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ADF RED BOOK

NORTH TORBIAN AIR FORCE

as at April 2023

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AMENDMENTS

[illegible]

Note to Exercise Designers, Instructors and Training Audience/Students

1. The North Torbian Air Force Red Book is intended to be used with the OP BRONZE ACHILLES (OBA) campaign plan.
2. Not all North Torbian People's Air Force (TPAF) capabilities are covered in this Red Book, **only those relevant to OBA**.
3. More information on the Force Structures of the TPA can be found in ODIN, link below:

https://odin.tradoc.army.mil/FS/PACIFIC/NORTH_TORBIA/NORTH_TORBIA

4. Details of these organisations continue to evolve. The ORBATs described within this Red Book will be updated by the Training Adversary System Support Cell (TASSC) within the Directorate of Training Systems at HQ FORCOMD as new information on North Torbian force structures and equipment becomes available.
5. Some TPA capability systems have been changed to meet OBA training requirements and may not reflect what is shown on ODIN.
6. The master for the OBA North Torbian Red Book resides on the ADF DATE site. ADF members are to access OBA North Torbian Red Book from this DATE site. Any suggestions for changes are to be submitted to the DATE Team at HQ FORCOMD (SO2 DATE or aus.dateteam@defence.gov.au).
7. The ADF DATE website link can be found below:

<https://date.army.gov.au>



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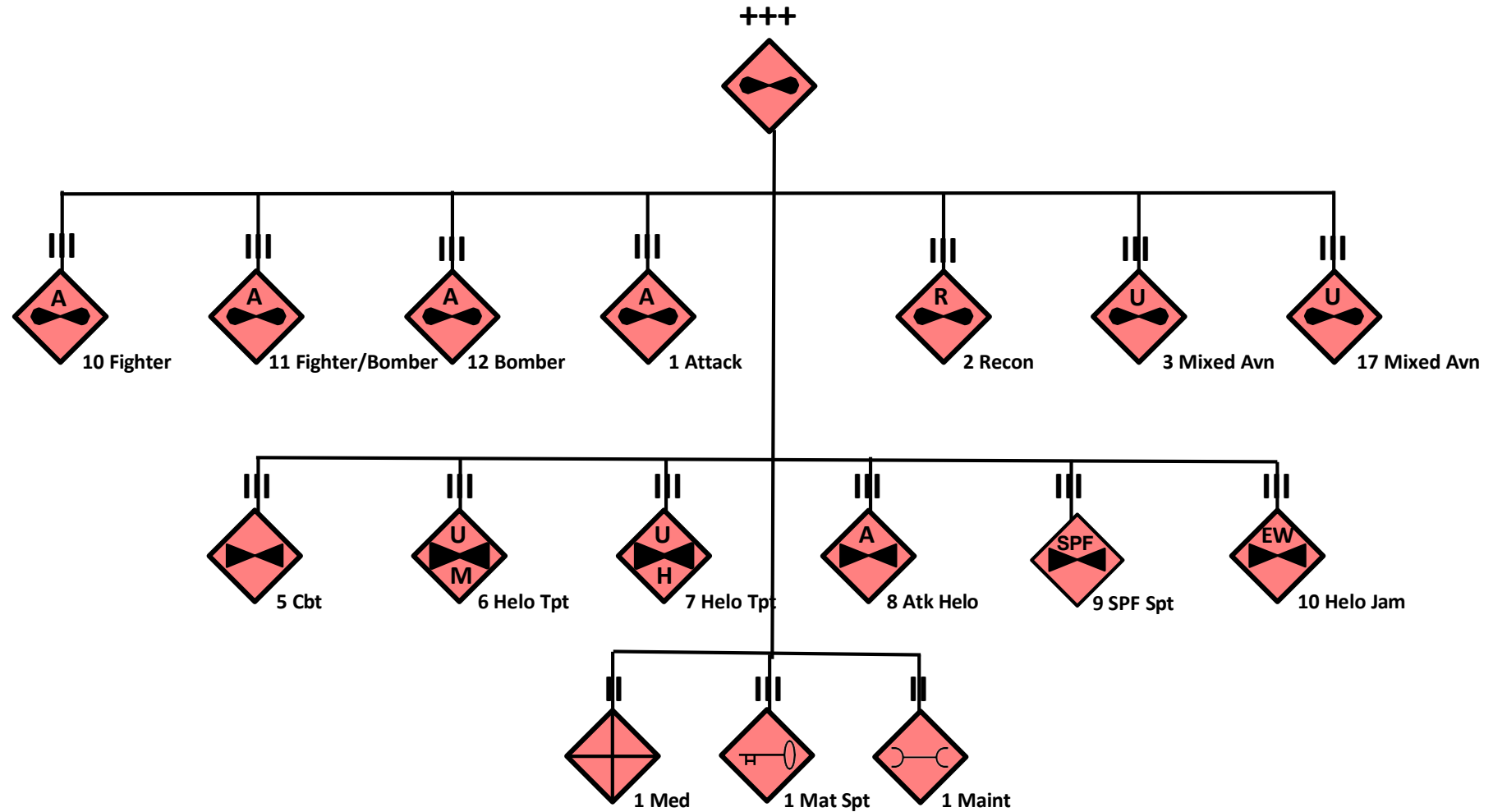
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NORTH TORBIAN/TORBIAN PEOPLE'S AIR FORCE (TPAF)

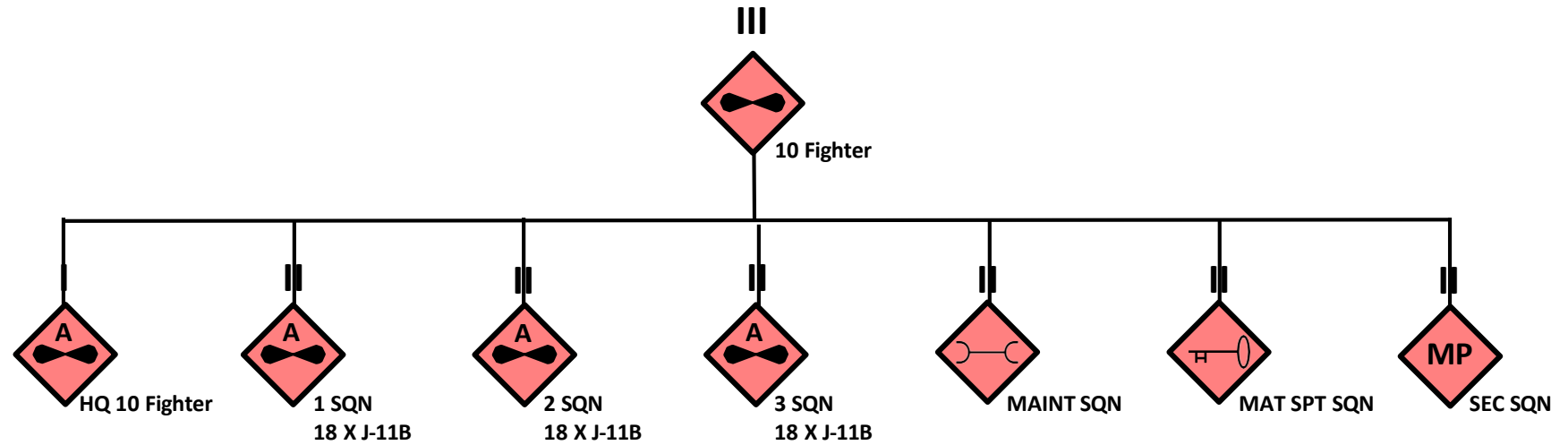




TPAF FIXED WING COMPONENT



TPAF 10TH FIGHTER REGIMENT



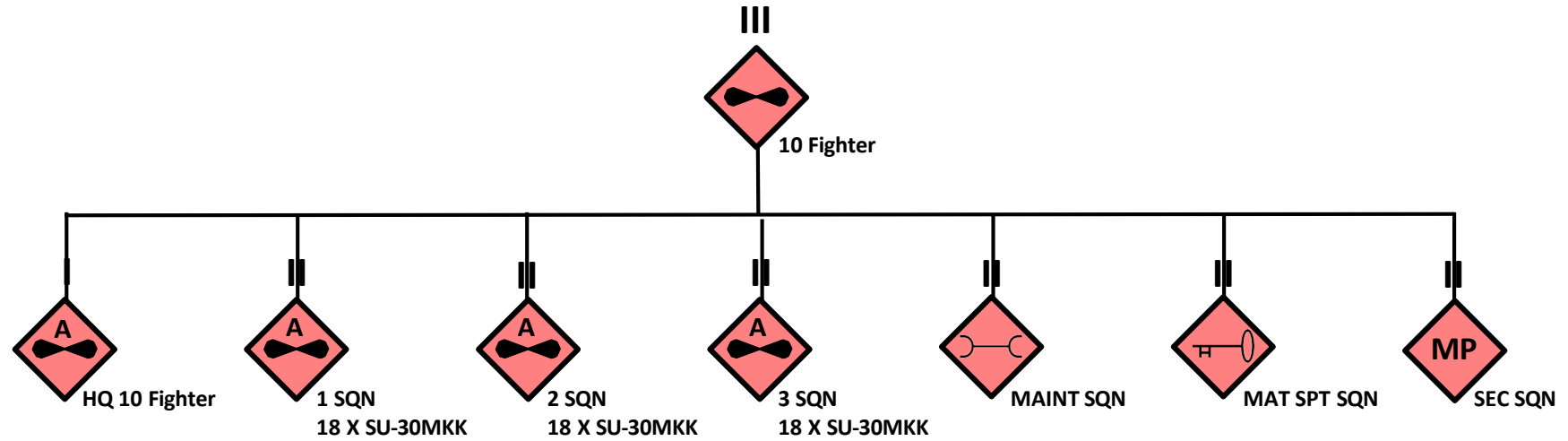
J-11B (Flanker-L)





TORBIAN PEOPLE’S AIR FORCE	
J-11B (Flanker-L) Air Superiority Fighter	
Allocation	10 th Fighter Regiment
Manufacturer	Olvana
Crew	1
Speed	Mach 2.1
Ranges	Maximum range – 3,530 km/1906 nm Combat range – 1,500 km/810 nm
Service ceiling	9,000 m/29, 528 ft
Weapons systems	Autocannon Air-to-Air Missile Free-fall cluster bombs Unguided rocket launcher
Equipment	NIIP Tikhomirov N001VE Myech coherent pulse Doppler radar Gardeniya ECM pods
WEG link	ODIN - OE Data Integration Network (army.mil)

TPAF 11TH FIGHTER BOMBER REGIMENT



SU-30 MKK

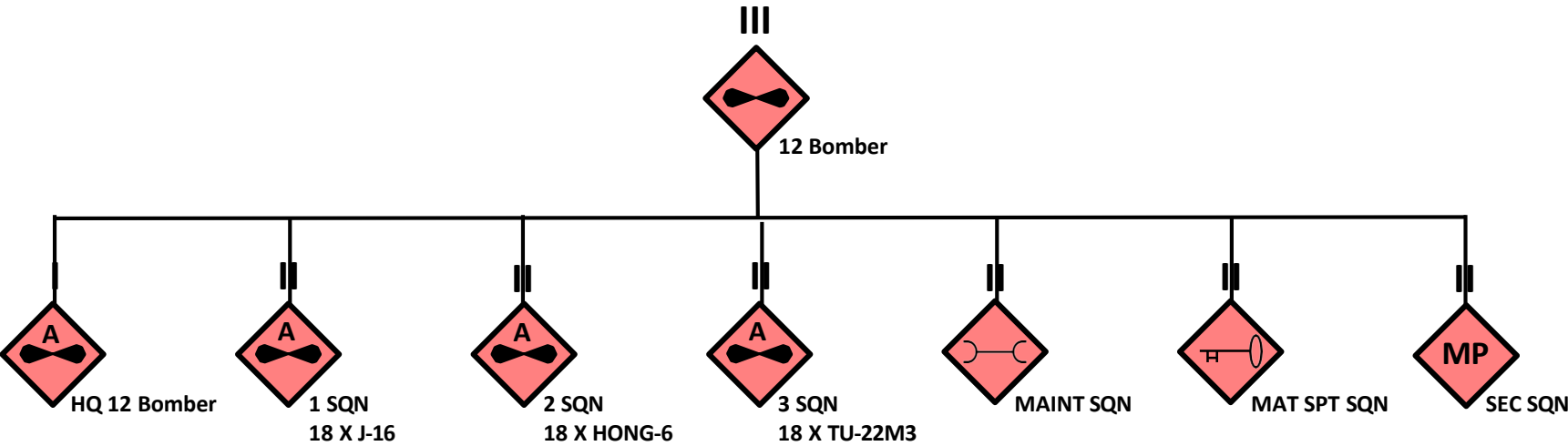




TORBIAN PEOPLE’S AIR FORCE	
Su-30MKK (Flanker-G) Multirole Fighter Aircraft	
Allocation	11 th Fighter Bomber Regiment
Manufacturer	Olvana
Crew	2
Speed	Mach 2
Ranges	Maximum range – 3,000 km/1620 nm Combat range – 1500 km/810 nm
Service ceiling	17,300 m/56,758 ft
Weapons systems	Autocannon Air-to-Air Missile Laser-guided bomb Precision-guided bomb Unguided rocket launcher
Equipment	EW system Airborne radar Fly by wire (FBW) control



