









Romanian 1980s TO&Es v1.2



xx
 BATTLEGROUP CWRO-01
Romanian Tank Division 1980s (a)

-  BATTLEGROUP CWRO-05
x3 Tank Regiment
-  BATTLEGROUP CWRO-06
x1 Motor Rifle Regiment
-  FIRE SUPPORT ELEMENT CWRO-01
x1 Artillery Regiment
-  BATTLEGROUP CWRO-07
x1 Self-Propelled Gun Regiment (b)
-  BATTLEGROUP CWRO-08
x1 Reconnaissance Battalion (e)
-  x1 Engineer Battalion (f)
-  MANOEUVRE ELEMENT CWRO-14
x3 SAM Battery (c)
-  MANOEUVRE ELEMENT CWRO-12
x6 Divisional Antiaircraft Battery (c)

(a) The Romanian Army formed the Warsaw Pact's 'Danube Front', comprising four Romanian Armies numbered 1st to 4th. All elements of the Danube Front were 100% Romanian. Romania had steered a course of stubborn independence from Moscow following the Soviet invasion of Czechoslovakia in 1968 and did not allow transit by Soviet units, nor did it participate in Warsaw Pact exercises. Romania was therefore at the absolute back of the queue for Soviet weapons technology, though it had an active domestic arms industry, producing various home-grown weapons systems, as well as Soviet, Yugoslav and even French designs under licence. The Romanian Army had two Tank Divisions: The 4th 'Tudor Vladimirescu' Tank Division was stationed with 1st Romanian Army (the strategic reserve) and was rated as Category A in terms of combat-readiness. The 6th Tank Division was assigned to 4th Romanian Army in the northwest of the country and was rated Category B.

(b) The Divisional Self-Propelled Gun Regiment had exactly the same organisation as the Front Antitank Regiments.

(c) Sources don't agree on the composition of the Air Defence Regiments, but I've opted for the most-commonly quoted 2x AAA battalions and 1x SAM battalion model. However, the number of batteries in each battalion is unknown, so I've guessed at three batteries per battalion


(d) More engineering assets than you can shake a stick at...

(e) An Army Reconnaissance Battalion was generally organised exactly the same as a Divisional Reconnaissance Battalion, though there were many organisational differences in recce units at all levels and it remains a very complicated area of research.

(f) The Divisional Engineer Battalion had a single Divisional Sapper Company that could be considered an ME for game purposes (ME CWRO-17), while the rest of the battalion consisted of road-building, bridging, amphibian, position preparation and demolition equipment, which is unlikely to feature very heavily in a game.


ARMY TROOPS

 FIRE SUPPORT ELEMENT CWRO-06
Up to x1 Artillery Brigade

 x1 Engineer Brigade (d)

 BATTLEGROUP CWRO-08
x1 Reconnaissance Battalion (e)

 MANOEUVRE ELEMENT CWRO-14
Up to x3 SAM Battery (c)


 MANOEUVRE ELEMENT CWRO-13
Up to x6 Army Antiaircraft Battery (c)


FRONT TROOPS


 MANOEUVRE ELEMENT CWRO-14
Up to x3 SAM Battery (c)

 MANOEUVRE ELEMENT CWRO-13
Up to x6 Front Antiaircraft Battery (c)

 BATTLEGROUP CWRO-07
Up to x5 Antitank Regiment (bg)

 x2 Mi-4 'Hound' Transport Helicopter (h) CWWP-117

 x12 Mi-8 'Hip' Transport Helicopter (hi) CWWP-118

 x22 IAR-316 Observation Helicopter (hj) CWWP-158

 x16 IAR-330 Utility Helicopter (hk) CWWP-154

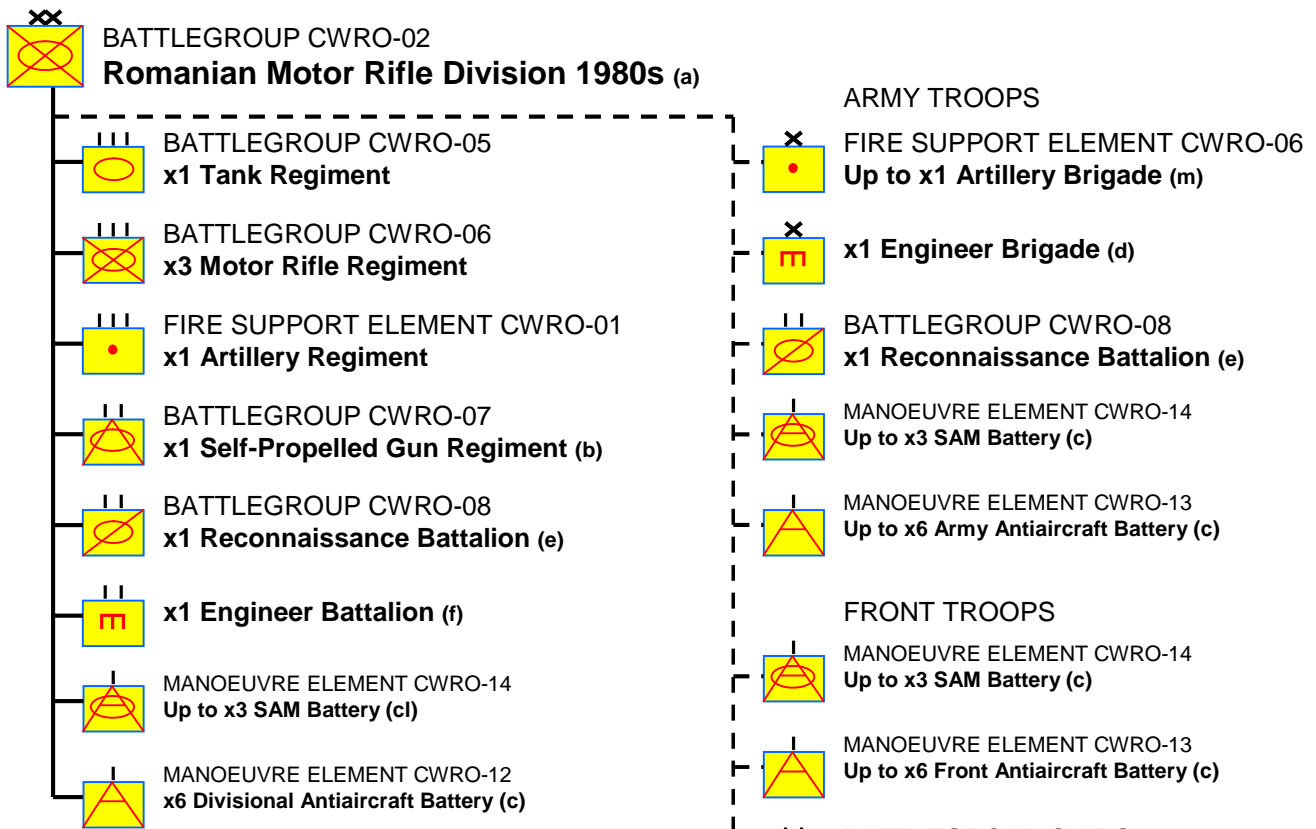
(g) The Romanian Army had a single Antitank Brigade, consisting of x5 Antitank Regiments.

