

Artillery Rules v1.3

CALL FOR FIRE TABLE					
OBSERVER		LEVEL OF SUPPORT			
		Organic	Direct	General	Air Support
Soviet Doctrine	Forward Observer	3 or more	4 or more	7 or more	4 or more
	BG Commander	4 or more	5 or more	-	-
	ME Commander	4 or more	6 or more	-	-
NATO Doctrine	Forward Observer	3 or more	4 or more	6 or more	3 or more
	Commander	4 or more	5 or more	7 or more	5 or more†
	Troops*	5 or more	6 or more	8 or more	7 or more†
Developing World	Forward Observer	4 or more	5 or more	8 or more	6 or more
	BG Commander	5 or more	6 or more	-	-
	ME Commander	5 or more	-	-	-
Insurgent	Forward Observer	5 or more	6 or more	-	-
	BG Commander	6 or more	-	-	-
	ME Commander	6 or more	-	-	-
MODIFIERS				ANY UNMODIFIED ROLL OF 10	
±r observer's discipline rating +1 preregistered or bracketed fire -1 obscured: barrage, dissipating smoke or knocked out vehicle OR -2 smoke				Danger Close	

* 'Troops' in some exceptionally highly-trained and professional armies might also mean tanks, attack helicopters, scout helicopters and recce vehicles. Where a vehicle has an organic or attached dismountable unit, it is the dismountable unit that calls for fire, even if mounted. APCs, AT, AA, transport softskins, etc may not call for fire. Note that not all armies were trained to this standard and if in doubt, limit this capability to professional NATO armies such as the USA, UK and Canada or their equivalents such as Australia (see 'NATO Enhanced Call-For-Fire Ability' rule).

** Note that 'Soviet/NATO Doctrine' also includes aligned and non-aligned armies outside of NATO or Warpac with similar organisation and training structures, that might be considered to be a cut above 'Developing World Army' status. E.g. Australia, South Africa, Sweden, South Korea, China, Israel, etc.

† Where a NATO Doctrine Artillery FO, Commander or Troop unit calls for air support, this will be routed via an on-table Forward Air Controller (FAC). The FAC is therefore considered to be 'calling for fire' for that turn and may not perform other actions. Scenario designers may specify exceptions (e.g. Special Forces teams). However, where multiple units are allowed to call for air support, there needs to be a limiting factor to prevent the simultaneous arrival of dozens of fighter-bombers over the table!

‡ Light Mortar, Medium Mortar, Recoilless Rifle and Grenade-Launcher units that are organic to an ME do not need to be called in. They can fire indirectly at any enemy unit that is spotted or suspected by another unit within the ME. These missions must be single-template Shelling, Random Shelling or Smoke missions and may not be concentrated with others or fired as 'batteries'. Attached units may not use this rule and must be called in as normal.

NATO Enhanced Call-For Fire Ability

We already allow most NATO armies to call for fire support and air support using Commanders and Troops (see national Call-For-Fire Tables). However, the fully-professional US, British and Canadian armies went even further, ensuring that all tank and recce crews were fully trained in fire support techniques.

1. US, British and Canadian tanks and reconnaissance vehicles may therefore call for Indirect Fire Support or Air Support, using the 'Troops' column on the Call-For-Fire Table. Use the 'Commander' column for ME command vehicles.
2. Calls for fire by non-command Troops or Vehicle units must be routed through either their ME Commander, their BG Commander or a FO attached to the BG. The Commander/FO is

therefore classed as calling for fire and may not therefore conduct any other actions during the turn.

3. Combat support vehicles within such units (such as mortar carriers or ATGM vehicles) may not call for fire support.
4. If the vehicle has a dismountable element (e.g. Commander or dismountable infantry patrol or heavy weapon), the carrier vehicle itself may not call for fire, but the passengers may do so, using the normal rules.
5. This rule could also be extended to other NATO armies, but I would limit this rule only to command tanks and command recce vehicles.
6. Remember that whenever a unit calls for fire, it may not conduct any other voluntary action (e.g. movement or Offensive Fire) during that turn.

