below this is a single line that shows the situation for all on map commands.

369101

The next part shows the freight allocation to depots, how much is used (local production) how much is shipped to units and how many trucks were used.

369102

Again a single line then summarises all this information

369103

Index

Below this is information about truck usage, losses and how many were captured.

369104

The next section gives an overview of the allocation of shipping assets between the various sea zones.

369105

Finally it shows how much production was diverted to civilian usage.

369106

36.9.2. Theatre Box

369107

This summarises the training activities in the reserve and other theatre boxes and then ground and air losses by Theatre.

36.9.3. Air Execution

369108

This will be generated after the air execution phase has been completed and shows the data that was available during the resolution.

Information is presented for each night and then day as to the auto-naval patrols that took place, each individual air mission, how many planes were repaired and if new pilots have been assigned to air units.

Beneath this is a summary table of the performance in combat of the various aircraft.

369109

Index

This shows the interaction between types of friendly and enemy planes, and how many enemy planes were destroyed or damaged.

Under the enemy section the view is partly reversed to show what enemy assets inflicted losses on friendly planes. Note this includes the effect of enemy flak on your air units.

369110

The final summary table will show how much fuel and ammunition was used and how many sorties were flown.

369111

36.9.4. Replacement

This section mostly covers allocation of equipment and manpower to air bases as the support needs change. In addition, it summarises how many damaged AFVs have been sent back to the production pool (28.4).

369112

For the Axis player it will also show exports to the Axis Allied nations.

369113

36.9.5. Rename

Lists any units that have changed their name this turn.

369114

For the Soviet player this will also show how many Guards formations have been created:

369115

36.9.6. Surrender

This will show units that surrendered in the last turn and any depots captured from the enemy.

369116

36.9.7. Arrival

This screen will indicate any units disbanded in the logistics phase:

369117

Lists all the units and HQs that have either arrived on the map or in a Theatre box this turn or have been unfrozen.

369118

36.9.8. Leader

Lists changes to the leadership ratings of commanders and any dismissals or deaths in the enemy turn and automatic replacements

369119

36.9.9. Upgrade

Lists any units or HQs that have taken on a new TOE, any air units that have been renamed and changes or upgrades to elements and airframes from the production pool.

369120

369121

369122

36.9.10. Supply

At the top this lists redeployment of trucks between depots and how many trucks were lost to unit movement.

369123

369124

The next section lists all the transfer of freight between industrial centres and how many rail points were available before this phase.

369125

369126

The next section shows shipment of resources, first between cities and then to the active pool and then from the pool to cities as the production phase is run.

369127

At the end it will summarise how many rail points are still available and then break down the transfers into each transaction.

369128

The final information covers how many trucks were repaired and returned to the logistics pool.

369129

36.9.11. Withdraw

This lists unit disbands and withdrawals such as:

369130

36.9.12. Production

For the Soviet player this sections starts by showing lend lease deliveries:

369131

It then lists how many generic elements were built

369132

It then shows how many factories are isolated, lack the resources for full production or have no production due to a lack of inputs.

369133

The final section is a table that shows how much of each item was produced and consumed, can be produced from active or damaged factories, losses due to low or no resources or how much is isolated from the supply grid.

369134

36.9.13. Loss by Type

This shows losses since the start of the game divided into combat, retreat, attrition, surrender or other causes.

369135

36.9.14. Version

Shows the current game version.

369136

36.10. AIR DOCTRINE SUMMARY SCREEN

This screen is discussed in section 37.16 as part of the overall review of the screens used to manage the air war (37.16.9).

36.11. AIR DIRECTIVE SUMMARY

This screen is discussed in section 37.16 as part of the overall review of the screens used to manage the air war (37.16.8).

36.12. THEATRE BOXES

The Theatre Boxes can be accessed by using CNTRL+T, using the tab at the top of the screen or by right clicking on any map hex and selecting 'map information' >> Theatre Boxes.

In addition, information on the units within the Theatre Boxes can be accessed using the Commanders Report (35). In practice, if the player wishes to redeploy units (to the map or to another theatre), change unit settings or TOE then it is often more efficient to use the CR.

If you select the Theatre Box, by default you will be taken to the National Reserve.

The display of each Theatre Box will vary according to the zoom level you are using.

361200

In this case, the map is fully zoomed out and the information displayed for each theatre is minimal.

If the map is fully zoomed in, this display will alter to:

361201

At this level, the status summary screen is shown.

36.12.1. Status Screen

At the top is the Theatre name and, on the right, the current air and ground combat intensity (13.3.1).

Below this is information on how well the Theatre meets the various requirements and other key information:

Index

Content	Notes
Ground	Shows the combined CV (and in brackets the target) and the %. In the case of the example above, the Germans exceed this minimum.

If this is expanded, information is provided on how that total is made up, as:

361202

Air Day	An estimate of the combat power of the day fighters, bombers and patrol aircraft assigned to that theatre
Air Night	An estimate of the combat power of the night fighters, bombers and patrol aircraft assigned to that theatre
Combat Divisions	The number of division equivalents in the Theatre.
Freight	The amount of freight allocated to the Theatre in the last turn (in brackets the amount needed)
Trucks (Used)	The number of trucks allocated to the Theatre
Gnd Element Received	The number of ground elements sent to the Theatre in the last logistics phase
Aircraft Received	The number of aircraft sent to the Theatre in the last logistics phase

36.12.2. Ground

361203

This information display will vary according to the level of detail (zoom) chosen, in the image above this is as large as possible. In that case unit titles, type, and strength can all be seen.

Regardless of zoom level, the units are divided up into the following categories:

- HQ Units
- Armor Units
- Mechanized Units
- Motorized Units
- Infantry Units

Index

- Airborne Units
- Artillery Units
- Anti-Tank Units
- Anti-Air Units
- Mtn Infantry Units
- Engineer Units
- SP Gun Units
- Construction Units
- Rocket Units
- Machine Gun Units

Hovering over any unit will produce a pop up box giving the Units Name, its TOE % and its morale.

361204

Left clicking on any unit will change the view to the unit tab.

361205

Right clicking on the unit will usually produce a pop up box that provides additional information and allows the unit to be transferred to the Map or another theatre. Note this option will only be available outside the National reserve if you have chosen the Enhanced control option (13.3.4).

361206

In the reserve, the option to transfer a unit to the map will be shown (regardless of your choice in terms of Theatre Box management):

361207

Play Note: Transferring units is often far easier done using the tools available in the CR.

The information includes:

- Name;

Index

- Men/guns/afv
- Morale/TOE
- Whether it is set for Refit (on) or not (off)
- The option to transfer the unit to the map or another Theatre and the number of turns this will take.

Units headed with red a border are locked in that Theatre and cannot be transferred for a number of turns. In this case, the option to transfer has been disabled from the pop-up box.

36.12.3. Air

As with the ground screen, the information display will depend on the map zoom. The example below is taken at zoom level 3:

361208

Planes are divided into Fighter; Fighter Bomber; Tactical Bomber; Level Bomber; Recon; Transport and Patrol.

Mousing over any entry, will bring up a display showing the unit name and the number of ready, damaged and reserve planes in the group as well as the current morale.

361209

Left clicking on the unit will bring up the standard air group window

Right clicking on the unit will show the unit name, plane type, number of ready and total planes and current morale. Below this will be the option to transfer the unit to another theatre.

361210

Note that air units can only be transferred to the game map using the routines in sections 17.1 (where the AI will do this for you) or 17.3.2 (if you are doing this manually).

36.13. VICTORY SCREEN

36.13.1. Campaign Games

From the top of the screen it is possible to access the Victory Points section of the metrics screens, again this can also be opened from a hot key or right clicking on any map hex.

For campaign game the Victory Screen is divided into five sub-sections.

On the left hand side can be found:

361300

Victory Points, showing the current score for holding cities and any extra VP awarded for early capture or events.

The Axis High Watermark, this is the highest Axis VP achieved in the game.

Initiative Player. Indicates which player has the initiative and when this will be checked.

Sudden Victory Levels. The VP level needed on a given quarterly turn to trigger a sudden victory.

Sudden Loss Levels, the HWM needed to avoid an automatic Axis defeat.

On the right hand side can be found:

361301

This lists all the cities that count for Victory Points. The information includes their basic value, the turn they were first captured by the Axis side (if relevant, otherwise this is shown as 0) and the turn they were first captured (or retaken) by the Soviets (again this is shown as 0 if the city was historically never captured by the Soviets).

The bonus if the city changes hands this turn is also shown.

Errata 01.02.06, the right hand side of this screen was slightly redesigned compared to the version shown in the manual

36.13.2. Non-Campaign Games

361302

This shows how VP are calculated from cities and combat losses, the current score and the current ratio between the two sides.

36.14. WITEPEDIA

This provides a list of background information on combat formations and other equipment in the game.

361400

If you click on an entry a text box will appear that will give further information. External links will take you to further information outside the game engine.

36.15. EVENTS

361500

This screen lists all the events that have so far occurred. It can be useful if you want to double check what has occurred after closing the pop-up that appears each turn.

36.16. TURN SUMMARY

Note this will appear automatically when you open a turn (even if you have started making your moves and saved part of the way through). In addition, as usual, you can access if from the tabs, or via a hot key. You can disable this functionality using the user preference scheme (36.17).

361600

This screen gives you access to other screens (reinforcements and victory) as well as providing a quick summary of the action over the last complete turn.

At the top is a summary of all that turn's reinforcements (ground and air), clicking on the symbol will take you to the reinforcement screen (36.7).

In particular, friendly losses are on map losses are for the prior 6 phases, so from the start of the last turn friendly air phase through the end of the current turn logistics phase.

OB changes are shown broken into 3 categories for the friendly player, change in strength on the map, change in strength in the TBs, and change in strength of units currently in-transfer. The enemy change in strength is the total of all three categories. These values are all 0 on turn 1 for both sides.

The unit trucks are a snapshot of the position when the turn opens (so once you take any action they are likely not to match the other in-turn information. These show how many trucks are in the units (the figure in brackets is how many are needed), in the depots, pool and undergoing repairs.

Tons of freight, tons of replacements, and number of men received during the logistics phase are snapshots from the logistics report. The difference in the fuel stores+pool is from the metrics screen turn differential.

Combat Unit Alerts provides information on the friendly on-map combat units.

For the section Combat Unit Alerts, if you click on 'Supply Alerts' or 'Strength Alerts' the relevant units will be highlighted on the map.

361601

The final section shows the current victory situation and will be different if currently playing a scenario or campaign game (36.13). In small scenarios, no projected victory result will be given on turn 1.

In the example above, the Axis side retains the initiative, have a HWM of 649 and currently 590 VP. The next sudden victory test requires them to have 750.

Clicking on the box to the left will take you to the main victory screen.

36.17. USER PREFERENCES SCREEN

361700

This can be accessed by selecting the 'Administration' tab or shift-p.

The screen allows the player to choose how to set up the game or to modify the game display.

36.17.1. User Preferences

Screen Mode: Select the appropriate box next to the graphic for windowed or full screen mode. The left choice is windowed mode and the right choice is full screen mode. Default is windowed mode. The player will have to exit the program after making a change for the change to take effect.

Note that if windowed mode is selected for computer screens set at 768 or 800 pixels, some information may be lost on some screens. For those screen resolutions it's suggested to play in Full Screen mode.

Graphic Quality: Select the appropriate box for low or high graphic quality. The down (left choice) arrow is the low setting, while the up (right choice) arrow is the high setting. The game must be exited and reloaded for the change to take effect.

Note that a low setting is recommended for older computers or those with low memory or older graphics cards. If map scrolling and combat or move animations look sluggish, try the low setting. The default graphic quality is the high setting.

Scroll Speed: Sets the time it takes to scroll across the map. Select the left arrow to decrease the time and the right arrow to increase the time or select directly inside the box with the current number and enter the desired time. Scroll speed can be set from 1 to 30 in .5 increments (if directly entered it can be set in .01 increments). The default scroll speed is 4.00.

Message Delay: This sets the amount of time (in seconds) a standard pop-up text message will display on the game screen, to include reserve unit commitment messages. By selecting the left (decrease) or right (increase) arrows or by selecting directly inside the box with the current number and entering the desired time, the value can be set from 0 to 30 seconds in .5 increments (if directly entered it can be set in .01 increments), with a 0 resulting in no messages being displayed. The default setting is 2.00 seconds.

Hex Pop-up Delay: Sets the amount of delay in seconds before the hex pop-up triggered by the mouse cursor will appear. The hex pop-up describes the hex on the map the mouse cursor is currently over.

Setting this value to 0 will prevent the hex pop-up from appearing. The default setting is .33 seconds.

Mouseover Delay: Sets the amount of delay in seconds before a pop-up triggered by the mouse cursor will appear, with the exception of the hex pop-up, which has a separate delay setting (see above). By selecting the left (decrease) or right (increase) arrows, or by selecting directly inside the box with the current number and entering the desired time, the value can be set from 0 to 30 seconds in .5 increments (if directly entered it can be set in .01 increments). The default setting is .33 seconds.

Combat Resolution Message Level: This determines the amount of information given about a battle in the Combat Resolution window that appears at the top of the screen during combat resolution. By selecting the left (decrease) or right (increase) arrows, or by selecting directly inside the box with the current number and entering the desired number, the value can be set from 0 to 7 in increments of 1.

A level of 0 will keep this window from appearing at all. Level 1 will provide only a minimum level of information messages, resolving the battle as quickly as possible. Level 1 will also prevent the window from appearing for any air combat. As the level is increased from 2 to 7, the amount of information reported will increase, with level 7 describing each shot fired by the units in combat.

The default setting is 1.

Combat Resolution Message Delay: This delay sets the amount of delay in seconds before the next combat resolution text message appears in the Combat Resolution window. By selecting the left (decrease) or right (increase) arrows, or by selecting directly inside the box with the current number and entering the desired time, the value can be set from 0 to 30 seconds in .5 increments (if directly entered it can be set in .01 increments).

The default setting is 1.00 seconds

Combat Resolution Close Delay: This delay sets the amount of time in seconds that the combat resolution report window will remain displayed after the battle is resolved and the last message is displayed. By selecting on the left (decrease) or right (increase) arrows, or by selecting directly inside the box with the current number and entering the desired time, the value can be set from 0 to 30 seconds in .5 increments (if directly entered it can be set in .01 increments).

The default setting is 5.00 seconds.

Air Execution Phase Detail: Determines the amount of information provided during the air execution phase. Values available are None, Low, Medium, and High.

The default is Low.

Auto-Save Game: When enabled by selecting the check box to the right of the “Auto-Save Game” text, the current game will be automatically saved at the end of each player turn. The default setting for Auto-Save game is off.

Starting Zoom Level: Sets the default map zoom level that will be used whenever a new scenario or save game is loaded. Select inside the box to the right of “Starting Zoom Level” to toggle between the five zoom levels, Max-Out (level 5), Out (level 4), Medium (level 3), In (level 2), Max-In (level 1).

The default setting is level 2 (In).

Show Move Animation: When enabled by selecting the check box to the right of the “Show Move Animation” text, friendly units will be shown moving from hex to hex on the map, accompanied by their respective sound effect if that preference is enabled. If not enabled, units will move directly to their destination.

The default setting has show move animation enabled.

Animation Speed: This sets the amount of delay in seconds between each hex moved for a unit using move animation. By selecting the left (decrease) or right (increase) arrows, or by selecting directly inside the box with the current number and entering the desired time, the value can be set from 0 to 30 seconds in .5 increments (if directly entered it can be set in .01 increments).

The default setting is .33 seconds.

Music Volume: Sets the volume for music by selecting the left (decrease) or right (increase) arrows, or by selecting directly inside the box with the current number and entering the desired time. The value can be set from 0 to 10 in increments of 1, with a value of 0 resulting in no music.

The default setting is 10.

Sound Effects Volume: Sets the volume for sound effects by selecting the left (decrease) or right (increase) arrows, or by selecting directly inside the box with the current number and entering the desired time, The value can be set from 0 to 10 in increments of 1, with a value of 0 resulting in no sound effects and no mouse click noise (see below).

The default setting is 10.

Mouse Click Volume: Set the volume for mouse clicks by selecting the left (decrease) or right (increase) arrows, or by selecting directly inside the box with the current number and entering the desired time. The value can be set from 0 to 10 in increments of 1, with a value of 0 resulting in no mouse clicks. If sound effects volume is set to 0, then mouse click volume is overridden and no mouse clicks will be heard.

The default setting is 10.

Auto Show Turn Summary: If selected the turn summary screen (36.16) will appear by default when you move onto a new turn.

Reset to Default: Select the button to the right of the “Reset to Default” text to return all user preferences to their default settings. Note that there is a separate default reset for both the user and map preferences section of the preferences screen.

36.17.2. Map Preferences

These settings can be used to customize aspects of the map area. Many of these settings can be changed at any time during the player turn, but some require the player to exit the game and reload prior to the change taking place.

361701

If the appropriate box has a check mark displayed, that feature is enabled; if blank, that feature is disabled.

Show Jump Map: Select the check box to the right of the “Show Jump Map” to display a small jump map in the bottom left corner of the screen that shows the entire map area. Units will be displayed as dots, with black for Axis and Red for Allied units. If Fog of War is enabled, units with a zero detection level will not be shown (10.2). When using a scenario that uses only a portion of the map area, a blue box will display around the playable area.

The default setting has show jump map enabled.

Show Ground Element/Aircraft Icons: Select the check box to the right of the “Show Ground Element/Aircraft Icons” text to display a pop-up window at the bottom of the screen when the mouse cursor is placed over hexes with units in the map area. Icons will appear in this pop-up representing the ground elements and aircraft located in the hex, to include support units attached to cities, HQ units, and combat units in the hex, along with the number of each ground element/aircraft that is in the hex.

Setting the hex pop-up delay (see above) to 0 will also disable the ground element/aircraft icons.

Show Army/Front Colours: Select the check box to the right of the “Show Army/Front Colours” text, to enable each Axis Army or Soviet Front to be represented by a distinct colour. This colour will fill in the unit type box of all units that are part of the Army instead of the standard white fill colour.

The default setting has show Army/Front colours enabled.

Show Move Path: Select the check box to the right of the “Show Move Paths” text, to display compass symbols on the map indicating the path of hexes the currently selected unit(s) will move through to reach the hex where the mouse cursor is presently located. Each hex on the path will contain a compass symbol with the anticipated movement points remaining for the unit if it were to move to the hex.

The default setting has show move paths enabled.

If a unit is moved when the map is at zoom level 5 (Max-Out) then the movement path will not be displayed. Movement compass symbols will be blue for Axis and brown for Soviet units.

Show Allowed Movement: Select the check box to the right of the “Show Allowed Movement” text, to display those hexes that the currently selected unit(s) may move to by shading the hexes the unit(s) cannot move into as well as shading hexes that can be moved into with an additional movement cost.

The default setting has show allowed movement enabled.

Counters Drop Shadow: Will modify how the counters appear on the map.

Non-NATO Unit Symbols: Will replace the usual NATO style unit symbols (34.2) with a pictorial clue as to the unit type.