(h) The Romanian Air Force had a single Helicopter Regiment (listed here at full strength), which would allocate helicopters to Romanian formations as required. There were no lower-level helicopter units as might be found in other Warpac armies.

(i) Some of these Mi-8s might have been Assault Transport Helicopters, in which case replace with:
 Mi-8 'Hip' Assault Transport Helicopter CWWP-119

(j) The IAR-316 was a licence-built, Romanian version of the French SA-316 Alouette III. Some of them were fitted out as Light Attack Helicopters with AT-3 'Sagger' ATGMs (see card).

(k) The IAR-330 was a licence-built, Romanian version of the French SA-330 Puma. I do not have an in-service date for the IAR-330 and the numbers shown here are circa 1987. In the early 80s these units may have been equipped with Mi-4 or Mi-8. Some IAR-330 were equipped as Attack Helicopters. Replace with:
 IAR-330 Attack Helicopter CWWP-153



(a) The Romanian Army had eight Motor Rifle Divisions: 1st MR Division (Cat A) was in reserve with 1st Army, 10th & 23rd MR Divisions (Cat B) were in the northeast with 2nd Army, 2nd MR Division (Cat C) and 9th MR Division (Cat B) were in the south with 3rd Army, while 11th, 18th and 28th MR Divisions (Cat C) were in the northwest with 4th Army.

(b) The Divisional Self-Propelled Gun Regiment had exactly the same organisation as the Front Antitank Regiments.

(c) Sources don't agree on the composition of the Air Defence Regiments, but I've opted for the most-commonly quoted 2x AAA battalions and 1x SAM battalion model. However, the number of batteries in each battalion is unknown, so I've guessed at three batteries per battalion

(d) More engineering assets than you can shake a stick at...

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(h) The Romanian Air Force had a single Helicopter Regiment (listed here at full strength), which would allocate helicopters to Romanian formations as required. There were no lower-level helicopter units as might be found in other Warpac armies.

- x2 Mi-4 'Hound' Transport Helicopter (h) CWWP-117
- x12 Mi-8 'Hip' Transport Helicopter (hi) CWWP-118
- x22 IAR-316 Observation Helicopter (hj) CWWP-158
- x16 IAR-330 Utility Helicopter (hk) CWWP-154

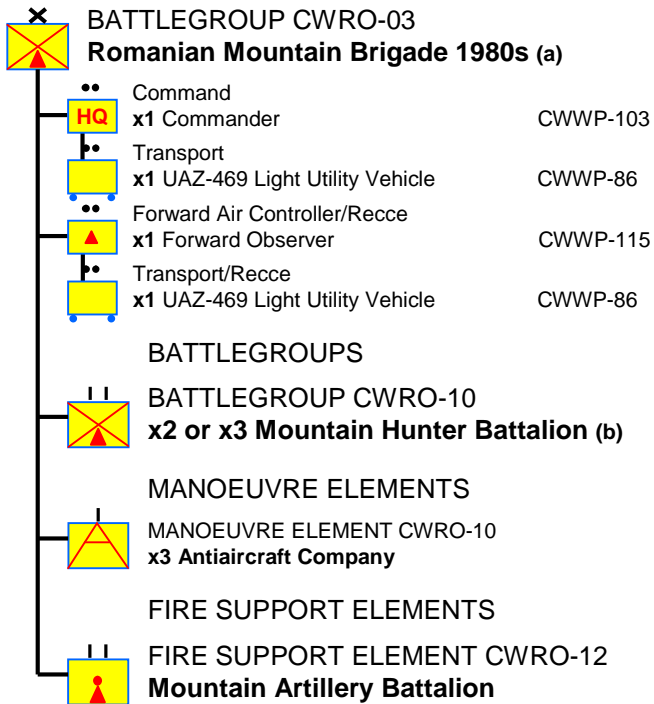
(i) Some of these Mi-8s might have been Assault Transport Helicopters, in which case replace with:
 Mi-8 'Hip' Assault Transport Helicopter CWWP-119

(j) The IAR-316 was a licence-built, Romanian version of the French SA-316 Alouette III. Some of them were fitted out as Light Attack Helicopters with AT-3 'Sagger' ATGMs (see card).

(k) The IAR-330 was a licence-built, Romanian version of the French SA-330 Puma. I do not have an in-service date for the IAR-330 and the numbers shown here are circa 1987. In the early 80s these units may have been equipped with Mi-4 or Mi-8. Some IAR-330 were equipped as Attack Helicopters. Replace with:
 IAR-330 Attack Helicopter CWWP-153

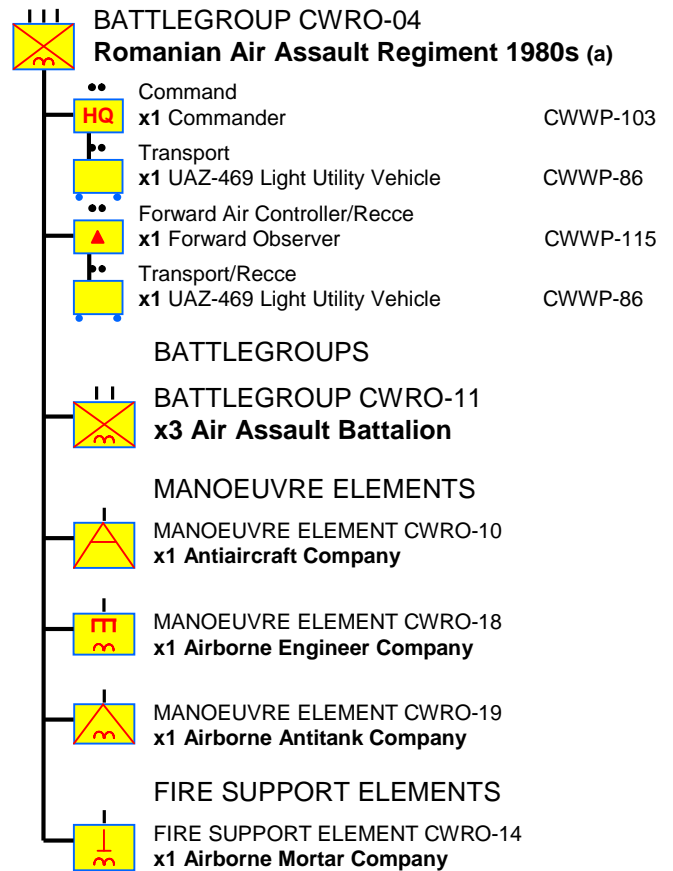
(l) The Category C Motor Rifle Divisions (2nd, 11th, 18th & 28th) probably did not have SAM Battalions in their divisional Antiaircraft Regiments, so delete these SAM batteries.

(m) The Romanian Army had only two Artillery Brigades to share between four Armies. As each Artillery Brigade consisted of two regiments, it is possible that one Regiment was attached to each Army.

