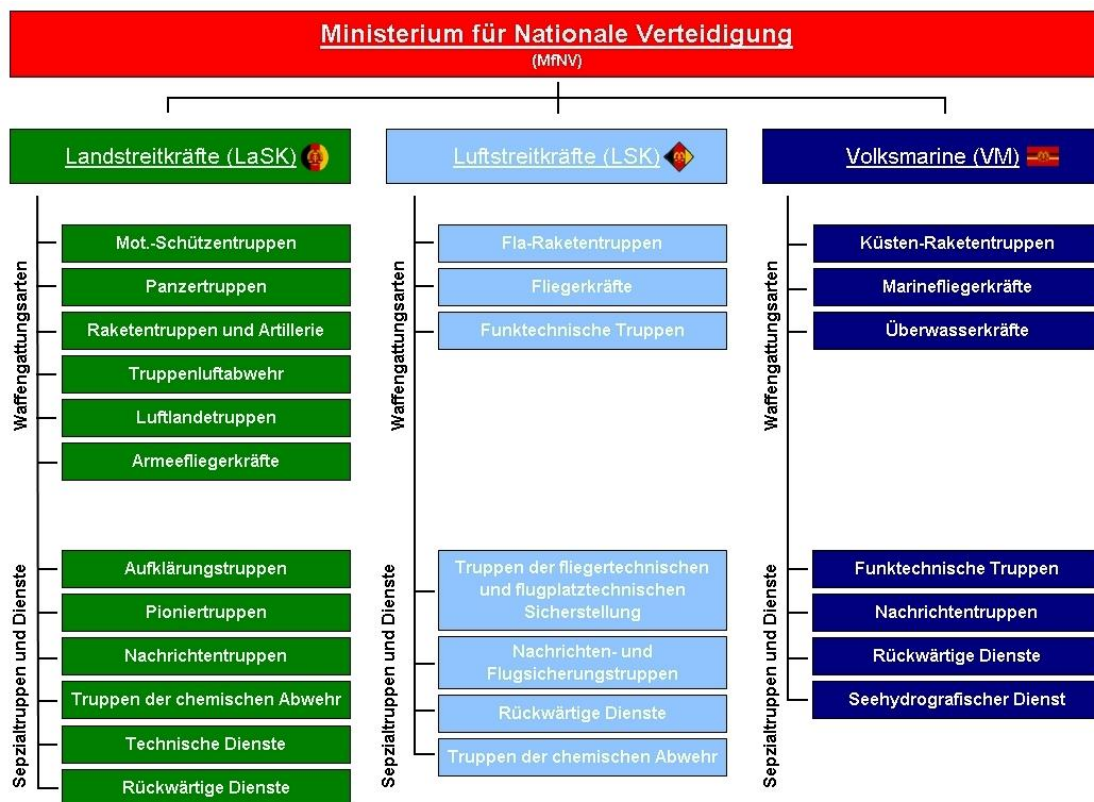




The East German Armed Forces were divided into three main categories.



The army had its own air defense organization (TLA) and helicopters.

Airforce & Air Defense

The amount of air defense is staggering! Ground forces, Soviet and East-German units. This intermingling of forces will change during an offensive. The ground forces air defense will move forward into western Europe and the SA-2/3/5's will stay put to protect the rear areas and follow-on forces.

Why I made the Russia and East-Germany as different sides is best explained from this quote:
(Google translated from German with a few errors, but you get the drift):

Problems of cooperation with German Air defense Troops.

The troops of the German tactical air defense troops worked virtually parallel to those of the Russians. Troops. Although there were again and again stimulated discussions on the joint work of the Russians with the German. The Russians did not show their cards. They did the main work in the service on the border with NATO, they had the last World War II and behaved accordingly as a great power. From possible arrangements for an emergency would have been made for a possible counterstrike during the war.

The RADAR airspace reconnaissance put their data in radio and data networks. This data has been automatically and computer-aided processing and fed to command posts of the LV (AD) and TLA (AD of the tactical ground forces). In the In Germany, the same systems were also available. Common Course Operations between Russians and Germans below the brigade level does not take place at all. This was also due to technical reasons. This is how TLA (army air defence) systems were and LV (regular air defense units) are technically not compatible. From the command post level division there were Cross-connections to the Russians. These connections were made by telephone depicted. There is no talk of automatic data comparison or even target assignments !