Counter-Battery Artillery Fire (Optional Rules)

The primary role of the Heavy, Long-Range and MRL artillery held by Corps/Army/Front artillery groups of virtually all nations is that of counter-battery (CB) fire. These artillery types may therefore be used to counter the opponent's artillery rather than engaging directly in the battle. To simulate CB fire, use this simplified artillery method:

1. Heavy, Long-Range and MRL batteries may be assigned to perform CB tasks before the start of the game. Once assigned to CB, the battery may not be reassigned to tactical fire support. Each player should make a note of which batteries in his order of battle are assigned to CB or tactical fire support. He should keep secret exactly how many batteries are at his disposal and whether they are armoured or softskinned/towed.
2. When an artillery battery fires (either in tactical fire support or on a CB mission), a player may, during their turn, engage that battery with whatever CB batteries he has at his disposal (note that once they have fired, CB batteries may themselves become targets for enemy CB fire).
3. Roll a D10 for every CB gun and 2x D10 for every MRL firing. A roll of '10' will destroy a gun in the target battery. Randomly distribute multiple hits within the target battery, as if 2 hits are scored (for example) it's always possible that the same gun will take the same killing hit. Apply a -1 modifier if the target battery is armoured and a +1 modifier if the CB battery is firing Improved Conventional Munitions (ICM – cluster sub-munitions).
4. If the target battery fires again without changing position, apply a cumulative +1 CB modifier for every additional turn that the battery fires without changing position.
5. In order to change position, a self-propelled battery must stop firing for two turns. A towed battery must stop firing for three turns.
6. Note that these rules apply exclusively to off-table artillery and are kept deliberately simple, ignoring artillery calibre, range, etc. For countering on-board IDF fire such as mortars, simply use the normal spotting and combat rules – CB batteries may not be used to engage on-table batteries.
7. Optional Rule: For armoured self-propelled batteries, two CB hits are required to kill a gun. Any single hits are accumulated and added to the next CB hits.

(Note that this can be a little bloody – an alternative is to roll one D10 for each CB battery firing, regardless of its strength)

Special Artillery Types

Multiple Rocket Launchers

Multiple Rocket Launchers (MRLs) typically deliver a large quantity of high explosive to a wide area at very short notice and normally have the additional advantages of being cheap, light, mobile and simple to operate. However, the trade-offs are frequently a lack of accuracy and hitting-power compared to conventional artillery of a similar calibre, as well as slow reload times.



As a consequence, most MRLs attack with 2x IDF Templates, but have slightly reduced fire factors when compared to artillery of a similar calibre. However, the fire factors may also be modified by the number of rockets in a salvo (e.g. the Soviet BM-21 122mm MRL has higher factors than the BM-21V 122mm MRL, due to the fact that the BM-21V has far fewer rockets in a salvo).

MRL missions MAY NOT be concentrated or thickened.

MRLs may not conduct Interdiction Fire.

Once fired, MRLs must cease fire for a turn in order to reload.

M712 Copperhead 155mm Anti-Armour Rounds

FOs may direct weapons onto individual enemy units using these weapons if the battery is so equipped (normally limited to USA and Australia during the 1980s).

Copperhead requires the target to be illuminated by a dedicated laser designator. It may therefore ONLY be called by a dedicated FO unit which has line-of-sight on the target and not by Commanders, Troops, etc, who will not normally be suitably equipped. However, some exceptions might be suitably trained and equipped special forces or observation helicopters such as the OH-58D Kiowa Warrior, which has a built-in laser-designator (though earlier helicopters can carry a FO with a hand-held laser designator).

Each FO can only direct ONE Copperhead round per turn. Other FOs may call for additional Copperhead rounds from the same battery (e.g. in NATO armies it was common for each 'teeth' company to have an attached FO, with all FOs in the BG reporting to the same battery), but a battery may not fire other mission types while part of the battery is engaged in Copperhead fire-missions.

Copperhead attacks with +5 versus Vehicles or +4 versus Troops and Guns and uses the Indirect Fire Table (NB this means that it attacks a vehicle's flank armour).

Copperhead attacks only the targeted unit and has no IDF Template effect. This is very much an artillery 'sniper' weapon!

Copperhead is classed as Unreliable Technology, so will have no effect on an unmodified roll of 1 to 4.

Copperhead cannot attack helicopters, either in the air or on the ground (in game terms, helicopters will only be on the ground for a matter of seconds – not long enough to accurately target them with Copperhead).