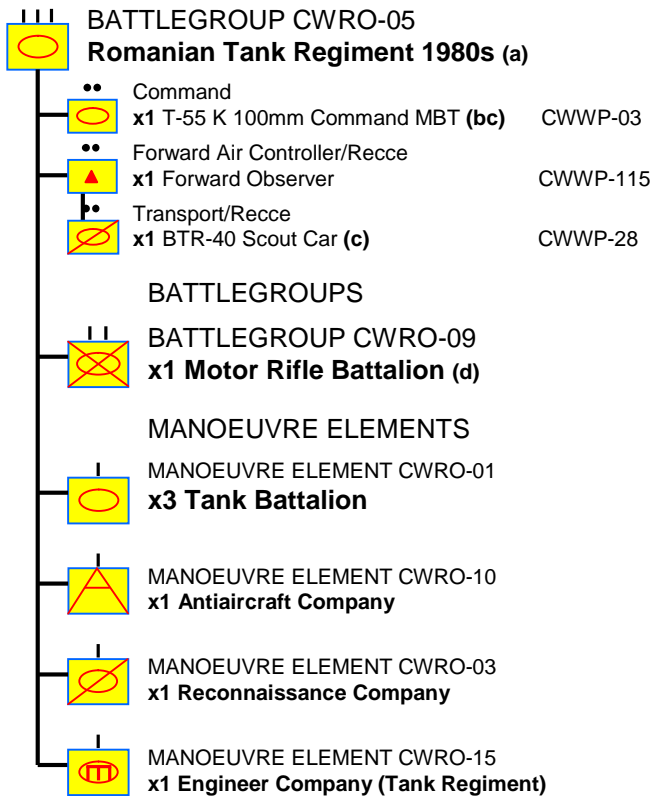


(a) The Romanian Army had four Mountain Brigades (*Brigada Vânători de Munte*). These brigades were all held in reserve as part of 1st Army and were regarded as the élite of the Romanian Armed Forces (indeed, they still are).

(b) Sources differ as to whether there were two or three battalions of *Vânători de Munte* ('Mountain Hunters) in each brigade.



(A) The Romanian Army had a total of three Air Assault Regiments. One was held as Front Troops while another was stationed with 4th Army in the northwest. I don't know where the third was stationed, but it was probably in reserve with 1st Army.



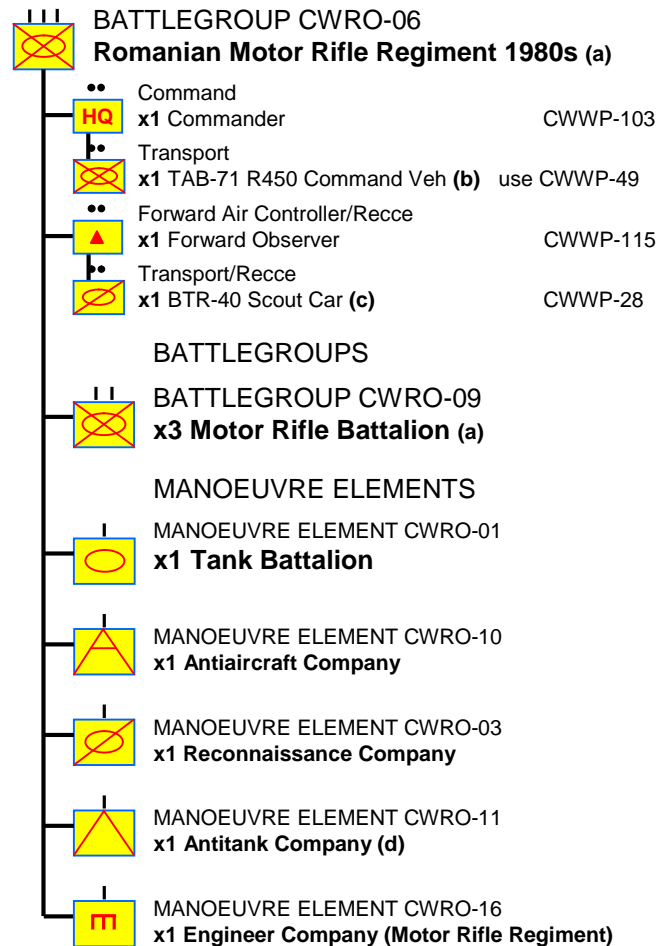
(a) There was no difference between the Tank Regiments in Tank Divisions and those in Motor Rifle Divisions.

(b) In one regiment of 4th Tank Division, may replace command tank with:
 T-72 MK 125mm Command MBT CWWP-09
 In late 1980s: Replace T-55s in 4th Tank Division and Tank Regiment of 1st Motor Rifle Division with:
 TR-85 100mm Main Battle Tank CWWP-143
 In Category C Motor Rifle Divisions: Replace tanks with:
 T-34/85 Medium Tank CWWP-02

(c) Regimental and Battalion Command Tank variants do not have AAMGs.

(d) All Romanian Motor Rifle Battalions were organised much the same until the late 1980s, when the MLI-84 Infantry Combat Vehicle (locally-built BMP-1 variant) was introduced. Enough MLI-84s were built to equip six battalions, so my guess is that they equipped the Motor Rifle Battalions of 4th Tank Division.

(e) From mid-1980s, replace FAC's transport with:
 TABC-79A POMA Observation Post Vehicle CWWP-151

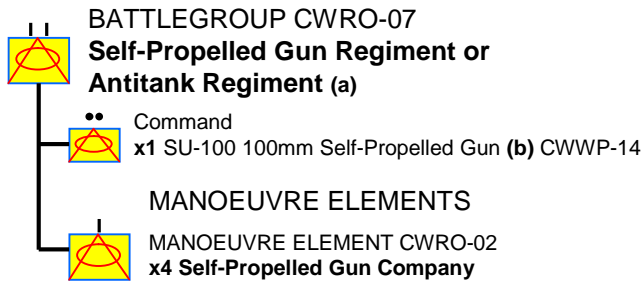


(a) There was no difference between the Motor Rifle Regiments in Tank Divisions and those in Motor Rifle Divisions until the late 1980s, when the MLI-84 Infantry Combat Vehicle was brought into service (locally-built BMP-1 variant) and the battalion/regimental organisations were changed in line with Soviet Tracked Motor Rifle Regiment doctrine. Enough MLI-84 were built to equip six battalions, so my guess is that they equipped the Motor Rifle Regiment and other Motor Rifle Battalions of the 4th Tank Division.

(b) May replace TAB-71 in Category A divisions with:
 TAB-77 Armoured Personnel Carrier CWWP-140
 Late 1980s: In 4th Tank Division, may replace TAB-71/77 with:
 MLI-84 Infantry Combat Vehicle CWWP-136
 In some lower category units, replace TAB-71 with:
 BTR-152 Armoured Personnel Carrier CWWP-27
 BTR-50PU Armoured Command Vehicle CWWP-61
 BTR-60PU Armoured Command Vehicle CWWP-62

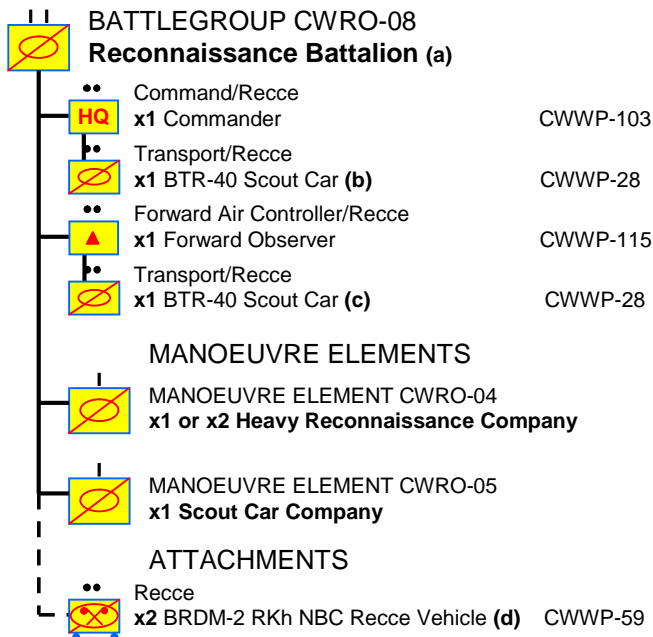
(c) From mid-1980s, replace FAC's transport with:
 TABC-79A POMA Observation Post Vehicle CWWP-151

(d) Not all regiments have a regimental Antitank Company.