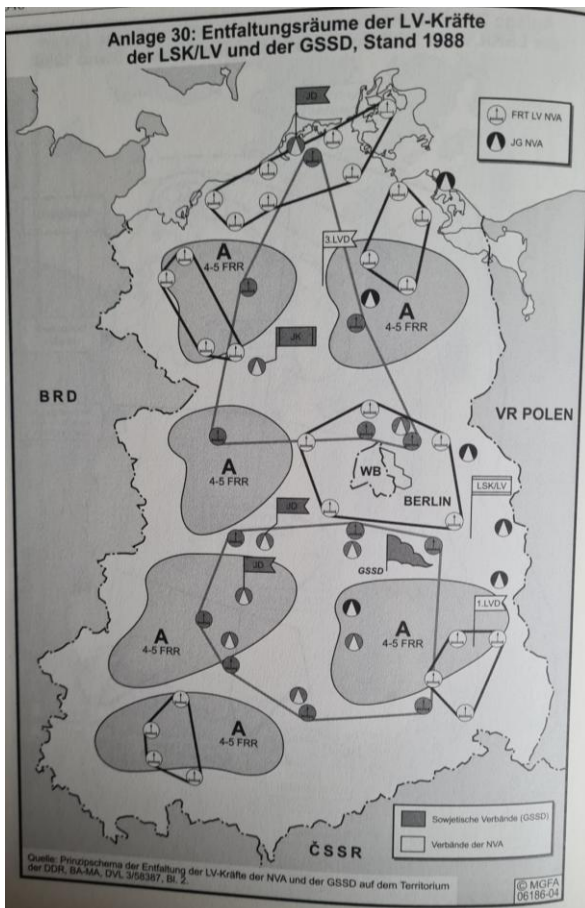
The troops of the country's air defense are managed centrally. Automatic guidance systems indicate within the Level Brigade individual anti-aircraft missile units to targets for destruction. Above of the brigade to the level of division and air defense district, Tactical command systems to the divisions from top to bottom assigned. The tasks of the LV were the protection of political, military and economic centers against air strikes by the enemy. The leadership of the course for Central Europe towards NATO took place from Minsk (Belarus)

The troops of the Army air defense (TLA) were mobile and not connected to stationary guide equipment. Their task was to protect the own army troops in the operational area. The tactical lead was (technically) at regiment level. A few RADARs were used Reconnaissance means 4- 6 mobile army anti-aircraft units. These were in the area 20 x 40 km distributed. Connection to the army level was made via radio.

The TLA was directly subordinate to the army and covered it up on the advance, retreat or battle against air strikes by the earth and air opponents. There was no Data network with other army groups The central air layer could be reached via radio and was depicted with grease pen on plexiglass.

Source: <https://peters-ada.de/russ-standorte.htm>

Conclusion: they were in it together but also separate!



Overview of the Soviet and East-German air defense units. (was it living apart, together..?)ⁱ

A difference between Day and Night!

The cold war is in 1989 and not in 2025 aircraft could only operate during daylight. can perform ground attacks at night (like Aerial intercepts are still possible with Control Intercept. But the SAM and radar the dark! Therefore the CMO restrictions ticked.

The amount of SAMs is overwhelming. But only engage 1 target at a time (=1 target figure tells how many targets every unit could engage at once in the 3rd Air Defense Division (North), responsible for the upper half of East-Germany. Look at the right side and see the difference between day (Tag) and night (Nacht)!ⁱⁱ



and most of the Only some types Su-24 Fencers). support of Ground units don't stop in on night flying are

most SAMs could channel). This

Zielkanäle der TLA MB III – Stand 1988

	Krug	Kub	Ossa-AK	Strela-10	Strela-1	Strela-2	Igla	Fla-SFL 23/4	57 mm	23-2 mm	14,5 mm	Gesamt	Davon	
													Tag	Nacht
FRR-3	6					10				10		26	26	6
FuTB-3														
4. MSD		4					32	16		4		56	56	20
11. MSD					8		43	16		2		89	89	36
7. PD		5		16		13	14	16		5		69	69	21
Gesamt Verband/Truppent.	6	9	20	16	8	23	89	48		21		240	240	83
WSB-3						6				2		8	8	
FuTB-103										4		4	4	
6. MSD						23		4	6		6	39	39	10
10. MSD						23		4	6	6		39	39	10
17. MSD						23		4	6	4	2	39	39	10
Gesamt Mob						75		12	18	16	8	129	129	30
MB III Gesamt	6	9	20	16	8	98	89	60	18	37	8	369	369	113

FRR-3 = SAM Regiment 3
FuTB = Radio Technical Battalion
4 MSD = 4th Motorized Rifle Div.
7 PD = 7th Panzer Division

When NATO aircraft can operate at night they will face only 1/3 of the daylight air defense fire capacity of the East German Army Air defense.