Unit Values Display Type: This sets whether numerals or short name will be displayed on the unit counters reflecting the name, combat strength and/or movement points of the unit (6.5). This can be set to Numeral or Name by selecting the box to the right of the “Unit Values Display Type” text.

The default setting is Numeral.

Unit Counter Info: This sets the specific information displayed on the unit counters regarding a unit’s combat strength and movement points.

This preference works together with the Unit Values Display Type preference so ‘NAME’ is selected, then only the short name of the top unit in the stack will be displayed, no matter what the unit counter info setting.

This preference can be set to CV-Movement Points or Attack CV-Defensive CV.

Hex Pop-up Location: The default setting results in the hex pop-up appearing on the map where the cursor is currently located.

Show River/Rail Info: Select the check box to the right of the “Show River/Rail Info,” to enable additional hex pop-up information (6.8). When enabled, the hex pop-up text will include information about any adjacent river hexsides, impassable lake hexsides, rail lines that enter the hex, points for victory objectives in non-campaign scenarios, and unit numbers of any units in the hex.

The default setting has “Show River/Rail Info” enabled.

36.17.3. Reset to Default:

Select the check box to the right of the “Reset to Default” text to return all map preferences to their default settings. Note that there is a separate default reset for both the user and map preferences section of the preferences screen.

36.18. GAME OPTIONS SCREEN

361800

This can be accessed by selecting the 'Administration' tab or shift-g.

This screen is used to set up a game and select the relative level of difficulty. In a game against the computer, these values can be varied at any time but in a PBEM game (2.6.2) they are fixed once set up.

Computer Controlled: On/Off for each player; on is AI control, off is human control. By default this will mirror the choices you made on the main loading screen.

Fog of War (FOW): On/Off for each player. If checked on, human players are limited by FOW rules (10.1).

Movement Fog of War: Only displays when FOW is enabled and can only be used in conjunction with FOW. The values are On/Off for each player. Using Movement FOW will limit what you can see when selecting possible unit moves (10.1.2)

Lock HQ Support: On/Off for each player, when on player's HQ's have their HQ Support Level Locked at start. The default setting is lock HQ support on.

Automate AI Air Assist: if this is selected then you will lose the ability to manually set air directives or redeploy your airforce (17.1). In a MP game, this setting applies to both sides and cannot be changed once the game is started.

Enhanced Player TB Control: Allows the players to move units in and out of the Theatre Boxes subject to the rules in section 13.3.4

General Difficulty Level: Cycles through Easy, Normal, Challenging, Hard, and Impossible play levels (2.6.1).

By default this will mirror the choice you made on the main loading screen but you can change any of the numbers here – and produce what is called a customized difficulty level. If you change any of the numbers the general difficulty level will be described as 'CUSTOM'.

This can be helpful as you may find you want to alter the default settings to fit to your own level of expertise in the game or give the AI some additional help if it is playing the side on the offensive.

The notes below simply give you an idea what changing these values does, many of these items are discussed in detail later in the manual.

Morale Level: This is probably the most important factor in WiTE2. Raising this above 100 will impact on combat performance, unit morale and even the cost of

movement into enemy territory. In effect, the basic morale of each unit (12.1) is multiplied by the value you set here. In turn this will alter how the AI operates (30.7)

Fort Build Level: Impacts the speed at which fortification levels are built (20.2).

Logistics Level: Impacts the formulas that determine the amount of supply and replacements a unit receives based on its supply trace, to include through ports, the amount of attrition a unit suffers due to movement, the amount of fatigue added or removed from a unit during a turn, and the amount of fuel expended by generic vehicles. This level also affects the ability of leaders to conduct successful admin checks.

Transport Level: Impacts the amount of rail capacity a player receives each turn.

Admin Level: Provides a straight percentage modifier for the number of administrative points that a player receives at the start of a scenario as well as any allocated during the game (9.1). It also impacts the aviation support level when repairing damaged planes.

Reset to Default: Selecting this button will return all Game Options to their default settings.

Again note, if you are playing the computer you can change any of these values at any time. You can access them either from the loading screen or when playing the game.

36.19. SAVE GAME SCREEN

361900

This can be accessed from the ‘Administration’ tab or shift-s.

The left side of the screen displays the list of folders for already saved games with any games saved without creating a folder listed underneath.

361901

Selecting a folder will display a list of already saved games and the date and time when that game was saved. The save game screen defaults to sorting the save list by date from most recent to oldest.

The list of saves or folders can be sorted either alphabetically by title or by date through selection of the applicable arrow at the top of the display. Selecting the folder icon with an up arrow will take the player back to the list of folders. Selecting a save game title will bring up a description on the right side of the screen that includes the title of the scenario being played, the current turn of that scenario and whether the players are human or computer. A progress bar will display the status of saving the game file.

There are initially four buttons at the bottom left side of the screen as follows:

361902

Save a New Game: Prompts the player to type in a name to create a new save game.

Save over Current Marked Game: Overwrites the save game that is currently selected and highlighted in green.

Delete this Saved Game: Deletes the save game that is currently selected and highlighted in green.

Create New Folder: Prompts the player to type in a name to create a new folder. This will not be displayed if an existing folder is selected.

Once you open a folder, the options are the first three only.

If you have selected the PBEM option then only folders and saves using that format will be shown.

37. Appendix H –INTERFACE WINDOWS

Some of these screens can be accessed from tabs at the top of the screen but most will only be available when you wish to carry out a specific action or look at certain information.

Also certain action links will only display if that particular unit is eligible to conduct that action. Examples include units that do not meet the criteria to disband, merge or go into static mode.

37.1. COMBAT RESOLUTION REPORT

This window displays the results of ground battles and air missions and will normally automatically display at the top of the screen during the execution of ground combat and all air missions except Air Group transfers unless the combat resolution message level has been set to zero. If it is set to nil, then the display is disabled for all combat and air missions, while setting it to level one will disable the display during air recon missions.

When you change this display a pop up like this will briefly appear:

37100

Combat resolution reports for battles and air missions that have occurred during the current or previous turn can also be accessed using the Battle Locator toolbar mode (F11) and selecting the battle marker in the desired hex.

37.1.1. Combat Resolution Window: Basic Information

The basic combat resolution window is divided into three sections.

37101

At the top is information about how many battles took place in that hex (in the example above, this is 2), the game turn, date, ground and air conditions, actual hex details and terrain (clear).

In the example above, 2 battles took place in that hex, one in the Soviet phase, one in the Axis turn, as:

37102

Below this is a split screen. On the left are the Axis details showing at start and final cv (23.8.2, 23.8.3 and 23.8.7), the numbers of men, guns, tanks and planes in action. Below these numbers is an estimate of the number killed or destroyed (23.10), for this screen these numbers are derived on the assumption that all elements recorded as ‘destroyed’ are permanently lost (23.10.2). These values are then repeated for the Soviets on the right hand side.

If the defender won the battle then the report will include a halt range to show the last range where elements fired at each other.

A rough indicator of the number of combat engineer and infantry elements involved in the attack is shown if sufficient were present to affect the combat by suppressing the defender’s fortifications (20.4.3). Note this was the case in the second image above.

Axis forces, whether attacking or defending, are listed on the left and Soviets forces are listed on the right.

If the fort level is reduced during the battle, the post-battle display will show any reduction in fort level due to the battle in the format Fort: x->y, where x is the initial fort level and y is the reduced fort level. If, as below, the defender is forced to retreat then all the fortification value will be removed regardless of the damage done during the actual fighting (20.4.3)

37103

In the third section, the left side of the window lists the Axis and the right side of the window lists the Soviets units, aircraft, and anti-aircraft guns that participated in the battle.

Combat units and support units are displayed with their initial combat value in parentheses.

Units are grouped by HQ unit, with the commanding HQ unit marked with an asterisk and any command battle CV modifier percentage listed in parentheses next to the HQ unit (23.8.6) if more than one HQ is involved. Reserve combat units successfully committed to the battle will be annotated with an 'R' next to their name (23.7).

A hasty attack (23.4.1) is annotated by an '(H)' in the header.

In the case of a ground attack air mission against an air base unit, defending fighter interceptors will be listed at the top of the window. As in the example below, such an attack may cause losses even if no defenders are shown. These losses will be to support staff and guns present at the air base or to planes destroyed on the ground.

If air units are present, then escorts will shown as x(x). The numbers in brackets are the number of escorts that could not reach the target hex but supported the mission for some of the distance.

Note that if aircraft carried out an earlier ground attack mission (18.1.4) on the hex they will be shown in the combat display even if no ground support (18.1.3) took place during the ground phase.

The percent damage done to an airfield during a bombing attack is show as two numbers, first the level of damage before the bombing and then the amount of damage done by the bombing (as in 9+35 the airfield was already at 9% and took 35% damage from the attack).

37104

The results of the battle are listed in the central part with the final ratio of attacker to defender and the result of the battle (23.11).

Index

37105

37.1.2. Combat Resolution Window: General Info

If the 'Show Details' option is selected then a further five screens can be accessed providing more information about the combat resolution.

37106

By default the screen will extend as shown above. Again, in all cases, Axis information is on the left hand side and Soviet on the right.

This screen is divided into three parts. The displays on the left and right hand sides show:

- The total number of units involved in the battle (divided into combat and support units);
- The number of Ground HQ involved in the battle;
- The number of Ground Elements that took part in the battle and their status (ready, damaged or disrupted) when the battle started;

  In effect this means any already damaged elements have already been taken account of in calculating the pre-combat CV for both sides.

- For the active player, the average morale, experience and fatigue of the Ground Elements taking part in the battle;
- The number of air missions and type (recon or bomb, escort, sweep, CAP) flown during the battle.

The central screen shows the consequences of the combat for both sides.

37107

The columns are shown first for Ground Elements and then in terms of Men.

Losses are split between Destroyed, Damaged and Disrupted.

The cause of the losses are divided between those caused by enemy Ground Elements, Air attack, during the retreat (losing side only).

Selecting the 'DESTROYED 'DAMAGED' option will display in parentheses the number of damaged ground elements and associated men that were subsequently destroyed as a result of the battle.

In this case, 33 German elements were destroyed by Soviet ground action, producing the estimate that 264 men were killed (the combat tab works on the basis of simply assuming all the men in a destroyed element were killed). The Soviets had a total of 50 elements destroyed (11 as they retreated).

37.1.3. Ground Losses

This tab provides detailed loss data for the actual ground elements for each side that participated in the battle.

37108

On this tab, Axis losses are always shown first followed by Soviet losses.

The Columns are:

- Total number of those elements involved in the battle (i.e. this will add to the ready elements on the General Info screen);
- The name of the ground element;
- The nationality of the ground element;
- Whether the ground element was destroyed, damaged or disrupted and, if so, whether this was due to enemy ground elements, air attack or during the retreat.

Selecting the 'DESTROYED 'DAMAGED' option will display in parentheses the number of damaged ground elements that were subsequently destroyed as a result of the battle.

Also at the bottom of the tab it is possible to choose to display only infantry, artillery or armour ground elements.

Selecting 'SHOW ALL' will show all the elements present in the battle even if they took no hits or hit nothing.

37109

37.1.4. Ground Combat

This tab provides detailed information on the performance of the various ground elements during the battle.

37110

In addition to columns describing the Ground Elements (as on the losses tab),their combat performance is shown in three respects.

The number of fires per element (FPE) and the number of hits per element (HPE) for that type and number of ready ground elements.

Hits are broken down high explosive (HE) and armor piercing (AP) hits with the range (RNG) for those types of hits.

The total number (TOT) of hits in each category is further broken down into results of destroyed (DES), damaged (DAM), and disrupted (DIS) enemy ground elements.

At the bottom there are filters for infantry, artillery and AFV type ground elements.

37111

If the 'Weapon Stats' filter, if checked, will list the individual devices (weapons) that the ground element is equipped with and the number of hits that those devices inflicted will be listed under the TOT column. This will provide considerable detail about how the various weapon systems in the battle actually performed (remember that many Ground Elements will have more than one weapon).

37112

In general the information on this screen, and the related Ground Losses tab, are probably only of interest if you want to understand why a particular outcome occurred. Typically this may be when an expected victory becomes a defeat or if there were unexpectedly heavy losses.

37.1.5. Air Losses:

37113

Provides data on aircraft losses for each side that participated in the battle. The columns include the aircraft model, and the number and types of losses. The four loss type columns are air to air combat (A2A), anti-aircraft losses (FLAK), operational losses (OPS), and losses of aircraft on the ground (GND).

In this case, one German bomber was lost to operational losses and 43 Soviet bombers were destroyed on the ground.

37.1.6. Air Combat:

37114

Information will be under this tab if Air to Air combat took place (note this can happen in connection to any air mission or if both sides commit Ground Support).

Provides data on the aircraft for each side that participated in the battle as follows:

- NUMxAIRCRAFT: The number model name of the aircraft in the flight resolving the air mission.
- GROUP: The parent Air Group of the aircraft flight.
- MISSION: The mission the flight of aircraft conducted (RECON, BOMB, ESCORT, SWEEP, and PATROL).
- SKILL: The average experience rating of the pilots in the aircraft flight.
- ALT: The mission altitude for the aircraft flight.
- DIS: The percentage of disruption to the aircraft flight, which results in a coordination penalty that reduces the effectiveness of the flight during air combat and attacks on ground targets.
- KILL: The number of enemy aircraft destroyed by the aircraft flight.
- LOSS: The number of friendly aircraft in the aircraft flight that were destroyed during the mission from all causes (See Air Losses above).
- DAM: The number of damage points inflicted on the aircraft in the flight. Aircraft damage points are measured against the aircraft durability rating to determine if the aircraft is destroyed or just damaged.
- DAMD: The number of damage points the aircraft flight inflicted on the enemy aircraft flight.

The ‘SHOW LOADOUTS’ filter at the bottom screen will list any load outs carried by each flight of aircraft if the box is checked.

37115

37.1.7. Battle Locator (F11)

When utilizing the battle locater (F11), the combat resolution window will display the number of battles that have taken place in the selected hex (i.e. 1 of 2) and provide a link to access each battle in turn. The combats will be listed by type rather than order of occurrence, with ground battles first, followed by air missions.

37116

When battle site (F11) mode is selected, the text ‘SHOW BATTLES:’ with a ‘FILTER’ link underneath will appear to the right of the menu tabs. Clicking on the link brings up a list of filters for various types of ground and air combats. These filters are saved off. The player can also repeatedly select the F11 mode to shift between showing all battle sites, ground only or air only. When this is done, it automatically turns on all of the appropriate filters (i.e. all battles, all ground battles only or all air battles only).

Also when in battle locater (F11) mode, moving the mouse cursor over a hex marked as a battle site will display a pop-up with the following information:

37117

If multiple battles occurred in that hex, the pop-up will only display the summary results for the first one.

Forces Attacking and Forces Defending displayed in number of men, guns, AFV, as well as fighter, bomber (includes fighter bombers assigned as bombers), and utility aircraft

Losses for each side displayed in number of men, guns, AFV, as well as fighter, bomber (includes fighter bombers assigned as bombers), and utility aircraft

Result of combat or air mission. In some cases, there will just be a description rather than a result, such as 'Air Combat.'

When units surrender during the logistics phase, a surrender flag battle site icon will display when the battle locater (F11) is enabled.

37118

This will allow the player to obtain information on units that surrendered during the previous turn.

37.1.8. Combat Resolution Message Section

The middle of the combat resolution displays text messages describing the battle. The amount of detail provided is determined by the combat resolution message level setting from 0 to 7.

Air mission and combat messages can include aircraft damaged or destroyed in air to air combat, anti-aircraft or crash-landing, Air Groups breaking off, number of aircraft bombing a target, damaged or destroyed enemy aircraft on the ground, disrupted, damaged, or destroyed enemy ground elements, and mission completion messages (i.e. "JU-88D takes recon photos.").

Ground combat messages can include ground element fire at an enemy ground element at a specific range, result of any hit from specific devices that disrupts, damages or destroys an enemy ground element, and reduction of fortification levels in a defending hex.

The combat resolution message section also includes a pause and an exit button. Selecting the exit button will close the combat resolution window and take the player back to the map area with that battle ended. Selecting the pause button will freeze the combat resolution window at the current place in the battle. The combat

resolution window cannot be “restarted” from that point and the exit button should be used to close the window.

37.2. HQ UNIT DETAIL WINDOW

This window can be accessed by selecting the unit name in the unit bar or right clicking in a blank area of the unit box in the unit bar. It can also be accessed by selecting the headquarters unit hex location in the commander's report. This window displays detailed information on the selected headquarters unit, such as the assigned leader, number of ground elements and their status, attached units, Table of Organization and Equipment (TOE), Headquarters and logistics information.

37.2.1. Main Tab

The top of the screen displays the following information:

37200

Item	Details
HQ Name	Lists the designation of the HQ unit
Wiki Link	If the unit has an entry in the WITEPEDIA a 'W' will be shown next to the unit name. Clicking on this will take you to the relevant entry. Closing that will return you to the unit detail window.
Leader Name	Assigned leader with rollover showing leader ratings and number of victories and defeats as well as link to leader detail window (37.7). Note that Amphibious HQ and Rail Repair HQ units do not have leaders, but in this case, below the unit name are icons and the number of men in and attached to the Amphibious or Rail Repair HQ unit.
Wins/Losses	How many wins and losses have been credited to units under this HQ

The left side of the screen displays the following information:

37201

Item	Details
Unit Counter	A graphic of the unit counter in combat value – movement mode
Assault Indicator	This will show 'SET ASSAULT' if the HQ is not in assault mode (21.11.2) and will show 'ASSAULT' if it is already set to that mode.
Unit Insignia	The historical unit insignia is displayed next to the unit counter for most HQ units.

TOE	An overall description of the unit's current actual TOE represented by two numbers, with the first number being the percentage of actual TOE compared to notional TOE of only ready ground elements and the second number being the percentage of all (ready and damaged) ground elements. Unlike combat and support units, HQ units TOE includes the TOE of support squads. The TOE detail window (37.10) can be accessed here.
MAX TOE	Number that indicates the maximum percentage of replacements the ground elements of the unit can take. The maximum TOE can be set by the player in a range between 50 and 100 percent by selecting the link.
HHQ	Shows the command the unit reports to. Selecting the name of the HHQ will allow units to be reassigned to a different headquarters by accessing the Pick New HQ window (21.11.10).
Morale	The HQ unit's current morale rating. The value in brackets is the current National Morale for that unit (12.1).
Nationality	Lists the nation of the unit
Unit Logistics Requirements	For supplies, fuel and ammo, the amounts are listed by type of supply on hand compared to need. For support squad ground elements, the first number signifies the total support available to the unit as of the previous supply phase compared to the support squad ground elements need. Total support includes support squad ground elements directly attached to the HQ unit as listed on the right side of the screen as well as any support squad ground elements automatically sent from any headquarters units up the chain of command. Excess support squad ground elements in HHQ units are parcelled out to attached HQ units in range based on the need of the units. On the first player turn of each game, since the logistics phase is skipped, the HQ units will not show benefits from HHQ unit support squad ground elements in range. After the first player turn, these values in the unit detail window will include support squad ground elements from HHQ units that were parcelled out during the logistics phase of the turn.
Transportation	Displays the transportation cost for the combat unit for strategic

Cost	rail, naval transport, and amphibious transport movement as well as air transport if applicable.
Vehicles/Need	The number of vehicles actually internal to the combat unit compared to the required number of vehicles. Units on the map can suffer a movement penalty if they do not have the required number of vehicles.
Motorized/Non-Motorized	Displays whether the headquarters unit is motorized or non-motorized. There are 3 types of non-motorized units: 0 – no vehicles 1 – vehicles for supplies only 2 – vehicles for supplies and all non-infantry, non-infantry-weapon elements These values are shown in the unit detail screen next to the word non-motorized in parentheses
Supply Status	Displays the supply status of the unit, In Supply or Isolated.
Withdraw	If the unit will withdraw at some stage, this is indicated here both with the turn number(s) and destination.