(a) The same organisation was used by both the five Front-level Antitank Regiments and the divisional-level Self-Propelled Gun Regiments. The difference was one of doctrine – the Antitank Regiments were a ‘fire brigade’ force to counter a penetration by enemy armoured formations, while the SP Gun Regiments were dual-role, intended to both provide antitank defence as well as direct fire support to an assault.

(b) In the Self-Propelled Gun Regiments of Category C Divisions: Replace SU-100 with:
 SU-76 76mm Self-Propelled Gun CWWP-76

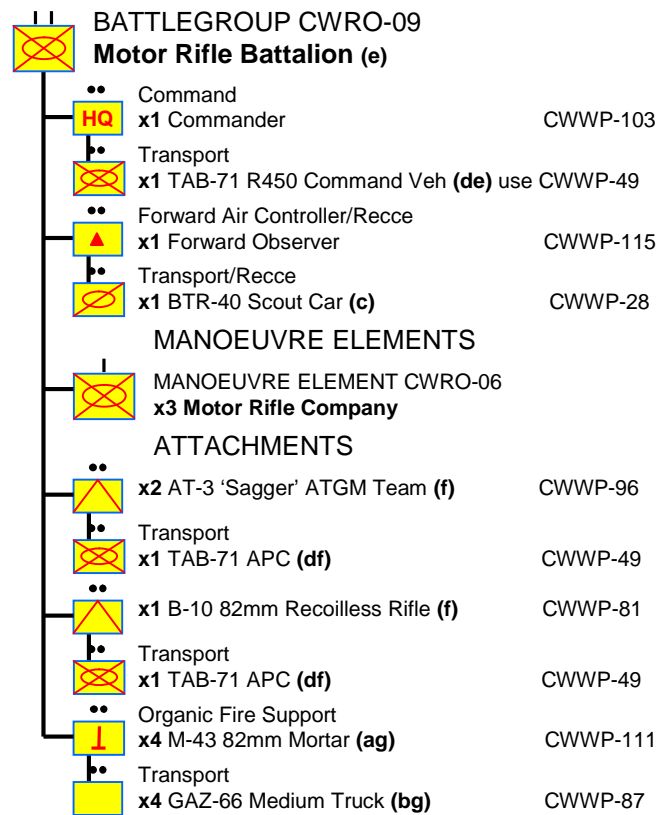


(a) Note that I have absolutely no information on how Romanian reconnaissance units were organised, so I have based this organisation on the basic Soviet model, using equipment that the Romanians were known to be using.

(b) May replace BTR-40 with:
 BRDM-2U Command Vehicle CWWP-60
 Or in mid-1980s with:
 TABC-79 Reconnaissance Vehicle CWWP-150

(c) From mid-1980s, replace FAC’s transport with:
 TABC-79A POMA Observation Post Vehicle CWWP-151

(d) Late 1980s: May replace BRDM-2 RKh with:
 RCH-84 NBC Recce Vehicle use CWWP-151



(a) May replace M-43 82mm Mortars in some regiments with:
 M-43 120mm Mortar CWWP-113

(b) From 1982: May replace 82mm Mortar transport with:
 TAB-71 AR 82mm Mortar Carrier (g) CWWP-50

(c) From mid-1980s: Replace FAC’s transport with:
 TABC-79A POMA Observation Post Vehicle CWWP-151

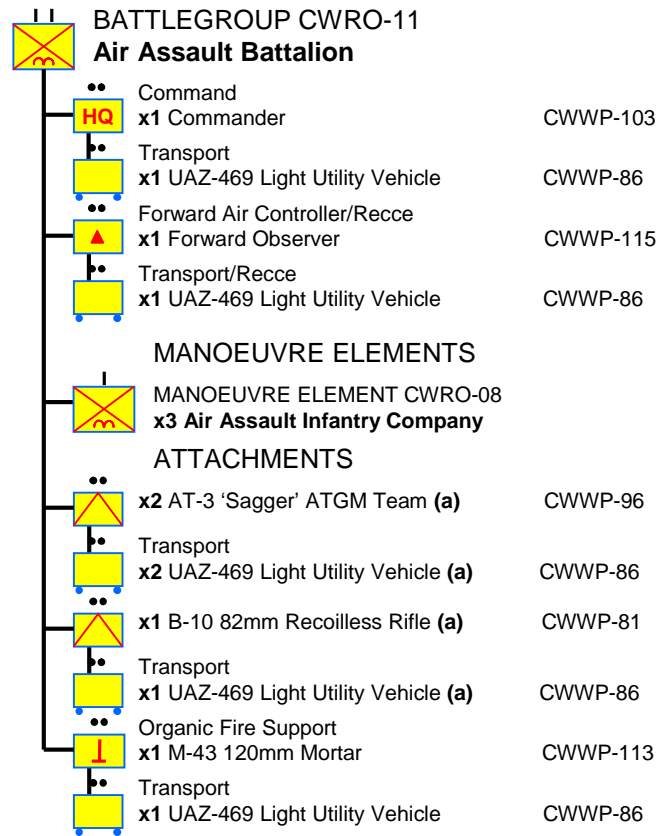
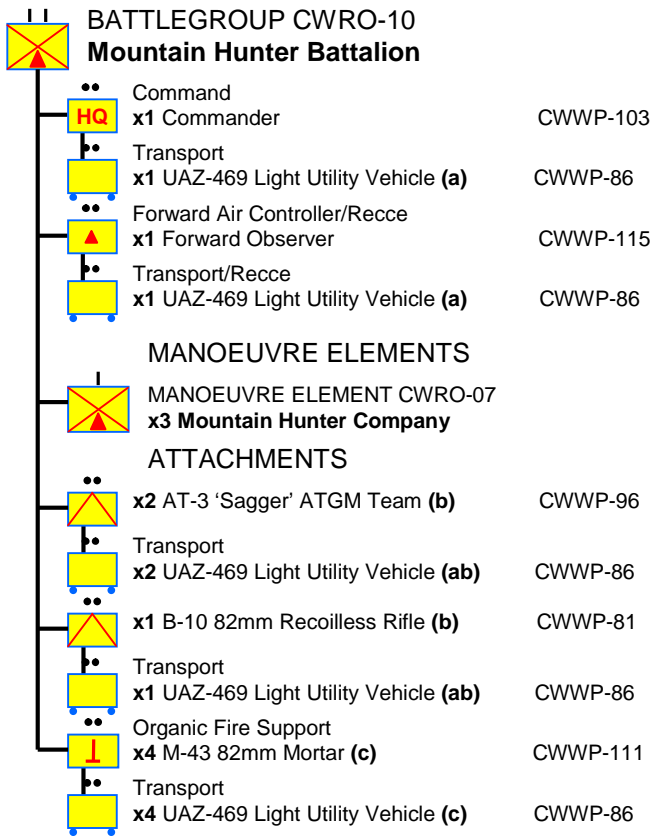
(d) In Category A divisions (1st Motor Rifles & 4th Tanks), may replace TAB-71 Armoured Personnel Carriers with:
 TAB-77 Armoured Personnel Carrier CWWP-140

