

Lock 'n Load Scenario Editor Guide

As of 2/13/14.

Camera Orientation

The first important thing to know is that the map is shown sideways on screen from how it is represented internally. The editor is fine with whatever orientation you are in most of the time, but there are two important exceptions: hexside terrain and LOS polygons.

Camera controls:

Zoom in/out: mouse wheel

Rotate: [and].

If the terrain names are drawn right-side up you are how you need to be for hexside/LOS stuff. If you tilt your head to the left and they are right-side up, that is the original orientation and the orientation that is shown in-game when you play the scenario.

Fixing this so that any orientation is fine at anytime is on the list.

Limits

Maximum of 200 units, but this would be silly, don't do that. If for some reason you do do that, make sure to leave a few spots for heroes and crews that get generated during the game. So, like, 190 tops. But don't do that.

The maximum map size in panels is 3x3, which is approximately 43x25. If you somehow hack yourself some other map configuration, the absolute max size is 65x65.

The LOS in the game is fairly complicated (as you will see later in this guide), and the time it takes the computer to do these LOS checks increases both with the size of the map and the number of units you have scattered all over the place. So if you make a huge monstrous creation, make sure it doesn't take 10 seconds to move one unit one hex before you inflict it on the world.

General Keys

Tab: This brings up the Scenario Info Menu, see later in the guide for that.

l (this is a lower-case L, darn font): This runs a full AI check of the hexes, giving them some basic ranking for cover and what can be seen from them. Victory hexes also count into this. The AI uses these ratings as tiebreakers for a lot of things when it really can't decide between two hexes. This has already been done for all the panels but because LOS is taken into account, whenever you put together more than one panel, you should at some point press 'l' and run the scan since now you have LOS that runs from one panel to the other. These numbers can be seen when you hold down Ctrl in the editor, if you're curious. It's on the list to do this automatically when it needs to be done and you save a scenario.

9: display LOS polygons.

Ctrl-S: save

Ctrl-L: load

Ctrl-Q: quit... and there is no confirmation or notice that you haven't saved yet, so be careful.

Function Keys

These change the mode that the editor is in, they are listed at the bottom of the screen as reminders. Generally z and x are then used to change what you are going to be then clicking on the map.

F1: Terrain.

Both ground terrain and hexside terrain are placed with this. This terrain has already been set for all the panels, but in case you draw your own map or something this is how you do it.

The map needs to be rotated correctly (words rightside up) for the hexside cursor to work.

Hexside terrain needs only to be one side of a hex, putting it on both sides is unnecessary.

Note that Clear (#1) is not the same as Nothing (#0) - Clear is open terrain, Nothing is an invalid hex that nobody can use (for the map edges, etc.).

In addition to clicking to place the basic terrain type, there are some map overlays you can place in Terrain Mode with these hotkeys, and these are meant to be used on the existing panels:

t: Trench

r: Rubble (this one completely replaces the existing terrain type)

f: Foxholes

v: Vehicle Wreck

w: Wire

You can see the modifiers from the popup hex info. These graphics are sort of randomized, just keep pressing the button until you like the look.

Mines can be set with the m key:

m: Mines, cycles through various firepowers and visibilities. Don't go crazy with these, mines are not really that fun when overused.

Ground level height is also set in this mode. Press a/s to choose a height and then shift-rightclick to set it.

Lastly, victory and exit hexes are set by right-clicking on the map. It cycles through these choices:

Nothing

Victory Hex

Hex of Special AI Importance: this gives the hex the same ranking as a vic hex in the 'I' scan, above, but isn't actually a vic hex.

Exit Hex: This is for side 1.

Exit Hex 2: This is for side 2.

Exit hexes and victory hexes don't actually mean anything unless they are set as victory conditions on

the Scenario Info->Victory Conditions menu.

F2: Units

Cycle through the unit counters with a/s to change the nation and z/x to change the type, then right-click to place it.

Set deployment zones for maps with purchased units (or continuing campaign units) by holding shift and left-clicking. Red is nobody, green is player 1, blue is player 2. If there is a possibility the player will have vehicles or large guns to deploy, make sure you have some valid hexes to let them be deployed.

Click hexes and select units to reposition them. *Stacking limits and valid terrain is not checked by the editor.* There may be times to violate this, for example reinforcements that enter at different times but generally you should probably follow the game rules or there will be complaints.

Right-click on a unit in the side box to bring up a bunch of stuff that can be changed there:

Set Owner: This is how you give a weapon to somebody or put somebody on a car. Basically whoever you click on afterwards will be carrying the first unit. There are no checks to see if this is valid or makes sense.