The right side of the screen has 3-6 links and two tabs as follows:

37202

Set Color: Allows you to change the colour scheme for the HQ and any attached units.

Supply Details: Links to the supply detail window for that unit (37.12).

Supply Priority: Link to set the supply priority for the HQ unit and attached units. This is not applicable for Amphibious and Rail Repair HQ units.

Show Subordinates (CR): Takes the player to the Unit List section of the Commander's Report and lists the headquarters and all attached combat and support units (35.2.1).

Relocate Unit: Allows the player to relocate a headquarters unit to a friendly town, city or urban hex in supply (21.11.9). The headquarters unit and any attached support units will suffer retreat attrition. This may be done multiple times in a turn.

Disband Unit: Displays if headquarters unit meets the requirements to disband. Allows the player to disband the unit and send its elements back to the respective production pools. Not applicable for Air and High Command HQ units.

37.2.2. Elements Tab

37203

Displays a list of each type of ground element making up the unit, with information on experience (EXP), number of ready (RDY) and damaged (DAM) elements and the current fatigue (FAT) of that type of ground element.

The ground element name has a link to that particular ground element detail window (37.6). For some German units, the number of Hiwi elements is shown in parentheses next to the ground element type. For example, the entry Support (Hiwi 2) indicates that 2 of the support squads in the unit are Hiwi squads (21.2.4).

Support Level: Indicates the number of each type of support unit that the computer will attempt to automatically assign to the headquarters. Next to this are links to increase (++) or decrease (--) the current support level. Selecting the number will toggle support level to LOCK and turn off the automatic movement of support units to and from the headquarters. Note that automatic assignment will not function for that particular headquarters unit if any higher headquarters unit in that HQ unit's chain, including the High Command, is set to LOCKED.

Support Information:

Total Support: The total support provided to all the units under this HQ unit during the logistics phase.

Organic Support: The total ready support squads ground elements in all the units under this HQ unit during the logistics phase.

Total Support Need: The total support needs of all the units under the HQ during the logistics phase.

37.2.3. Assigned Tab

37204

Displays a link with the name of the unit's HHQ.

For ground HQ units, to include amphibious HQ units, below this will be a list of all units that are attached to the HQ unit with the name linked to the applicable unit detail window.

The units are broken out by type (HQ, Armor, Parachute, Artillery, etc,) with the total number of each in parentheses and support units designated by a dash in front of

their name. An asterisk next to the unit means that it was attached this turn and cannot change attachments until next turn.

37.3. COMBAT UNIT DETAIL WINDOW

This window can be accessed by selecting the unit name in the unit bar or right clicking in a blank area of the unit box in the unit bar. It can also be accessed by selecting the combat unit hex location in the commander's report.

37.3.1. Main Tab

This window displays detailed information on the selected combat unit, such as the number of ground elements and their status, Table of Organization and Equipment (TOE), Headquarters and logistics information. There is also a link to the unit supply detail window.

37206

The top of the screen provides the name of the combat unit. Below the unit name are icons and the number of men, guns, and AFV in the combat unit and the numbers of wins and losses for the unit so far.

If the unit has an entry in the WITEPEDIA a 'W' will be shown next to the unit name. Clicking on this will take you to the relevant entry. Closing that will return you to the unit detail window

The left side of the screen displays the following information

37207

Item	Details
Unit Counter	A graphic of the unit counter in combat value – movement mode and its current status (ready, reserve, refit, static, unready, routed or depleted)
Wiki Link	If the unit has an entry in the WITEPEDIA a 'W' will be shown next to the unit name. Clicking on this will take you to the relevant entry. Closing that will return you to the unit detail window.
Unit Insignia	The historical unit insignia is displayed next to the unit counter for most combat units.
Unit Status	This can be ready, refit, reserve, unready, depleted or static
Fatigue	Fatigue level for the unit
Combat Preparation Points	How many CPP the unit currently has.

Unit CV	The unit's attack and defence CV will be displayed with two decimal point precision separated by a slash, for example, 10.38/121.61.
TOE	An overall description of the unit's current actual TOE represented by two numbers, with the first number being the percentage of actual TOE compared to notional TOE of only ready ground combat elements and the second number being the percentage of all (ready and damaged) ground combat elements. The TOE percentages shown on the unit detail window do not include the support elements. For example if the unit has 15 percent of its TOE combat elements ready, and another 5 percent of them damaged, TOE 15/20 will be displayed, even though the unit may have 80 percent of its support elements and thus a much higher percentage of the unit's total elements. It is this TOE percentage of ready non-support elements that is used to determine whether a unit is ready, unready or depleted. The TOE detail window (37.10) can be accessed here.
MAX TOE	Number that indicates the maximum percentage of replacements the ground elements of the unit can take. The maximum TOE can be set by the player in a range between 50 and 100 percent by selecting the link.
HQ Units	Lists the Headquarters unit that the combat unit is attached (HHQ) as well as the operational headquarters (OHQ) that the HHQ is attached. Selecting the name of the HHQ will allow units to be reassigned to a different headquarters by accessing the Pick New HQ window. If a unit cannot be transferred to a new HHQ then this is shown as white text and -*.
Morale	The combat unit's current morale rating and the appropriate national morale value (in brackets)
Nationality	Lists the nation of the unit.
Unit Logistics Requirements	For supplies, fuel and ammo, the amounts are listed by type of supply on hand compared to need. For support squad ground elements, the first number signifies the total support available to the unit as of the previous supply phase

	compared to the support squad ground elements need. Total support includes support squad ground elements directly attached to the HQ unit as listed on the right side of the screen as well as any support squad ground elements automatically sent from any headquarters units up the chain of command. Excess support squad ground elements in HHQ units are parcelled out to attached HQ units in range based on the need of the units. On the first player turn of each game, since the logistics phase is skipped, the HQ units will not show benefits from HHQ unit support squad ground elements in range. After the first player turn, these values in the unit detail window will include support squad ground elements from HHQ units that were parcelled out during the logistics phase of the turn.
Construction Value	Displays the current construction value that the combat unit would use for increasing the fortification level in its hex.
Transportation Cost	Displays the transportation cost for the combat unit for strategic rail, naval transport, and amphibious transport movement as well as air transport if applicable. For units that can be air transported, a second number after a slash mark will display the air transportation cost of the unit.
Vehicles/Need	The number of vehicles actually internal to the combat unit compared to the required number of vehicles. Units on the map can suffer a movement and combat penalties if they do not have the required number of vehicles (22.1 and 23.8.3). Motorized/Non-Motorized: Displays whether the unit is motorized or non-motorized. There are 3 types of non-motorized combat units: 0 – no vehicles 1 – vehicles for supplies only 2 – vehicles for supplies and all non-infantry, non-infantry-weapon elements These values are shown in the unit detail screen next to the word non-motorized in parentheses
Supply Status	Displays the supply status of the unit, In Supply or Isolated (25.9).

Withdraw	If the unit will withdraw at some stage, this is indicated here both with the turn number(s) and destination.

The top of the unit screen will show between one and six possible links and then allow the player to access one of two detailed tabs.

37208

The options/links are:

Item	Details
Supply Details	This will always be displayed and provides a link to the supply detail window for that unit (37.12)
Transfer	Used to assign the unit to another Theatre, including the National Reserve if it is eligible.
Convert	Displays if multi-role combat units in the hex meet the requirements of section and allows the combat unit to be converted to support unit mode. If the multi-role combat unit does not meet the requirements to convert, it will be designated with the plain white text Multi-Role.
Merge Unit	Displays if combat units in the hex meet the requirements of section and allows two units of the same type to be merged.
Motorize Unit	Displays if combat unit is eligible to be motorized. Selecting this link will triple the movement points of the unit for the turn, but at cost in vehicles drawn from the motor pool (first number) and admin points (second number)
Disband Unit	Displays if combat unit is eligible to be disbanded. Allows the player to disband the unit and send its ground elements back to the respective production pools.

The tabs are elements, and assigned.

37.3.2. Elements Tab

37209

Index

Displays a list of each type of ground element making up the unit, with information on experience (EXP), number of ready (RDY) and damaged (DAM) elements and the current fatigue (FAT) of that type of ground element.

The ground element name has a link to that particular ground element detail window (37,6). For some German units, the number of Hiwi elements is shown in parentheses next to the ground element type. For example, the entry Support (Hiwi 2) indicates that 2 of the support squads in the unit are Hiwi squads (21.2.4).

If the unit is eligible to have directly assigned Support Units (21.5) either those already attached, or the option to assign new SU is shown at the bottom of the screen.

37.3.3. Assigned Tab

37210

Displays a link with the name of the combat unit's HHQ.

If the combat unit is eligible to attach support units and has not attached the maximum allowed, 'ASSIGN SUPPORT UNITS' will link to the Pick Support Unit window. The link will be greyed out if the maximum allowed support unit attachments have been made.

37211

Below this will be a list of any support units that are attached to the combat unit with the name linked to the applicable support unit detail window. Selection of the [X] to the right of listed support unit will return that support unit to the headquarters to which the combat unit is attached. An asterisk next to the support unit means that it was attached this turn and cannot change attachments until next turn.

37.4. SUPPORT UNIT DETAIL WINDOW

This window can be accessed from the attached support section of the combat unit, headquarters unit or city detail window by selecting the desired attached support unit. It can also be accessed by selecting the support unit hex location in the commander's report. The window displays detailed information on the selected support unit, to include number of ground elements and their status, Table of Organization and Equipment (TOE), Headquarters and logistics information. There is also a link to the unit supply detail window.

37.4.1. Main Tab

Most of the information is the same as for a Combat Unit but there are some important differences.

37213

The top of the screen provides the name of the combat unit. Below the unit name are icons and the number of men, guns, and AFV in the combat unit.

If the unit has an entry in the WITEPEDIA a 'W' will be shown next to the unit name. Clicking on this will take you to the relevant entry. Closing that will return you to the unit detail window

The left side of the screen displays the following information

37214

Item	Details
Unit Counter	A graphic of the unit counter in combat value – movement mode and its current status (note this will always be REFIT unless the unit is located in the National Reserve)
Wiki Link	If the unit has an entry in the WITEPEDIA a 'W' will be shown next to the unit name. Clicking on this will take you to the relevant entry. Closing that will return you to the unit detail window.
Unit Insignia	The historical unit insignia is displayed next to the unit counter for most combat units.
Fatigue	Fatigue level for the unit
Combat Preparation Points	How many CPP the unit currently has.
Unit CV	The unit's attack and defence CV will be displayed with two

	decimal point precision separated by a slash, for example, 0.05/0.33.
TOE	An overall description of the unit's current actual TOE represented by two numbers, with the first number being the percentage of actual TOE compared to notional TOE of only ready ground combat elements and the second number being the percentage of all (ready and damaged) ground combat elements. The TOE percentages shown on the unit detail window do not include the support elements. For example if the unit has 15 percent of its TOE combat elements ready, and another 5 percent of them damaged, TOE 15/20 will be displayed, even though the unit may have 80 percent of its support elements and thus a much higher percentage of the unit's total elements. It is this TOE percentage of ready non-support elements that is used to determine whether a unit is ready, unready or depleted. The TOE detail window can be accessed here.
MAX TOE	Number that indicates the maximum percentage of replacements the ground elements of the unit can take. The maximum TOE can be set by the player in a range between 50 and 100 percent by selecting the link.
HQ Units	Lists the unit that the support unit is attached (HHQ) as well as the operational headquarters (OHQ) that the HHQ is attached. Note this can be either a combat unit or a HQ. Selecting the name of the HHQ will allow units to be reassigned to a different headquarters by accessing the Pick New HQ window. If a unit cannot be transferred to a new HHQ then this is shown as white text and -*.
Morale	The support unit's current morale rating and in brackets the appropriate National Morale.
Nationality	Lists the nation of the unit.
Unit Logistics Requirements	For supplies, fuel and ammo, the amounts are listed by type of supply on hand compared to need. For support squad ground elements, the first number signifies the total support available to the unit as of the previous supply phase compared to the support squad ground elements needed.

	Total support includes support squad ground elements directly attached to the combat unit as listed on the right side of the screen as well as any support squad ground elements automatically sent from headquarters units in the chain of command.
Construction Value	Displays the current construction value that the support unit would use for increasing the fortification level in its hex.
Transportation Cost	Displays the transportation cost for the support unit for strategic rail, naval transport, and amphibious transport movement as well as air transport if applicable. For units that can be air transported, a second number after a slash mark will display the air transportation cost of the unit.
Vehicles/Need	The number of vehicles actually internal to the support unit compared to the required number of vehicles. Motorized/Non-Motorized: Displays whether the unit is motorized or non-motorized. There are 3 types of non-motorized combat units: 0 – no vehicles 1 – vehicles for supplies only 2 – vehicles for supplies and all non-infantry, non-infantry-weapon elements These values are shown in the unit detail screen next to the word non-motorized in parentheses
Supply Status	Displays the supply status of the unit,.
Withdraw	If the unit will withdraw at some stage, this is indicated here both with the turn number(s) and destination.

The top of the unit screen will show possible links to either allow particular actions or provide more detailed information.

37215

The options/links are:

Item	Details

Supply Details	This will always be displayed and provides a link to the supply detail window for that unit
Transfer Unit	Allows the Support unit to be transferred to another Theatre if eligible
Convert	Displays if multi-role combat units in the hex meet the requirements of section support unit to be converted to combat unit mode.
Disband Unit	Displays if combat unit is eligible to be disbanded. Allows the player to disband the unit and send its ground elements back to the respective production pools.

37.4.2. Elements Tab

37216

Displays a list of each type of ground element making up the unit, with information on experience (EXP), number of ready (RDY) and damaged (DAM) elements and the current fatigue (FAT) of that type of ground element.

The ground element name has a link to that particular ground element detail window (37.6). For some German units, the number of Hiwi elements is shown in parentheses next to the ground element type. For example, the entry Support (Hiwi 2) indicates that 2 of the support squads in the unit are Hiwi squads (21.2.4).

If the unit is eligible to have directly assigned Support Units (21.5) either those already attached, or the option to assign new SU is shown at the bottom of the screen.

37.4.3. Assigned Tab

Support units cannot have other units assigned to them.

37.5. BUILD NEW UNIT SCREEN

37500

This screen allows players to create new formations (both combat and support units). Freshly raised units will be placed in the National Reserve.

At the top is the chosen unit (if any), its unit type, manpower, guns and tanks (if it is at 100% TOE) and the Administrative Point cost to build it.

37501

Clicking on the BUILD text confirms the decision to build it. Clicking on the 1x opens a dialogue to allow between 1 and 10 of that unit type to be ordered.

37502

On the left hand side is a list of all the units that can be built, their cost, the number already built and the limit. Note all these variables will alter as the game progresses.

37503

Clicking on any type will alter the displays at the top and on the right.

At the top on the right is the detail of the last unit ordered. Since this was a Tank Corps it uses existing brigades if it can, or creates new brigades if any were missing. Here it has used 2 existing tank brigades and raised a fresh motorized brigade.

37504

Clicking on any of these entries will take you to the unit tab.

The middle section shows the TOE of the proposed formation and the numbers of elements in the ground pools at the moment. Note this will also include ground elements that can be substituted for the desired element when constructing the unit TOE.

37505

At the bottom is a list of all the existing units of that type. If they are in another theatre (or the reserve) this is indicated next to their name.

37506

Clicking on a unit will take you to the detailed unit tab for that unit.

37.6. GROUND ELEMENT DETAIL WINDOW

This window can be accessed from all unit and city detail windows and provides detailed information on ground elements as follows:

37600

Item	Details
Top Section	
Name	Ground element name and unit type graphic
Nation	Nationality
Type	Unit type
Upgrade to	The upgrade path for this element (if there is one)
Men	Number of men in the ground element
Speed	Relative ability of the ground element to manoeuvre. Used in combat computations.
Size	Relative size of the ground element. Used in combat computations.
Load Cost	Used to determine rail, naval and air transport costs.
Fuel Use	Used to determine fuel usage for supply purposes.
Ammo Use	Used to determine ammo usage for supply purposes.
Reliability	Used to determine if an AFV/Combat vehicle becomes damaged due to mechanical problems (21.2.8).
Build Cost	Amount of supplies required to produce the item.
Pool (Nation Abbreviation)	Number of ground elements of this type currently in the applicable active production pool.
Front, Side, Top Armour	Relative amount of armour possessed by the ground element. This is one factor in determining the effectiveness of enemy fire during combat.
First Year	Year when the ground element entered or enters production.
First Month	Month when the ground element entered or enters production.
Last Year	Year when production of the ground element ended or will end.

Index

Last Month	Month when production of the ground element ended or will end.
Graphic	Picture of the ground element.
Device information	
Device	Number and nomenclature of the devices that are fitted by default to this element.
AMMO	Amount of ammunition carried internally by that device.
ROF and ACC	Modifier to a device's base rate of fire (ROF) and accuracy (ACC). ROF (Rate of Fire) and ACC (Accuracy) are modifiers. ROF is a negative modifier that is applied to vehicle mounted devices to reflect the restrictions of operating the device inside the vehicle. ACC is a positive modifier that increases the accuracy of the device to reflect both a more stable firing platform and superior optics.
RGE	Max Range at which it can be used
vMAN	Summary of the combat effectiveness against manpower.
vARM	Summary of the combat effectiveness against armour

The data for the weapon system shown on this screen may be different to that in the Commander's Report (35.8.3). This is due to modifying the values of that particular weapon for the specific platform it is mounted on.

37.7. LEADER DETAIL WINDOW

This window is accessed by selecting the leader's name in the applicable headquarters unit detail window or from the Commander's Report. It provides information on a leader's ratings, number of victories and defeats, command restrictions and the admin cost to replace the leader (9.2).

37700

The Leader Detail window provides a picture of the leader and displays their rank, first and last name, HQ unit assigned, leader ratings, number of victories and defeats, command restrictions (None, Ground only, Air only, SS only), maximum command allowed (Corps/Army, Army Group, High Command), and dismissal cost in admin points, which links to Pick New Leader window (37.9).