Dual-Purpose Improved Conventional Munition (DPICM)

DPICM was developed by the USA to improve the effect of 155mm artillery against massed infantry formations, dug-in infantry and massed armoured formations. Each DPICM round carries a large number of sub-munitions of two types: an anti-personal fragmentation 'grenade' and a shaped-charge round designed to attack an armoured vehicle's weak top-armour. In short, DPICM is the artillery equivalent of a cluster-bomb. Similar weapons have since been developed by Russia and others, but during the 1980s it was the sole preserve of NATO and US-aligned nations.

DPICM affects a much wider area than standard 155mm HE missions and has the added advantage of saturating the area; dropping in, around and behind cover that may be used by infantry. However, it struggles to have much effect in urban or mountainous terrain or against troops deeply dug in with overhead cover. In these instances, standard HE is more effective.

DPICM was also developed for the new M270 Multiple-Launch Rocket System (MLRS) and as such was the only ammunition type available for MLRS during the 1980s. It proved to be EXTREMELY effective during the subsequent Gulf War of 1990-91, earning MLRS the nickname of 'Map Location Removal System'

155mm DPICM attacks the target with 2x Large Templates arranged side-by-side and inflicts +3 versus Vehicles and +3 versus Troops and Guns.

155mm DPICM attacks MAY be concentrated/thickened as per the standard rules, with each additional concentrated battery of DPICM or standard HE adding +1 to the effect within the thickened area.

227mm DPICM from the M270 MLRS system attacks the target with 4x Large Templates, arranged 2x2 and inflicts +4 versus Vehicles and +4 versus Troops and Guns. If firing as a full battery of 3x MLRS, the templates may be arranged 4 wide x 3 deep.

227mm DPICM attacks MAY NOT be concentrated.

Once all modifiers have been applied, all DPICM attacks will suffer an additional -2 modifier when attacking Troops or Guns deployed within any Urban terrain type (i.e. Built-Up, Streets or Rubble), as well as Rocky Ground or Sheer Slope terrain types (see Terrain Effects Chart), Concrete Pillboxes or Log Pillboxes.

All DPICM attacks are classed as Unreliable Technology due to the large percentage of dud rounds. Any unmodified roll of 1-4 will therefore have no effect.

We recommend that game designers might wish to restrict the supply of 155mm DPICM rounds, as standard HE would be far more plentiful and were the majority ammo-load for such units and DPICM rounds would rapidly be exhausted in the event of a full-scale war between NATO and Warsaw Pact forces. It is also likely that 'secondary' nations might simply not receive supplies of DPICM.

Artillery-Delivered Mines

The USA developed a family of artillery-delivered mines and carrier-shells capable of being delivered by all of their standard 155mm artillery pieces. These would typically be delivered as mixed loads of anti-personnel mines known as 'ADAM' (Area-Denial Artillery Munition) and anti-tank mines known as 'RAAMS' (Remote Anti-Armour Mine System). West Germany also deployed an anti-tank mine system for the LARS-2 MRL during this period. Other nations eventually developed similar systems, but as far as we are aware, the USA (and by association NATO and other aligned nations) was the only nation to have deployed such systems.

Artillery-delivered mines are called as a fire mission in the same manner as a standard Shelling fire mission. However, it need not be directed at an enemy unit or terrain feature – it may simply be directed at a point on the ground within the FO's line of sight. A mixed minefield will then be immediately created within the Templated area.

Built-Up, Sheer Slope or Stream terrain features, as well as pillboxes and trenches will not be affected by this type of attack, though the terrain immediately surrounding them may well be.

An artillery-delivered minefield has no immediate effect on any units deployed within the minefield, though they will need to roll on the Minefield Passage Table as normal when attempting to move through or leave the minefield.

We strongly recommend that artillery-delivered mines be limited to a maximum of one minefield per battery, per game.

Swedish 155mm Bandkannon 1A

The Swedish 155mm Bandkannon 1A is a unique self-propelled 155mm artillery system that features a twin magazine-feed system, enabling it to potentially fire a colossal number of rounds in a short space of time.

The Bandkannon may fire in exactly the same manner as any other artillery piece, but has the option of concentrating/thickening its own fire missions.