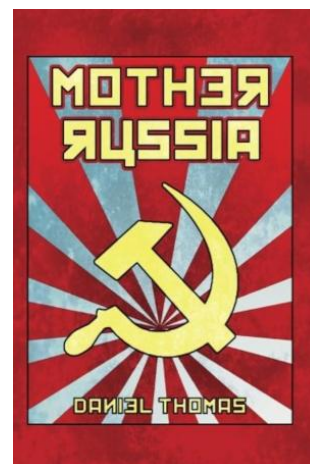
Disposition

The peacetime disposition is the basis but probably the main SAM sites will move to a few kilometres from their peacetime position. A (jealous?) quote from an German: *What is interesting, however, is the peaceful deployment of the Russian SA 3 regiments. All are in close proximity to airfields. Here you will find the necessary one Infrastructure, the telecommunications connection for the management system. In contrary, no German knows what the structure would have looked like after 6 hours of war.*¹

East-German S-300 (SA-10)

At 54° 3'39.50"N 11°52'45.52"E, a S-300 PM (SA-10) unit was planned. with the ST-68U radar and did exercises in Aschulk in Russia in till but did not deploy in the DDR in the year 1989 and returned the quickly to Russia after the fall of the Berlin wall.ⁱⁱⁱ You have the chance history and place the SA-10 and see what the effect will be.

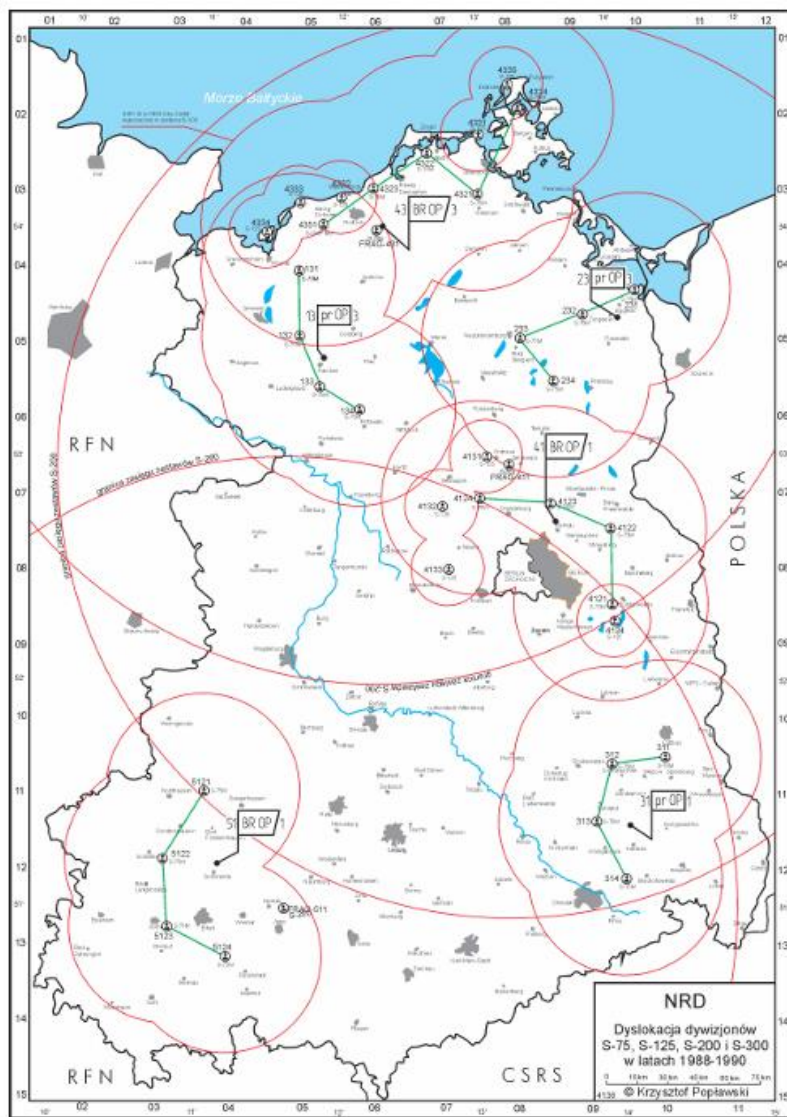
Only one Soviet Brigade was in the process of converting their SA-4's The rest was all older equipment. If you compare this to the Air the current Baltic states (with a lot of S-300's) you will see a sharp between East Germany and Mother Russia...



They trained December 1989 equipment to change

to S-300V's. Defense along contrast

¹ https://peters-ada.de/41_frb_bernau.htm



[Deployment of squadrons in 1988-1990]

Graphic overview of ONLY the East-German SAM sites.^{iv}

Close in protection

East Germany protected its SAM units with 4x Zu-232 AAA and quad SA-7's mounted on a small truck called FASTA-4. This FASTA-4 facility is not yet incorporated into CMO and the request is resting in Github... Firstly I modified every SAM site with separate FASA-4's and AAA positions but this is not retained in the .INST file because it is not a standard facility. Bigger...