TPAF 12TH BOMBER REGIMENT



Hong-6



TU-22MR



J-16





TORBIAN PEOPLE’S AIR FORCE	
J-16 Multirole Fighter Aircraft	
Allocation	12 th Bomber Regiment
Manufacturer	Olvana
Crew	2
Speed	Mach 2.4
Ranges	Maximum range – 3,000 km/1620 nm Combat range – 1500 km/810 nm
Service ceiling	20,300 m/66,601 ft
Weapons systems	Autocannon Air-to-Air Missiles Laser-guided bomb BeiDou satellite-guided bomb Rocket launcher
Equipment	INA
WEG link	ODIN - OE Data Integration Network (army.mil)



TORBIAN PEOPLE'S AIR FORCE	
H-6 (Hong-6) Strategic Bomber	
Allocation	12 th Bomber Regiment
Manufacturer	Olvana
Crew	4
Speed	Maximum speed – 1,050 kph Cruise speed 768 kph
Ranges	Maximum range – 6,000 /3240 nm Combat range – 1800 km/970 nm
Service ceiling	17,300 m/56,759 ft
Weapons systems	Autocannon Anti-ship/air-to surface missiles CJ-100 supersonic-hypersonic cruise missile 9,000 kg free-fall weapons
Equipment	INA
WEG link	ODIN - OE Data Integration Network (army.mil)



TORBIAN PEOPLE’S AIR FORCE

Tu-22M3 (Backfire-C) Long-Range Strategic Bomber

Allocation	12 th Bomber Regiment
Manufacturer	Donovia
Crew	4
Speed	2,300 kph
Ranges	Maximum range – 6,800 km/3672 nm Combat range – 2,410 km/1301 nm
Service ceiling	13,300 m/43,635 ft
Weapons systems	Autocannon Air-to-Air and air-to-surface Missile 69 x FAB-250 or 8 FAB-1500 bombs
Equipment	PNA (Isdeliya 030A) Down Beat I-band for AS-4 Bee Hind I-band radar warning system MTN missile system with integral TV-optical bomb sight, integrated with search radar
WEG link	ODIN - OE Data Integration Network (army.mil)



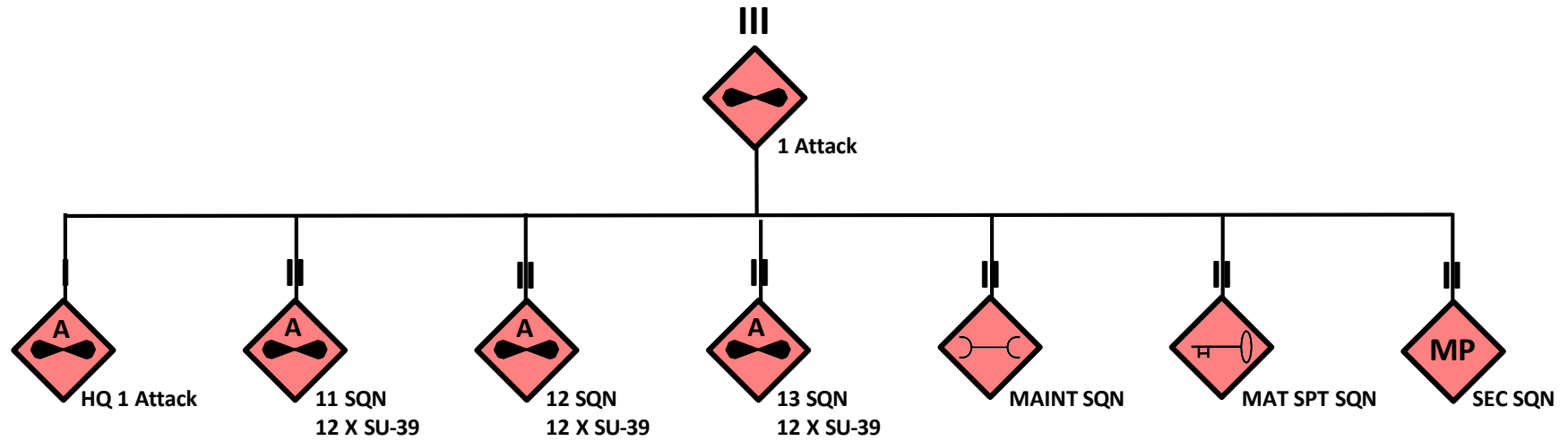
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TPAF 1st ATTACK REGIMENT



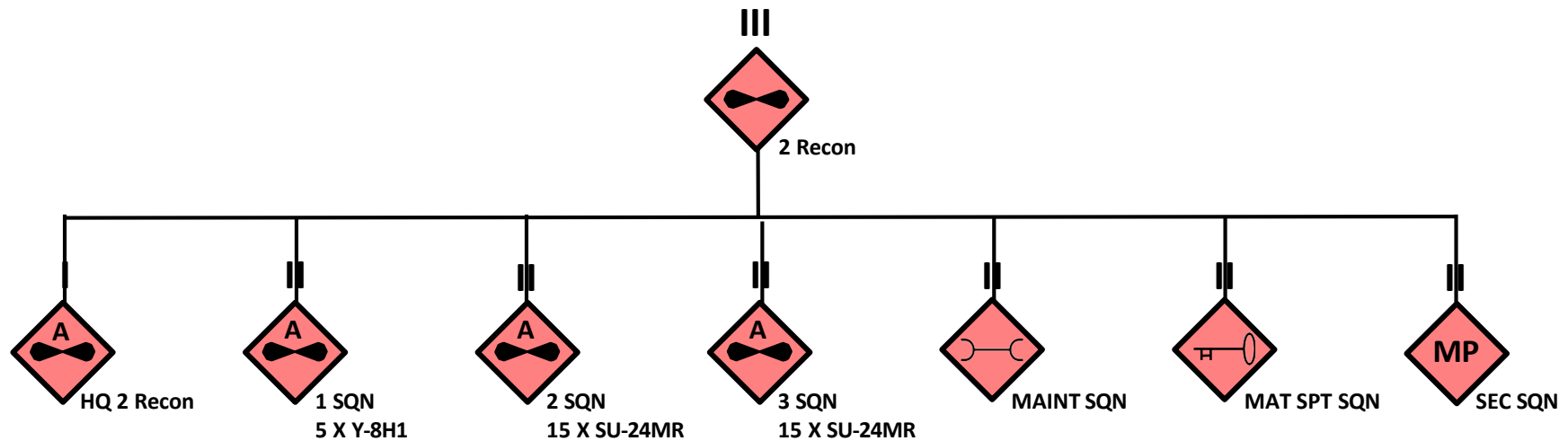
SU-39





TORBIAN PEOPLE'S AIR FORCE	
Su-39 (Frogfoot) Attack Aircraft	
Allocation	1 st Attack Regiment
Manufacturer	Donovia
Crew	1
Speed	Maximum speed – 950 kph Cruise speed – 650 kph
Ranges	Maximum range – 1400 km/755 nm Combat range – 800 km/432 nm
Service ceiling	18,000 m/59,055 ft
Weapons systems	Autocannon Air-to-Air Missile Concrete piercing and cluster bombs
Equipment	Coherent-pulse RLPK Kopyu-25 radar 3-cm band, including cartographic mapping mode
WEG link	ODIN - OE Data Integration Network (army.mil)

TPAF 2nd RECONNAISSANCE REGIMENT



Y-8H1



SU-24MR





TORBIAN PEOPLE’S AIR FORCE	
Y-8H1 Reconnaissance Aircraft	
Allocation	2 nd Reconnaissance Regiment
Manufacturer	Olvana
Crew	6
Speed	Maximum speed – 662 kph Cruise speed – 550 kph
Ranges	5,615 km/3032 nm
Service ceiling	10,600 m/34,777 ft
Weapons systems	INA
Equipment	Chin-mounted radome SATCOM antenna BM/KZ800 ELINT system Litton Canada APS-504 search radar dual Litton LTN-72R inertial navigational system single LTN-211 Omega navigation set
WEG link	ODIN - OE Data Integration Network (army.mil)



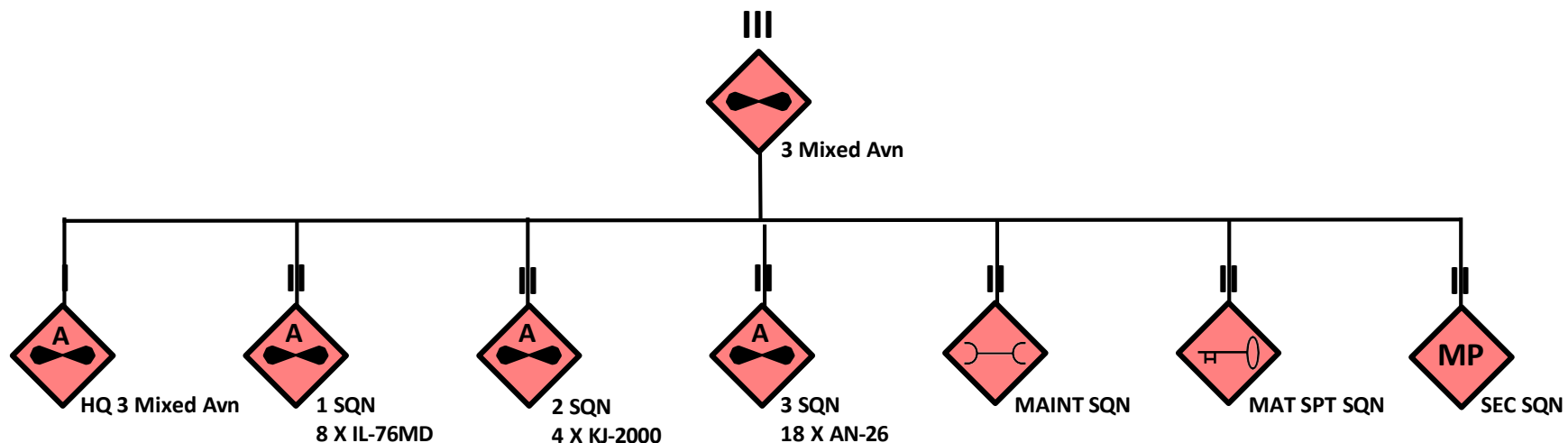
TORBIAN PEOPLE’S AIR FORCE

Su-24MR (Fencer-E) Reconnaissance Aircraft

Allocation	2 nd Reconnaissance Regiment
Manufacturer	Donovia
Crew	2
Speed	Maximum speed – 2,320 kph Attack speed – 1,200 kph
Ranges	Combat range 615 km/382 nm Ferry range – 2775 km/1498 nm
Service ceiling	17,500 m/57,415 ft
Weapons systems	Air-to-Air/surface missile Anti-ship/anti-radiation missiles Rockets Bombs
Equipment	2 x panoramic cameras 'Aist-M' ('Stork') TV camera Side-looking airborne radar (SLAR) Zima' ('Winter') infrared reconnaissance system
WEG link	ODIN - OE Data Integration Network (army.mil)