37.8. PICK SUPPORT UNIT AND ASSIGN AA UNIT DETAIL

The Pick Support Unit Type window is accessed by selecting the ASSIGN SUPPORT UNITS link in the Assigned Tab of the unit detail window of headquarters units and combat units eligible to attach support units.

37800

For town, city and urban hexes that can attach anti-aircraft support units, the window is accessed from the city detail window ASSIGN/FORM link. This window allows the player to view and manually transfer available support units.

37801

The window for HQ and combat units list the name of eligible support units sorted by type (Armor, Anti-Tank, Anti-aircraft, Artillery, Engineer, Construction, etc.) the support unit's current ready TOE percentage, and the name of the HHQ that it is currently attached.

If the screen is open for a combat unit then only the types of SU that can be directly attached to an SU are shown.

37802

For cities, the Assign AA Unit window lists the name of eligible AA units, the AA unit's current ready TOE percentage, and the name and range in hexes of the currently attached HHQ or city.

37803

For either window, selecting the name of the support unit will transfer its attachment to the selected HQ unit, combat unit or city.

For combat units eligible to attach support units, the Pick Support Unit Type window will automatically close once the maximum number of support units has been attached.

Unready support units will not be included in the list of available units.

In addition, both HQs and Combat Units can only attach Support Units from a HQ within a certain range.

> ***Play Note: SU can be allocated over a longer range than they can be selected. Thus it might be more efficient to open the HQ that currently contains the desired SU(s) and allocate them using the rules in (21.5.2).***

37.9. PICK NEW LEADER WINDOW

This window is accessed from the leader detail window dismissal cost link (37.7) and allows the player to dismiss the current leader of a headquarters unit and select a new leader.

The window lists all leaders eligible to take command of the selected headquarters units. For each eligible leader, the window displays the admin cost to make the change, leadership ratings, number of victories and defeats, and, if applicable, the headquarters unit that the leader currently commands.

37900

The current leader's leadership ratings and number of victories and defeats is listed at the top of the window for comparison purposes. The sequence of letters corresponds to the following ratings:

P – Political, M – Morale, I – Initiative, A – Admin, M – Mech, I – Infantry, A – Air, V – Victories, D – Defeats.

Selecting a leader will place him in command of the headquarters unit and dismiss the current leader, who will be returned to the leader pool as an unassigned leader. If the new leader requires a promotion to assume command of the headquarters unit, there will be a 'P' next to the admin cost (9.2).

37.10. UNIT TABLE OF EQUIPMENT (T0E) WINDOW

371000

The TOE window can be accessed from the unit detail window of all ground units. The left side of the window displays the name of the notional unit type (e.g. 43 Guards Rifle Corps) and details the generic type (i.e. “medium tank” ground element)and number of ground elements required for that type of unit to be manned and equipped at 100 percent, to include the total number of men in a fully manned unit.

The right side of the window displays the name of the actual unit (e.g. 9th Guards Rifle Corps), and details the actual number of ground elements by generic type in the unit.

An additional column compares the actual number of each ground element to the TOE number as a percentage.

If the ‘Show Ground Element Mapping’ option is selected, then more information will be displayed. This will include the actual elements used in the TOE and any substitutions (such as a different model of medium tank to that set by the ideal TOE).

371001

For units that will upgrade to a different TOE, there is a “Show next TOE (OB) upgrade” link at the bottom right hand side of the window. Selecting that link will take the player to the “TOE Upgrade Window” (37.11).

371002

When viewing the TOE of a unit that has been broken down, the left side of the window will display one third of the parent unit rather than the entire parent unit.

371003

37.11. TOE UPGRADE WINDOW

This window is accessed from the TOE window (37.10) and uses a series of links to display all future TOE upgrades for that particular type of unit. The left side of the screen will show the current TOE (OB) for that unit, which includes the actual type (i.e. Panzer IVf) as well as number of ground elements and total number of men in the unit.

371100

The right side of the screen will show the next TOE (OB) upgrade as well as the month and year the upgrade will commence. Links at the bottom right of the window can be selected to cycle back and forth through all future TOE upgrades in chronological order (Next TOE (OB) and Prev TOE (OB)), or switch to the TOE window.

37.12. UNIT SUPPLY DETAIL WINDOW

This window which is accessible from the unit detail screen or the Commander's Report screen by selecting the unit name provides current info on the supplies/fuel/ammo/vehicles in the unit at the moment (in tons), and the current calculated "need" for each of these items.

In the lower half of the screen, it lists information about what the unit got during the previous logistics phase and where it got it from. The unit supply detail window has three sections as follows:

37.12.1. Current Status

371200

The top part of the screen first lists the supply priority for the unit (25.8) and then provides current supply and vehicle status by listing the amount and percentage in brackets of supplies, fuel, ammo, vehicles and support (if applicable) that are in the unit as compared to the amount required (need) to reach 100 percent of required supply and vehicles.

For vehicles this will also show how many were used in the logistics phase and if any were lost to attrition.

37.12.2. Turn Supply Detail

371201

This section lists each depot that sent freight to the unit with the following information:

- Location of Depot: Usually name of port or city hex where the depot is located.
- Range: The range in hexes to the depot.
- MP: The number of movement points to the depot.
- FrRec: The freight received in one ton increments.
- FrLost: Freight lost in transit to the unit
- VehRec: The number of vehicles received from the depot. These are vehicles that were delivering freight that were then retained by the unit.

A unit may receive goods from up to 5 depots.

Remember if you use the '8' key to map the supply network only the largest source is shown (in this case it would be Polotsk).

37.12.3. Received Detail

371202

This section provides details on the conversion of the freight received into supply, ammunition, fuel and replacements, the amount of supplies consumed, and information and events that occurred during the supply and replacement segment of the logistics phase that impacted the ability of the unit to be replenished.

Item	Details
Supplies, Fuel, Ammo	The amount of each item received (in tons) along with the percentage of need this represents.
Vehicles from Pool	The number of vehicles received from the motor pool (after being converted from freight) along with the percentage of need this represents.
Replacements	The net number of men received as replacements and the freight tonnage that was converted to replacements. This number can be negative if more men are returned to the pool than are received in replacements.
Supplies consumed	The amount of supplies consumed. Note that consumption occurs prior to supplies being received, so the unit uses the supplies it had from the prior turn.
Admin failures	This is the number of admin rolls the unit failed during its attempts to get freight from the depot. Next to this in brackets is any penalty that is being applied to various leader checks due to HQ command range or HQ unit command capacity impacting the HQ units in the unit's chain of command (15.5).
No freight, No trucks, No fuel, No supply, No manpower	The first time a unit does not receive freight due to one of these reasons, a number is placed next to the item. The number is the supply sub-segment in which the lack of the item first occurred. For example, if in a sub-segment where the unit must have less than 30 percent of the needed item, the unit does not get anything because there was a lack of freight at available depots, then a 30 will be displayed next to 'no freight'. The no trucks message can also be received if the unit was trying to requisition vehicles but there were no trucks available in the pool to go to the unit.

	Note there is a chance that the no trucks message may be misleadingly given when vehicles are not required for a delivery as this process only checks to see if there are vehicles in the pool and not whether they were needed at the point of a failure to deliver.

37.13. CITY DETAIL WINDOW

This window can be accessed from the General Information and City box at the top of the screen or by right clicking in a hex. The window normally displays the following information:

371300

Item	Details
Name	Name of town, city or urban hex.
Nation	Nationality of town, city or urban hex
Player	Name of Player that currently controls the hex; Axis or Soviets
Population	Population in points, with each point equal to 50,000 people. This number does not change during a game, even if some of the manpower centers are destroyed. For non-city hexes containing an air base unit, the term 'Airfield' will be displayed. For non-city hexes containing just a depot, the term 'Depot' will be displayed
Storage	Amount of Supply, Fuel, Oil and Resources currently stored in the town, city or urban hex
Factories	List of factory types in the town, city or urban hex in three columns as follows: NUM – Number of that type of factory in the hex (factory points) DAM – Percentage of damage currently sustained by that type of factory DEL- Delay till the factory enters production
Priority (x)	Link displayed if a depot is in the hex to allow the player to change the depot supply priority. Number in parentheses is the current depot supply priority.
Disband Depot	Link displayed if a depot is in the hex to allow the player to disband the depot. This option will not be shown if the city is also a NSS (as in the example above)
Create Depot	Link displayed if there is no depot is in the hex to allow the player

	to create a depot at the cost of 1 admin point. This option will not be shown if the city is also a NSS (as in the example above)
ASSIGN/FORM	Links to the Assign Unit window (37.8), which allows manual attachment of anti-aircraft or construction support units to that town, city or urban hex or a hex with an existing air base unit.
UNITS ATTACHED	Lists air base units and anti-aircraft support units attached to that town, city or urban hex or a hex with an existing air base unit.
Build or Expand Air Base Unit	If no air base unit exists in the town, city or urban hex, a 'BUILD AIR BASE' link will display allowing a player to commence construction of a size 1 air base unit. If there is an existing air base unit in the hex, an 'EXPAND AIR BASE(x)' link (number in parentheses being the current size of the air base unit) will display allowing the player to expand the air base unit to the next size. If the existing air base unit is already at the maximum size three, a plain white text will display 'AIR BASE (3).'

37.14. FACTORY INFORMATION

This can be reached by right clicking on the map, select map information and then selecting 'Factory information', from the tabs at the top of the screen or using the hotkeys.

371400

Factory types can be filtered to show any, all or just one of:

- Ground Chassis;
- Airframe;
- Heavy Industry;
- Armaments;
- Vehicles;
- Resources;
- Oil,
- Fuel;
- Manpower;
- Port;
- Railyard.

371401

Filters can also be used to show factories by various criteria:

371402

For each factory the information shown is size, damage, delay (if greater than 0 the factory will not be available for that number of turns), location and how much was produced in the last turn.

Below this are any changes in size in future terms and (in this case) the aircraft that will use this specific airframe.

371403

If the factory is due to be relocated, this is shown below indicating where it will move to and when. Note this data maybe advanced if the Axis player makes faster than historical gains or the Soviet player wishes to relocate the factory manually (28.7).

371404

37.15. FIND HEX/CITY/UNIT/AIR GROUP WINDOW

371500

This window can be accessed by using the Hotkey- (h). It consists of four parts as follows:

- Find Hex/City/Unit/Air group: Variable header that changes based on selection made in the “Find what” section
- Search Term Input Box: Interactive input box used to enter a hex coordinate to find a specific hex or a search string to locate a town, city, urban hex, ground unit, or Air Group. The search is not case sensitive. Left clicking in that section will bring up the appropriate input box.
- Find What Section: Allows the player to select from four types of things to search for, which are a hex, a city (town, city, urban hex or air base unit location), a unit (on-map or off-map support units), or an Air Group.
- Search Results and “Go to” Section: Displays the result of the search. A “Go to” button takes the player to the appropriate detail window of the city, unit or Air Group or to the specific hex location entered. If the search term entered resulted in more than one city, unit or Air Group, the “Find Next” button will display, allowing the player to cycle through all the possible choices.

37.16. AIR WAR MANAGEMENT SCREENS

37.16.1. Air plane detail window

This window can be accessed when comparing planes to possible upgrades and from the Commanders Report:

On the left hand side of the screen will be the attributes of the current selected weapon system (35.8.3), on the right is information about the chosen plane.

371600

Item	Details
Name	Plane name and graphic
Nation	
Type	
Start Date	Month and year when the plane becomes available
End Date	Month and year when the plane ceases production.
Upgrade	The plane type this model will usually upgrade to.
Crew	
Engines	
Max Speed	The maximum speed the plane can attain
Cruise Speed	The normal speed for the plane
Climb	How fast the plane can climb
Max Alt	The maximum height the plane can fly at – note this is often significantly above its optimal performance level
Max Load	How much the plane can transport
Endurance	
Range	The normal range for the unit, note it can transfer to a new base over longer distances
Reliability	The lower the number here, the more reliable is the plane (18.3.10)

Index

Sortie Ammo	
Sortie Fuel	
Build Cost	
Build Limit	How many frames are converted each turn (assuming full production)
Armor	
Durability	
Maneuver	

Beneath this will be listed the weapons and equipment carried by the plane. At that top this will show the standard equipment and then any optional load outs that can be selected (note these may alter the performance characteristics above.

371601

When a weapon, or piece of equipment, is selected the information on the left of the screen will alter to show how effective that item is. This value may differ from the underlying information shown in the Commander's Report as it will be modified by the characteristics of the plane.

371602

See sections 19.2 and 19.4 of the manual for how to interpret this data.

Basically reliability is better the lower the shown value and reflects the difficult in maintaining the plane and its vulnerability to operational losses. Endurance reflects how long the plane can operate just using its current fuel and built in armament (so this will vary according to the chosen load out). Here the higher the number, the better the plane's performance. Durability mainly reflects vulnerability in A2A combat as it indicates how much damage can be absorbed (again a larger number is better) before it is destroyed.

The information on the air unit can also be accessed by clicking on the air unit name (usually from an air base display). This will contain similar information to that above in the central box.

371603

The extra information is relevant to the Air Group window discussed below.

How to interpret this is discussed in section 37.16.3 below.

37.16.2. Air Base Unit Detail Window

371604

On the left hand side this will show the current TOE, morale and supply status for the air base. In addition it will indicate current size, usage (including any spare capacity) and damage.

On the right hand side can be accessed more detail about the current supply status and the supply priority of the airbase can be changed.

Of the three tabs, Elements will show all the ground elements currently at the base

Assigned will show the air units at the base: This screen can also be used to bring new air units or AOG from the reserve (17.3.1) tab if the AI air assist option (17.1) is not being used.

371605

Air units can be assigned from the Reserve using this screen. Clicking on an air group will open the air unit tab (37.16.3).

37.16.3. Air Group Detail Window

371606

At the top will be shown the unit name, current planes (in this case the Ju-87B-R), the air profile it matches (16.3.2 and 16.4.6) and an image (this is the same as will appear in the hex pop-up as discussed in section 6.4.3).

On the left hand side this will indicate the unit type, air HQ, current AOG (this can be changed manually if the AI air assist option is not being used) and information about the air unit.

Clicking on the AOG will take you to the window to allow it to swap to a new air command or AOG.

Experience, morale and fatigue are the average value for all the pilots in the unit.

Aircraft are divided into those ready to undertake missions, those that are damaged and those that are currently placed into reserve.

The number of aircraft of this type in the production pools and the number of suitable trained pilots who could be allocated.

The number of kills attributed to this unit and how far (as a %) it has travelled this turn.

Whether it can only be assigned to naval missions (if so this will be yes) and, since this is a FB formation, whether it is trained as a fighter or bomber. Clicking on FIGHTER will send the unit off to retrain as a bomber formation (and it will return in 8 weeks).

On the right hand side is the current AD for this Air Group, its mission setting, how it will take on replacement pilots and whether plane upgrades are handled automatically or manually.

The unit can be sent to the national reserve or disbanded.

If 'Aircraft' is selected, the statistics for the current aircraft are shown and the load out can be changed here if desired.

371607

Pilots will show all the pilots currently in the unit. This can be used to assign fresh pilots if desired.

371608

Planes will show the status of all the planes in the unit and whether they are ready, currently being repaired or placed in reserve (usually due to a lack of pilots).

371609

37.16.4. Air Operation Group Detail Window

This is not a tab in the conventional sense but a combination of information that can be seen on the right hand of the screen and on the AOG label if you click on it. The latter will vary according to the chosen zoom level.

371610

On the right hand side is the unit 'counter' display (note there is no on map equivalent). This shows the unit name, the number of ready and total planes (here 119 and 135), and information used if the AI assist routines are in use (17.1).

Below this is a listing of the individual air units, plane type and their airbase. Next to the airbase will be an indicator if the base is overloaded (in this case the green base symbol will be circled in red).

On the label some of this information is repeated. When zoomed in the label will show the number of fighters, bombers and utility aircraft, and the other information above. In addition, the bar and % on the right hand side will show how many planes are ready for operations out of all those in the relevant air group units.

1705

The icons will change as follows:

Stance	Icon
Flexible	**1706**
Hold	**1707**
Retreat	**1708**
Advance	**1709**

For when to fly:

Timing	Icon
Rest	**1710**
Day and Night	**1711**
Night Only	**1712**
Day Only	**1713**
Mixed (this will be shown for an Air Command where different AOGs have different flying orders)	**1714**

Naval air missions and Ground HQ assignment

Assignment	Icon
Follow set HQ	**1715**
Some Naval Air missions	**1716**
No HQ set	**1716a**

If you click on the unit display, you will open this tab:

371610a

This repeats some of the information on the counter such as asset level, assignment and stance. At the top is a visual indication of the types and numbers of planes within that AOG.

In addition the AOG/Air Command label can be used to access other screens or to carry out particular actions.

Left clicking will open a map mode that shows the location of all the air groups on the map, airbases in use by the components of that command are shown in blue, as:

371610b

Right clicking will bring up a menu of options that alter the information on the map (to show the range of the component air groups), order air base resupply, bring new air groups (or AOG depending on the command level) from the reserve, change the command responsibility of the AOG/Air Command or to alter the rules set for the AI-Assistant.

371610c

37.16.5. Manually assigning air units from the National Reserve

This can be done to either move air units to an air base or to bring new AOGs from the reserve (with attached air groups).

To transfer air groups, this screen can be accessed (right click on a hex with an airbase or from the airbase tab) or by right clicking on any AOG or Air Command label.

371611

Information on this screen allows you to reset the indicated AOG (by default this will be shown as the air command nearest the chosen air base). It is also possible to indicate the air units should go to nearby airbases (if the target would be overloaded).

All the columns are sortable and can be used to create rules so as to limit the air units shown (so just FB or just planes of a particular type). More options are at the foot of the screen.

Click on the chosen unit(s) as:

371612

And then TRANSFER to complete the redeployment.

To bring a new AOG to the map, this can be initiated as above or by right clicking on any existing air command label.

To transfer AOGs, this screen can be accessed (right click on a hex with an airbase or from the airbase tab):

To do this first chose an AOG from the shown list

371613

Which will bring up

371614

Remember that AOGs are restricted in the type of air groups they can contain (in this case only ground attack formations). The screen will suggest a suitable air command (this can be changed), airbases it has free and a suggested list of air groups. These can be changed by cancelling the tick and replacing with a different air group. Once you have the desired list, click on TRANSFER.

37.16.6. Manually creating or amending Air Directives Screen

371615

The process for manually creating or amending an air directive is set out in 17.4.

This screen will appear on the right hand side of the map window during the air planning phase when one of the F2-F7 tabs are selected and an air command is chosen.

At the top will be the air command name and the number of planes split into fighters, bombers and utility planes. If wanted the air doctrine tab (37.16.9) can be accessed from here.

Beneath this is a list of the current air directives for that command and the maximum number that can be set. The option to create a new AD that fits the selected type (e.g. pressing F2 for ground support will mean the potential new mission is a Ground support mission).

This will show the target hex, the radius for the mission, the target HQ if it is a ground support mission and whether air groups have been assigned or will be auto-assigned during the turn 17.4.2).