German FASTA firing during an exercise.



Two East-

A setup like the image right is logical, with the ZU-23-2 and MANPADS dispersed around the SAM site and the Spoon Rest a little separated from the FAN SONG... but the amount of units grew out of hand.

Therefore I have two kind of .INST files for the DDR air defense. Normal like above and a compressed variant were I deleted the Zu-23-3 guns and FASTA-4 units out, and placed them under the SA-2/3 SAM units itself.

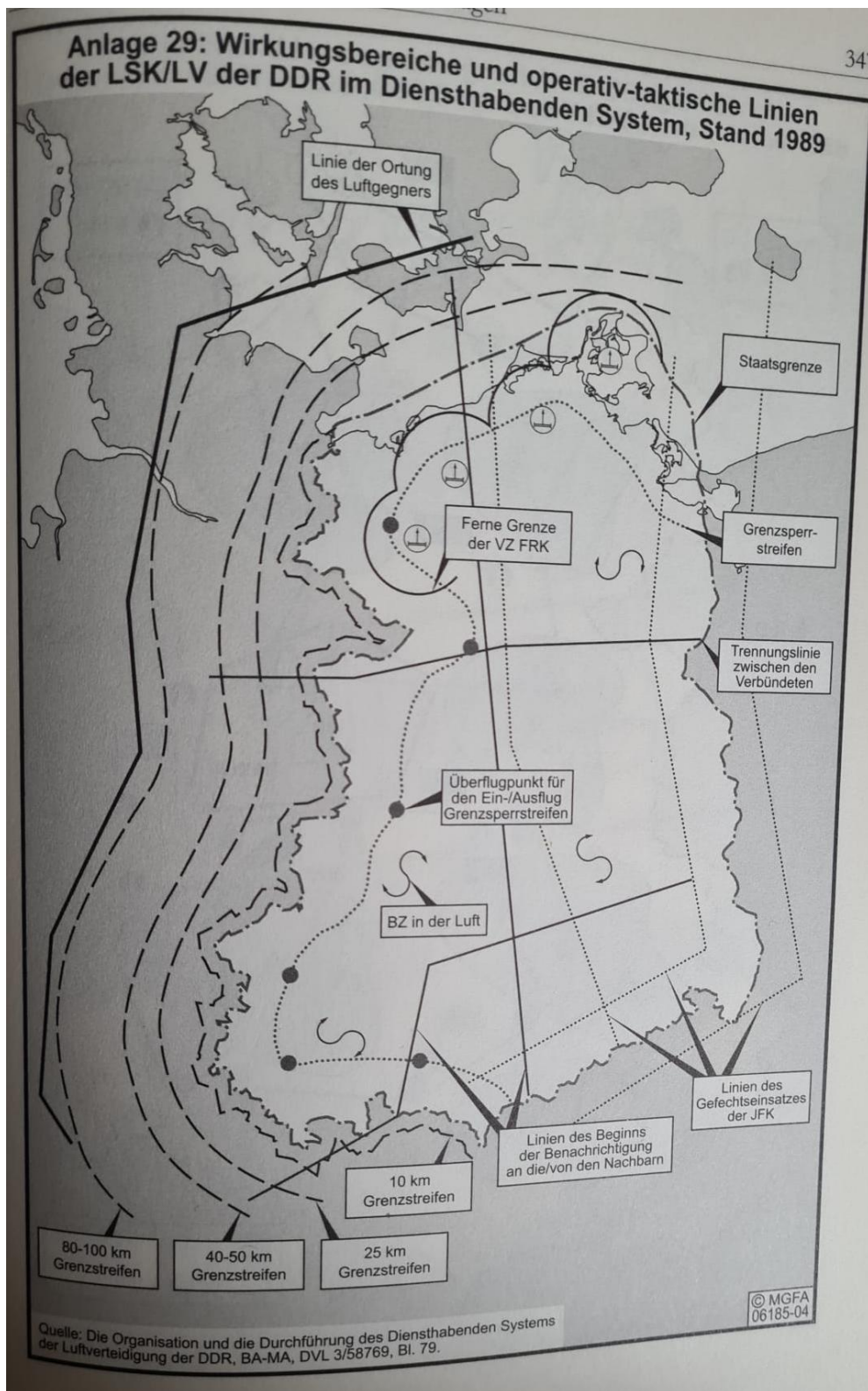
UNIT WEAPONS	UNIT WEAPONS
48x SA-3b Goa [5V27, V-601P]	18x SA-2f Guideline Mod 1 [S-75M2 Volkho
6x SA-7a Grail [9M32]	6x SA-7a Grail [9M32]
16x SA-N-5 Grail [9M32M]	16x SA-N-5 Grail [9M32M]
300x 23mm ZU-23-2 Burst [20 rnds]	300x 23mm ZU-23-2 Burst [20 rnds]

I deleted the original SA-7 Grails but unfortunately they remain visible... Please disregard them.