Switch Sides: A yellow 1 or 2 will be shown over the unit counter, this is how you change that. Generally German units default to side 1 and Soviet units are side 2, unless you remembered to change the nations in the Scenario Info before you started placing stuff. If you totally messed everything up, the hotkey Shift-S will swap everyone's side.

Arrival Turn: If this is set to something not-0, the unit will magically arrive in their hex on the designated turn. "R#" in blue text will be shown over the unit counter if this is set. If the hex is full at the time they arrive, they will be shuffled off to an adjacent hex so as to not violate the stacking rules.

Skill Card: Brings up a menu to assign skill cards. Read the skill card before you set it, some are supposed to only be for Heros or Leaders and not vice-versa.

Toggle Shaken/Toggle Buttoned/Toggle Abandoned: Mainly were for testing bugs but I suppose they could be used for some verisimilitude.

Mission Flag: For victory conditions that require a particular unit X to survive or be killed or whatever, this flags this unit as one of those targets. See Victory Conditions for details on which ones require a mission flag. A green asterisk will be shown over the unit counter if this is set.

Fixed Position: This unit is prohibited from moving out of its hex until it is shaken or an enemy unit is adjacent to it. This restriction is regardless of if it is a player or AI unit. Displays "Fixed" in green text over the counter.

Deployable: This marks the unit as able to be moved around in the deploy phase (even though it is already on the map). Displays "Deploy" in cyan text.

Fleeing: This is an AI setting. The unit's primary goal is to flee to an exit hex. Used for scenarios where that would be appropriate. Displays "Flee" in green text.

Hide In Place: The unit is invisible to the other side until it fires or is moved adjacent to. Displays "HIP" in green text.

Adjacent Activate (HIP 2): Like Hide In Place but in addition, the AI will not do anything with the unit until somebody actually moves adjacent to it (remaining hidden for longer). Displays "AdjAct+HIP" in green text.

Rescue (HIP 3): This was for some specific scenarios and I'm not sure if it can be used generally yet.

Watch Hex Group: AI setting to tell the unit to (only) fire at particular hexes, which are set with function key F6. This restriction is never lifted from the AI. We didn't really use this that much, not sure how useful it is.

Move Hex Group: AI setting to tell the unit to move for a particular hex, which is set with the function key F7. *There should only be one move hex for each move group.* Units all stacked in one hex that you want to try and keep together should all be set to the same move group. This is the primary way to get AI units on the edge of the map to start moving in the right direction. Their move group destination will be forgotten once the enemy is contacted, this is intended just to get them going.

Patrol Group: Like Move Hex Group, except several hexes can be set in sequence that the AI will move between until the enemy is spotted. Hexes set with function key F8.

Random Placement Group: Used to set a unit's Random Placement Group. Probably a misleading name, the way it works is at the start of a scenario, ONE randomly-selected unit from each Random Placement Group remains on the board, the rest are deleted. So, for example, you want a squad to be in three possible locations, you put him out on the map three times, and set each of the three counters to be in Random Placement Group #1. Then when the game starts, he will be in one of the three spots.

AI Always Control: Used to set units on a player's side that they are not allowed to control. They are still allowed to stack with player units and such, this is simply who gets to activate them. Displays C, for computer control, in orange text.

Campaign Core Unit: The core units are picked by the player, but the leader guy (Wurtz or Yakov) gets this flag on the scenario in which they first appear. Shows a star on the unit counter.

Delete Counter: self-explanatory.

F3: Offboard

This is no longer used.

F4: LOS

This is how you set LOS polygons. This has already been done for all the existing panels, but if you make a new map, here is how you do it:

First: Go back to F1: Terrain for a second and rotate the map so the words are right-side up. Now go back to F4: Los and we can really begin. Make sure the polygons are shown by pressing '9'.

Now, hex by hex, go over your map. Go systematically so you don't forget any hex. Hover over each non-clear hex and wait for the hex info to pop up. If it says Degrading or Blocking and does *not* say [Whole Hex], this hex needs polygons. [Whole Hex] terrain will automatically have a large imaginary hexagonal polygon nearly reaching the edges of the hex, you don't need to mess with these.

Click on the hex: This is very important. The large red cursor will be around the hex that you are currently adding polygons to. You can click outside of a hex while adding/editing polygons (and in fact, you will need to), so you have to 100% make sure you are always editing the correct hex.

Add/Position polygons in this hex:

a: add a polygon to the hex. There can be up to 6 in each hex. You will automatically have the first vertex of the polygon you just created selected.

v: cycles through vertices of the current polygon. The currently selected vertex is cyan. and the currently selected polygon is red.

p: cycles through polygons (once you have more than one).