The next box shows the directive details including target priorities, staging base and the days it will be flown (17.4.1).

If you want to assign air groups individually you have the choice of using the AOG or the Air group (you cannot mix this but you can tell a given AOG to split its assets between missions).

If you want to use the Air group option you can do this from the normal display (just select air groups rather than AOG) or by selecting Hide AOG at the bottom of the screen and all the eligible air groups will be shown. In either case, click on ++ to assign the groups you wish to use:

All ‘assigned’ AOGs are shown under the assigned section and available air groups that can be added are below.

It is possible to split an assigned AOG across multiple AD by modifying the participation percentage (17.4.2).

If the AD is set to auto for AOG allocation, then all the available AOGs that could contribute are shown but the ‘assigned’ box is empty apart from indicating the potential maximum number of mission and escort planes.

At the bottom, the various tabs can be used to filter out ineligible planes or to provide more information as to why certain air units are not available.

You can close this window by clicking on the air command (in this case Luftflotte 2) and you will be returned to the main map.

Note that as in section 17.4.3 you can adjust the area covered or the target hex of an AD using on-map functionality. In addition you can use this approach to alter the staging base for the mission.

Errata 01.02.14

Manual Addendum: Changing the Intensity setting shown on the Air Directive (right side of map) Window for an air directive, changes the Air Doctrine intensity setting for the given type of air directive, for the controlling Air Command. Changing this, will also automatically alter all ADs of the same type, within the Air Command, that are not using a Custom intensity. Players wishing to alter the intensity of only one air directive, should set a Custom value by manually setting the Strike Num for the air directive

37.16.7. Air Execution Phase Window

When the air execution phase starts a small message box will appear in the lower right hand corner of the screen.

This will show the statistics so far this turn such as the losses so far.

371616

The air directive that is currently being carried on the screen

371617

Detailed information about the current air directive

371618

At the same time the map will display the current air mission:

371619

The amount of detail and speed can be set by the player (6.2.4).

Most of this information can be later read using the end of turn logistics phase log (36.9).

371620

Equally all the battle sites can be accessed using the F11 option and reviewed on the map.

37.16.8. Air Directive Summary

This will appear at the end of the air execution phase and can also be accessed from the tabs in the second row.

371621

At the top of screen is information on the number of Air Directives carried out, sorties flown and losses for the respective sides.

If you open this tab in the air planning phase, the top row will be slightly different and will allow you to delete all your existing AD with one click:

371621a

Beneath that is the AHQ, its leader, their key traits (air and admin are the most important in the context of the air war) and how many AD could be set.

Each Air HQ is listed with all its air directives (so here, Luftflotte 2 carried out two ground attack directives). The [x] on the left can be used to remove that AD, the next turn the tick can be removed so that the AD is retained but not operate till re-instated.

Beneath the air directive type is the target base (the centre of the AD), S Base used, how wide the AD is (so in this case the various recon missions were ordered to

cover a radius of 10 hexes) and how many eligible hexes were in that area (recon missions will not fly over friendly held hexes).

The information then shows the altitude for the mission, whether it took place at day or night, the intensity of the mission and whether AOGs were allocated by the player or using the Auto-allocation routines (17.4.4) and the weather conditions over the AD target.

The number of actual raids are shown as [+]x indicating how many different missions were flown and the number of sorties shows the total number of air group commitments. Losses for both sides are shown and separated between those planes flying the mission (reconnaissance or bombers usually) and their escorts.

Exec detail shows if the mission will be displayed on the map as it is carried out. NONE may mean that no mission of that type will be shown, ALL means that all missions of that will be shown. To see combat report windows appear during this phase, you must have a detail setting above None (and the actual AD not set to None), and a combat resolution message level of at least 2. The execution detail level will impact the number of messages that come up during the resolution phase.

The number for the raids can be expanded as:

371622

This now shows the target of each ground attack mission, the number of fighters, bombers and other plane types that took part and losses. For the Soviet side, no planes actually flew and the shown losses are planes destroyed on the ground. The final column will show damage to ground targets or physical infrastructure. Here it shows how much the airbase was damaged in each raid but if it was an interdiction mission then it would show that, if it was a ground attack mission it would show any elements that were destroyed.

Clicking on the TYPE will take you to the detailed battle tab with the map centred on that mission, such as:

371623

37.16.9. Air Doctrine

The Air Doctrine screen can be accessed from the map (right click>>info screens) from the tabs at the top of the screen or from setting an Air Directive. In that case, the Air Doctrine screen will only show that particular Air Command but the information and options are the same.

371624

The screen has seven tabs and the first six are similar. They basically allow you to set the default settings that will be used when creating Air Directives. If you are

using the AI-assist then these values will be used for the actual missions, if you are doing so manually you can alter any of these variables for that particular mission (17.4).

On the left hand side is a list of all the Air Commands in your OOB and beneath each is the number of fighters, bombers and other aircraft in that command. The values in pink are the current number of AD and the number of this particular type. So Luftflotte 1 has 4 AD of which one is a ground support mission.

Since ground support is automatically generated during the ground phase you have less control and can only set the altitude, the minimum weather conditions, the Pct to fly, Mission percentage and escort percentage (17.4.1).

These three variables are particularly important. Pct Fly sets the minimum number of ready planes an air group unit needs before it will commit to a mission. Raising this above 20% will mean that less planes might be available but equally will protect air units that have taken heavy losses on an earlier mission.

Mis Pct and Esc Pct will affect how many planes the AI will send on a mission. If this is set at 100% it will pick the number it thinks it needs and if these are lacking then that mission will not take place. If this is set under 100% then more missions may occur but you run the risk of having too few planes. Over 100% will probably mean less missions but you will see more planes actually committed each time.

For the other missions, the display is slightly different, such as:

371625

Here in addition you set whether the mission will take place by day or night, whether escorts will be committed even if they cannot cover all the target area (or even reach the target area), whether the mission will follow the flight path until they reach the last waypoint, and then fly from that waypoint to the specific target hex for the mission. When set to No, the mission will fly directly from the staging base to the specific target for the mission.

Finally you can set the days on which the mission will take place.

The pilots tab shows the average experience of pilots in that command with that type of role. In brackets are the number of pilots who would undertake training (i.e. have experience of 50 or less) if the formation was in the national reserve and the total number of pilots in that category.

371626

On any of these screens clicking on the air command will take you to the table that just shows the doctrine for that command, such as:

Index

371627

This is also the screen that is accessed from the Air Directives tab. Clicking on the Air HQ name again will return you to the main screen.

Note this screen allows you to set targets for bomb city and ground attack style directives if you wish and their relative priority.

37.16.10. Air Transport

This screen can only be accessed during the ground movement phase using the F9 button (18.1.9).

Once the F9 option is selected, this will appear:

371628

The screen can be adjusted to enable air transport of freight, of units or airborne operations.

For freight, at first the screen will show all the eligible staging bases (where sufficient freight is stored – 18.1.9 and 22.5.1). Below this is a list of all the eligible air groups than can be used for transportation including both specialist transport aircraft and level bombers.

The map display will change to show locations with sufficient freight in blue and possible target airbases in green:

371629

You can target a non-airbase hex but the mission will be far less efficient in that case.

By default to use this function, simply left click on the target hex (in this case Bratislava) and the screen will adjust to:

371630

You can amend the staging base by selecting from the list or right clicking on a suitable on map location. You can add more aircraft if you desire. Air groups below the option to 'Select/Deselect ALL Air Groups' are out of range.

You can tab between MULTIPLE MISSIONS as shown and SINGLE MISSION as you wish. Once you have set up the air freight transport mission click on LAUNCH.

The Unit transfer option is similar except that you need to select an airbase with an eligible formation, such as:

371631

Once you select a destination, sufficient transport assets, if they exist, will be assigned as:

371632

Select LAUNCH and the unit(s) will be moved to the new airfield.

The Airborne option is used both to carry out missions and to set the target for an airborne formation (22.5.3). To set a target, simply left click on a desired target hex, as:

371633

If an airborne formation is eligible to be dropped then the option LAUNCH AIRDROP will be shown.

371634

37.16.11. Redeploying Air Groups

This is not a screen as such but how the map adjusts to show the options and process for manually redeploying Air groups, AOGs or complete Air Commands.

When moving AOGs or Air Commands there are two options to designate the target area and airbases.

If the Air Command is selected, then, press down the shift key and that AOG/Air Command will redeploy to the valid airbases in the same pattern as they occupy at their current locations:

371635

If the Ctrl key is depressed then the target area can be resized (so just a single airbase) or a different shape to capture the desired target area.

Once a target area is selected, the chosen set of airbases will be shown

371636

This display will vary according to the zoom level chosen but in any case if the target air base lacks a key asset the red bar will appear to the right of the name. If any or all of fuel, ammunition, supply and support squads are fully present then no indicator will be shown. If one of these is lacking it will be shown in red, a serious shortage in orange and less than 75% in yellow.

Clicking on any named airbase will indicate which air group(s) are due to deploy there.

371637

If the transfer is set to ‘Planned’ then some may be executed immediately and other moves will happen in the logistics phase when suitable assets can be allocated (if possible). Any immediate shortages will be shown by hovering the mouse over the blue airbase label as:

371638

If the intention is to only deploy one or more air groups (but not the entire AOG), then click on the AOG label and it will show the airbases it is currently using. Left click on one of these and the relevant air groups will be displayed:

371639

If you want to move groups (as in this case), then select the airbase and that portion of the AOG will be redeployed. Doing this will enable the transfer of all the air groups from that AOG at that particular airbase.

So in this case, all three air groups at Sudovaya Vishnya will be redeployed but the rest of the AOG will remain on its current base(s).

371640

If you only want to move one, then click on one as:

371641

In this case, the 162 GIAP will be redeployed (note the Air group label is outlined in gold) and the other two will remain in place.

38. Appendix I: SIGNIFICANT TABLES

38.1. ADMINISTRATIVE POINTS COSTS

Action	Admin Point Cost	Remarks
Disband a Unit (note this cost also applies if two units are merged)	1 (Axis), 0 (Soviet)	21.10
Merge a Unit	1	21.10
Manually Create Supply Depot	1	25.72
Priority Repair	1	28.6.4
Reactivate Static Unit	Varies according to the number of trucks the unit would need to be fully mobile	21.8
Temporary Motorization	Varies according to the number of trucks needed	22.2.5
Change leader of a HQ unit	Varies	15.6.2
Create Fortified Zone Unit	4 (Axis player all game); 2 (Soviet player)	20.5
Transfer AA Battalion from City to High Command HQ	3	16.8
Transfer AA Regiment from City to High Command HQ	10	16.8
Transfer Marine or Naval Battalion from City to High Command HQ	3	16.8
Transfer Marine or Naval Brigade from City to High Command HQ	10	16.8

Transfer any flak unit from a city to a city	1	16.8
Transfer Marine or Naval AA to a non-port location	2	16.8
Transfer LW or PVO AA Battalion from City to High Command HQ	15	16.8
Transfer LW or PVO AA Regiment or Brigade from City to High Command HQ	50	16.8
Transfer eligible Construction unit from a HQ unit to a city	1	21.6
Build a Corps (Soviet player only)	20 (1941 Rifle Corps) 10 (1941 Cavalry Corps) 5 (1942-45 any type)	27.5
Build a new Combat or Support Unit (Soviet player only)	Varies according to the game turn and unit type. Some units will initially cost Administrative Points but then will become free.	27.2
Create a City Fort	10	20.6
Place a Command on Assault Status	10 (Axis Army) 20 (Soviet Front)	21.11.2

38.2. NATIONAL MORALE

The national morale of the main factions varies over time and between ground, air and naval units.

This can be checked in game by referring to the game editor and looking under the Nat/Weather tab (41)

38.2.1. Soviet Union

Date From	Ground	Air	Naval
1 June 1941	50	55	45
1 September 1941	45	50	40
1 January 1942	45	45	40
1 July 1942	50	45	45
1 April 1943	50	50	45
1 September 1943	55	50	50
1 January 1944	55	55	50
1 April 1944	60	55	55
1 September 1944	60	60	55

38.2.2. Germany

Date From	Ground	Air	Naval
1 June 1941	75	75	80
1 September 1942 **– see errata**	70	75	80
1 January 1943	65	70	75
1 July 1943	65	70	65
1 January 1944	60	70	60
1 October 1944	60	65	55
1 January 1945	55	65	50

Errata, the German NM changes in July 1942 not September as shown above

38.2.3. Finland

Date From	Ground	Air	Naval
1 June 1941	70	80	70
1 July 1944	70	80	65
1 January 1945	70	75	60

38.2.4. Italy

Date From	Ground	Air	Naval
1 June 1941	40	50	40
1 January 1942	40	50	35
1 January 1944	40	70	35
1 July 1944	40	65	35

38.2.5. Rumania

Date From	Ground	Air	Naval
1 June 1941	45	50	45
1 October 1943	45	45	45
1 July1944	45	45	40
1 January 1945	45	45	30

38.2.6. Hungary

Date From	Ground	Air	Naval

1 June 1941	45	55	30
1 January 1943	50	55	30
1 January 1944	50	50	30
1 January 1945	50	45	30

38.2.7. Slovakia

Date From	Ground	Air	Naval
1 June 1941	60	65	30
1 January 1943	55	65	30
1 July 1943	55	60	30
1 January 1944	55	55	30
1 July 1944	55	50	30
1 January 1945	55	45	30

38.2.8. Bulgaria

Date From	Ground	Air	Naval
1 June 1941	45	50	45
1 January 1944	40	45	40
1 January 1945	40	45	45
1 July 1945	45	50	45

38.3. HQ UNIT PRIORITY AND SUPPLY ALLOCATION

HQ Supply Priority	Percent of Need
4	< 90% (1)
3	< 90%
2	<70%
1	<50%
0	<30% (2)

(1) This can be up to 110% if the unit did not move in the prior turn and is not adjacent to an enemy controlled hex.

(2) Air Base Units will not receive any supply or replacements if set to supply priority 0.

38.4. TERRAIN

38.4.1. Basic Terrain Guide

The images below show typical examples of the various terrain in the game. Note that there are (deliberately) variations between the style chosen so as to break up the game map.

Note that some of the images below show that type of terrain when the map art varies substantially as the ground conditions change.

Note also that changing the map view options will both alter what is shown and sometimes the symbols used. Also the on-map symbol for woods and heavy woods will vary across the seasons regardless of the actual weather.

Airbase (empty/with planes)	**38400**
Airbase (small, medium, large)	**38401**
Capital City	**38402**
Clear (clear/light mud/heavy mud/light snow/heavy snow)	**38403**
Ferry Hex	**38404**
Heavy Woods (clear/light mud/heavy mud/light snow/heavy snow)	**38405**
Light Woods (clear/light mud/heavy mud/light snow/heavy snow)	**38406**
Impassable Hex side (Lake/Sea)	**38407**
Major River (clear/part frozen/fully frozen)	**38408**
Mountain	**38409**
National Border	**38410**

Port	**38411**
Rail (Single, Dual track)	**38412**
River (clear/part frozen/fully frozen)	**38413**
Roads (Average, Good), Road Map option selected	**38414**
Roads (Average, Good), Road Map option not selected	**38415**
Rough (clear/mud/snow)	**38416**
Swamp (clear/mud/snow)	**38417**
Town/City/Urban/Heavy Urban	**38418**
Tundra	**38419**
Water hexes: Ocean/Sea/Lake	**38420**

38.4.2. Terrain Defensive Modifiers

Terrain Type	Defense Modifier	Remarks
Clear	+0	
Bocage	+2	Dense (1)
Desert	+0	
Sand	+0	

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Tundra	+0	
City	+2	
Light Urban	+12	+3 if Isolated Hex Double Dense (2)
Heavy Urban	+16	+4 if Isolated Hex Double Dense (2)
Light Woods	+1	
Heavy Woods	+2	Dense (1)
Rough	+3	Dense (1)
Mountain	+3	Double Dense (2)(3)
Swamp	+2	Dense (1)
Impassable	N/A	

Notes

(1) In dense terrain, the CV of infantry type ground elements is doubled and the CV of AFV and combat vehicle type ground elements are halved.

(2) In double dense terrain the CV of infantry type ground elements is quadrupled (x4) and the CV of AFV and combat vehicle type ground elements is quartered (x1/4).

(3) Mountain and type 0 non-motorized combat units are more effective during battles that take place in a mountain hex.

38.5. WEATHER

38.5.1. Moisture Levels and Impact

Type	Moisture (Water)	Impact on any Snow	Moisture Effects
Clear	Water level decreases by 2-7 each turn	Converts snow to water	Clear = water 1 and Snow 1
Rain	Changes from –1 to +2 each turn / If water is >3 than 1 is subtracted / If water is >7 then an additional – 1 / Water level can't be over 5	Converts snow to water	light mud= water 2-5
Heavy rain	Increases 2-4 per turn Good Roads 1-2 Average Roads 2-3 Poor roads 2-4	Converts snow to water	heavy mud= water 6 to 9
Cold	Snow level in hex changes – 1 to +2 each turn / can't be over 6	Increases snow levels by between -1 and 2 per turn up to level 6	light snow = snow 2 to 3
Snowfall	Increases 1-3 each turn / can't be over 7	Increases snow level by between 1 and 3 per turn up to level 7	snow= snow 4 to 7
Blizzard	Increases 2-4 each turn	Increases snow level by between 2 and 4 per turn up to level 9	heavy snow = snow 8 to 9

38.5.2. Impact on Air Operations

Air Weather Condition	Remarks	Category
Clear		Excellent
Rain	Light Rains/Summer Rains, Additional cloud cover	Fair
Heavy Rain	More overcast and sustained rain	Very Poor
Cold	Light Snow, Clear sky much of the time	Good
Snowfall	More regular Snowfall with more Cloud Cover.	Poor
Blizzards	Snow storms and very low temperature.	Very Poor

38.5.3. Weather and Fortification Decay

	Ground Weather and Added Decay		
Fortification Level	Clear	Light Mud/Light Snow/Snow	Heavy Mud/Heavy Snow
0	20%	40%	80%
1	12%	14%	48%
2	4%	8%	16%

38.5.4. Weather effects on attacking CV

Weather in Attacking Units Hex	Good Roads	Average Roads	Poor Roads

Light Mud	.90	.80	.75
Heavy Mud	.50	.25	.125
Light Snow	1.00	1.00	1.00
Snow (1)	.90	.80	.75
Heavy Snow (1)	.90	.80	.75

Note

(1) Ski units will have their combat value (CV) doubled in snow hexes and tripled in heavy snow hexes and are not affected by the above weather CV modifiers for snow and heavy snow

38.6. LEADERS AND HQs

38.6.1. Optimum Rank per HQ Type

HQ unit type	Soviet Optimum Rank	German Optimum Rank
Corps (Type 4)	GENM	GENL
Army (Type 3)	GENL/GENM	GEN
Army Group (Type 2)	GENA/GENP/MAR	GENO
High Command (Type 1)	GENA/MAR	FM

38.6.2. Command Range and Command Modifiers

Unit	Command Range (in Hexes)	Command Modifier (21.11.4)
High Command (Type 1)	90	Divide Range by 4
Army Group (Type 2)	45	Divide Range by 3
Army (Type 3)	15	Divide Range by 2
Corps (Type 4)	5	Divide Range by 1
Air (Any Type)	90	Range is treated as 0 if the actual distance is

		less than 91 hexes.