Only the mobilized SA-2/3 units retained the separate MANPADS instead of the FASTA-4 quad launchers. The compressed units will fire only from one location vs. the “normal” disposition. As they say...Every advantage has a disadvantage...

Weapons for 13th Anti-Aircraft Missile Regiment [S-75M Volkhov]					
Mount (click weapon for DB Info)		Time to fire	Status	Reload Priority	Show Arcs
SA-2f Guideline Mod 1 Single Rail	(1/1)	Ready	Operational		☐
SA-2f Guideline Mod 1 Single Rail	(1/1)	Ready	Operational		☐
SA-2f Guideline Mod 1 Single Rail	(1/1)	Ready	Operational		☐
SA-2f Guideline Mod 1 Single Rail	(1/1)	Ready	Operational		☐
SA-2f Guideline Mod 1 Single Rail	(1/1)	Ready	Operational		☐
SA-2f Guideline Mod 1 Single Rail	(1/1)	Ready	Operational		☐
Vehicle [Fan Song F [RSNA-75M]]	(0/0)	Ready	Operational		☐
Vehicle [Spoon Rest C [P-12]]	(0/0)	Ready	Operational		☐
SA-N-5 Grail [9K32M Strela-2M] Quad MANPADS	(4/4)	Ready	Operational		☐
4/4 SA-N-5 Grail [9M32M]	Guided Wea...			☐	
SA-N-5 Grail [9K32M Strela-2M] Quad MANPADS	(4/4)	Ready	Operational		☐
4/4 SA-N-5 Grail [9M32M]	Guided Wea...			☐	
SA-N-5 Grail [9K32M Strela-2M] Quad MANPADS	(4/4)	Ready	Operational		☐
4/4 SA-N-5 Grail [9M32M]	Guided Wea...			☐	
SA-N-5 Grail [9K32M Strela-2M] Quad MANPADS	(4/4)	Ready	Operational		☐
4/4 SA-N-5 Grail [9M32M]	Guided Wea...			☐	
23mm ZU-23-2	(50/50)	Ready	Operational		☐
50/50 23mm ZU-23-2 Burst [20 rnds]	Gun			☐	
23mm ZU-23-2	(50/50)	Ready	Operational		☐
50/50 23mm ZU-23-2 Burst [20 rnds]	Gun			☐	
23mm ZU-23-2	(50/50)	Ready	Operational		☐
50/50 23mm ZU-23-2 Burst [20 rnds]	Gun			☐	
23mm ZU-23-2	(50/50)	Ready	Operational		☐
50/50 23mm ZU-23-2 Burst [20 rnds]	Gun			☐	
23mm ZU-23-2	(50/50)	Ready	Operational		☐
50/50 23mm ZU-23-2 Burst [20 rnds]	Gun			☐	

Add Weapon Record
 Add Mount
 Remove Mount



Setup of the Early warning reaction lines, CAP planning (BZ in der Luft) and planned points to enter or depart safely for own aircraft (in the eyes of the air defenders) ^v

Good info for your CMO zones. I made an exclusion zone for the 3rd AD division (north) and 1st AD division (south) which is incorporated into the empty baseline .scen.

Radio Technical Troops (RTV) – Funktechnische Truppen

I incorporated the Radio-Technical Troops of the Soviet and East-German units. These units were used to search for and identify aircraft. Their job was to build a Recognized Air Picture so the SAM units could remain silent and got presented with a sorted air situation from top-down.

Quote: *There were (always) technical problems with the lower limit in the altitude range of 50 m (150ft) and lower. The air situation was recorded analogously, converted graphically and then broadcast via radio **with a delay (1-2 minutes)**.* (<https://peters-ada.de>) Beware CMO is much faster because the data is relayed in real time in the game...! Something I realised after I researched all the locations.....

The whole order of battle of the German Radio Technical Companies are known and right radars are placed at the historic locations. The precise equipment of the Russian RTV companies is unknown and is estimated from the East-German data. This is the setup retrieved from <https://www.nva-futt.de/> and now present in CMO .inst files, except the PRV-17 which is still in request on Github from 2023 onwards and is covered here by the PRV-16 until now.