Or in Category C divisions with one of these obsolete APCs:
 BTR-152 Armoured Personnel Carrier CWWP-27
 BTR-50 PK Armoured Personnel Carrier CWWP-28
 BTR-60 P Armoured Personnel Carrier CWWP-29
 BTR-60 PA Armoured Personnel Carrier CWWP-30
 BTR-60 PB Armoured Personnel Carrier CWWP-31

(e) By the 1980s there was no distinct ‘Tracked’ or ‘Wheeled’ Motor Rifle Battalion organisation. Romania’s ancient tracked BTR-50 fleet had been relegated to low-category formations and had been replaced by wheeled TAB-71s and TAB-77s. No BMPs had been bought to fill the tracked capability gap. However, that situation changed with the introduction of the MLI-84 Infantry Combat Vehicle, which was an improved copy of the BMP-1. However, the Romanians only built enough MLI-84s to equip the 4th Tank Division. Therefore, in 4th Tank Division from 1984: May replace battalion commander’s vehicle with:
 MLI-84 73mm Infantry Combat Vehicle CWWP-136

(f) In battalions equipped with MLI-84, delete all battalion antitank weapons (AT-3 and B-10) and their transports (the MLI-84s have their own integral ATGMs and 73mm guns).

(g) In battalions equipped with MLI-84, replace all mortars and their transports with:
x4 M-43 120mm Mortar CWWP-113
x4 MLVM-AR 120mm Mortar Carrier CWWP-73



(a) One battalion per brigade is mechanised. May therefore replace transport with:

MLVM Mountaineer's Combat Vehicle CWWP-39

May alternatively replace transport in any battalion with:

Pack Mules

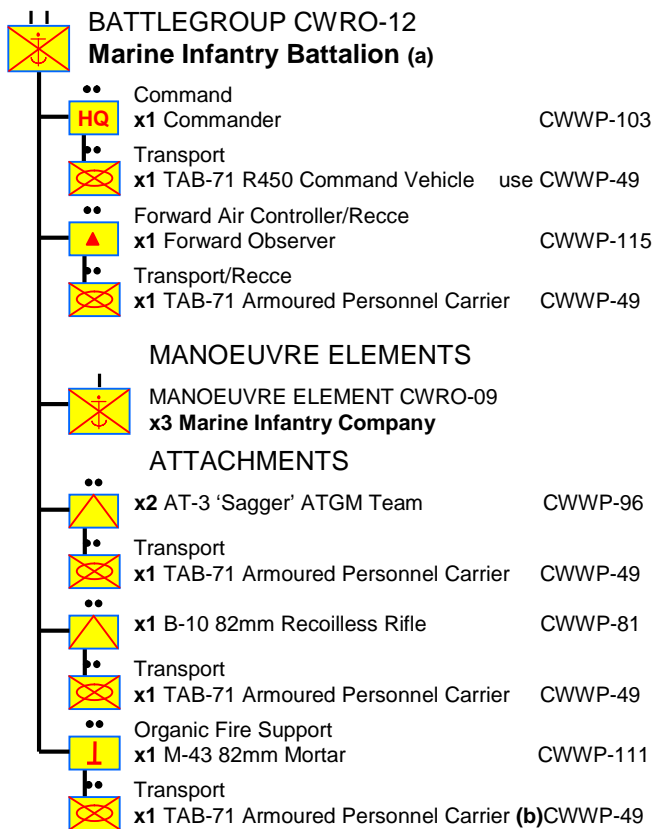
(b) AT-3 and B-10 antitank weapons may be fired from UAZ when mounted.

(c) In MLVM-equipped battalions, replace mortars and transport with:

x4 M-43 120mm Mortar CWWP-113

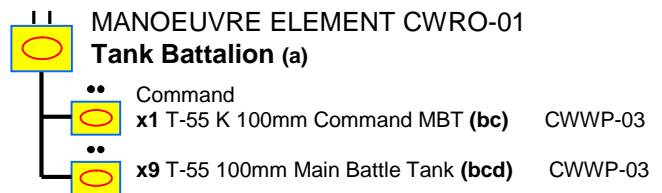
x4 MLVM-AR 120mm Mortar Carrier CWWP-73

(a) AT-3 and B-10 antitank weapons may be fired from UAZ when mounted.



(a) The Romanian Navy had a single Marine Infantry Battalion, which was stationed on the Black Sea and could therefore, be deployed to support 2nd Army (northeast) or 3rd Army (southeast).

(b) From 1982: Replace mortar platoon transport with:
 TAB-71 AR 82mm Mortar Carrier CWWP-50

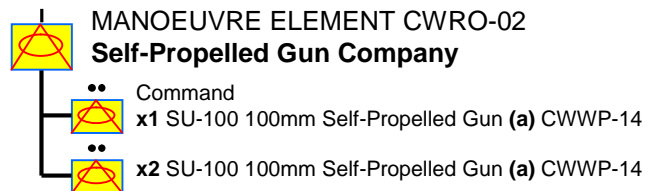


(a) Unlike Soviet Tank Regiments, there was no difference between the Tank Battalions in Tank Regiments and those in Motor Rifle Regiments. However, the Romanian Army was constantly short of tanks, so each company consisted only of two platoons, hence the relatively weak tank strength shown here.

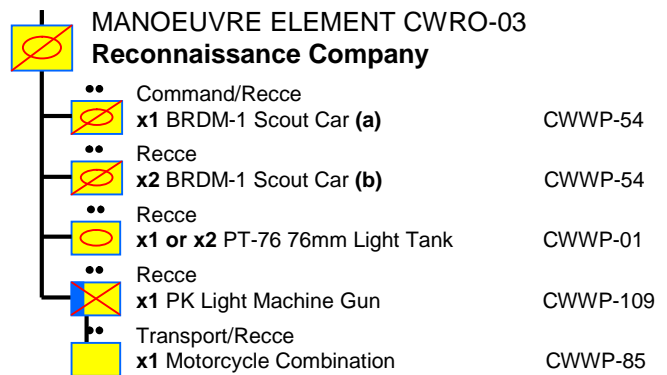
(b) In one regiment of 4th Tank Division, replace tanks with:
 T-72 M 125mm Main Battle Tank CWWP-09
 In late 1980s: Replace T-55s in 4th Tank Division and Tank Regiment of 1st Motor Rifle Division with:
 TR-85 100mm Main Battle Tank CWWP-143
 In Category C Motor Rifle Divisions: Replace T-55 tanks with:
 T-34/85 Medium Tank CWWP-02

(c) Battalion Command Tank variants do not have AAMGs.