38.6.3. Basic Command Capacity Rules

Type	6/41-3/42	4/42-3/43	4/43-3/44	4/44-9/45
Corps (type 4)	9 CP	9 CP	10 CP	11 CP
Axis Army (type 3)	27 CP	27 CP	30 CP	33 CP
Axis Army Group (type 2)	108 CP	108 CP	120 CP	132 CP
Soviet Front (type 2)	72 CP	81 CP	90 CP	99 CP
Soviet MD (type 2)	36 CP	36 CP	36 CP	36 CP

The notional command capacity some HQs can be increased by designating them as 'Assault HQs' (21.11.2).

This can only be done for Axis Army or Soviet Front HQs and the number of such commands will vary by side across the game. Once an army or front is designated as 'assault' all attached HQs and their combat units will be affected.

Note that while this will increase the command points available, there are disadvantages, especially if the formation is on the defensive where its ability to create entrenchments is limited.

38.6.4. Soviet Army Command Capacity Rules

Type	6/41 – 8/41	9/41 – 3/42	4/42 – 9/45
Tank Armies	N/A	N/A	11 CP
Guards Tank Armies	N/A	N/A	12 CP
Combined Arms	21 CP	21 CP	18 CP

Armies			
Shock and Guards Armies	N/A	21 CP	21 CP

38.7. MOVEMENT COSTS

38.7.1. Basic Tactical Movement Costs

Situation	Motorized MP	Non Motorized MP
Leave enemy ZOC	+1	+1
Enter enemy hex (good or average roads)	Morale>80, +1; Morale 51-80, +2 Morale <51, +3	Morale>80, +1; Morale 51-80, +2 Morale <51, +3 subtract one from cost for cavalry units)
Enter enemy hex (poor roads)	Minimum cost of 3	Minimum cost of 3
Enter enemy hex if the unit is a brigade or regiment	In addition to the rules above (and other terrain and weather costs) these units must pay at least 3 MP per any type of enemy controlled hex	In addition to the rules above (and other terrain and weather costs) these units must pay at least 3 MP per any type of enemy controlled hex
Enter enemy ZOC (only if already in enemy ZOC, i.e. ZOC to ZOC) (1)	+4 + same cost as for entering an enemy hex (This is in addition to the entering enemy hex charge that may also apply if	+4 + same cost as for entering an enemy hex (This is in addition to the entering enemy hex charge that may also apply if entering a enemy hex)

	entering a enemy hex)	
Temporary and Soviet Motorized Infantry Units entering enemy hex	+1 in addition to normal costs	N/A
Administrative movement bonus: poor quality road hex (2)	-1	-1
Administrative movement bonus: average quality road hex (2)	-2	-2
Administrative movement bonus: good quality road hex (2)	-3	-3
Combat Delay MP Cost	+3 per Delay Point	+1 per Delay Point
Hasty Attack	+3	+2
Deliberate Attack	+16	+6 (3)
Attack across an unfrozen minor river (in addition to applicable attack cost)	+2/3 of EZOC MP Cost (4)	+2/3 of EZOC MP Cost (4)
Attack across an unfrozen major river(in addition to applicable attack cost)	+2/3 of EZOC MP Cost (4)	+2/3 of EZOC MP Cost (4)

(1) Example: A ZOC to ZOC move by a Morale 83 unit moving to clear terrain is 7 if not entering an enemy hex (1 for clear + 1 for leaving a ZOC + 5 for moving ZOC to ZOC) If the unit was a cavalry unit it would be 6.

(2) The cost of entering a hex can never be reduced below 1 due to this modifier. Note this does not apply in a hex with any interdiction.

(3) Non-motorized type 2 units pay only 5 MPs for a deliberate attack (i.e. those that have vehicles for supplies and all non-infantry, non-infantry weapon elements).

(4) The extra MP cost of attacking across a river is equal to 2/3 of the MP cost (truncated) for moving across a river (based on ice levels) into an EZOC. For example, a motorized unit pays 17 extra points when attacking over a major river when the ice level is 7, 26x2/3 = 17.

38.7.2. Air Interdiction and Tactical Movement Costs

Air Interdiction per hex	Motorized MP	Non Motorized MP
1	NA (1)	NA (1)
2	+1	NA
3	+1	NA
4	+1	NA
5	+2	NA
6	+2	+1
7	+2	+1
8	+3 (2)	+1
9	+3 (2)	+1

(1) Note that any interdiction >0 and <1 will still stop administrative movement in that hex.

(2) There is a +2 MP cap on the movement penalty per hex caused by air interdiction for motorized units moving in clear terrain.

38.7.3. Terrain and Tactical Movement Costs

Terrain Type	Motorized MP	Non Motorized MP
Clear	1	1
City/Light Urban/Heavy Urban	1	1
Woods	2	1
Heavy Woods	See 38.7.4	See 38.7.4
Rough	See 38.7.4	See 38.7.4
Desert	2	2
Sand	See 38.7.4	See 38.7.4
Tundra	3	2

Swamp	See 38.7.4	See 38.7.4
Mountain	See 38.7.4	See 38.7.4
Lake Hex	Impassable	Impassable
Full water hexes	Impassable	Impassable
Ferry (1)	12	6

(1) Special Ferry Rules – Ferry Movement is allowed between two friendly hexes or from a friendly hex to an empty enemy controlled hex. In this case the MP cost of the ferry is 12 for motorized and 6 for non-motorized units.

Units may enter a ferry hex to attack an adjacent enemy land hex. Units that fail an attack from a ferry hex will retreat back to a land hex.

38.7.4. Road Movement Costs for Poor Terrain

For some terrain types, the underlying road network determines the basic movement costs.

Terrain Type	Motorized MP (Road Conditions: Good/Average/Poor)	Non Motorized MP (Road Conditions: Good/Average/Poor)
Heavy Woods/Forest	4/6/8	2/2/3
Mountain [1]	8/16/40	4/6/10
Rough	4/5/6	2/2/2
Sand	8/8/10	4/4/6
Swamp	4/6/8	2/2/3

[1] Note that Mountain units pay 3 MP per Mountain hex regardless of the quality of the road network.

38.7.5. Weather and Tactical Movement Costs

Weather Type	Motorized MP (Road Conditions:	Non Motorized MP (Road Conditions:

	Good/Average/Poor)	Good/Average/Poor)
Light Mud	+1/+1/+1	+1/+1/+1
Heavy Mud	+2/+4/+6	+1/+2/+3
Light Snow	0/+1/+1	0/+1/+1
Snow	+1/+2/+2	+1/+1/+1
Heavy Snow	+2/+3/+3	+2/+3/+3

38.7.6. River Hexsides and Tactical Movement Costs

Level of ice and existence of Enemy Zones of Control (EZOC) (1)	Motorized MP	Non Motorized MP
Minor River Ice lvl 0-4 (No EZOC)	+2	+1
Minor River Ice lvl 0-4 (EZOC)	+6	+2
Minor River Ice Lvl 5-10 (No EZOC) (Frozen)	+0	+0
Minor River Ice Lvl 5-10 (EZOC) (Frozen)	+1	+0
Major River Ice lvl 0-4 (No EZOC)	+4	+2
Major River Ice lvl 0-4 (EZOC)	+18	+5
Major River Ice Lvl 6 (No EZOC)	+5	+3
Major River Ice Lvl 6 (EZOC)	+20	+6
Major River Ice Lvl 7 (No EZOC)	+8	+5
Major River Ice Lvl 7 (EZOC)	+26	+11
Major River Ice Lvl 8-10 (No EZOC) (Frozen)	+1	+0
Major River Ice Lvl 8-10 (EZOC) (Frozen)	+4	+1
Impassable River/Lake hex side (2)	Impassable except when frozen (3)	Impassable except when frozen (3)

(1) Major and Minor Rivers as well as impassable River/Lake hexsides have much less effect on movement and no effect on combat when they are frozen. These hexsides are frozen when the ice level is 5 or greater for minor river hexsides and when the ice level is 8 or greater for Major River and impassable hexsides. There is never any ice in full water hexes (small lakes, large lakes, Baltic, Black Sea, etc.) and they will never be frozen

(2) Supply may be traced through hex side when frozen (Ice level 8-10).

(3) Impassable hexes can be crossed if both sides are friendly controlled, paying the same cost as if crossing a major river hexside when that is frozen at levels 8-10. In addition, these hexes can be traversed if fully frozen (again paying the cost as if it was a major river).

38.7.7. Rail Movement Strategic Movement Penalties

Colour	Usage	SMP Penalty
Bright green	None	No SMP penalty
Dark Green	1 – 4999 tons	No SMP penalty
Yellow	5000 – 9999 tons	No SMP penalty
Yellow	10000 – 14999 tons	+1 SMP penalty
Orange	15000 – 19999 tons	+1 SMP penalty
Orange	20000 – 24999 tons	+2 SMP penalty
Orange	25000 – 29999 tons	+2 SMP penalty
Red	30000+ tons	+3 SMP penalty

38.8. SOFT FACTORS: SYMBOLS AND INTERPRETATION

Soft Factor Summary	Color Code

Symbol	Soft Factor	Bright Green	Dark Green	Yellow	Orange	Red
655	Morale	>85%	71-85%	56-70%	41-55%	<41%
656	Experience	>85%	71-85%	56-70%	41-55%	<41%
657	Supplies	>85%	71-85%	56-70%	41-55%	<41%
658	Fuel	>85%	71-85%	56-70%	41-55%	<41%
659	Ammo	>85%	71-85%	56-70%	41-55%	<41%
660	Number of Support Units attached to a Combat Unit	0	Not used	1	2	3
660	Number of Support Units attached to a HQ Unit	0	1-6	7-12	13-18	19+
661	Supply Priority	4	3	2	1	0
661a	Combat Preparation	100%	75-99%	50-74%	25-49%	<25%

661b	Fatigue	<25%	25-49%	50-74%	75-99%	100%

39. Appendix J: HOTKEY LIST

The hot keys can ease the process of moving between screens and carrying out some actions. They all duplicate other methods such as right clicking on the map or accessing the various tabs at the top of the screen.

The keys are organised into four broad sections, as:

3900

3901

3902

3903

40. Appendix K: LIST OF EVENTS

The events in WiTE2 are designed to reflect the progress of the war in the various Theatre Boxes (TB) or major shifts in the capacity of either side.

Note this list shows the events and their effects in the context of the 1941 Campaign. Campaign games started at a later date may have a slightly different sequence depending on the historical development of the wider war.

Although many of these have a notionally fixed date, in game they may happen earlier or later depending on the player(s) failing to meet, or exceeding, the relevant Theatre Box garrison requirements. Also random events may push back or advance a particular schedule of events.

To access this data, you will need to open the Game Editor and select 'GAME EVENT EDITOR' from the main page:

4001

40.1. FINNISH CAMPAIGN

Event	Likely Start Date	Main Effects
Continuation War	26 June 1941	Axis Finnish TB combat intensity set to very low for Ground and medium for Air. Soviet Northern Front TB ground combat intensity to set to very low and medium for Air.
Finnish Offensive	10 July 1941	Axis Finnish TB ground combat intensity set to Medium, Soviet Northern Front TB ground combat intensity set to high.
Axis capture Salmi	20 July 1941	Ladoga Karelia conquered by the Axis
Axis reach Svir River	1 October 1941	Olonets Karelia conquered by the Axis
Finnish Offensive Ends	1 November 1941	Karelian Isthmus region captured by the Axis, Axis Finnish TB ground combat intensity set to very low. Soviet Northern Front TB ground combat intensity set to low.

		At this stage penalties and benefits can accrue if the forces in the respective theatre boxes are too low or too high.
Axis Capture Leningrad	May happen between 1 December 1941 and 1 March 1942	If the Axis player holds both Leningrad and Terijoki between these turns there is a 5% chance each turn that a one-off transfer of the 1 Finnish Corps (with 3 Finnish Infantry divisions) will occur. Once they arrive they are treated as German units.
Finland Holds Strong; Finland Wavers		These two events will occur if the forces committed to Finland are below or above key thresholds. If either occur they will delay or advance the likely date of the following events.
It's Not Over	1 June 1942	Finland ground requirements increase to 240, Air to 13.
An Opportunity Arises	At least 1 June 1943	Triggered if Kingisepp, Luga and Novgorod are Soviet controlled. Soviets must have at least 110% of their ground requirement in the Northern Front Theatre Box
Soviet Northern Offensive	At least 8 June 1943	Axis Finnish TB ground combat intensity set to high, Soviet Northern Front TB ground combat intensity set to very high. Conditions are Soviet control of Kingisepp, Luga and Novgorod and have 110% of the Ground Defense score needed for the Northern Theatre Box.
It's only a Matter of Time	27 January 1944	Finland ground requirements increase to 300
Soviets Retake Occupied Regions	1 October 1944	Olonets Karelia, Ladoga Karelia and Karelian Isthmus all transferred from Axis Finnish TB to Soviet Northern Front TB
Finland Surrenders	1 October 1944	Can only happen if the Soviets also control Leningrad. Ends combat operations in the Axis Finnish and Soviet Northern Front TBs.

		Triggers the game event ‘Norway on the Frontline’.

Note see also the Norwegian Events

Errata: Axis Capture Leningrad event, only 3 divisions are added to the on-map forces

4 turns after the Finland surrenders event, the bulk of the Axis forces in Finland are placed in the Axis Reserve. As a play note, it is useful to send some of these to Norway or that Theatre Box will be short of ground units.

40.2. NORTH AFRICAN CAMPAIGN

Event	Likely Start Date	Main Effects
Retreat from Cyrenaica	16 December 1941	Cyrenaica TB set to WA Control
Axis Retreat to El Agheila	16 December 1941	Ground and Air combat intensity in Axis North Africa TB set to very low
Axis 1942 Counteroffensive	26 May 1942	Ground and Air combat intensity in Axis North Africa TB set to low
All in For Cairo	2 August 1942	North Africa ground requirement increases to 61
Tunisia must be Held	Follows from above	North Africa Ground Requirement increases to 90, Italy Naval Requirement increases to 15
Allies take Northwest Africa	15 November 1942	Allies capture Atlantic Coast, Atlas, Western and Eastern Algeria
Tripoli Falls	23 January 1943	Tripolitania falls to the Allies
Taking the Mareth Line	28 March 1943	South Tunisia falls to the Allies
Axis in NA Surrender	15 May 1943	Axis North Africa TB set as inactive Triggers game events ‘what’s next?’ and makes

		the Italian Campaign events active.
Whats Next		Western Europe Ground Requirement set to 500, Italy Ground Requirement increases to 175, Italy Air requirement increases to 55, Balkans Ground Requirement increases to 130, Air to 9.

Errata: 9 turns after the Axis surrender, a variable number of units will be placed in the Axis Reserve (including Italian formations).

40.3. ITALIAN CAMPAIGN

Event	Likely Start Date	Main Effects
Allies Invade Sicily	10 July 1943	Air intensity in the Axis Italy TB set to medium and ground to low
Allies Capture Sicily	17 August 1943	Sicily set to WA Control
Italy Surrenders	9 September 1943	Italian surrender, triggers the Campaign for France events and the 'Shrinking Axis'
The Shrinking Axis	Follows from above	Italy Air Requirements reduced to 20, Naval to 5
Allies Land in Italy	9 September 1943	Air and Ground intensity in the Axis Italy TB set to medium
Italian Calabria Region Falls	9 September 1943	Calabria set to WA Control
Allies capture Sardinia	14 September 1943	Sardinia set to WA Control
Allies Capture Corsica	4 October 1943	Corsica set to WA Control
Southern Italian Regions	8 October	Puglia, Basilicata and Campania set to WA

Fall	1943	Control
Molise Region Falls	13 October 1943	Molise set to WA Control
Allies Land at Anzio	22 January 1944	Air and Ground intensity in the Axis Italy TB set to high
Abruzzo Region Falls	24 May 1944	Abruzzo set to WA Control
Rome Liberated	4 June 1944	Lazio set to WA Control
Umbria/Marche Region Falls	23 July 1944	Umbria and Marche set to WA Control
Tuscany Region Falls	5 August 1944	Tuscany set to WA Control
Gothic Line	29 August 1944	Air and Ground intensity in the Axis Italy TB set to medium
Advance into Northern Italy	1 April 1945	Air and Ground intensity in the Axis Italy TB set to high
Italian Campaign Concluded	2 May 1945	Sets Italian TB as inactive, triggers game event 'Austria on the front line'
Austria on the Front Line		Western Europe Ground Requirement increases to 400

Note see also the events related to the WA advance into Germany

40.4. ALLIED INVASION OF FRANCE

Event	Likely Start Date	Main Effects
Dieppe Raid	19 August 1942	Western Europe Ground Requirement increases to 425
The Atlantic Wall	1 January 1944	Western Europe Ground Requirement increases to 530

D-Day	6 June 1944	Air and Ground combat intensity in the Axis Western Europe TB set to very high. Italy Ground requirement drops to 170 and air to 5 for the Axis side.
WA Isolate Channel Islands	30 June 1944	Channel Islands set to WA Control
Lower Normandy Falls	9 August 1944	Lower Normandy set to WA Control
Centre Region Falls	16 August 1944	Centre Region set to WA Control
Loire Region Falls	20 August 1944	Loire set to WA Control
Paris Liberated	25 August 1944	Ile de France set to WA Control
Disaster in the West	25 August 1944	Ground combat intensity in the Axis Western Europe TB set to high. Approximately 20% of the Axis forces in the Western Europe TB will surrender, ground requirement set to 510.
SE French Coast Falls	28 August 1944	Provence and Languedoc set to WA Control
Upper Normandy Falls	1 September 1944	Upper Normandy set to WA Control
Allies Capture SE France	3 September 1944	Rhone-Alpes, Auvergne and Limousin set to WA Control
Allies Capture SW France	4 September 1944	Poitou, Aquitaine, Midi-Pyrenees and Andorra set to WA Control
Burgundy Region Falls	14 September 1944	Burgundy and Franche-Comte set to WA Control
NE France	15	Picardy, Champagne, Lorraine, Alsace and

Falls	September 1944	Luxembourg set to WA Control
Allies Capture Belgium	17 September 1944	Pays de Calais, Wallonia and Flanders set to WA Control
Allies Capture Brittany	19 September 1944	Brittany set to WA Control
South Netherlands Falls	25 September 1944	South Netherlands set to WA Control
Axis Ardennes Offensive	16 December 1944	Ground combat intensity in the Western Europe TB set to very high
Failure in the Ardennes	30 December 1944	Ground combat intensity in the Western Europe TB set to high
Crossing the Rhine	8 February 1945	Air and Ground combat intensity in the Western Europe TB set to very high

See also Allied invasion of Germany events

Errata: 9 turns after the 'Disaster in the West' event roughly 20% of the units that were in the West Theatre Box will re-appear in the Axis Reserve.