Division	unit	level	P-12	P-14	P-15A	P18	P-19	P-37	ST-68U	PRV-9	PRV-10	PRV-11	PRV-13	PRV-16	PRV-17	P-40	5N84A	5N87	Polje
			Spoon Rest	Tall King	FLAT FACE A	SPOON REST	Flat Face B	Bar Lock B	Thin Shield	Thin Skin	Rock Cake	Side Net	ODD PAIR	Thin Skin	Odd Group	LONG TRACK	Tall King C	Back Net	Parol
1 LVD	FuTB-31	BAT				1		2				2		1					
1 LVD	FuTK-311	COY			1			1		1				1			1		
1 LVD	FuTK-312	COY			1	1		1				1		1					
1 LVD	FuTK-313	COY			1			1					1						
1 LVD	FuTK-314	COY			1	1		1				1			1				
1 LVD	FuTB-41	BAT																	
1 LVD	FuTK-411	COY				1		2				3							
1 LVD	FuTK-412	COY			1	1		1				1	1						
1 LVD	FuTK-413	COY				1		2					3						
1 LVD	FuTB-51	BAT		1															
1 LVD	FuTK-511	COY			1	1							2					1	
1 LVD	FuTK-512	COY			3	1								1			1		
1 LVD	FuTK-513	COY			2			1		1									
1 LVD	FuTK-514	COY		1	1					1					1				
1 LVD	FuTK-515	COY			1	1			1					1					
1 LVD	FuTB-61	BAT																	
1 LVD	FuTK-611	COY				1		2					3						
1 LVD	FuTK-612	COY		1	1					1			3						
1 LVD	FuTK-613	COY	1	1	1				1				1						
1 LVD	FuTK-614	COY	1	1	1				1				1	1					
3 LVD	FuTB-23	BAT																	
3 LVD	FuTK 231	COY				1		2				1			2				
3 LVD	FuTK 232	COY		1	1	1									1				
3 LVD	FuTK 233	COY		1	1							1			1				1
3 LVD	FuTB-33	BAT																	
3 LVD	FuTK-331	COY	1					1					4				1		
3 LVD	FuTK-332	COY				1			1				1						1
3 LVD	FuTK-333	COY				1			1				1	1	1		1		1
3 LVD	FuTB-43	BAT																	
3 LVD	FuTB-431	COY			1	1		1		1		1			1				
3 LVD	FuTB-432	COY			2	1								1					
3 LVD	FuTB-433	COY			1	1		1		1		1							
3 LVD	FuTB-434	COY			1	1			1					1					
Laage JGB-77	FuTK-28	COY				1		1		1			1	1					
Drewitz JGB-37	FuTK-37	COY				1		1					1	1					



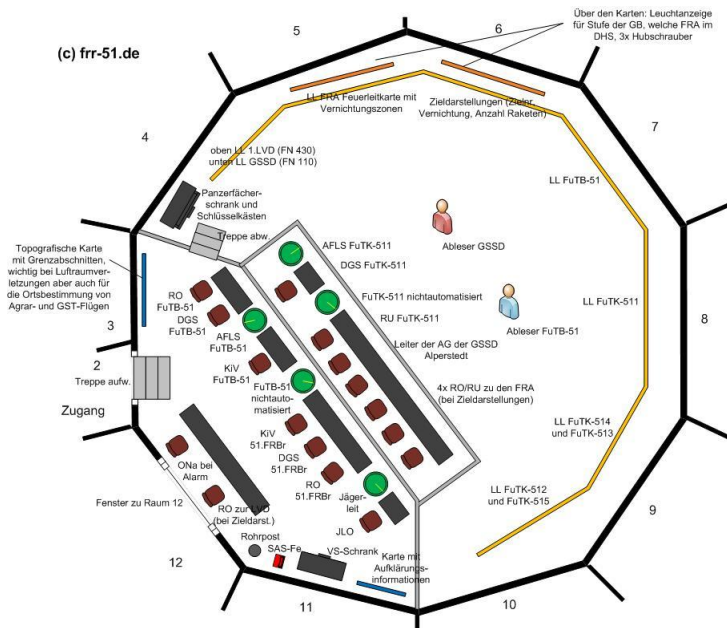
It must have been a great time to work at a RTV Coy 😊

To connect all the units multiple transmission masts were placed. Just to get an idea look at https://www.frr-51.de/na_rifu.html for all the connections needed (use google translate). These are not in CMO.



To get an idea how a bunker of a SAM brigade looked like check <https://bunker-ladeburg.de/aktuelles/>

The Radio Technical Companies could not see the air picture of other RT companies in their battalion. Only at the battalion level the air pictures were put next to each other. Some DDR RTV companies did send their air picture to Soviet Battalions but this was an exception.^{vi}



The bunker room of the 51st Anti-Aircraft Regiment with the air picture of each of the RTV companies.

NVA Airforce

The Air defense fighters are placed under the 1st and 3rd Air Defense Divisions.

The ground attack fighters are placed under the Front and military transport aircraft forces.

In July of 1989, two major changes occurred which are important to mention.