TPAF 3rd MIXED AVIATION REGIMENT



IL-76MD



KJ-2000



AN-26





TORBIAN PEOPLE’S AIR FORCE

II-76MD (Candid-B) Multi-Purpose Strategic Airlifter

Allocation	3 rd Mixed Aviation Regiment
Manufacturer	Donovia
Crew	7
Speed	Maximum speed – 540 kph Cruise speed – 440 kph
Ranges	Max Fuel – 7,800 km/4212 nm 20,000 kg payload – 7,300 km/3942 nm 40,000 kg payload – 4200 km/2268 nm Max Load – 3,800 km/2052 nm
Service ceiling	12,100 m/39,698 ft
Weapons systems	Autocannon in tail turret 2 x 500 kg bombs
Passengers/cargo	140 pers/125 paratroops Air refule capable
WEG link	ODIN - OE Data Integration Network (army.mil)

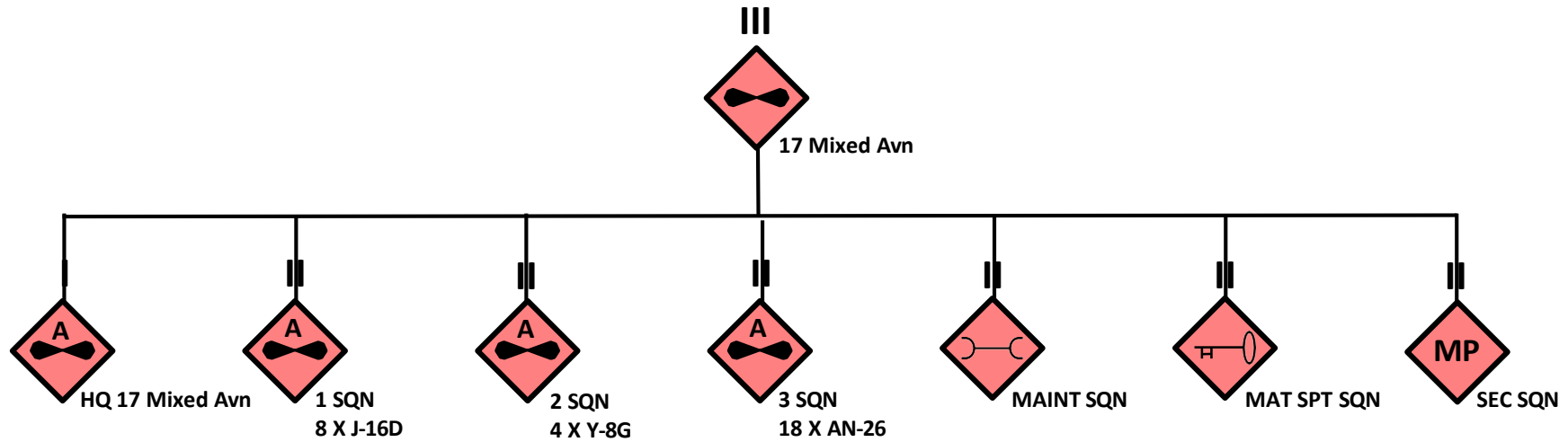


TORBIAN PEOPLE’S AIR FORCE	
KJ-2000 (Mainring) Airborne Early Warning and Control Aircraft	
Allocation	3 rd Mixed Aviation Regiment
Manufacturer	Olvana
Crew	Flight crew – 5 Mission crew – 10-15
Speed	Maximum speed – 540 kph Cruise speed – 440 kph
Ranges	Max flight range – 5,000 km/2700 nm Endurance – 8 hrs
Service ceiling	10,200 m/3.465 ft
Weapons systems	INA
Passengers/cargo	Advanced, non-rotating, three-sided active electronically scanned array (AESA) radar system
WEG link	ODIN - OE Data Integration Network (army.mil)



TORBIAN PEOPLE’S AIR FORCE	
An-26 (Curl) Military Transport Aircraft	
Allocation	3 rd Mixed Aviation Regiment
Manufacturer	Donovia
Crew	5
Speed	Maximum speed – 540 kph Cruise speed – 440 kph
Ranges	1,100 km/594 nm
Service ceiling	7,500 m/24,606 ft
Weapons systems	INA
Passengers/cargo	38-40 pers, or 24 stretchers with attendants
WEG link	ODIN - OE Data Integration Network (army.mil)

TPAF 17th MIXED AVIATION REGIMENT



J-16D



Y-8G



AN-26





TORBIAN PEOPLE’S AIR FORCE

J-16D Radar-Jamming Electronic Warfare Aircraft

Allocation	17 th Mixed Aviation Regiment
Manufacturer	Olvana
Crew	2
Speed	Mach 2.4
Ranges	Maximum range – 3,000 km/1620 nm Combat range – 1,500 km/810 nm
Service ceiling	20,000 m/65,617 ft
Weapons systems	Various bombs and rockets including BeiDou satellite-guided bombs and laser-guided bombs
Equipment	INA
WEG link	ODIN - OE Data Integration Network (army.mil)



TORBIAN PEOPLE’S AIR FORCE	
Y-8G (High New 3) Long-Range Electronic Jamming Aircraft	
Allocation	17 th Mixed Aviation Regiment
Manufacturer	Olvana
Crew	6
Speed	Max speed – 540 kph Cruise speed – 440 kph
Ranges	Max flight range – 5,615 km/3032 nm Endurance – 10.5 hrs
Service ceiling	10,400 m/34,120 ft
Weapons systems	INA
Equipment	INA
WEG link	ODIN - OE Data Integration Network (army.mil)

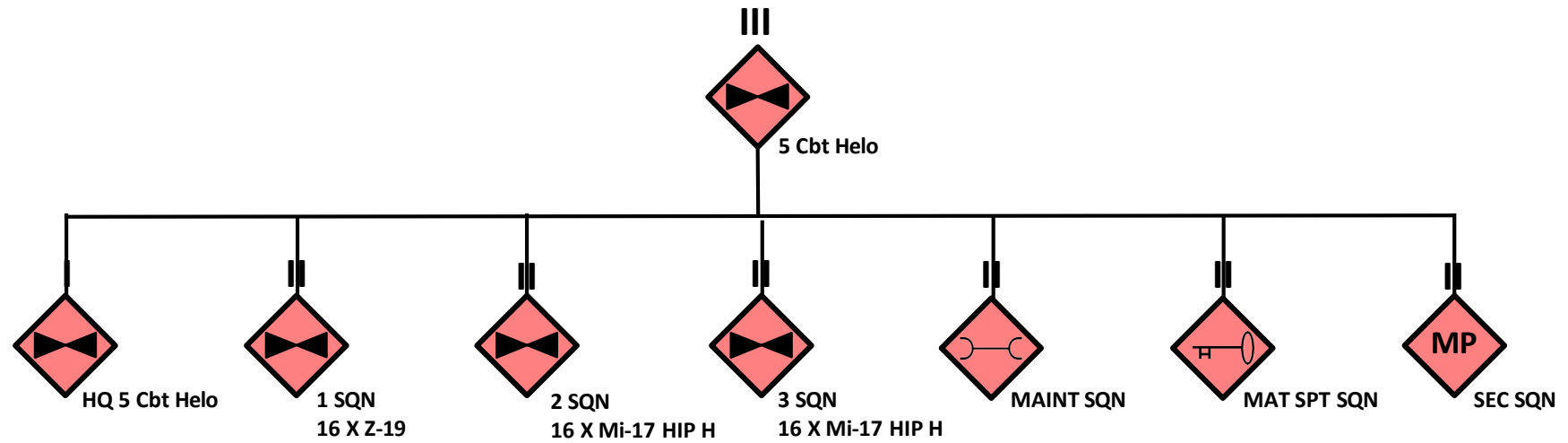


TORBIAN PEOPLE’S AIR FORCE	
An-26 (Curl) Military Transport Aircraft	
Allocation	3 rd Mixed Aviation Regiment
Manufacturer	Donovia
Crew	5
Speed	Maximum speed – 540 kph Cruise speed – 440 kph
Ranges	1,100 km/594 nm
Service ceiling	7,500 m/24,606 ft
Weapons systems	INA
Passengers/cargo	38-40 pers, or 24 stretchers with attendants
WEG link	ODIN - OE Data Integration Network (army.mil)

TPAF ROTARY WING COMPONENT



TPAF 5th COMBAT HELICOPTER REGIMENT





TORBIAN PEOPLE’S AIR FORCE	
Z-19 (WZ-19) Reconnaissance/Attack Helicopter	
Allocation	3 rd Mixed Aviation Regiment
Manufacturer	Olvana
Crew	2
Speed	Maximum speed – 280 kph
Range	700 km/378 nm
Service ceiling	4500 m/14,764 ft
Weapons systems	Wing-mounted autocannon Wing-mounted AT rocket systems TY-90 Air-to-Air Missiles
Equipment	Laser Range Finder Under-Nose Low-Light TV Infrared Observing and Tracking Roof Mounted Optical Sight
WEG link	ODIN - OE Data Integration Network (army.mil)

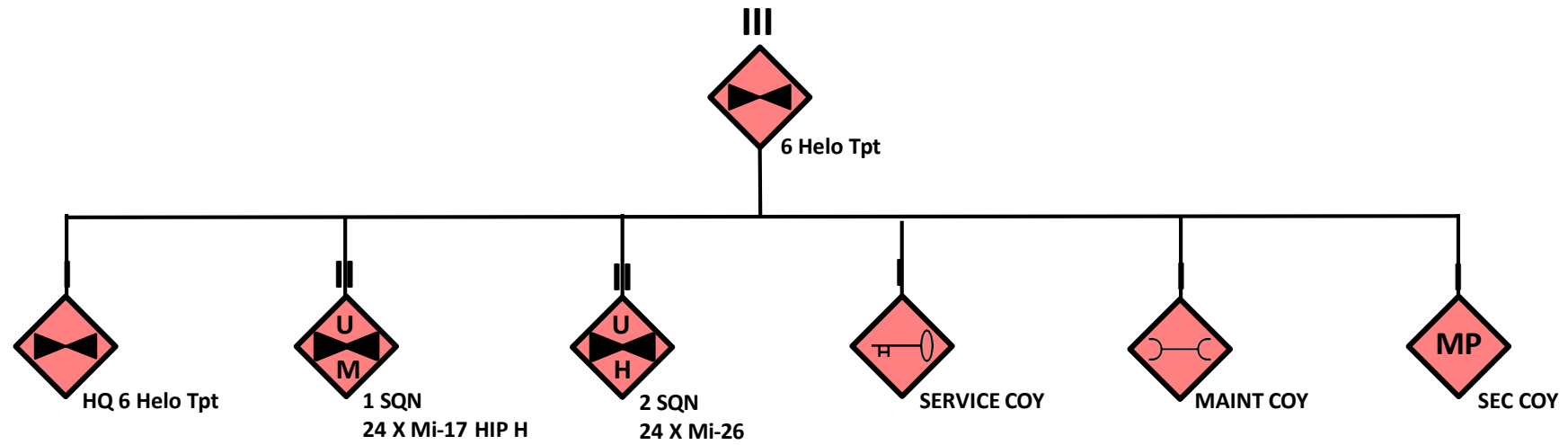


TORBIAN PEOPLE’S AIR FORCE

Mi-17 (Hip H) Helicopter

Allocation	3 rd Mixed Aviation Regiment
Manufacturer	Donovia
Crew	3
Speed	Max speed – 250 kph Cruise speed – 240 kph
Ranges	Max load – 350 km/189 nm Normal load – 460 km/248 nm With auxiliary fuel – 950 km/513 nm
Service ceiling	6,000 m/19,685 ft
Weapons systems	Wing-mounted rocket systems
Passengers/cargo	24 pers 3,000 kg internal/external
WEG link	ODIN - OE Data Integration Network (army.mil)