40.5. STRATEGIC BOMBING CAMPAIGN

Event	Likely Start Date	Main Effects
RAF Raids 1941	1 July 1941	Will cause limited damage to some German manpower factories
RAF Raids 1942	1 January 1942	Will cause limited damage to some German manpower factories
Allied Bombing Increases	1 July 1942	Western Europe Air Defence requirement set to 85, Night Air Defence requirement set to 58
Air Offensive in WE	17 August 1942	Air combat intensity in the Western Europe TB set to medium

RAF Raids 1943	1 January 1943	Will cause some damage to some German manpower factories
RAF Long Range Raids 1943	1 January 1943	Will cause some damage to some German manpower factories
8AF Raids early 1943	1 January 1943	Will cause some damage to German Railyards and HI factories
Escorts arrive over Germany	1 July 1943	Western Europe Air Defence requirement set to 140, Night Air Defence requirement set to 65
8AF Raids late 1943	1 July 1943	Will cause increasing damage to German Railyards, aircraft and HI factories
9AF Raids 1943	1 July 1943	Will cause some damage to the Fuel and Oil production in Romania
Battle of Berlin	1 December 1943	Western Europe Air Defence requirement set to 170, Night Air Defence requirement set to 70
15AF Raids late 1943	1 November 1943	Will damage Axis railyards in Northern Italy
RAF Raids 1944	1 January 1944	Will cause some damage to some German manpower factories
RAF Long Range Raids 1944	1 January 1944	Will cause some damage to some German manpower factories
8AF Raids early 1944	1 January 1944	Will cause damage to German Railyards and Airframe factories
15AF Raids early 1944	1 January 1944	Will damage Axis railyards and Fuel production
Air Offensive Intensifies	1 April 1944	Air combat intensity in the Western Europe TB set to high.
P-51s in Action	1 June 1944	Western Europe Air Defence requirement set to 230
8AF Raids late 1944	1 June 1944	Will cause damage to German Railyards and Synthetic Fuel factories

15AF Raids late 1944	1 July 1944	Will damage Axis railyards, Fuel and Synthetic Fuel production
Final Effort	1 December 1944	Western Europe Air Defence requirement set to 270
RAF Raids 1945	1 January 1945	Will cause damage to German manpower factories and Railyards
RAF Long Range Raids 1945	1 January 1945	Will cause damage to German manpower factories
8AF Raids 1945	1 January 1945	Will cause damage to German Railyards
15AF Raids 1945	1 January 1945	Will cause damage to German Railyards

40.6. WESTERN ALLIED INVASION OF GERMANY

Event	Likely Start Date	Main Effects
Pfalz Region Falls	13 March 1945	Pfalz map region set to WA control
Hesse Region Falls	4 April 1945	Hesse map region set to WA control
Westphalia Region Falls	4 April 1945	Westphalia map region set to WA control
Baden Region Falls	11 April 1945	Baden map region set to WA control
Thuringia Region Falls	11 April 1945	Thuringia map region set to WA control
Gelderland Region Falls	18 April 1945	Gelderland map region set to WA control
Friesland	18 April	Friesland map region set to WA control

Region Falls	1945	
Hannover Region Falls	18 April 1945	Hannover map region set to WA control
Rheinland Region Falls	18 April 1945	Rheinland map region set to WA control
Wuerttemberg Region Falls	23 April 1945	Wuerttemberg map region set to WA control
Emilia-Romagna Region Falls	23 April 1945	Emilia-Romagna set to WA control
Piedmont Region Falls	27 April 1945	Piedmont set to WA control
Bavaria Region Falls	28 April 1945	Bavaria map region set to WA control
Veneto Region Falls	28 April 1945	Veneto set to WA control
Tyrol Region Falls	2 May 1945	Tyrol map region set to WA control
Liguria Region Falls	2 May 1945	Liguria set to WA control
Lombardy Region Falls	2 May 1945	Lombardy set to WA control
Alto-Adige Region Falls	2 May 1945	Alto-Adige set to WA control
Friule Region Falls	2 May 1945	Friule set to WA control
Istria Region Falls	2 May 1945	Istria set to WA control
Salzburg Region Falls	4 May 1945	Salzburg map region set to WA control
Upper Austria Falls	5 May 1945	Upper Austria map region set to WA control

Schleswig-Holstein Falls	6 May 1945	Schleswig-Holstein map region set to WA control
Allies Capture Holland	7 May 1945	Holland set to WA control
Weser-Ems Falls	7 May 1945	Weser-Ems map region set to WA control
Western Allies takes Berlin	1 June 1945	A hypothetical event that will trigger and end the game by forcing the surrender of any remaining Axis powers.

40.7. BALKANS EVENTS

Event	Likely Start Date	Main Effects
The Soft Underbelly	1 August 1942	Balkan Ground Requirement increases to 125, Air to 6
Axis Facilities Sabotaged	26 September 1942	Air and Ground combat intensity in the Axis Balkans TB set to very low
Yugoslav Royalists Advance	13 October 1943	Air combat intensity in the Axis Balkans TB set to very low, ground combat intensity to low
Bulgaria surrenders to Soviets	Variable	Bulgaria set to Soviet control if the Soviets occupy Bucharest
Serbia under Soviet Control	31 August 1944	If the Soviets control Szeged and Timisoara, map region Serbia will be made playable.
Albania under SU Control	Variable	Once this is triggered, Albania will come under Soviet control within 37 days.
Macedonia under SU	Variable	Once this is triggered, Macedonia will come under Soviet control within 37 days.

Control		
Bosnia and Herzegovina Liberated	Variable	Bosnia and Herzegovina removed from the Balkan TB and made playable on the map
Montenegro Liberated	Variable	Once this is triggered, Montenegro will come under Soviet control within 37 days.
Soviet Offensive on Belgrade	Variable	Air combat intensity in the Axis Balkans TB set to low. Triggered by Soviet control of one of Turnu Severin, Calafat, Teregova, Lugoj, Timosoara, Szeged or Pecs
Mainland Greece Liberated	15 October 1944	Peloponnese, Greek Islands, Attica, Thessaly, Epirus, Thessalonika, Macedonia and Thrace set to WA Control
Belgrade Liberated	20 October 1944	Air and Ground combat intensity in the Axis Balkans TB set to low

Related to these events are the surrender rules for Slovakia and Romania. See section 14.3 of the main rules for these.

40.8. NORWEGIAN EVENTS

Event	Likely Start Date	Main Effects
Norwegian Resistance Begins	20 November 1941	Ground combat intensity in the Axis Norway TB set to very low
Allies Raid Norway	27 February 1943	Ground combat intensity in the Axis Norway TB set to very low Ground Requirement increases to 80, Naval decreases to 13
Soviets advance into	On or After 18 October	Ground and Air combat intensity in the Axis Norway TB set to low. Ground and Air combat intensity in the Soviet Northern Front TB set to

Norway	1944	low
Norway on the Frontline	Once the above event triggers	Norway air requirement increases to 9

40.9. PARTISAN WAR

The Partisan war is handled within the Theatre Box but some of the events will place increasing levels of interdiction on the map.

Event	Likely Start Date	Main Effects
Soviet Partisans in Bielorussia	27 July 1941	Ground combat intensity in the Axis Soviet Union Garrison TB set to intensity 1
Consolidating Control	10 August 1941	Soviet Union Garrison Ground Requirement increases to 55
Soviet Partisans	10 August 1941	Partisan attacks (intensity 1 or 2) in many USSR regions, intensity of ground combat in the Axis Soviet Union Garrison set to very low.
Winter is here	15 December 1941	Western Europe Ground Requirement decreases to 280, Soviet Union Garrison requirement increases to 85
Smolensk Partisans	1 January 1942	Partisan attacks (intensity 2) in the Smolensk Region
Partisan Movement under Stavka	30 May 1942	Ground combat intensity in the Axis Soviet Union Garrison TB set to low
Orel Partisans	1 October 1942	Partisan attacks (intensity 1) in the Orel Region
Security Forces Reorganize	20 October 1942	Soviet Union Ground Requirement increases to 130
Partisan Movement	28 February 1943	Ground combat intensity in the Axis Soviet Union Garrison TB set to low

Intensifies		
Central Area Partisans	1 August 1943	Partisan attacks (intensity 1) in the Orel, Kursk and Smolensk Regions
Belorussia Heats Up	10 August 1943	Partisan attacks (intensity 1) in Belorussia
Final Push	1 January 1944	Partisan attacks (intensity 3) in Belorussia
Soviet Partisan Movement Ends		If the Soviets own Kaunas, Brest-Litovsk and Lvov, the partisan war ends.

40.10. US ENTRY TO THE WAR

Event	Likely Start Date	Main Effects
US Enters the War	11 December 1941	Italy Ground Requirement increases to 70, Air to 32, North Africa Ground Requirement increases to 58, Air to 25, Naval to 6, Norway Ground Requirement increases to 75, Air to 6, Naval to 20; Finland Ground Requirement increases to 195; Western Europe air requirement to 70, night air to 37

40.11. HISTORICAL EVENTS

The game includes a number of historical events that simply provide information about the wider war. These have no direct impact on gameplay.

40.12. SOVIET ADMINISTRATIVE POINT GAINS AND SCRIPTED REINFORCEMENTS

Event	Likely Start Date	Main Effects

Soviets release reserves	25 November 1941	500,000 men added to the Soviet manpower pool
Cav Corps and Ski Bn's	15 December 1941	Soviets gain 200 AP (note this will be modified by any relevant game settings).
Soviet Air Force Reorganises	10 January 1942	Many air divisions including the SAD formations will be disbanded over the coming months. From April fresh formations will become available.
Tank Corps	15 April 1942	Soviets gain 250 AP (note this will be modified by any relevant game settings).
Additional reserves released	1 May 1942	200,000 men added to the Soviet manpower pool
Rifle Corps	15 June 1942	Soviets gain 300 AP (note this will be modified by any relevant game settings).
Mechanized Corps	15 September 1942	Soviets gain 250 AP (note this will be modified by any relevant game settings).
Additional reserves released	15 September 1942	450,000 men added to the Soviet manpower pool
Artillery Divisions	15 October 1942	Soviets gain 200 AP (note this will be modified by any relevant game settings).
Soviets Continue Reorganization	15 June 1943	Soviets gain 300 AP (note this will be modified by any relevant game settings).
2ND Polish Army Formed	After 1 January 1943 if the Soviet player controls Bialystok	26 Turns later the units of the 2 Polish Army will be available

40.13. SOVIET THEATRE BOX REQUIREMENTS

Event	Likely Start Date	Main Effects
Sorge Spy Ring	21 September 1941	Far East Ground Requirement reduced to 130, Air to 12
Iran is Secure	23 November 1941	Transcaucasus Ground Requirement reduced to 42, Air to 4
Crisis Averted	1 April 1942	Far East Ground Requirement increased to 150, Air to 19, Northern Front Ground Requirement increased to 110, Air to 15, Transcaucasus Air to 6
Secondary Fronts Strengthened	28 February 1943	Far East Ground Requirement increased to 155, Air to 40, Northern Front Air to 30, Transcaucasus Air Requirement increased to 11
Preparing for the Next War	2 January 1944	Far East Ground Requirement increased to 160, Air to 75

40.14. SOVIET THEATRE BOX REQUIREMENT CHECKS

These events will occur if the necessary force requirements in various Theatre Boxes are either lacking or exceeded.

Event	Main Effects
Garrison Shortage in the Transcaucasus	Soviets lose 1 VP and 1 AP
Excess Garrison in the Transcaucasus	Soviets gain 1 VP and 1 AP
Garrison Shortage in the Far East	Soviets lose 1 VP and 1 AP
Excess Garrison in the Far East	Soviets gain 1 VP and 1 AP

Northern Front Faltering	Finnish Offensive events moved forward
Northern Front defending well	Finnish Offensive events are moved back
Shortage of forces in the Northern Front	Soviets lose 1 VP and 1 AP
Excess forces in the Northern Front	Soviets gain 1 VP and 1 AP
Northern Front held up	Soviet offensive events against Finland are set back
Northern Front Pushes West	Soviet offensive events against Finland are moved forward

40.15. GERMAN MOBILISATION EVENTS

Event	Likely Start Date	Main Effects
More Men for the Ground Forces	13 January 1943	Adds 16 to the manpower production multiplier for Germany
Temp Mobilisation Measures End	1 July 1943	German manpower production multiplier reduced by 16
Germany fully mobilises	25 August 1944	200,000 men added to the German manpower pool, German manpower multiplier increased by 4, German ground National Morale reduced by 5

Errata: Error in the original manual. The 'more men for the ground forces' event now starts on 1 March 1943 and ends on 20 June 1943.

40.16. AXIS THEATRE BOX REQUIREMENT CHECKS

These events will occur if the necessary force requirements in various Theatre Boxes are either lacking or exceeded.

The extent that a later event chain is amended will depend on both a random element and the nature of the event. So if the Axis suffers a ground setback in North Africa this will have more of an impact than one in the Air campaign.

Event	Main Effects
Axis Grnd Setback in N Africa	N African Campaign events are moved forward; Italian Campaign events are moved forward
Axis Grnd Success in N Africa	N African Campaign events are moved back; Italian Campaign events are moved back
Axis Air Setback in N Africa	N African Campaign events are moved forward; Italian Campaign events are moved forward
Axis Air Success in N Africa	N African Campaign events are moved back; Italian Campaign events are moved back
Axis Naval Setback in N Africa	N African Campaign events are moved forward; Italian Campaign events are moved forward
Axis Naval Success in N Africa	N African Campaign events are moved back; Italian Campaign events are moved back
Axis Setback in the Balkans	Axis lose 1 VP and 1 AP
Axis Success in the Balkans	Axis gain 1 VP and 1 AP
Garrison Shortage in Italy	Axis lose 1 VP and 1 AP
Excess Garrison in Italy	Axis gain 1 VP and 1 AP
Italian Campaign advances	Italian Campaign Events moved forward
Italian Campaign delayed	Italian Campaign Events moved back
Garrison Shortage in WE	Axis lose 1 VP and 1 AP
Excess Garrison in WE	Axis gain 1 VP and 1 AP
Campaign for France advances	French/Benelux Campaign Events moved forward

Campaign for France delayed	French/Benelux Campaign Events moved back
Weak Finnish Forces Delayed	Finnish Offensive Events moved forward
Strong Finns advance	Finnish Offensive Events moved back
Shortage of Forces in Finland	Axis lose 1 VP and 1 AP
Excess Forces in Finland	Axis gain 1 VP and 1 AP
Finland Holds Strong	Soviet Offensive against Finland Events are pushed back
Finland wavers	Soviet Offensive against Finland Events are moved forward
Shortage of Forces in Norway	Axis lose 1 VP and 1 AP
Excess Forces in Norway	Axis gain 1 VP and 1 AP

41. APPENDIX L: USING THE EDITOR

This section does not describe how to use the editor to create or modify a scenario but how to find information that is available within the editor and sometimes not from the main game.

Usually you will open the editor from the main loading screen.

4100

After this select a scenario, if all you want to do is to explore the information available then it is probably best to select the 1941 campaign files.

4101

You will be presented with the game map. You can use this to place and redeploy existing units and any extra units you create using the editor.

If you click on the close game option, you will be taken to the main data pages.

This is divided into a number of tabs, as:

4102

In this case it will open with the Scenario summary page, every item in yellow can be modified.

For the purposes of this discussion, all the tabs from units to device are ignored. You can use them to create new items or to modify any existing ones.

The aircraft tab does contain one table that can be useful and is not available within the game.

This shows how that particular plane performs at different altitudes and its optimal performance altitude.

4103

The Nat/Weather tab again gives access to information that is not available elsewhere in the game (although the information is in this manual).

National Morale shows how ground, air and naval morale varies across the game

4104

You can select the nation using the ‘pick nation’ list on the right hand side.

Production multipliers show the variables used to determine actual production by year and nationality.

4105

Edit Weather Effects gives access to the basic weather table (also available within the game), the movement costs due to adverse weather and the type of winter rules that apply.

4106

Other tabs here show the river crossing costs.

4107

How weather fronts are formed and affect the basic weather table.

4108

Movement costs include the basic movement table

4109

Clicking on ‘edit nations’ returns you to the other screen.

The final tab ‘csv’ allows you to export the information in the various tabs to a csv file. This may make it easier to modify or analyse the information. This tab can also be used to import a csv file to replace the data.

4110

These files will be placed in the \dat\csv folder of your game set up.

Close will return you to the opening editor screen.

Close again will take you to the normal game loading screen.

42. CREDITS

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Special thanks to Nigel Askey for his exceptional research work on the 'Operation Barbarossa - the Complete Organizational and Statistical Analysis, and Military Simulation' series of books.

43. PATCH NOTES

43.1. 01.00.xx Series

43.1.1. 01.00.06

1. Adjusted scroll speed. Sped up scrolling in zoomed out views, and adjusted scrolling speed with the arrow keys.
2. Major improvements in how the game handles memory and 4k displays and application/system DPI scaling. This includes new dynamic loading of fonts and speeds up game loading and dramatically reduces memory usage during play, which also opens up possibilities for further scaling options in the future.
3. Previously Undocumented Rule (was already in 1.00) - Axis units in heavy snow from December 1941 to March 1942 have their defensive CV modified as follows:
   Dec 1941 - /2
   Jan 1942 - /1.5
   Feb 1942 - /1.33
   This is reflected in the CV values shown on the map. In addition, once in combat, there are admin and land combat rating checks made. For each failed check, the defence value is modified an additional time. So a unit in Jan 1942 in heavy snow can have its CV divided by 1.5 up to 3 times if it fails both checks.

43.1.2. 01.00.11

1. Reduced the likelihood that ground elements of types SP Artillery and Heavy SP Artillery will become involved in direct fire ground combat.
2. CV values on map for mountain units in mountain hexes and ski units in heavy snow now reflect their CV modifiers

43.1.3. 01.00.12

1. For a support unit to be committed to battle the HQ that the SU is attached to must be within 30 motorized movement points of the attacking unit being supported
2. Section 27.5.1. Any surviving Soviet Tank Divisions will convert to Tank Brigades in late January 1942, not March 1942. Surviving Mechanized Divisions will only convert to Rifle Divisions when they go depleted (i.e. they will not automatically convert to Rifle Divisions in March 1942).

43.2. 01.01.xx Series

43.2.1. 01.01.01

Added an in-game scaling preference option that when completed will allow for scaling the size of the map and most windows. Primarily intended for users with 4k monitors.

Added a new scenario that is a modified version of the 1941 Campaign (1941 Campaign – No Early End). The only difference between this and the 1941 campaign is that the no early end version does not make checks for Sudden Victory or Sudden Loss. There is still the check at the end of 1944 re the Soviet HWM needing to match the Axis HWM (or Allied control of parts of Germany). This scenario will always contain the latest 1941 campaign changes unless otherwise noted in the scenario update notes.