32 Su-24M Fencers moved from Brand (East Germany) to Ross airfield (Belarus) to the 26th Air Army.

And 29 Su-24M Fencers moved from Grossenhain (East Germany) to Lida airfield (Belarus) to the same 26th Air army.

This is a significant change in combat power before and after July 1989. But the Fencers still can reach a lot of NATO targets Hi-Lo-Hi...

There are sources that state that the NVA Luftwaffe will be placed under Soviet control in wartime.

Here an example: *In the state of defense and war, the JBG-77 would have been detached from the NVA's holdings and would have been the commander in chief of the Soviet 1st Front (GSSD). Operationally managed there by the chief front pilot of the 1st Front. Until 1988, this was also associated with the fact that the JBG-77 would then have had a Soviet commander.*

You can play with this or not. Right-mouse-click and change side or do it with Lua.

If you like to attack some airfields this site can make it more attractive because it incorporated a lot of satellite pictures from those days to spice up your scenario: <https://www.mil-airfields.de/germany/national-peoples-army-air-bases.html>



Jagdfliegergeschwader 7 at Drewitz looks by name an air defense wing, but its purpose was ground attack and part of the Front- and military transport aircraft forces. So do not put Atol missiles under these jets

The Su-22 squadrons of the Airforce and Marineflieger on Laage AB each had 6 ELINT pods. These are in request in CMO Github already from jan 2023, but unfortunately not modified yet...

The ELINT missions had essentially two routes flown ("north" and "south route"), in the north over the Baltic Sea to destinations in Northern Germany, Denmark, Sweden and To enlighten Norway or along the former inner German border (approximately Schwerin - Stendal - Erfurt - to Chemnitz). The flight heights were as standard at 6,100, 7,300 m or 7,900 m, but could also be underneath or up to 18,000 m (via sea). Initially, both squadrons flew both routes, later the Northern route only flown from MFG-28, the southern route from JBG-77. ^{vii}

East-Germany had a number of SIGINT sites to help the NVA with their intelligence picture. These will be incorporated in a future upgrade. ^{viii}

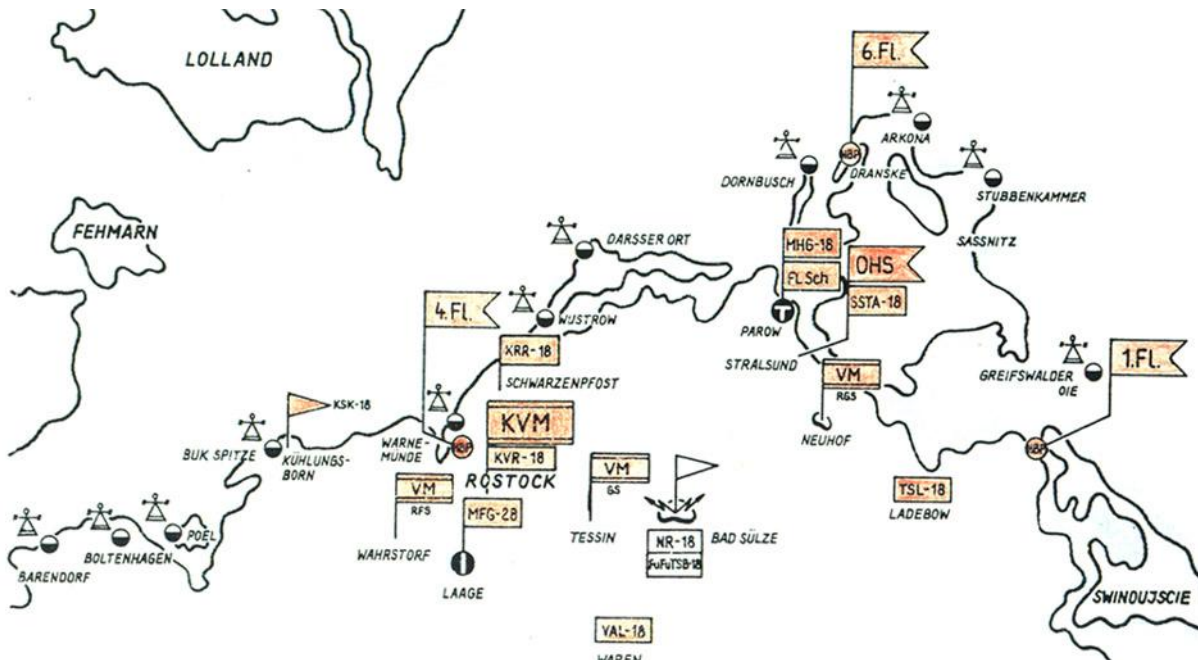
East German Navy - (Volksmarine).

The ships are in port and ready for operations against the imperialist NATO forces. The East-German Navy had a lot of small ships and was locally oriented.