TPAF 6th HELICOPTER TRANSPORT REGIMENT



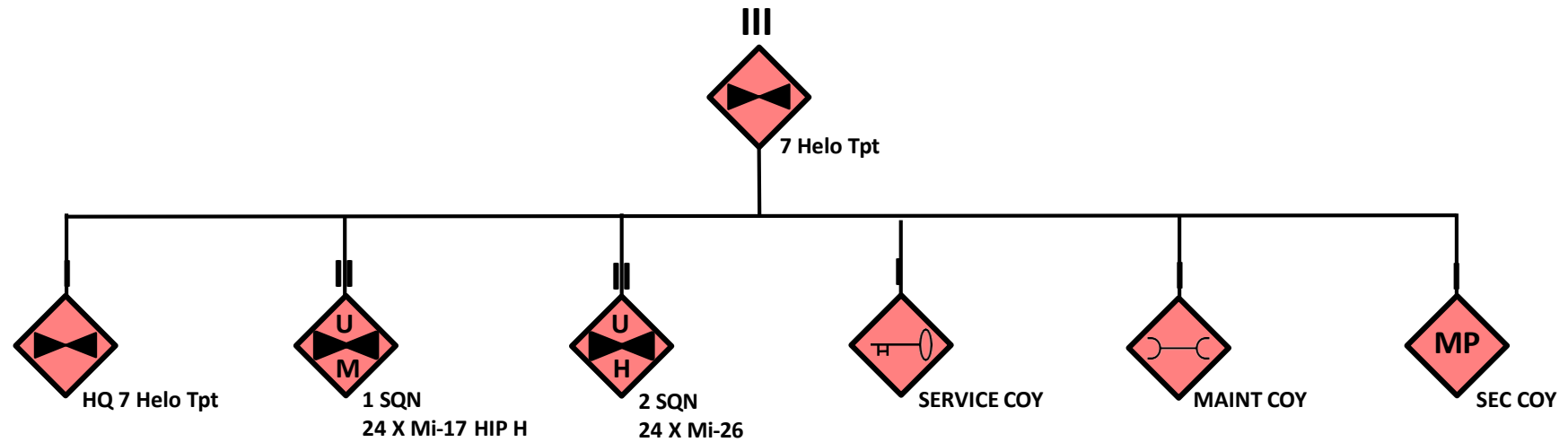
MI-17 HIP H



MI-26



TPAF 7th HELICOPTER TRANSPORT REGIMENT



MI-17 HIP H



MI-26





TORBIAN PEOPLE’S AIR FORCE

Mi-17 (Hip H) Helicopter

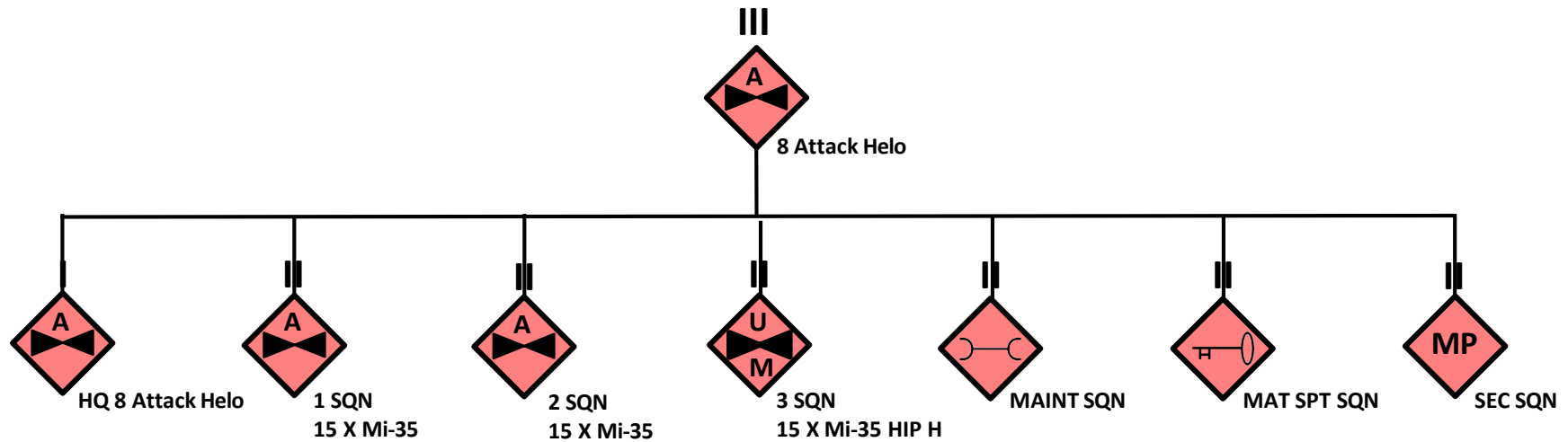
Allocation	7 th Helicopter Transport Regiment
Manufacturer	Donovia
Crew	3
Speed	Maximum speed – 250 kph Cruise speed – 240 kph
Ranges	Max load – 350 km/189 nm Normal load – 460 km/248 nm With auxiliary fuel – 950 km/513 nm
Service ceiling	6,000 m/19,685 ft
Weapons systems	Wing-mounted rocket systems
Passengers/cargo	24 pers 3,000 kg internal/external
WEG link	ODIN - OE Data Integration Network (army.mil)



TORBIAN PEOPLE’S AIR FORCE	
Mi-26 (Halo) Heavy Transport Helicopter	
Allocation	7 th Helicopter Transport Regiment
Manufacturer	Donovia
Crew	5
Speed	Max speed – 250 kph Cruise speed – 240 kph
Ranges	Max range with internal fuel and max payload – 950 km/513 nm
Service ceiling	4,600 m/15,092 ft
Weapons systems	Nil
Passengers/cargo	Maximum payload – 20,000 kg External Payload 14,515-18,144 kg
WEG link	ODIN - OE Data Integration Network (army.mil)



TPAF 8th ATTACK HELICOPTER REGIMENT



MI-35



MI-17 HIP H





TORBIAN PEOPLE’S AIR FORCE

Mi-35M (Hind E) Attack Helicopter

Allocation	8 th Attack Helicopter Regiment
Manufacturer	Donovia
Crew	2
Speed	Max speed – 310 kph
Ranges	Max load – 160 km/86 nm Normal load – 450 km/243 nm With auxiliary fuel – 950 km/513 nm
Service ceiling	5,750 m/18,865 ft
Weapons systems	Chin-mounted autocannon Wing-mounted rocket systems ATGM
Passengers/cargo	8 pers 4 stretchers Internal payload – 2.4 t
WEG link	ODIN - OE Data Integration Network (army.mil)

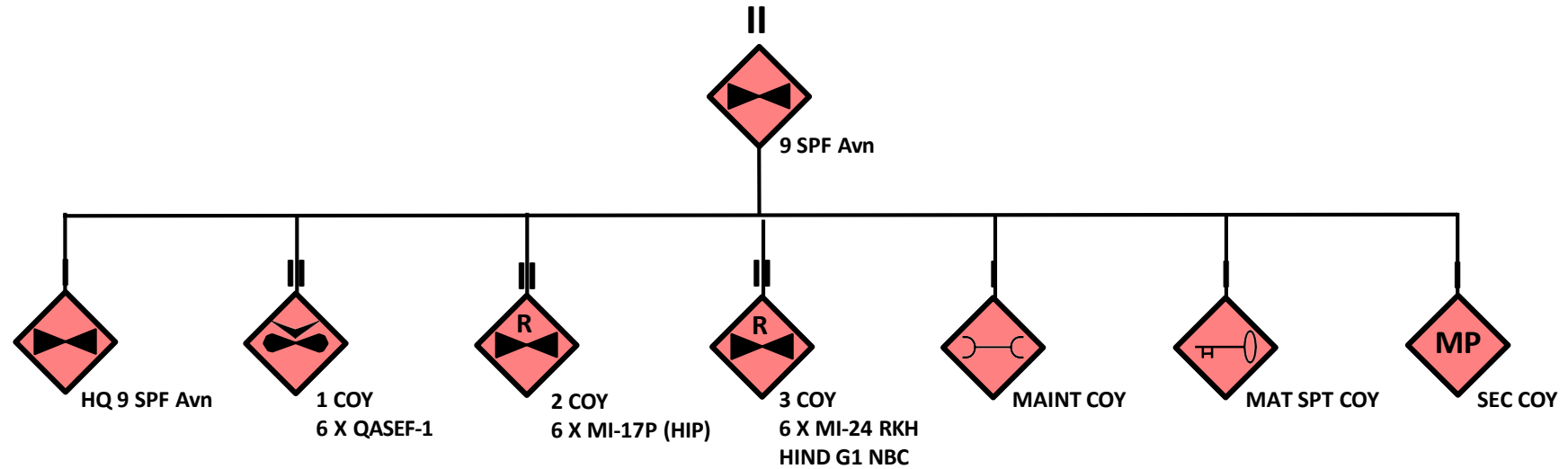


TORBIAN PEOPLE’S AIR FORCE

Mi-17 (Hip H) Helicopter

Allocation	8 th Attack Helicopter Regiment
Manufacturer	Donovia
Crew	3
Speed	Maximum speed – 250 kph Cruise speed – 240 kph
Ranges	Max load – 350 km/189 nm Normal load – 460 km/248 nm With auxiliary fuel – 950 km/513 nm
Service ceiling	6,000 m/19,685 ft
Weapons systems	Wing-mounted rocket systems
Passengers/cargo	24 pers 3,000 kg internal/external
WEG link	ODIN - OE Data Integration Network (army.mil)

TPAF 9th SPF AVIATION SQUADRON



QASEF-1



MI-24 RKH HIND G1 NBC





TORBIAN PEOPLE’S AIR FORCE

Qasef-1 Recon and Loitering Munition Drone

Allocation	9 th SPF Aviation Squadron
Manufacturer	Ariana
Crew	Unmanned
Speed	Maximum speed – 370 kph
Ranges	120 km/65 nm
Service ceiling	3,000 m/9843 ft
Weapons systems	1 x 30 kg warhead with Impact Detonation
Passengers/cargo	INA
WEG link	ODIN - OE Data Integration Network (army.mil)

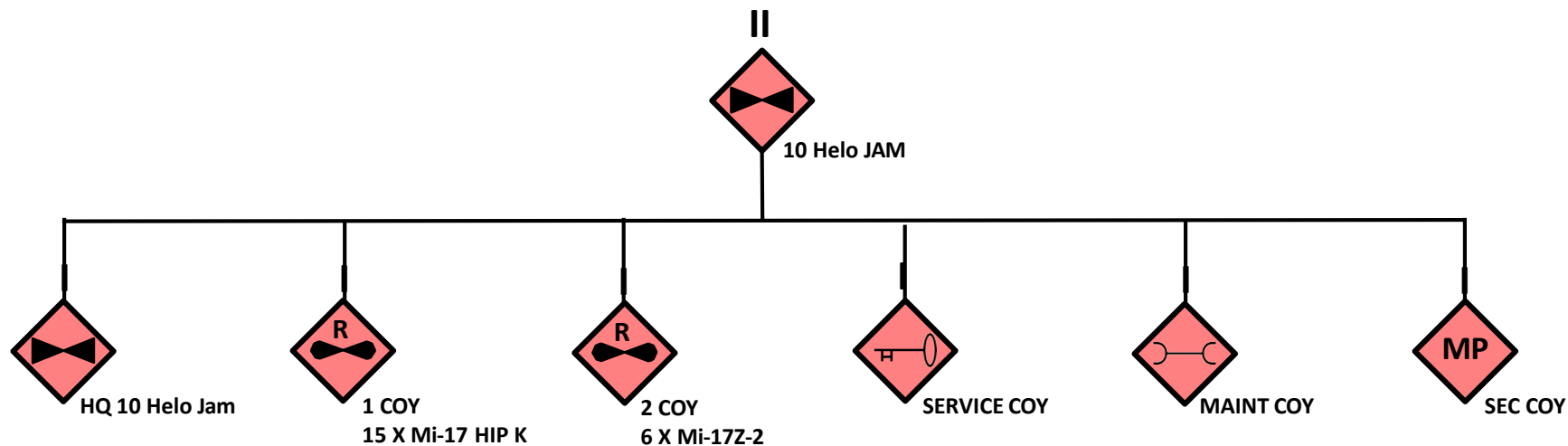


TORBIAN PEOPLE’S AIR FORCE	
Mi-17P (Hip H) Helicopter	
Allocation	9 th SPF Aviation Squadron
Manufacturer	Donovia
Crew	3
Speed	Maximum speed – 250 kph Cruise speed – 240 kph
Ranges	Max load – 350 km/189 nm Normal load – 460 km/248 nm With auxiliary fuel – 950 km/513 nm
Service ceiling	6,000 m/19,685 ft
Weapons systems	Improved electronic ECM helicopter fitted for electronic warfare, communications jamming and intercept
Passengers/cargo	INA
WEG link	ODIN - OE Data Integration Network (army.mil)