Rule Clarification for Leader Dismissal Costs

a. The cost of dismissing a leader is increased by the political rating of the leader being dismissed. If the leader is an Axis Allied leader, the cost is double the political rating of the leader.
b. The cost of dismissing a leader is reduced by the political rating of the leader of the Higher HQ for the leader being dismissed (i.e. OKH political rating is subtracted from the cost of dismissing the leader for Army Group North).
c. The base cost before items a and b, are as follows All High Command 30, Axis Army Group 30, Axis Army 20, Axis Corps 10, Soviet Front 15, Soviet Army 10, Soviet Corps 5.
d. There is a minimum cost of 2.

Rule change for temporarily motorized units

a. Soviet units may not be temporarily motorized in 1941.
b. Corps and division sized units have a minimum AP cost of 3 to temp motorize.
c. Temporarily motorized units have to pass an extra admin check when determining their MPs (failure reduces their MPs).
d. Soviet motorized units that are brigade size or smaller have a max MP of 35, and this applies to temporarily motorized units.

General Rule Changes

- HQs and attached support units in isolated city forts that are forced to retreat are destroyed. The HQs will be rebuilt.

- When Follow Path is set to 'no' for an Air Directive, each mission created by the AD will automatically set a stage base for the mission when it launches and the aircraft will fly directly to the stage base and then directly to the target. The stage base created is heavily weighted toward the bombers in the mission (so not as useful if you have short range escorts you want to fly in the missions). In this case the player selected stage base is ignored.

- When tracing distance for freight movement from a depot to a unit, the number of MPs will never be more than 4x the number of movement points.

- The Command Range Modifier is slightly different than as explained in the manual. When determining the modifier, instead of subtracting 5 from the range before determining the modifier, you subtract the following:
  Corps HQ – 5
  Army – 10
  Army Group/Front – 15
  High command - 20

- Manpower multipliers for Finland, Italy, and Slovakia are different from that listed in the manual. They are:
  1941,42,43,44,45
  Finland 10,3,3,3,3
  Italy 3,3,3,3,3
  Slovakia 1,1,1,1,1

- Romanian Surrender - Romanian Surrender event is no longer triggered by the loss of Constanta, Sulina, Cogealac, or Medgidia. Since this is a data change, it is only in games started with this or a later version of the game.

- Adjusted formula to spread out assignment of ground support over more air units where possible instead of overusing the same units. However, it is still heavily biased towards using air units flying shorter distances.

- Editor – Removed AI Line Forming x,y and Formation role from the displays as these are not intended to be editable values

- HQs and attached support units in isolated city forts that are forced to retreat are destroyed. Units will be rebuilt per the normal rules, except in this case HQs will also be rebuilt.

- Adjusted formula to spread out assignment of ground support over more air units where possible instead of overusing the same units. However, it is still heavily biased towards using air units flying shorter distances.

- Reduced the combat effectiveness of Light Mortar ground type weapons. Increased the combat effectiveness of Mortar ground type weapons.

- Added the ability to cancel an AOGs withdrawal orders on the AOG detail window. Linked any cancellation of withdrawal orders for an Air Command HQ to the withdrawal orders for its associated army level AOG. A cancellation of either, will cancel both.

- Moved Assault Squad category higher on the left side of production screen.

43.2.2. 01.01.03

This patch saw the addition of in-game scaling (see section 1.12 for how this works).

The supply priority of naval units are automatically set to 4 at the start of every logistics phase.

Reduced the effect the range of the mission has on op losses for naval patrol missions. This should significantly reduce the op losses of naval patrol missions.

Made automatic rail repair a higher priority during the logistics phase, making it more likely that automatic rail repair units will be able to secure the needed supplies/freight to do their work.

Improved the system for airfield construction so it is more likely that construction will occur if there are available construction units. There is still a supply/freight requirement so it is not guaranteed in low supply areas.

To be eligible to escort an air transport mission, the fighter unit must now either be within range of the target hex, or if not, be within range of the stage base while the stage base is in range of the target hex.

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43.2.3. 01.01.07

Changed the rules for isolated support/multi-role units inside HQs when the HQ displaces (either through relocate order or forced displacement). Now those units will be destroyed when the HQ displaces. As with surrenders, some small amount of men and equipment can escape to the pool.

Reduced the number of fighters that are assigned by default to air transport missions.

Reduced by 50% the chance of pilots being killed when an operational loss is recorded

43.2.4. 01.01.09

More in game scaling set in place.

43.2.5. 01.01.15

For a unit on the map to disband or be sent to a theater box, it must now be more than 8 hexes from enemy units. To be able to send a unit to a TB, it must also be on a connected rail hex. Other limitations/restrictions re disbanding and transferring to a theater box remain unchanged.

Assault Front rules are revised as follows:

The limits and rules for Assault Fronts are substantially revised.

The revised command capacity bonuses are now:

Date	Axis Army	Axis Corps	Soviet Front	Soviet Army
1941	1.34	1.17	Nil	Nil
1942	1.34	1.17	1.10	1.10
1943	1.34	1.17	1.34	1.25
1944	1.34	1.17	1.67	1.34
1945	1.34	1.17	1.67	1.34

The limits on the maximum number of Assault HQs are revised to:

Year	Axis	Soviet
1941	4	2

1942	3	2
1943	3	3
1944	2	4
1945	2	4

(note that it is still possible to exceed this number if you already had formations on Assault status in an earlier year)

When a corps is created using 2 or 3 guards units, if an appropriate guards OB is not available, the newly formed corps will not be a guards unit. A data change in this version delays the first available Guards Tank Corps to December 1942, and the first available Guards Mechanized Corps to November 1942. So merging guards brigades before these dates will not result in a guards corps

43.3. 01.02.xx series

43.3.1. 01.02.01

Clarification. It is possible for vehicles to transport freight from one depot to another depot that is not connected to the rail grid. This is generally rare, but possible.

Functional Change. Lowered the chance of intercepting transports missions that are flying behind friendly lines (further from the front the lower the chance of intercepts).

43.3.2. 01.02.06

New rule - A mission generated by a ground attack air directive that is performing an attack on a unit has a chance of having the mission converted to an interdiction attack. The chance of switching to interdiction increases with the number of movement points expended by the unit in the unit's prior turn, and increases against units smaller than divisions.

Changes/Clarifications with flak

Clarification – A ground element can be counted multiple times in a single battle report in the list of anti-aircraft elements. This is because the attack is broken up into 'flights', and each flight has the chance of being engaged by a ground element. So, a ground element could fire at 6 different flights and be counted 6 times.

Non-flak elements were being added into the anti-aircraft count in cases when they should not have been. This was a display only issue as they weren't actually adding to the anti-aircraft value firing at the aircraft. This has been fixed.

Non-flak elements will never fire at aircraft flying into or through and adjacent hex. This was rare before, but has been removed entirely.

Increased the importance of aircraft armor in mitigating damage from flak.

Reduced operational losses for day missions and ground support. Also, fixed the function that was supposed to credit some aircraft damaged by flak, that crashed during landing routine, as flak losses. This was incorrectly always counting them as operational losses.

Until the Axis control a port on the Caspian Sea, every Caspian Sea hex will automatically receive 20 interdiction points at the end of each air execution phase (enough to make the hexes Soviet controlled)

This version includes the War in the West editor manual in the /Manuals folder. Although there are many differences between the WitW and WitE2 editors, the WitW editor manual is a useful guide to understanding the WitE2 editor.

43.3.3. 01.02.08

Reduced the chance that HE fire by non-infantry type weapons will gain extra shots during direct fire phases.

Increased the effectiveness of high experience artillery elements.

43.3.4. 01.02.13

Several changes to flak, some bug fixes (especially in what flak guns were listed as participating), some adjustments to formulas, with the net being a major reduction in flak losses. Also reduced air to air and op losses.

Several changes to ground combat, including reducing the effectiveness of towed guns in the attack, and adjustments to mortars. Also added a chance for indirect fire weapons to participate in hasty attacks (on both sides). If they participate, their rate of fire will be greatly reduced.

Change to Logistics – It is possible for supplies and fuel in cities to automatically be converted to freight in the depot in the hex, with the supplies and freight returning to the pool. This has now been changed so it no longer happens in isolated cities.

43.3.5. 01.02.14

Increased the chance of intercept of air transport missions. You should now see air transport missions close to the front line and especially over enemy territory being intercepted. Given this change, along with the air transport fix noted below once again allowing escorts, be careful with flying unescorted transports near the front line. Intercepts well be limited far into enemy territory.

Theater boxes (including the reserve) are now limited during the logistics phase in that they will never use more than 2/3 of the trained pilots that begin the replacement phase in the pool. 1/3 of the trained pilots are reserved for air units on the map, which receive their replacements after the theater boxes.

Previously destroyed units that arrive in the National Reserve are to set to 0 Max TOE so this will need to be adjusted before the unit will start to take on replacement elements.

43.3.6. 01.02.21

The baseline chance a displaced/relocated HQ will lose a leader was changed, from 15% (50% if isolated), as follows:

- June 1941 – 5% (10% if isolated)
- July 1941 – 10% (15% if isolated)
- All other dates – 15% (30% if isolated)

Note: in-game loss percentages, on average, appear to be slightly higher than these baseline values.

No more than one leader may be killed, per player turn within any given HQ, due to HQ displacement/relocation.

HQs that have lost a leader due to displacement/relocation may suffer an additional MP reduction at the start of their next logistics phase.

43.3.7. 01.02.24

Changes impacting combat in “high intensity” combat (combat versus defenders in heavy urban/urban/port hexes):

o Many different combat adjustments that generally reduce losses in high intensity combat, for both sides.

o Isolated units suffer additional penalties in high intensity combat. Units must be fully isolated and not in aerial re-supply, not just be in isolated hexes, to suffer these additional penalties.

o The attackers in a failed high intensity attack take no retreat attrition.

• Changes to combat delay rules:

o A deliberate attack that fails, versus a defender in a non-isolated hex in urban/heavy urban/port, adds 9 to the combat delay. A hasty attack in this case adds 5 combat delay.

o Hexes that have 9 (maximum) combat delay may not be attacked.

o Note: Bombardment attacks (2 hex range artillery only attacks) cause no combat delay (this has always been the case).

• Manual Addendum: Changing the Intensity setting shown on the Air Directive (right side of map) Window for an air directive, changes the Air Doctrine intensity setting for the given type of air directive, for the controlling Air Command. Changing this, will also automatically alter all ADs of the same type, within the Air Command, that are not using a Custom intensity. Players wishing to alter the intensity of only one air directive, should set a Custom value by manually setting the Strike Num for the air directive

43.3.8. 01.02.27

Clarification of existing rules

Fighter's, and fighter bombers with a Mission setting of Fighter, display their escort range for radius in their air unit detail screen. Fighter bombers with a Mission setting of Bomber, display their combat range (in this case bombing range) for radius in their air unit detail screen. When the range circles are shown on map using the AOG functionality if the unit consists of fighter bombers one of two circles will be shown. If its Mission setting is Fighter, the purple circle will show the area within which it can escort missions. If the FB's Mission setting is Bomber then a purple circle will be shown indicating the range over which the plane can fly to strike a ground target. This distance is 4/3 further than the escort range, but is usually then lowered due to having a bomb loadout (this can be checked on the load out tab for the air unit).

If an airbase has aircraft but no ground units present in the hex, then left-clicking on the hex will generate one or two range circles depending on the aircraft at the airbase. The green circle is the greatest escort range of any fighters or fighter bombers with Mission set to Fighter that are at the base. The purple circle is the greatest combat range of any air unit at the base. So if the airbase only has level bombers only the purple combat range circle will be shown but for fighters and

fighter bombers with their Mission set to Fighter, both the shorter escort and the combat range circles are shown.

New Rules

Air units with custom loadouts are now set to Auto loadout, during the logistics phase, if the availability date of their loadout has passed.

Increased the fuel used by aircraft each time they engage in air to air combat, thus reducing their ability to engage large numbers of enemy aircraft in any one mission.

43.3.9. 01.02.32

Rules Changes:

HQs on map and in the national reserve may now be placed into refit mode. This can be done on the CR screen or by right clicking on the unit within the Reserve box on the map

Documentation of existing rules:

For a deliberate attack there are some important modifiers. If the attacker (in the current phase) or the defender (in the previous phase) has moved the relevant HQ there is a -1 modifier to the chance of a Support Unit being committed. If the attacker has not moved their HQ in the current turn, then there is a +3 bonus to the chance of a Support Unit commitment.

A Soviet Rifle Corps can be formed with 3 rifle brigades. This will follow the usual rules for Guards/non-Guards status and will need at least one turn to refit to full strength

43.3.10. 01.02.39

Changes to Ground Combat

Increased general front line attrition (damage/destruction of ground elements in units next to an enemy controlled hex).

The loss of combat preparation points (CPPs) by attacking units, instead of always being a 50% reduction in CPP, is now based on the type of attack and the final combat odds:

Deliberate attack

<10 to 1 odds – 50% reduction

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>=10<20 to 1 odds – 40% reduction

>=20<50 to 1 odds – 30% reduction

>=50 to 1 odds – 25% reduction

Hasty attack

<10 to 1 odds – 50% reduction

>=10<20 to 1 odds – 35% reduction

>=20<50 to 1 odds – 20% reduction

>=50 to 1 odds – 10% reduction

When the sub units of an Axis Division or Soviet Corps reform into the larger unit, the unit with the lowest CPP value is weighted as if it was two units, when calculating the unit CPP. Example: When units with 25, 50, and 100 CPPs recombine, the combined unit will have 50 CPPs ((25x2)+50+100/4)

Reduced AFV losses, focusing on reducing the extreme losses of AFVs by the losing side (90%+). Now, as AFV losses climb, there will be a chance that the remaining AFVs will try to refrain from engaging in combat.

Increased the willingness of armored cars to engage soft targets.

Small increase in fire against soft targets.

Reduced the amount of shots taken by medium flak ground elements, more so against soft targets than AFVs.

Changes to Units in the Non-reserve Theatre boxes

Units will normally have their Max TOE automatically set to 100 when in a non-reserve theatre box.

Axis non-motorized units in non-reserve theatre boxes will have their TOE's lowered if they do not have the sufficient manpower in their national active manpower pool as follows:

a) German non-motorized units will be set to Max TOE of 80 if the German active manpower pool begins the turn below 150,000. They will have Max TOE set to 65 if the pool begins the turn below 75,000.

b) Italian, Romanian, and Hungarian, non-motorized, non-elite units, will be set to Max TOE of 80 if their national active manpower pool begins the turn below 20,000. They will have Max TOE set to 65 if the pool begins the turn below 10,000.

c) Finnish non-motorized, non-elite units, will be set to Max TOE of 80 if their national active manpower pool begins the turn below 10,000. They will have Max TOE set to 65 if the pool begins the turn below 5,000.

d) Slovakian non-motorized, non-elite units, will be set to Max TOE of 80 if their national active manpower pool begins the turn below 2,000. They will have Max TOE set to 65 if the pool begins the turn below 1,000.

Changes to the Air War

Changed the display of air unit range circles shown in the AOG view for fighters and fighter-bombers that are set to Mission: Fighter. They used to show a purple line equal to their escort range, but now, they show the purple line equal to their combat (intercept/patrol) range. The unit detail screen has been changed so that for fighters and fighter-bombers set to mission:fighter, show escort range/intercept (combat) range. Clicking on a hex with an airbase in the normal map view (with no ground unit in the hex), will still show both the green (escort range) circle, and the purple (combat range) circle, for each air unit at the airbase..

Adjusted ground support commitment routines to better ensure that there will rarely be more than 300 aircraft committed to any one battle. Also, increased the chance that the Soviets will commit less bombers to any battle before 1943.

Changes to leadership rules

Increased the chance of leaders being dismissed due to perceived poor performance.

Increased the base costs of dismissing Soviet Front/Army/Corps leaders

New Limits for Fortified Zones

Changed Soviet Fortified Region build limit to 50

Changed Axis Fortified Region build limit and AP costs as follows:

June 41 to Dec 42 – 4 AP / 20 build limit

Jan 42 to Jun 43 – 4 AP / 40 build limit

Jul 43 to Dec 43 – 3 AP / 60 build limit

Jan 44 to Dec 44 – 2 AP / 60 build limit

Jan 45 to end – 2 AP / 80 build limit

Other Changes

The Reinforcement & Transfers screen now has a new Renames tab under the Units and Air Groups tabs. The Renames tab shows all scheduled ground and air unit renames, as well as some information about these renames.

Soviet vehicle mobilization during the first 10 turns of the war will now mobilize 60% of the original number of vehicles. Instead of 260,000 vehicles mobilized, The Soviets will mobilize 156,000 vehicles.

Entrained units are no longer susceptible to first winter rules.

Editor

A new editor is under construction. It is possible to switch back and forth between the new and the old editors when on the editor main screen. The old editor is still fully functional, except for unit and air group renames. These renames must be done in the new editor. Each rename no longer takes up a slot in the editor. Instead, all the rename info is contained in the original unit's slot. Note there is now expanded search capability. For a directed search with multiple words, start with a quote (") sign to limit the search. The new editor has improved use of larger screens and in-game scaling, but is not yet fully functional. Work is continuing to complete full functionality in the new editor.

43.3.11. 01.02.41

The odds brackets for the loss of combat preparation points (CPPs) have been changed slightly from v1.02.39. They are now as follows:

Deliberate attack

<20 to 1 odds – 50% reduction

>=20<35 to 1 odds – 40% reduction

>=35<50 to 1 odds – 30% reduction

>=50 to 1 odds – 25% reduction

Hasty attack

<20 to 1 odds – 50% reduction

>=20<35 to 1 odds – 35% reduction

>=35<50 to 1 odds – 20% reduction

>=50 to 1 odds – 10% reduction

Lowered front line attrition by roughly 30%, although it is still roughly double what it was in 1.02.32.

Amphibious HQ units may no longer enter ferry hexes.

Added visibility to losses due to front line attrition in logistics report losses by phase section.

On map units in reserve mode will no longer commit into hasty attacks.

Reduced the amount of lend lease vehicles received by the Soviets per turn as follows:

- 1943 - 4500 -> 2500
- 1944 - 6000 -> 4000
- 1945 - 1500 -> 1000

• Improved the system for sending back non-standard OB ground elements during the logistics phase and when building up units. The system will be less likely to send items that don't match the items in the unit TOE, and will better account for items that are subbing in for non-standard items. However, there is still a chance that items will be sent back due to limited slots and/or having non-standard items.

Audited flak code to bring air phase and ground phase flak into alignment. The changes are expected to bring down flak losses in some cases in the air phase, while increasing them in some cases in the ground phase.

Air unit transfers in the ground phase are no longer reported in the logistics report. These had been getting reported to both players. Now, only air unit transfers that happen during the logistics phase are listed in the logistics report, and this info is not in the enemy report.

Editor Clarification – To create a temp port in the editor, first set the x,y coordinate, player and nation for a location slot, name the slot. Next, with that slot selected, press the Build Temp Port option.