The frigate Berlin of the East German Navy. ^{ix}

Marinefliegergeschwader 28, with the Su-22 is co-located with the Su-22's of the Frontal Aviation on Laage Airbase. Therefore this airfield will not show up if you only select Volksmarine... to prevent doubling up.



Disposition of the Volksmarine in March 1990. ^x

Ground troops- Nationales Volks Armee (NVA) (National Peoples Army)

The Ground troops are divided East Germany into two military districts. This can cause confusion because the ground troops have the 3rd Military district (South) and the air defence troops had the 3rd Air Defense Division (North). The other one was the 5th Military District (North), which is less confusing vs. the 1st Air Defence Division (South).



East German BMP-1 on a parade ^{xi}

Details about the equipment can be found here:

<https://www.relikte.com/basis/docs/nva-10.pdf> or

https://tank-afv.com/coldwar/East_Germany/Nationale-Volksarmee.php

All the NVA divisions are placed in assembly areas with Air defence employed to protect them.

GDR Reserves

Note: The GDR had five reserve Motorized Rifle Divisions. Mobilization was so effective that all five divisions could be combat ready within two days. ^{xii} These Division did not have SAMs like the SA-6/8 but only a S-60 (57mm) AAA regiment as cover.

Overall: Division	Type	NVA overall Cmdr	Mil District III (North)	Mil District III (South)	Assigned to Soviet unit
4 th MRD	Active		X		
11 th MRD	Active		X		
7 th Panzer Div	Active		X		
10 th MRD	Mobilization		X		
20 th MRD	Mobilization	X			
19 th MRD	Mobilisation				2 nd Guards Tank Army
1 st MRD	Active			X	
8 th MRD	Active			X	
9 th Panzer Div	Active			X	
6 th MRD	Mobilization			X	
17 th MRD	Mobilization				8 th Guards Tank Army

The mobilization divisions were placed under different commands.

The mobilization divisions were much lighter, especially in air defense. They had only a few MANPADS and lacked the ZSU-23-4 and the SA-13. As overall cover they were equipped with S-60 AAA. Only the 20th MRD appears to have operated SA-6 SAMs. Maybe it was a typo in the single source or real?



As a Cold War picture as it ever can be! ^{xiii}

Main sources: ^{xiv xv xvi xvii xviii xix xx xxi xxii xxiii xxiv xxv}

ⁱ Hüter des Luftraumes – Die Luftstreitkräfte der DDR im Diensthabenden System des Warschauer Pact by Julian-André Finke 2010

ⁱⁱ <https://peters-ada.de/tla1.jpg>

ⁱⁱⁱ <https://home.snafu.de/veith/43.htm#4351>

^{iv} [Die Truppenluftabwehr der NVA der DDR](#)

^v Hüter des Luftraumes – Die Luftstreitkräfte der DDR im Diensthabenden System des Warschauer Pact by Julian-André Finke 2010

^{vi} Hüter des Luftraumes – Die Luftstreitkräfte der DDR im Diensthabenden System des Warschauer Pact by Julian-André Finke 2010

-
- vii <https://www.manfred-bischoff.de/SU22.htm#Aufkl%C3%A4rungsbeh%C3%A4lter%20KKR-1T>
- viii <https://www.manfred-bischoff.de/ZFD.htm>
- ix [Aus 2 mach 1 | Truppendienst](#)
- x [Warnemünde – Freundeskreis Schnellboote und Korvetten e.V.](#)
- xi https://tank-afv.com/coldwar/East_Germany/Nationale-Volksarmee.php
- xii [Warsaw pact OOB update - King Sargent Military History Forum - tanknet.org](#)
- xiii https://vid1.ria.ru/ig/infografika/kafidov/Sputnik/de/nato/images/tild6539-6433-4935-b839-356561393163__rian_2867344hrru.jpg
- xiv <https://www.nva-futt.de/>
- xv https://www.deutsche-militaerstandorte-nach1945.de/view_standorte.cfm?art=2
- xvi <https://peters-ada.de/standorte.htm>
- xvii <https://home.snafu.de/veith/flugplatz.htm>
- xviii <https://geimint.blogspot.com/2008/08/ddr-air-defense-cold-war-case-study.html>
- xix <https://www.flugzeugforum.de/forums/nva-lsk.35/>
- xx <https://home.snafu.de/veith/1LVD.htm>
- xxi [Warnemünde – Freundeskreis Schnellboote und Korvetten e.V.](#)
- xxii [Vierte Flottille \(Volksmarine\)](#)
- xxiii ["TUSHURKA"](#)
- xxiv <https://wgt.museumsserver.de/>
- xxv <https://www.sightraider.com/fomer-soviet-and-east-german-military-bases-in-the-gdr-pictures-from-above/>