TORBIAN PEOPLE’S AIR FORCE	
Mi-24M RKH (Hind-G1) NBC Recon Helicopter	
Allocation	9 th SPF Aviation Squadron
Manufacturer	Donovia
Crew	2-4
Speed	Max speed – 310 kph
Ranges	Max load – 350 km/189 nm Normal load – 460 km/248 nm With auxiliary fuel – 950 km/513 nm
Service ceiling	5,750 m/18,865 ft
Weapons systems	Chin-mounted autocannon Wing-mounted excavation mechanisms NBC protection system
Passengers/cargo	8 pers
WEG link	ODIN - OE Data Integration Network (army.mil)

TPAF 10th HELICOPTER JAMMING SQUADRON



MI-17 HIP H



MI-17Z-2

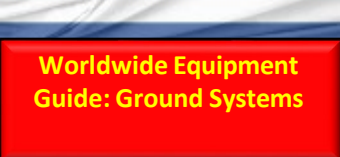
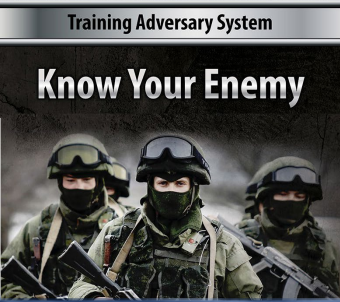




TORBIAN PEOPLE’S AIR FORCE	
Mi-17P (Hip H) Helicopter	
Allocation	10th Helicopter Jamming Squadron
Manufacturer	Donovia
Crew	3
Speed	Max speed – 250 kph Cruise speed – 240 kph
Ranges	Max load – 350 km/189 nm Normal load – 460 km/248 nm With auxiliary fuel – 950 km/513 nm
Service ceiling	6,000 m/19,685 ft
Weapons systems	Improved electronic ECM helicopter fitted for electronic warfare, communications jamming and intercept
Passengers/cargo	INA
WEG link	ODIN - OE Data Integration Network (army.mil)



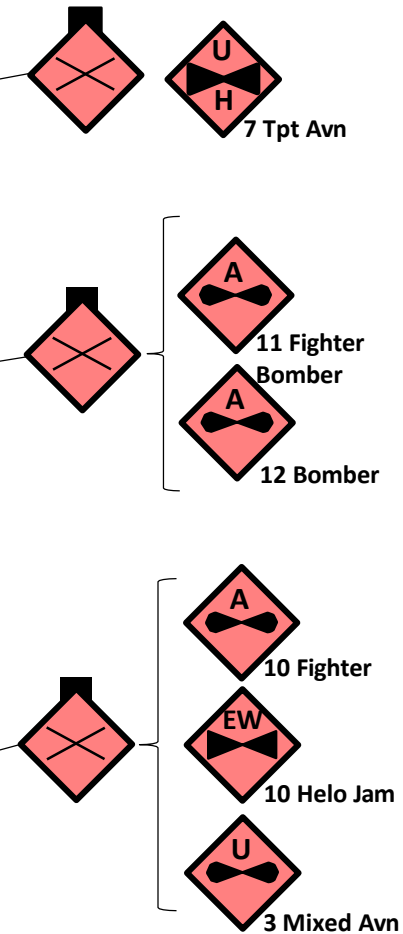
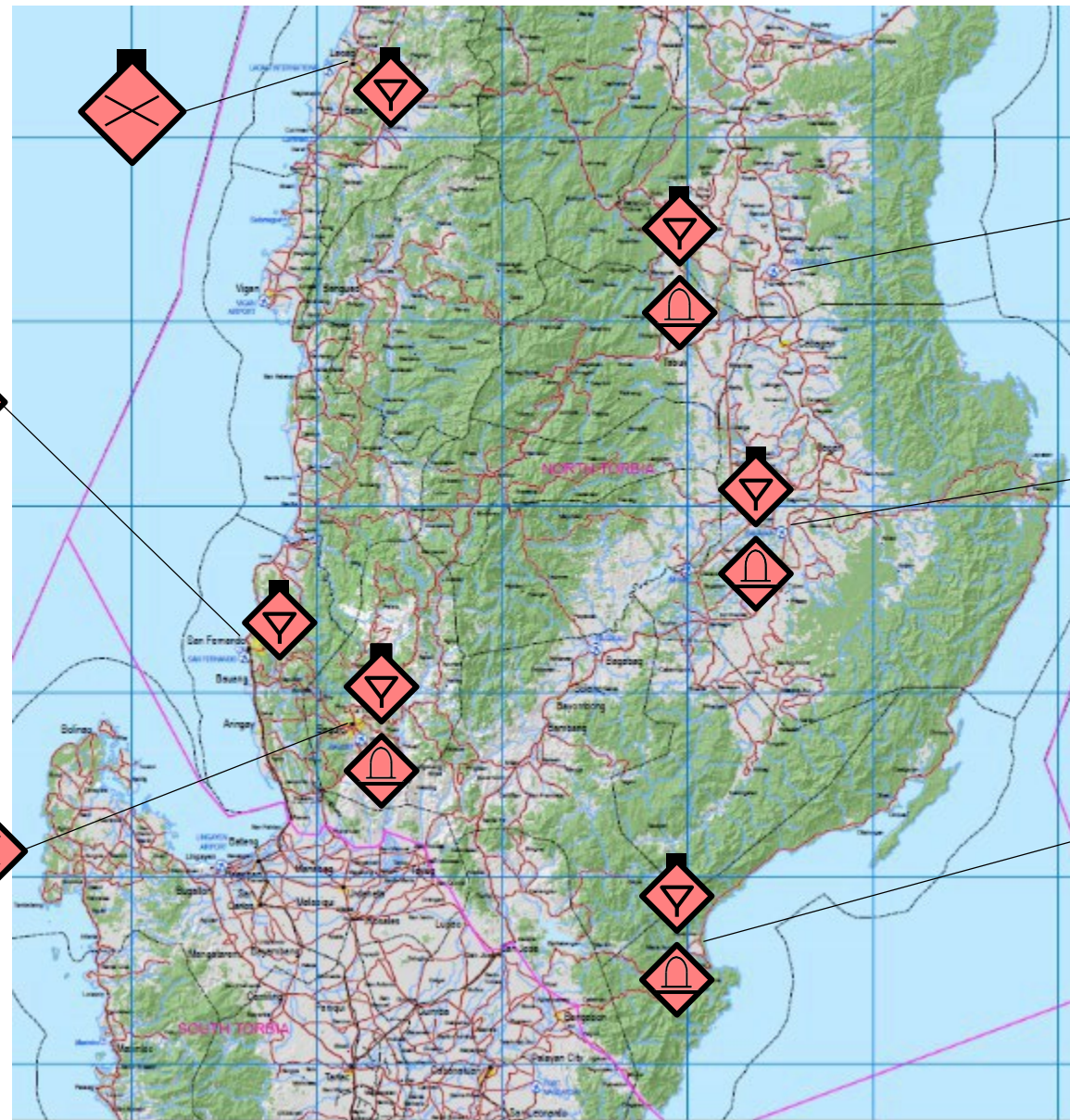
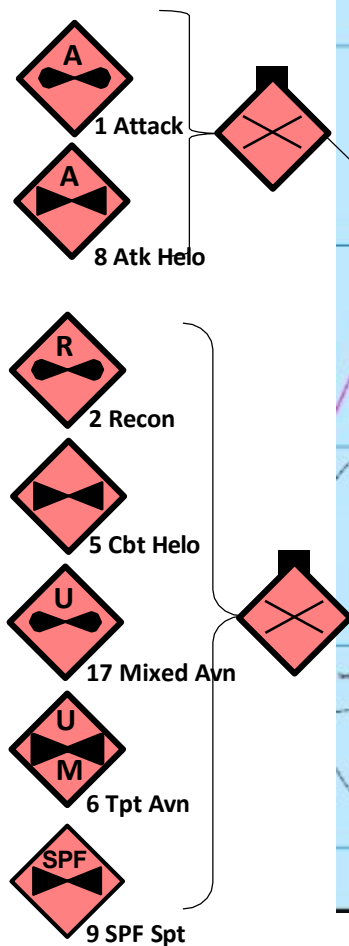
TORBIAN PEOPLE’S AIR FORCE	
Mi-17Z2 RKH (HIP) EW Helicopter	
Allocation	10th Helicopter Jamming Squadron
Manufacturer	Donovia
Crew	2-4
Speed	Max speed – 310 kph
Ranges	Max load – 350 km/189 nm Normal load – 460 km/248 nm With auxiliary fuel – 950 km/513 nm
Service ceiling	5,750 m/18,865 ft
Weapons systems	Used for airborne early warning or EW
Passengers/cargo	INA
WEG link	ODIN - OE Data Integration Network (army.mil)



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TPAF AIRBASES AND UNIT LOCATIONS



OFFICIAL



TPAF AIRBASES AND UNIT LOCATIONS

Airport	Type	Location (MGRS)		Runway length (feet)	Surface type	POL	Ammo storage	ADA coverage	TPAF units
San Fernando	Military Commercial	Lat	16.5956	6955	C	Y	Y	SA-17 Grizzly	1 Attack Regt 8 Attack Helo Regt
		Long	120.3032						
Baguio	Military Commercial	Lat	16.3750	5912	C	Y	Y	SA-17 Grizzly	2 Recon Regt 10 Fighter Regt 17 Mixed Avn Regt 6 Tpt Avn Regt 9 SPF Spt Regt
		Long	120.6194						
San Luis	Military Commercial	Lat	15.7297	3937	A	Y	Y	SA-17 Grizzly	10 Fighter Regt 10 Helo Jamming Regt 3 Mixed Avn Regt
		Long	121.5000						
Tuguegarao	Military Commercial	Lat	17.6383	6453	C	Y	Y	SA-17 Grizzly	7 Tpt Avn Regt
		Long	121.7306						
Cauayan	Military Commercial	Lat	16.9300	6877	C	Y	Y	SA-17 Grizzly	11 Fighter Bomber Regt 12 Bomber Regt
		Long	121.7531						
Laoag	Military Commercial	Lat	18.1781	9120	C	Y	N	SA-17 Grizzly	Nil
		Long	120.5319						