For example, a battery of 3x Bandkannon firing a standard shelling mission, would arrange 3x Large Templates side by side, with all units under the templates being attacked with +1 versus Vehicles or +2 versus Troops, Guns & Soft Vehicles. Alternatively, the battery may fire a 'standard' concentration mission with a single Large Template at +2 versus Vehicles and +3 versus Troops, Guns & Soft Vehicles. However, the Bandkannon Battery may opt to use its unique rapid-fire ability, thereby increasing all of the above factors by +1.

When a Bandkannon battery fires a rapid-fire mission, it must cease fire for a turn in order to reload.



Warsaw Pact Artillery Ratings 1980-1989				
Artillery Unit Type	Template	V	TGsV	Range
AGS-17 <i>Plamya</i> 30mm Automatic Grenade Launcher	Sml	-1	0	10-40
M-43 82mm Mortar	Sml	-1	0	5-80
2B9 <i>Vasilek</i> 82mm Automatic Gun-Mortar	Sml	0	+1	5-80
SPG-9 73mm Recoilless Rifle	Sml	-1	0	20-100
M-38 76mm Mountain Howitzer	Sml	-1	0	40-250
M-84 76mm Mountain Howitzer	Sml	-1	0	40-250
Zis-3 76mm Field Gun	Sml	-1	0	40-210
SU-76 Self-Propelled 76mm Gun	Sml	-1	0	40-210
B-10 82mm Recoilless Rifle	Sml	-1	0	10-110
D-44/SD-44 85mm Field Gun	Sml	-1	0	60-300
B-11 107mm Recoilless Rifle	Lrg	0	+1	20-150
M-43 120mm Mortar	Lrg	0	+1	20-120
2S9 <i>Nona</i> Self-Propelled 120mm Mortar	Lrg	0	+1	20-220
2S9 <i>Nona</i> Self-Propelled 120mm Mortar (Rkt-Assisted Projectile)	Lrg	-1	0	220-320
ShM vz.85 PRÁM-S Self-Propelled 120mm Mortar (Czechoslovakia)	Lrg	0	+1	10-200
D-30 122mm Howitzer	Lrg	0	+1	60-320
D-30 122mm Howitzer (Rocket-Assisted Projectile)	Lrg	-1	0	320-480
2S1 <i>Gvozdika</i> SP 122mm Howitzer	Lrg	0	+1	60-320
2S1 <i>Gvozdika</i> SP 122mm Howitzer (Rocket-Assisted Projectile)	Lrg	-1	0	320-480
M-31/37 122mm Gun	Lrg	0	+1	60-320
M-46/54 130mm Gun	Lrg	-1	0	80-600
M-43/D-1 152mm Howitzer	Lrg	+1	+2	40-160
D-20 152mm Howitzer	Lrg	+1	+2	40-400
D-20 152mm Howitzer (Rocket-Assisted Projectile)	Lrg	0	+1	400-560
2S3 <i>Akatsiya</i> SP 152mm Howitzer	Lrg	+1	+2	40-420
2S3 <i>Akatsiya</i> SP 152mm Howitzer (Rocket-Assisted Projectile)	Lrg	0	+1	420-560
2A36 <i>Giatsint-B</i> 152mm Gun	Lrg	+1	+2	60-720
2A36 <i>Giatsint-B</i> 152mm Gun (Rocket-Assisted Projectile)	Lrg	0	+1	720-960
2S5 <i>Giatsint-S</i> SP 152mm Gun	Lrg	+1	+2	60-720
2S5 <i>Giatsint-S</i> SP 152mm Gun (Rocket-Assisted Projectile)	Lrg	0	+1	720-960
DANA SP 152mm Gun (Czechoslovakia)	Lrg	+1	+2	40-450
2S4 <i>Tyulpan</i> Self-Propelled 240mm Mortar	Lrg	+2	+3	60-240
RM-70 40x 122mm Multiple Rocket Launcher (Czechoslovakia)	2x Lrg	0	+1	40-480
BM-21 <i>Grad-V</i> 12x 122mm Multiple Rocket Launcher	2x Lrg	-1	0	40-375
BM-21 <i>Grad</i> 40x 122mm Multiple Rocket Launcher (Heavy Rocket)	2x Lrg	0	+1	40-375
BM-21 <i>Grad</i> 40x 122mm Multiple Rocket Launcher (Light Rocket)	2x Lrg	-1	0	120-500
9P138 <i>Grad-1</i> 36x 122mm Multiple Rocket Launcher	2x Lrg	0	+1	40-360
RM-51 32x 130mm Multiple Rocket Launcher (Czechoslovakia)	2x Lrg	+1	+2	40-190
BM-14 16x 140mm Multiple Rocket Launcher	2x Lrg	0	+1	40-200
RPU-14 16x 140mm Multiple Rocket Launcher	2x Lrg	0	+1	40-200
BM-27 <i>Uragan</i> 16x 220mm Multiple Rocket Launcher	2x Lrg	+1	+2	60-840
BM-24 12x 240mm Multiple Rocket Launcher	2x Lrg	+1	+2	40-140
WP-8 8x 140mm Multiple Rocket Launcher (Poland)	1x Lrg	0	+1	40-200