(d) The entire tank battalion normally operates as a single ME. However, in a Tank Battalion organic to a Motor Rifle Regiment, the battalion may be split into three Company MEs of x3 tanks each, with each Tank Company being attached to a Motor Rifle Battalion. Designate one tank in each Tank Company ME as the Company Commander.

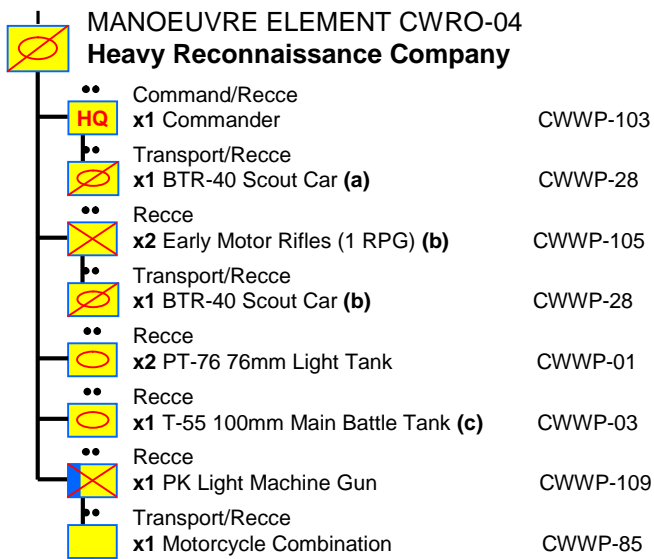


(a) In the Self-Propelled Gun Regiments of Category C Divisions: Replace SU-100 with:
 SU-76 76mm Self-Propelled Gun CWWP-76



(a) May replace command BRDM-1 with:
 BRDM-2 U Command Scout Car CWWP-60
 Or from mid-1980s with:
 TABC-79 Reconnaissance APC CWWP-150

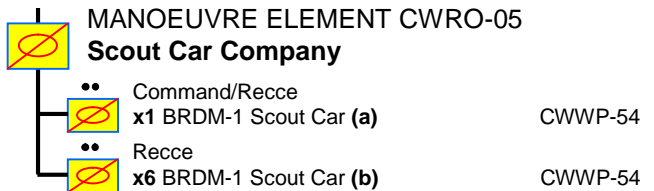
(b) May replace BRDM-1 scout cars with:
 BRDM-2 Armoured Car CWWP-55
 Or in mid-1980s with:
 TABC-79 Reconnaissance APC CWWP-150



(a) May replace commander's transport with:
 BRDM-1 Scout Car CWWP-54
 BRDM-2 U Command Scout Car CWWP-60
 Or from mid-1980s with:
 TABC-79 Reconnaissance APC CWWP-150

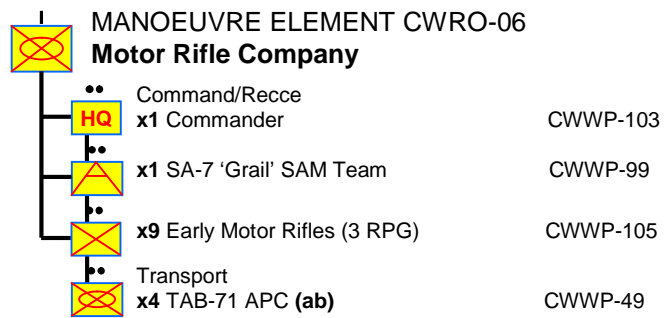
(b) Replace scout infantry transport in mid-1980s with:
 TABC-79 Reconnaissance APC CWWP-150

(c) In late 1980s: Replace T-55 in 4th Tank Division and 1st Motor Rifle Division with:
 TR-85 100mm Main Battle Tank CWWP-143
 In Category C Motor Rifle Divisions: Replace T-55 with:
 T-34/85 Medium Tank CWWP-02



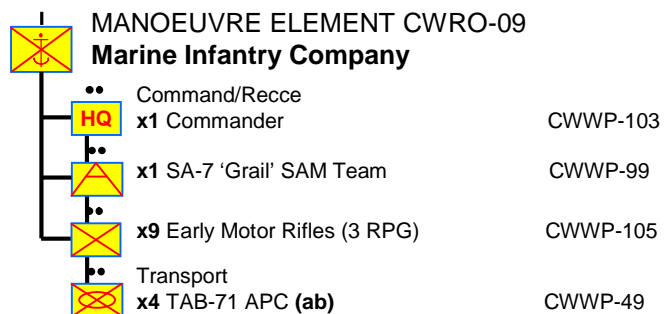
(a) May replace command BRDM-1 with:
 BRDM-2 U Command Scout Car CWWP-60
 Or from mid-1980s with:
 TABC-79 Reconnaissance APC CWWP-150

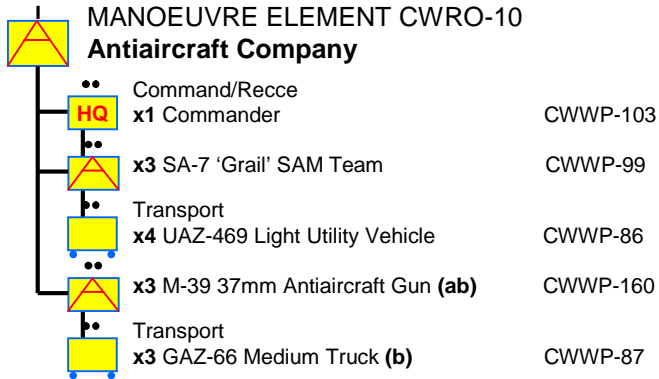
(b) May replace BRDM-1 scout cars with:
 BRDM-2 Armoured Car CWWP-55
 Or in mid-1980s with:
 TABC-79 Reconnaissance APC CWWP-150



(a) In Category A divisions (1st Motor Rifles & 4th Tanks), may replace TAB-71 Armoured Personnel Carriers with:
 TAB-77 Armoured Personnel Carrier CWWP-140
 Or in Category C divisions: Replace with obsolete APCs:
 BTR-152 Armoured Personnel Carrier CWWP-27
 BTR-50 PK Armoured Personnel Carrier CWWP-28
 BTR-60 P Armoured Personnel Carrier CWWP-29
 BTR-60 PA Armoured Personnel Carrier CWWP-30
 BTR-60 PB Armoured Personnel Carrier CWWP-31

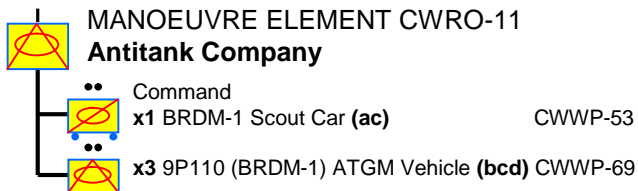
(b) Late 1980s in 4th Tank Division: Replace APCs with:
 MLI-84 73mm Infantry Combat Vehicle CWWP-136





(a) In Air Assault Regiments and some other units, may replace 37mm AA guns with:
ZPU-2 Twin 14.5mm Antiaircraft Gun CWWP-162