Delete key: deletes the current polygon. Lightly tap this, it goes super fast.

Polygon placement:

LOS will go clearly through a hex unless it hits a polygon. One thing to be aware of is that - it can often be hard to see this on the screen - if you perfectly line up two adjacent polygons, there is a possibility the LOS trace will go perfectly between the two. So always overlap them if you have two polygons shoved together to make a non-rectangular obstacle. Overlapping doesn't hurt anything performance-wise.

More commonly, though, these accidental clear pathways occur on the edges of the hex, especially since the cursor is sort of blocking the view. So make sure if an obstacle reaches the edge of a hex (most common in buildings) that you make that polygon overlap well into the adjacent hex. And when you add polygons to that adjacent hex, make sure they overlap well into this hex. You can look at the polygons on one of the city maps for examples of how adjacent building hexes often require what looks like an excessive amount of overlapping to avoid sneaking between two hexes.

When done, hit Esc:

This deselects the polygon you have selected and puts you back at the 'click on a hex' stage.

When completely done: Before you forget, before you lose power, Ctrl-S because that took you forever. Or you're faster at it than I am. :) Then L to rescan the Los and then save again for good measure.

F5: Events

This sets event-triggering hexes. There are up to six of them, each one only in one hex.

F6-F8: Fire/Move/Patrol Groups

For setting the AI destination hexes for Watch Hex Groups, Move Hex Groups, and Patrol groups, respectively. There can be up to 6 different groups, click on hexes to cycle through.

There can be any number of hexes for a given Watch Hex Group, but there should only be one Move Hex Group hex for each group. Patrol groups also require right-clicking on the hex to set the step #. They will go from step #0 to step #1 to step #2 back to step #0, etc.

F9: LOS String

Because the usual key 'l' is used for another purpose in the editor, F9 is the LOS string. On the list to get changed to match the game.

Scenario Info Menu (Tab)

Lots of stuff to set here.

First button (defaults to Blank Map unless you loaded something): The scenario name. Try to make it fit in the box. :)

Scenario Text: The briefing. A basic text editor, though the Del key goes extremely fast and clicking the mouse to reposition the cursor is not super accurate. On the list. Be aware that some people play the game in small resolutions, so don't make it a novel or it will not fit on the scenario intro screen.

Turns: The game turn limit. Be aware that under most victory conditions, this limit will be automatically bumped up by three on Introductory Difficulty.

Side 1/Side 2: Enter the # for the side's nation, 0-6 (though Civilians would be weird). This is mainly used for informational purposes, announcements, etc, but if it doesn't match the majority of units on a side it will be very confusing.

Initiative: Cycles through standard rules, an automatic start of initiative for each side, and CHAOTIC initiative which basically a new initiative roll after each impulse.

Map Info: This is where you arrange the map panels, see **Map Info** later in the guide.

Raw Map Info: Before the map panel method was implemented, this was how you set up maps. You don't need to go here anymore.

Event Info: This is where events are set up (they often use Event Hexes, set in the editor with F5). This is one of the things I really want to fix up. Let's pretend it doesn't really exist for now.

Victory Conditions: Set the Victory Conditions here, see **Victory Conditions** later in the guide.

Purchase List 1/2: You can set units here for the player to buy and then deploy before the battle. The total number of points they get is shown in the corner and then you left-click on counters to make one available for purchase, click again to make two, etc. Right-click to decrease the numbers. The total cost is shown just for reference.

If you make units available, make sure that this player has deploy hexes set with F2: Units back out on the map.

AI Stances/Re-eval Turns: This is where you set the initial AI mode for a side on the map, which it will maintain until the listed Re-eval Turn, when it will start deciding for itself based on whether or not it thinks it is 'winning'.

The stances are basically self-explanatory but have too many effects to really go into. Basically Hold really sits there, Defend will come out a little once the enemy is found, Harass kind of pokes and prods a bit, Attack will move forward steadily, and Berserk is just moving forward whether it likes it or not.

Tutorial #: Flags scenario as a tutorial and what number it is in the list. All the tutorial text is hardcoded, so don't use this.

Multiplayer: Flag scenario to be allowed to show up on the Multiplayer scenario list. Only scenarios that you believe are balanced for both sides should be flagged like this, or someone will not have as much fun as their opponent.

Campaign #/Campaign Scen #: Flags the scenario as a campaign scenario. No support for additional campaigns yet.

Night Rules: Toggles whether or not the scenario is at night. Has a bunch of game rules effects, see the manual.