NATO Artillery Ratings 1980-1989

Artillery Unit Type	Nation	Template	V	TGsV	Range
M2/M19 60mm Mortar	USA	Sml	-2	-1	2-20
M224 60mm Mortar	USA	Sml	-2	-1	2-80
M29 81mm Mortar	USA	Sml	-1	0	5-120
M252 81mm Mortar (British L16A1)	USA	Sml	-1	0	5-140
M30 107mm Mortar (4.2-inch)	USA	Lrg	-1	0	20-170
M2/M101 105mm Howitzer	USA	Lrg	-1	0	40-270
M102 105mm Howitzer	USA	Lrg	-1	0	40-270
M102 105mm Howitzer (Rocket-Assisted Projectile)	USA	Sml	-1	0	270-360
M52 SP 105mm Howitzer	USA	Lrg	-1	0	40-270
M108 SP 105mm Howitzer	USA	Lrg	-1	0	40-270
M108 SP 105mm Howitzer (Rocket-Assisted Projectile)	USA	Sml	-1	0	270-360
M119 105mm Howitzer (British L119)	USA	Lrg	-1	0	40-320
M1 155mm Gun ('Long Tom')	USA	Lrg	+1	+2	80-560
M114 155mm Howitzer	USA	Lrg	+1	+2	40-350
M114 155mm Howitzer (Rocket-Assisted Projectile)	USA	Lrg	0	+1	350-720
M114 155mm Howitzer (M712 Copperhead)	USA	-	+5	+4	80-350
M114 155mm Howitzer (DPICM)	USA	2x Lrg	+3	+3	40-690
M114 155mm Howitzer (ADAM/RAAMS Mines)	USA	Lrg	-	-	100-420
M44 SP 155mm Howitzer	USA	Lrg	+1	+2	60-350
M198 155mm Howitzer	USA	Lrg	+1	+2	40-530
M198 155mm Howitzer (Rocket-Assisted Projectile)	USA	Lrg	0	+1	530-720
M198 155mm Howitzer (M712 Copperhead)	USA	-	+5	+4	80-380
M198 155mm Howitzer (DPICM)	USA	2x Lrg	+3	+3	40-690
M198 155mm Howitzer (ADAM/RAAMS Mines)	USA	Lrg	-	-	100-420
M109 SP 155mm Howitzer	USA	Lrg	+1	+2	40-350
M109 SP 155mm Howitzer (Rocket-Assisted Projectile)	USA	Lrg	0	+1	350-720
M109 SP 155mm Howitzer (M712 Copperhead)	USA	-	+5	+4	80-350
M109 SP 155mm Howitzer (DPICM)	USA	2x Lrg	+3	+3	40-690
M109 SP 155mm Howitzer (ADAM/RAAMS Mines)	USA	Lrg	-	-	100-420
M109A1-A4 SP 155mm Howitzer	USA	Lrg	+1	+2	40-430
M109A1-A4 SP 155mm Howitzer (Rocket-Assisted Projectile)	USA	Lrg	0	+1	430-720
M109A1-A4 SP 155mm Howitzer (M712 Copperhead)	USA	-	+5	+4	80-380
M109A1-A4 SP 155mm Howitzer (DPICM)	USA	2x Lrg	+3	+3	40-690
M109A1-A4 SP 155mm Howitzer (ADAM/RAAMS Mines)	USA	Lrg	-	-	100-420
M109A5 SP 155mm Howitzer	USA	Lrg	+1	+2	40-520
M109A5 SP 155mm Howitzer (Rocket-Assisted Projectile)	USA	Lrg	0	+1	520-790
M109A5 SP 155mm Howitzer (M712 Copperhead)	USA	-	+5	+4	80-380
M109A5 SP 155mm Howitzer (DPICM)	USA	2x Lrg	+3	+3	40-690
M109A5 SP 155mm Howitzer (ADAM/RAAMS Mines)	USA	Lrg	-	-	100-420
M107 SP 175mm Gun	USA	Lrg	+2	+3	80-960
M115 203mm Howitzer (8-inch)	USA	Lrg	+3	+4	80-400
M55 SP 203mm Howitzer (8-inch)	USA	Lrg	+3	+4	80-400
M110A1 SP 203mm Howitzer (8-inch)	USA	Lrg	+3	+4	80-400
M110A2 SP 203mm Howitzer (8-inch)	USA	Lrg	+3	+4	80-600
M110A2 SP 203mm Howitzer (Rocket-Assisted Projectile)	USA	Lrg	+2	+3	600-720
M270 Multiple-Launch Rocket System (DPICM)	USA	4x Lrg (2x2)	+4	+4	200-760