(b) In some Tank Regiments, may replace AA guns with:
ZSU-57-2 Twin 57mm Antiaircraft Vehicle CWWP-16

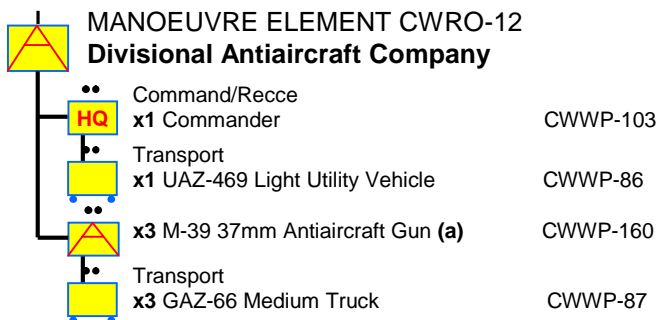


(a) May replace command vehicle with:
BRDM-2 U Command Scout Car CWWP-60

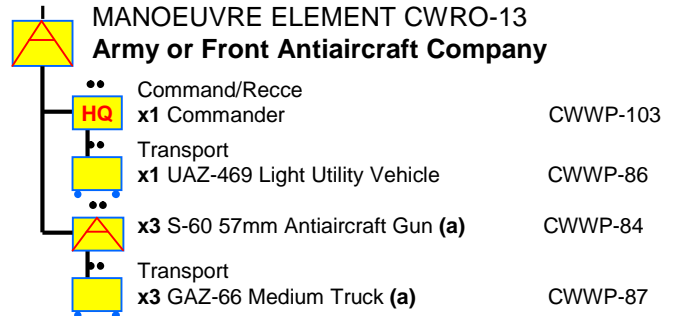
(b) May replace all 9P110 ATGM Vehicles with:
9P122 (BRDM-2/ AT-3 'Sagger') ATGM Vehicle CWWP-70

(c) In some units, replace this organisation with:
x1 Commander CWWP-103
x3 B-11 107mm Recoilless Rifle CWWP-82
x4 GAZ-69 Light Utility Vehicle use CWWP-86

(d) Regimental Antitank Companies may be split up as individual attachments to units within the regiment.



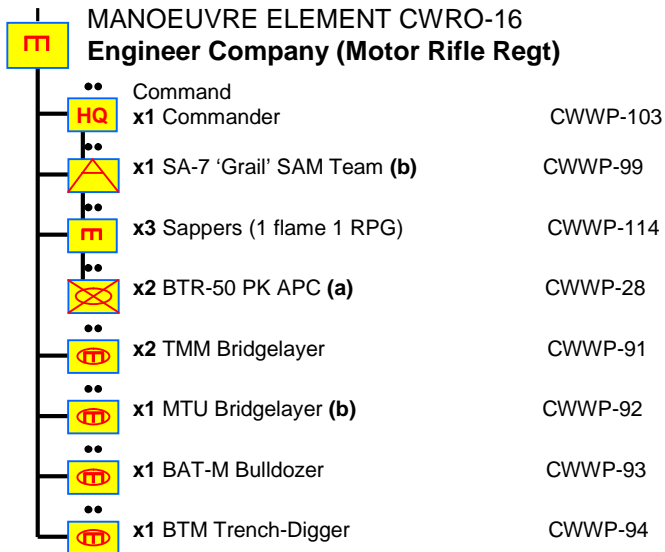
(a) May replace 37mm AA Guns with:
S-60 57mm Antiaircraft Gun CWWP-84



(a) May replace 57mm AA Guns with:
M-39 85mm Antiaircraft Gun CWWP-161
KS-19 100mm Antiaircraft Gun CWWP-159
Replace GAZ-66 transports with:
Zil-157 Heavy Truck CWWP-149

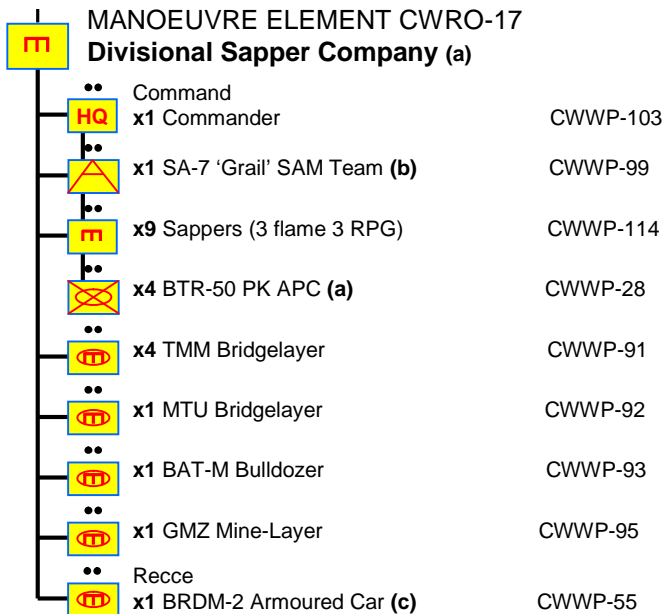


(a) May replace BTR-50 APCs with:
TAB-71 APC CWWP-49



- (a) May replace BTR-50 APCs with:
- | | |
|--------------------------------------|---------|
| TAB-71 Armoured Personnel Carrier | CWWP-49 |
| BTR-152 Armoured Personnel Carrier | CWWP-27 |
| BTR-60 P Armoured Personnel Carrier | CWWP-28 |
| BTR-60 PA Armoured Personnel Carrier | CWWP-29 |
| BTR-60 PB Armoured Personnel Carrier | CWWP-30 |

(b) Some low-category divisions probably did not have such a generous supply of MTU Bridgelayers or SAMs

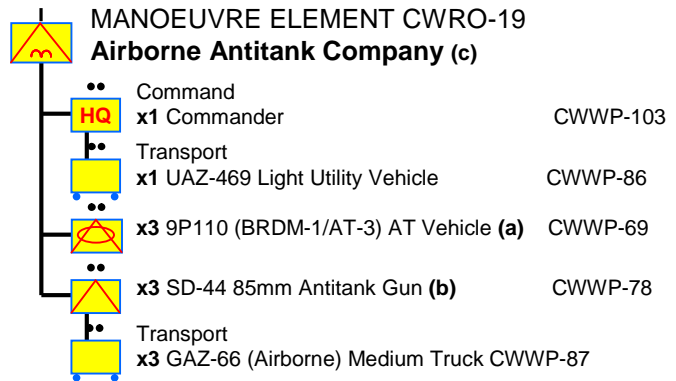
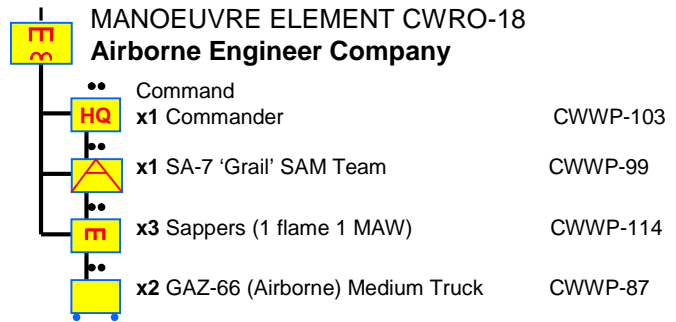