Snowy Map: Toggles whether or not the map uses snowy graphics. There are not snowy versions of all maps.

Art Missions/FP: Gives that side Artillery missions of the listed FP.

Hidden Units: If this is set to 0, everyone can see everyone at all times. Not really sure this is a good thing to use. I had the idea that maybe someone would want to play 'like the board game', but this flag can now be set independently in multiplayer, so it's sort of moot here.

Searching Fire: This allows ctrl-click to fire into any hexes at all, not normally allowed by the rules. This is used for a couple of campaign scenarios.

Hidden Scenario ID: Top secret, do not touch. Used for campaign stuff.

Map Info

From Scenario Info [Tab]->Map Info.

This is where you construct a new map. Single-panel maps use the lower left, and then expand outwards as you wish. Non-rectangular maps (L-shaped, or, I guess, hollow in the middle) should technically work but look really weird.

A small screenshot of the map is shown to remind you which one it is, and then there are buttons on top of it to modify it.

Add: goes to the file menu to add a panel to this location.

Change: goes to the file menu to change the panel.

Clear: removes the panel entirely.

Flip: flips the map upside-down.

Reload: if you have reason to believe the map panel has been updated or changed since you made the map, this reloads it. Units and modified terrain (trenches, wrecks, etc) will still be on the map after reloading.

After changing and flipping maps it is best to doublecheck the map's terrain (and press 9 to make sure the polygons look good) when you are done arranging the panels to make sure everything is correct. Check the boundaries between the maps especially. Then L for the los scan. Then Ctrl-S save.

Victory Conditions

From Scenario Info [Tab]->Victory Conditions

This is the list of tasks for Player 1 to accomplish. They must do all of them, so don't pick like five different types.

Use Vic Hexes: Default is 1, which is player 1 tries to capture the victory hexes before the end of the game or lose. If 2, they already hold them all and are trying to keep holding them until the end of the game. 3 is a little different, whoever holds more at the end of the game wins, and there can be a tie.

Civilian Escort: This condition will be satisfied if there is a friendly civilian on the map in the same hex as one of player 1's *mission-flagged* units.

Kill All Enemies: If set to 1, player 1 has to kill all enemy units before the end of the game or lose. If set to 2, if either side kills all the enemy units they win, but if both fail, it is a draw.

Eliminate Squads/Vehicles/Armored Vehicles: Player 1 has to eliminate the listed # of that unit type. Make sure there are actually enough units on the map to qualify. Causing vehicles to be abandoned counts.

Eliminate Marked Units: Player 1 must kill the units on Player 2's side that have been *mission flagged* before the end of the game.

Marked Units Survive: If any of Player 1's *mission flagged* units are killed, they instantly lose.

Squads/Vehicles/Marked Units Exit Map: Player 1 has to exit the listed # of units from the map (marked units = *mission flagged* units) before the end of the game.

First to Exit ____ Vehicles: Whoever exits the listed # of vehicles wins.

Num Vic Hexes Needed: Instead of needing ALL the victory hexes to win with Use Vic Hexes, only the listed # is needed.

Check Hexes at End (default) or Immediate Victory: If set to Immediate Victory, once the last Vic Hex is captured the scenario immediately ends. Otherwise it will go through the last turn and then check to see if Player 1 succeeded.

Auto-Victory with Kills (default) or No Auto-Victory: If set to Auto-Victory with Kills, if player 1 kills all of player 2's units they win regardless any of the other victory conditions.

Custom Maps

The map backgrounds are in /art/maps. You can call a new one whatever you wish, just plop it in there with everything else.

The image must be a 2048x2048 bmp. You are going to have to make the hexes line up just like the original maps. This is left as an exercise for the artist.

Once you have your bitmap there, go into the scenario editor and ctrl-L to load "XComplete Blank Map.map". (The X prevents it from showing up on the maps list, so - helpful hint - don't name your new scenario something beginning with an X.)

XComplete Blank Map.map is, as the name implies, a blank map. Now, to replace the existing map background, hit Tab to go to the Scenario Info Menu and then previously-noted-as-forbidden *Raw Map Info*. The only thing to touch on this screen is **Map Background #1**. Push that button, find your background, and that's that. All the other stuff on this screen is old leftovers from when we arranged them by hand.

Go back out and set all the terrain hexes and all the LOS polygons and you are set.

If you want to be extra fancy *and it is the same size as the existing panels*, when you save it with a new name, instead of the default filename extension .map, override that and give it the extension .mpp and you can load it up as a panel in the map arranger for later convenience.

Future Topics

Modifying Unit Data/Adding New Units