21st Coastal Air Defence Battalion



HQ-9 LONG RANGE SAM

DATE

Decisive Action Training Environment

Training Adversary System

Know Your Enemy

Worldwide Equipment Guide: Ground Systems

Worldwide Equipment Guide: Air & Air Defence Systems

Worldwide Equipment Guide: Navy Systems

DATE

Decisive Action Training Environment

21st Coastal AD Battalion, Southern Army

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AD BN

Total Pers: 404

Command Relationships

Constituent (OPCOM) -----

Supporting (In Support) -----

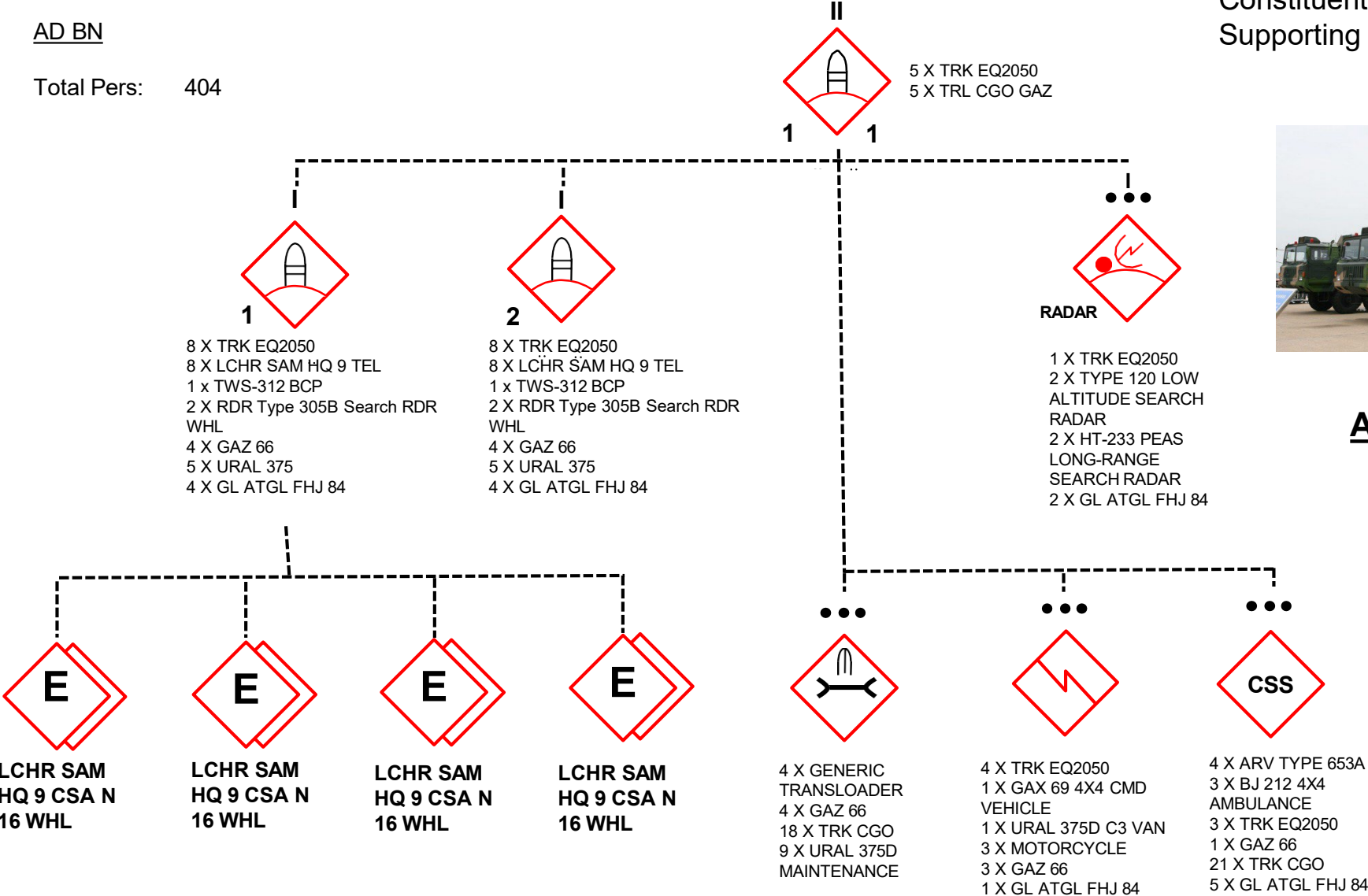
HQ 9



TYPE 305B 3D ACQUISITION RADAR



EQ2050



OFFICIAL



NORTH TORBIAN AD WEAPONS

HQ-9

Allocation	21 st Coastal AD Battalion
Manufacturer	Olvana
Crew	3-4
Missile	Advance two-stage with advance guidance system and multi-target jamming capabilities 180 kg HE-FRAG type warhead with prox fuse of 35 m effective range activated within 5 km of tgt
Ranges	125 km/68 nm against aircraft 15-25 km/8 – 13.5 nm against cruise and ballistic missiles
Ceiling	30 km/98,425 ft
Guidance system	Inertial guidance with mid-course update and terminal active radar homing
WEG link	ODIN - OE Data Integration Network (army.mil)



NORTH TORBIAN AD WEAPONS	
HQ-9 Transport Erector Launcher (TEL)	
Allocation	21 st Coastal AD Battalion
Manufacturer	Olvana
Crew	INA
Transport	Taian TA5380 8x8 high mobility tac truck chassis
Description	Holds four missiles in separate compartments In firing position, compartments at the rear side of the truck raise to a vertical position, while two stabilisers are placed at the rear and centre of the chassis.
WEG link	ODIN - OE Data Integration Network (army.mil)



NORTH TORBIAN AD WEAPONS	
TWS-312 battery command post	
Allocation	21 st Coastal AD Battalion
Manufacturer	Olvana
Crew	INA
Transport	Taian TA5380 8x8 high mobility tac truck chassis
Description	INA
WEG link	ODIN - OE Data Integration Network (army.mil)



NORTH TORBIAN AD WEAPONS	
Type 120 / K/LLQ120	
Allocation	21 st Coastal AD Battalion
Manufacturer	Olvana
Crew	INA
Type of radar	Self Propelled Low Altitude Acquisition Radar
Description	Antenna height of 2.3 metres folded, and 7 metres unfolded, using a feed network of sixteen 230mm wave guides.
Bandwith operation	Rotates at a maximum of ten revolutions per minute, and operates in the L-band at a wavelength of 23.75 cm
Ranges	INA
WEG link	ODIN - OE Data Integration Network (army.mil)



NORTH TORBIAN AD WEAPONS	
TYPE 305B 3D ACQUISITION RADAR	
Allocation	21 st Coastal AD Battalion
Manufacturer	Olvana
Crew	2-3
Type of radar	Standard 3-D search radar
Description	Antenna height of 3.5 m employs sixty 350 mm waveguide feeds
Bandwidth operation	S-band at a wavelength of 11.67 cm.
Ranges	Detection range – 120 km Tracking range – 90 km
WEG link	ODIN - OE Data Integration Network (army.mil)



NORTH TORBIAN AD WEAPONS	
HT-233 HQ-9 Self Propelled Engagement Radar	
Allocation	21 st Coastal AD Battalion
Manufacturer	Olvana
Crew	INA
Type of radar	Multifunction radar for illuminating and homing
Description	IFF/SSR array antenna installed at the top of the primary antenna frame structure, which is structurally extended.
Bandwith operation	300MHz bandwidth in the lower X-Band or C-Band
Tracking capability	50 targets simultaneously
Ranges	Detection range – 150 km Tracking range – 100 km
WEG link	ODIN - OE Data Integration Network (army.mil)

DONOVIAN S-400 BATTERY



5P85M2 SURFACE-TO-AIR MISSILE LAUNCHERS



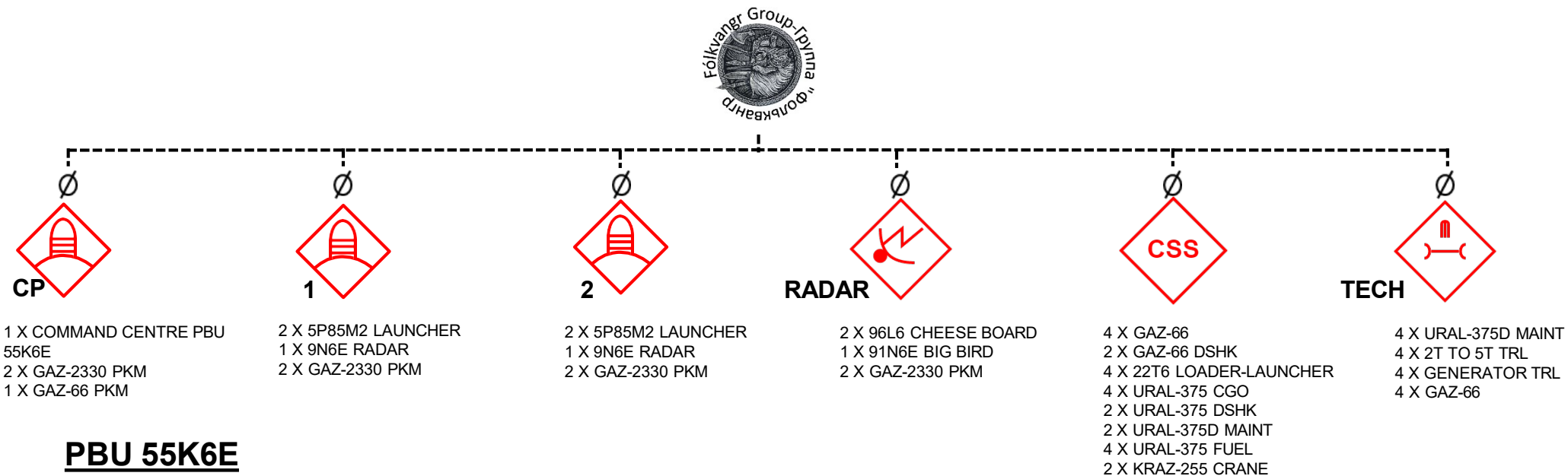
**Worldwide Equipment
Guide: Ground
Systems**

**Worldwide Equipment
Guide: Air & Air
Defence Systems**

**Worldwide Equipment
Guide: Navy Systems**



Donovian S-400 Battery



PBU 55K6E



5P85M2 LAUNCHER



96L6 CHEESE BOARD



91N6E BIG BIRD





NORTH TORBIAN AD WEAPONS

S-400 Triumph Missiles

Missile	Range	Altitude	Guidance	Notes
40N6E	400 km 216 nm	30,000 m 98,000 ft	Semi-active/active radar homing	Effective against low-altitude targets at extremely long range (below the radio horizon).
48N6DM/ 48N6E3	250 km 135 nm	60,000 m 200,000 ft	Semi-active radar homing	
48N6E2	200 km 108 nm		Semi-active radar homing	
9M96 and 9M96E2	120 km 65 nm	30,000 m 98,000 ft	Active radar homing	hit probability with one missile against fast, maneuvering targets: Aircraft – 0.9 UAV – 0.8 Missile – 0.7
9M96E	40 km 22 nm	20,000 m 66,000 ft	Active radar homing	Optical and infrared range of 9M96 versions combined with approximate figures from long-wavelength radar can detect and home-in on stealth targets.



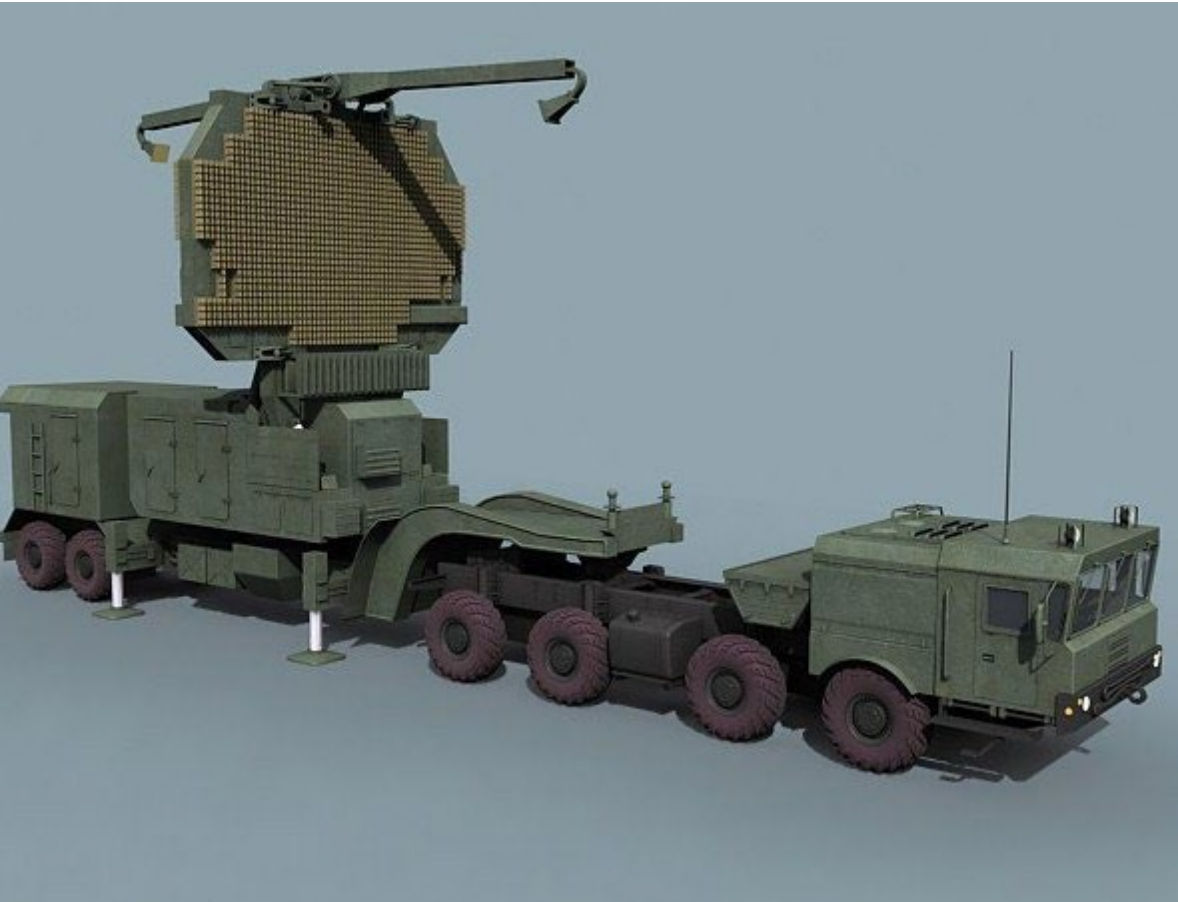
NORTH TORBIAN AD WEAPONS

5P85M2 LAUNCHER

Allocation	21 st Coastal AD Battalion
Manufacturer	Donovia
Crew	INA
Transport	Based on the BAZ-64022 6×6 tractor truck or MAZ-79100 series Transporter-Erector-Launcher (TEL) vehicle
Description	Holds four missiles in separate compartments In firing position, compartments at the rear side of the truck raise to a vertical position, while the vehicle is lifted off the ground by stabilisers at the front and rear of the chassis.
WEG link	ODIN - OE Data Integration Network (army.mil)