- (a) May replace BTR-50 APCs with:
- | | |
|--------------------------------------|---------|
| TAB-71 Armoured Personnel Carrier | CWWP-49 |
| BTR-152 Armoured Personnel Carrier | CWWP-27 |
| BTR-60 P Armoured Personnel Carrier | CWWP-28 |
| BTR-60 PA Armoured Personnel Carrier | CWWP-29 |
| BTR-60 PB Armoured Personnel Carrier | CWWP-30 |

(b) Some low-category divisions probably did not have such a generous supply of MTU Bridgelayers or SAMs

- (c) The armoured car may alternatively be of an obsolete type:
- | | |
|------------------|---------|
| BTR-40 Scout Car | CWWP-26 |
| BRDM-1 Scout Car | CWWP-54 |

Or may replace from mid-1980s with:
TCG-80 Engineer Recce Vehicle (TABC-79) use CWWP-151



- (a) May replace 9P110 ATGM Vehicle with:
9P122 (BRDM-2/AT-3 'Sagger') ATGM Vehicle CWWP-70

(b) The SD-44 85mm Antitank Gun was equipped with an auxiliary engine for manoeuvring the gun when its tractor was not available (particularly likely in a heli-borne operation, for example). In game terms, the SD-44 may not be manhandled in the usual sense. (notice that the regular D-44 85mm Antitank Gun has a movement value of 0/0). Before moving, an SD-44 must use an action to 'limber' and may then move at its movement rate (2/4), classed as a Wheeled Vehicle for bog-down/breaching purposes. It must then use an action to 'unlimber' before firing.

(c) This ME may be split up and allocated as individual unit attachments to other MEs in the BG.

Romanian Air Support

The Romanian Air Force had the following ground-attack aircraft:

x32 MiG-17 'Fresco'	CWWP-126
x16 IAR-93 'Vultur'	CWWP-152

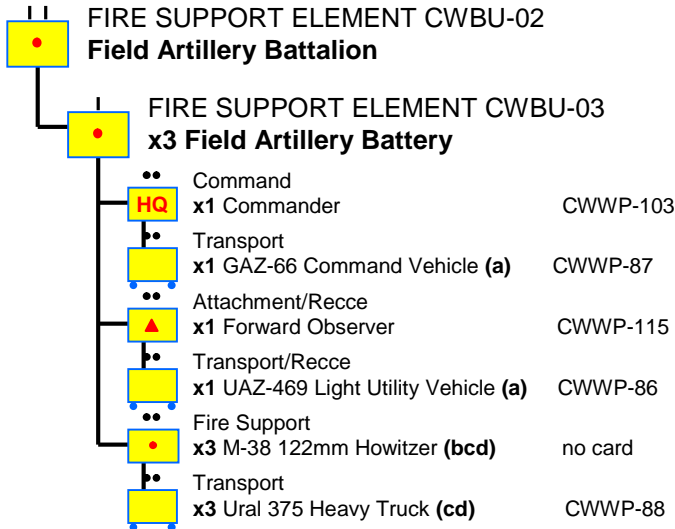
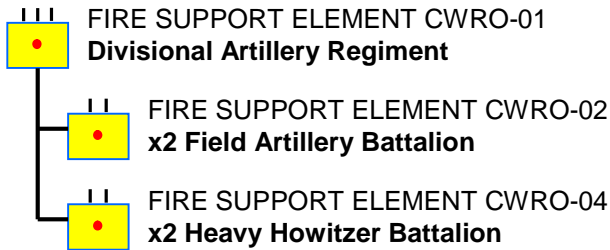
In 1987 a further x16 MiG-17 were converted to IAR-93 'Vultur'.

The Romanian Air Force had these reconnaissance assets, which had a secondary ground-attack role:

x8 Il-28 'Beagle' Light Bomber	No Card
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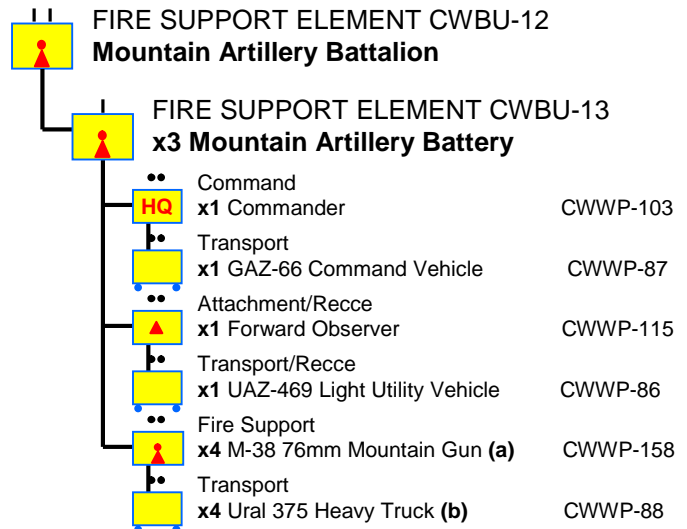
The Romanian Air Force had the following fighter aircraft:

x88 MiG-21 'Fishbed'	CWWP-127
x20 MiG-23 'Flogger'	CWWP-128



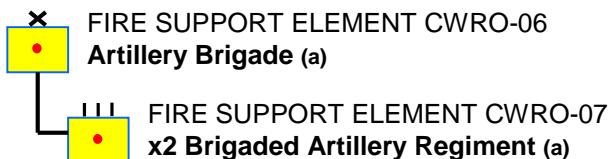
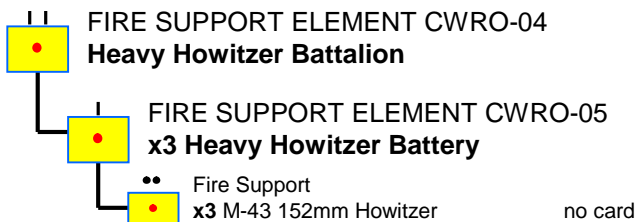
(a) May replace softskin command/OP transport with:
 BTR-40 Scout Car CWWP-26
 BRDM-1 Scout Car CWWP-54
 Or from mid-1980s with:
 TABC-79A POMA Artillery Observation Vehicle CWWP-151

(b) Field Artillery Battalions in higher category divisions may replace their M-38 122mm Howitzers with:
 D-30 122mm Howitzer CWWP-76



(a) Mid-1980s: Replace M-38 76mm Mountain Guns with:
 M1984 76mm Mountain Howitzer CWWP157

(b) May replace transport with:
 Pack Mules Generic Card



(m) The Romanian Army had only two Artillery Brigades to share between four Armies. As each Artillery Brigade consisted of two regiments, it is possible that one Regiment was attached to each Army.



MANOEUVRE ELEMENT CWRO-14

Airborne Mortar Company



Command
x1 Commander CWWP-103



Transport
x1 UAZ-469 Light Utility Vehicle CWWP-86



Attachment/Recce
x1 Forward Observer CWWP-115



Transport/Recce
x1 UAZ-469 Light Utility Vehicle CWWP-86



Fire Support
x4 M-43 120mm Mortar CWWP-113



Transport
x4 GAZ-66 Airborne Medium Truck CWWP-87