NORTH TORBIAN AD WEAPONS	
PBU 55K6E Command Module	
Allocation	21 st Coastal AD Battalion
Manufacturer	Donovia
Crew	INA
Transport	Ural-5323 is an 8×8 heavy-duty off-road truck
Description	The Ural-5323-20, with its 8x8 wheel configuration, is designed to carry cargo weighing up to 10 tons and tow trailers with a full weight up to 16 tons.
WEG link	ODIN - OE Data Integration Network (army.mil)



NORTH TORBIAN AD WEAPONS	
91N6E BIG BIRD	
Allocation	21 st Coastal AD Battalion
Manufacturer	Donovia
Crew	INA
Type of radar	Mobile radar detection station with bilateral antenna, automatic control of modes and data, working in a centimetric range of frequencies.
Description	Used for target detection and tracking in normal, clutter and severe ECM environments. Comprises a hydraulically raised antenna assembly and radar shelter mounted on a common semi-trailer. The phased-array antenna set has a double-sided antenna aperture.
Operation	A fully digital technology processor capable of scanning azimuthal and azimuthal radii, providing the ability to detect objects flying at a certain rate.
Ranges	Can detect up to 300 targets at distances up to 600 km.
WEG link	ODIN - OE Data Integration Network (army.mil)



NORTH TORBIAN AD WEAPONS	
92N6E fire control and target tracking radar	
Allocation	21 st Coastal AD Battalion
Manufacturer	Donovia
Crew	INA
Type of radar	A fire control and targeting radar, it is an I/J-Band multi-function phased-array trailer-mounted engagement radar with digital beam steering.
Description	Uses a transmission type of space feeded phased-array antenna with a complex monopulse horn feed into the rear plane of the antenna, using a microwave lens. The antenna has low sidelobes as protection against noise jammers and anti-radar missiles.
Operation	A fully digital technology processor capable of scanning azimuthal and azimuthal radii, providing the ability to detect objects flying at a certain rate.
Ranges	Can control up to 12 missiles of type 40N6 against 6 aims in a range up to 400 km.
WEG link	ODIN - OE Data Integration Network (army.mil)



OFFICIAL

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6th Air Defence Artillery Battalion, 6th Mechanised Division (APC)



BUK – M2 (SA-17 GRIZZLY) MEDIUM-RANGE AIR DEFENCE MISSILE SYSTEM

OFFICIAL

DATE

Decisive Action Training Environment

Training Adversary System

Know Your Enemy

Worldwide Equipment Guide: Ground Systems

Worldwide Equipment Guide: Air & Air Defence Systems

Worldwide Equipment Guide: Navy Systems

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Decisive Action Training Environment

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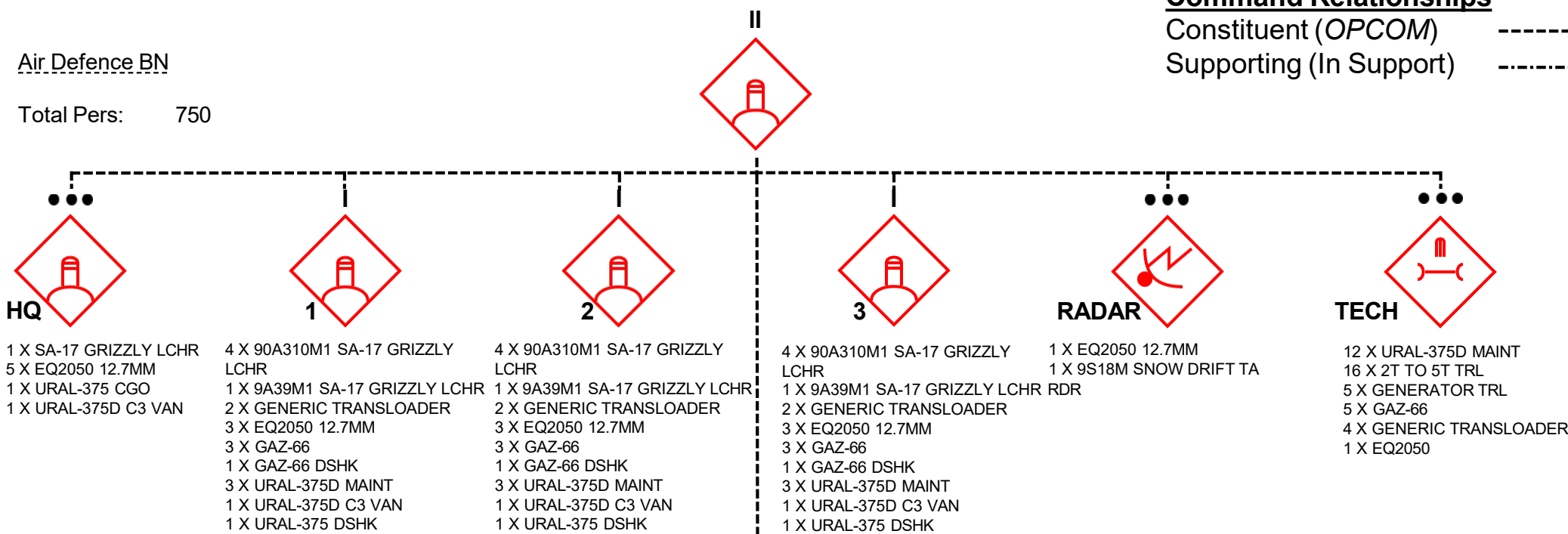
6th Air Defence Artillery Battalion, 6th Mechanised APC Division

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Air Defence BN

Total Pers: 750

Command Relationships
Constituent (OPCOM) -----
Supporting (In Support) -----



SNOWDRIFT TA RADAR



- 1 X BTR-80K M1981
- 3 X MOTORCYCLE IMZ-8
- 3 X GAZ-2330 DSHK
- 3 X GAZ-66
- 1 X URAL-375D C3 VAN



- 6 X BREM-2 ARV
- 3 X BMM-1 AMBULANCE
- 1 X BMM-2 AID STATION
- 4 X GAZ-66
- 2 X GAZ-66 DSHK
- 4 X URAL-375 CGO
- 2 X URAL-375 DSHK
- 1 X URAL-375D MAINT
- 4 X URAL-375 FUEL
- 2 X KRAZ-255 CRANE
- 16 X MEDIC

SA-17 GRIZZLY



OFFICIAL



NORTH TORBIAN AD WEAPONS	
SA-17 GRIZZLY	
Allocation	6 th ADA Battalion
Manufacturer	Donovia
Crew	4
Armament	Main gun – 4 x 30 mm Missiles – 8 x 9M311
Ranges	2,500-50,000 m/1.35-27 nm
Guidance system	Terminal semi-active radar homing with inertial mid-course and course correction radio datalink updating Phased-array radar
Accessories	INA
WEG link	ODIN - OE Data Integration Network (army.mil)

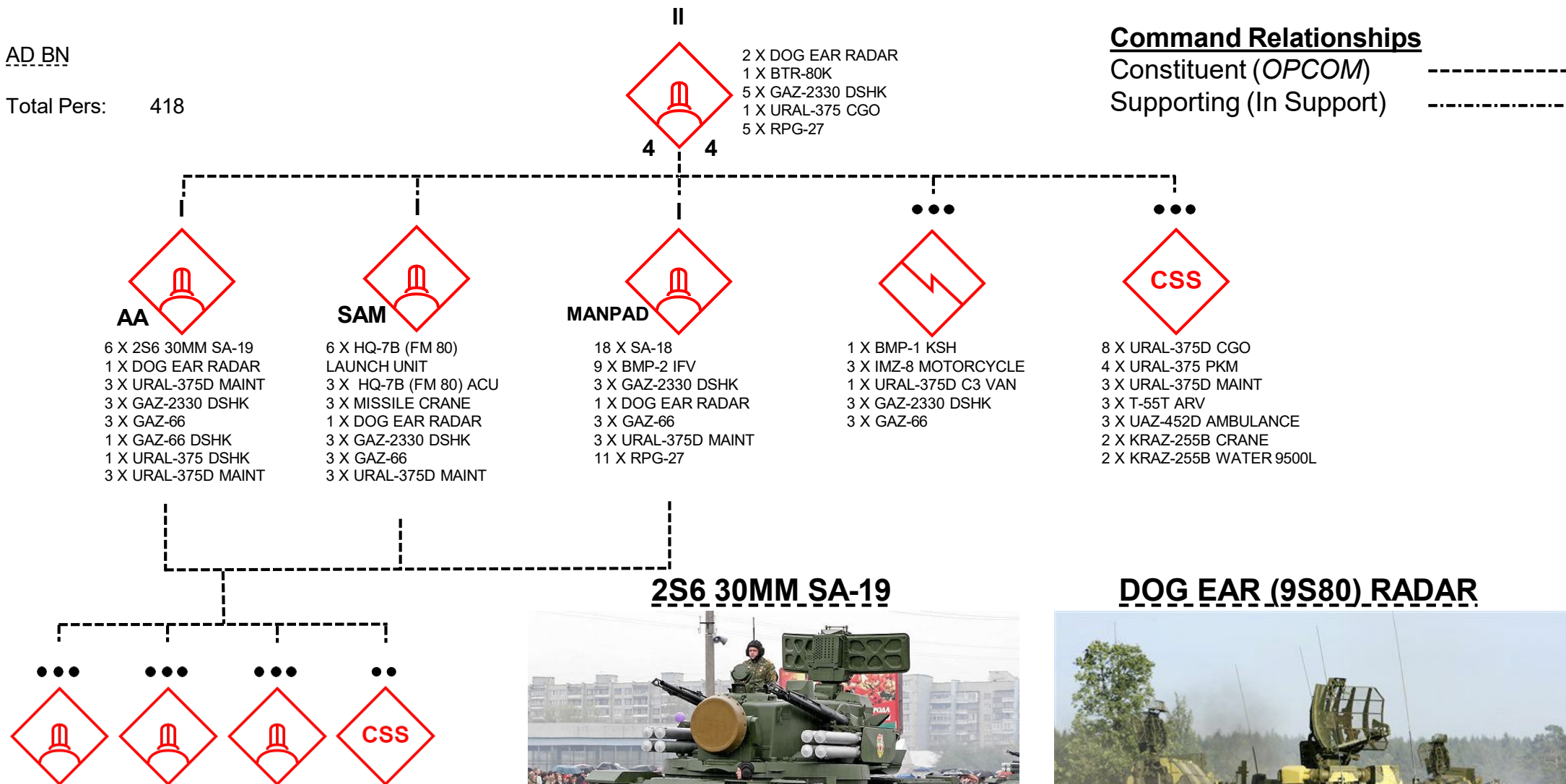


NORTH TORBIAN AD WEAPONS	
9S18M SNOWDRIFT TA Radar	
Allocation	6 th ADA Battalion
Manufacturer	Donovia
Crew	3
Type of radar	Fire control
Description	Operates in combination with the 9S470/9S470M1 'Fire Dome' H/I-band tracking and engagement radar which is mounted on each TELAR.
Bandwith operation	3-D Centimetric band
Ranges	Detection range – 85 km/45.9 nm Aircraft at 100m – 35 km/18.9 nm Lower flying targets – 10-20 km/ 5.4-10.8 nm
WEG link	ODIN - OE Data Integration Network (army.mil)

64th Air Defence Battalion, 64th Tank Brigade

AD BN

Total Pers: 418





NORTH TORBIAN AD WEAPONS

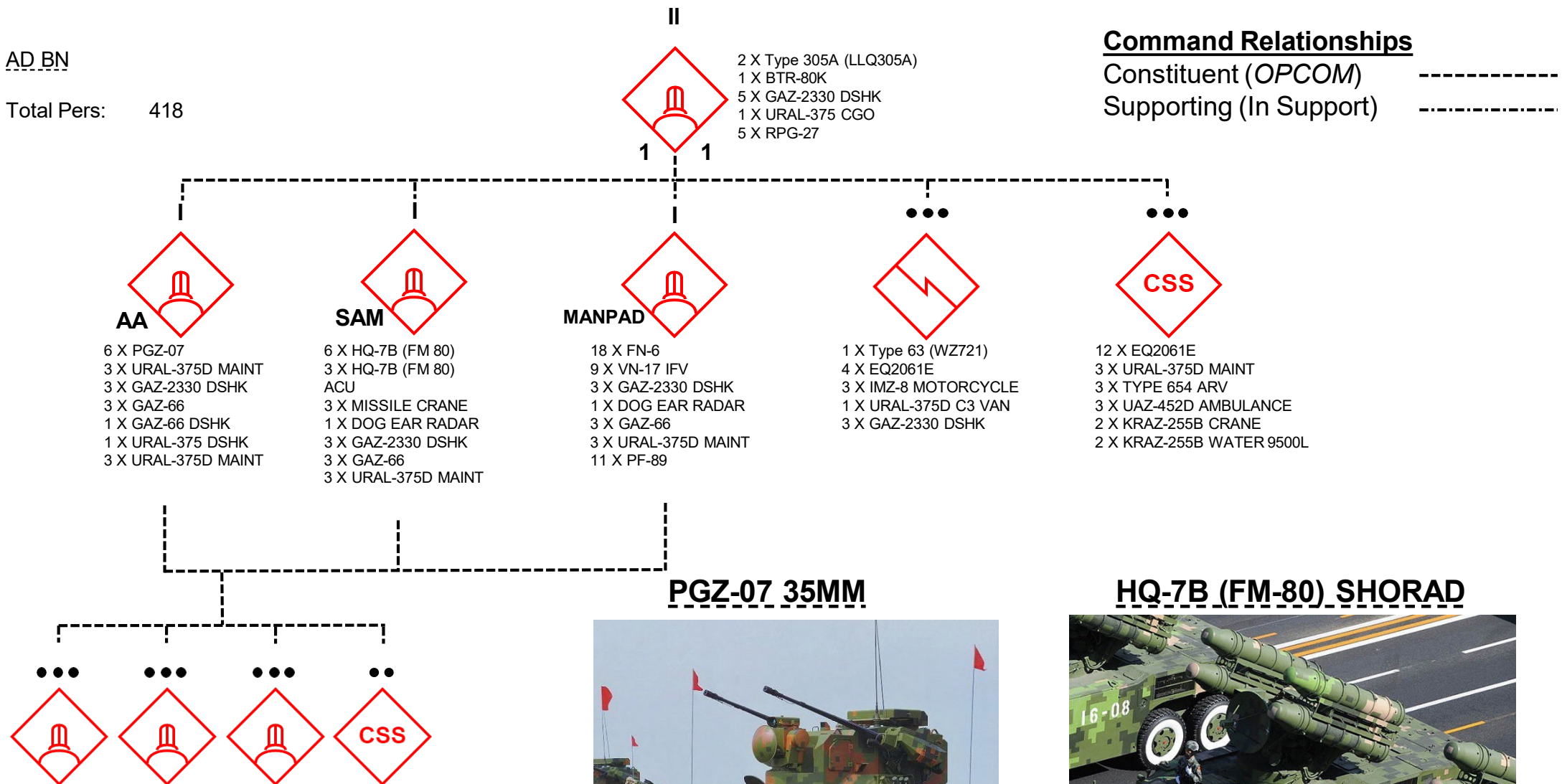
2S6 30MM SA-19

Allocation	Various
Manufacturer	Donovia
Crew	4
Armament	Main gun – 4 x 30 mm Missiles – 8 x 9M311
Ranges	Max slant range (guns) 3 km/1.62 nm Max firing range (guns) 4 km/2.16 nm Max slant range (missiles) 3.5 km/1.89 nm Max firing range (missiles) 8 km/4.32 nm
Guidance system	E-band surveillance parabolic radar Tracking radar
Accessories	INA
WEG link	ODIN - OE Data Integration Network (army.mil)

63rd Air Defence Artillery Battalion, 63 Mechanised Brigade (IFV)

AD BN

Total Pers: 418



DATE

Decisive Action Training Environment

Training Adversary System

Know Your Enemy

Worldwide Equipment Guide: Ground Systems

Worldwide Equipment Guide: Air & Air Defence Systems

Worldwide Equipment Guide: Navy Systems

DATE

Decisive Action Training Environment

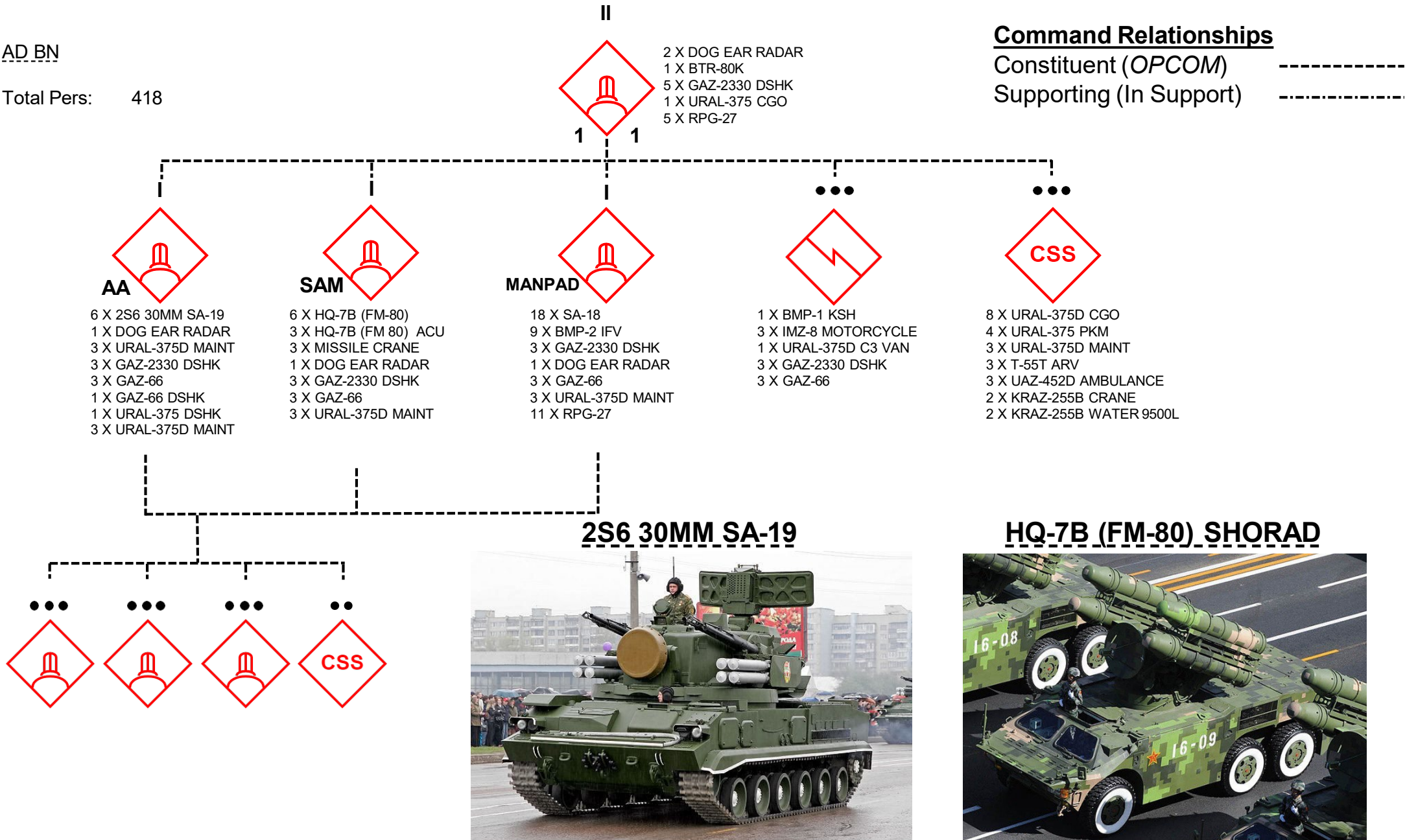
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61st/62nd Air Defence Artillery Battalion, 61/62 Mechanised Brigade (APC)

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AD BN

Total Pers: 418





NORTH TORBIAN AD WEAPONS	
PGZ-07 35 MM	
Allocation	63 rd ADA Battalion
Manufacturer	Olvana
Crew	3
Armament	Main gun – 2 x 35 mm autocannon Missiles – 4 x SAM (unconfirmed)
Ranges	4,000 m/2.2 nm horizontal range 3,000 m/1.62 nm effective shot height
Guidance system	Search radar Tracking radar Independent photoelectric fire contrl system
Accessories	Laser range finder Infrared goniometer Thermal image tracker
WEG link	ODIN - OE Data Integration Network (army.mil)



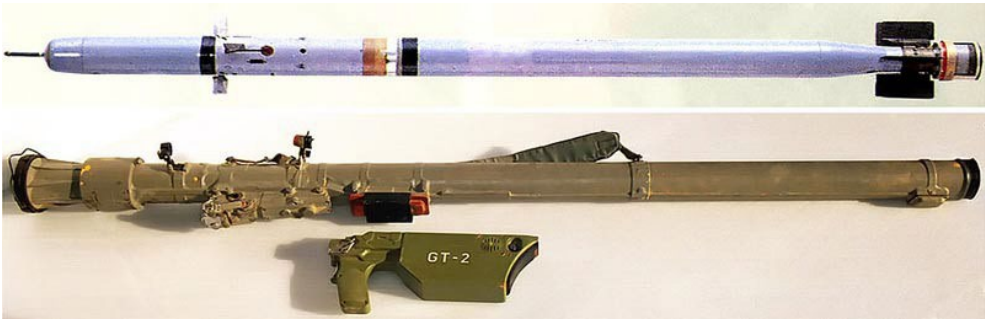
NORTH TORBIAN AD WEAPONS	
HQ-7B (FM-80) SHORAD	
Allocation	Various
Manufacturer	Olvana
Crew	3
Armament	Main gun – 4 x 30 mm Missiles – 8 x 9M311
Ranges	8.6 km/400 m/s, 10 km/300 m/s, or 12 km Radar detecting range: 18.4 km/9.93 nm Radar homing range: 17 km/9.17 nm
Guidance system	Command + electro-optical tracking
Accessories	INA
WEG link	ODIN - OE Data Integration Network (army.mil)



NORTH TORBIAN AD WEAPONS	
9S80 DOG EAR Surveillance Radar	
Allocation	Various
Manufacturer	Donovia
Crew	INA
Type of radar	Target Indicator, 2D Surface-to-Air
Description	. A ground-based, target-acquisition radar mounted on an MT-LB multi-purpose tracked vehicle or MT-LBu armoured command and reconnaissance vehicle (ACRV). It uses an open-mesh, rounded-rectangle parabolic antenna.
Operation	A fully digital technology processor capable of scanning azimuthal and azimuthal radii, providing the ability to detect objects flying at a certain rate.
Ranges	Up to 74 km/40 nm
WEG link	ODIN - OE Data Integration Network (army.mil)



NORTH TORBIAN AD WEAPONS	
FN-6/FY-6 MANPADS	
Allocation	SPF, 63 Mech Bde (IFV)
Manufacturer	Olvana
Crew	2
Speed	Head on – 360 m/s Tail chasing– 300 m/s
Ranges	Minimum – 500 m/0.27 nm Maximum – 5.5 km/3 nm
Operating altitude	15 m – 3800 m/2.6-12,467 ft
Guidance system	Infared passive homing guidance
Accessories	Night vision equipment IFF system (FY-6 variant)
WEG link	ODIN - OE Data Integration Network (army.mil)



NORTH TORBIAN AD WEAPONS	
SA-18 GROUSE	
Allocation	6 Mech Div (APC)
Manufacturer	Donovia
Crew	1
Speed	Head on – 360 m/s Tail chasing– 300 m/s
Ranges	5.2 km (3.2 mi)
Operating altitude	3.5 km (11,000 ft)
Guidance system	Passive IR homing device and night vision (operating in the medium IR range)
Accessories	INA
WEG link	ODIN - OE Data Integration Network (army.mil)