NATO Artillery Ratings 1980-1989 (Continued)

Artillery Unit Type	Nation	Template	V	TGsV	Range
L9A1 51mm Light Mortar (2-inch)	UK	Sml	-2	-1	2-20
L16A1 81mm Mortar	UK	Sml	-1	0	5-140
Ordnance QF 25pdr Field Gun (88mm)	UK	Lrg	-1	0	40-290
L5 105mm Pack Howitzer (Italian Mod 56/14)	UK	Lrg	-1	0	40-260
L118/L119 105mm Light Gun	UK	Lrg	-1	0	40-320
FV433 Abbot SP 105mm Gun	UK	Lrg	-1	0	40-410
BL 5.5-inch Gun (140mm) (100lb Shell)	UK	Lrg	+1	+2	60-350
BL 5.5-inch Gun (140mm) (82lb Shell)	UK	Lrg	0	+1	60-390
C3 81mm Mortar (British L16A1)	Canada	Sml	-1	0	5-140
CS60 60mm Gun-Mortar (AML-60 Armoured Car)	France	Sml	-2	-1	5-40
TDA LL or MO-81-61C 81mm Mortar	France	Sml	-1	0	5-80
MO-120-AM-50 120mm Mortar (Brandt 120mm)	France	Lrg	0	+1	30-140
MO-120-RT-61 120mm Mortar	France	Lrg	0	+1	30-220
MO-120-RT-61 120mm Mortar (Rocket-Assisted Projectile)	France	Lrg	-1	0	220-350
Mod 1950 105mm Howitzer	France	Lrg	-1	0	40-340
Mk 61 SP 105mm Howitzer	France	Lrg	-1	0	40-340
Mod 1950 155mm Howitzer	France	Lrg	+1	+2	60-430
Mk F3 SP 155mm Gun	France	Lrg	+1	+2	60-480
GCT 155mm AUF1 SP Gun	France	Lrg	+1	+2	60-560
GCT 155mm AUF1 SP Gun (Rocket-Assisted Projectile)	France	Lrg	0	+1	560-670
NM95 81mm Mortar (British L16A1)	Norway	Sml	-1	0	5-140
Tampella 120mm Mortar (used by West Germany & Portugal)	Finland	Lrg	0	+1	20-120
Mod 56/14 105mm Pack Howitzer (also known as M56)	Italy	Lrg	-1	0	40-260
FIROS-30 40x122mm Multiple Rocket Launcher	Italy	2x Lrg	0	+1	80-720
FBP 60 60mm Mortar	Portugal	Sml	-2	-1	2-20
FBP 81mm Mortar	Portugal	Sml	-1	0	5-80
ECIA L65/60 60mm Mortar	Spain	Sml	-2	-1	2-90
ECIA L65/81 81mm Mortar	Spain	Sml	-1	0	5-140
ECIA L65/120 120mm Mortar	Spain	Lrg	0	+1	20-190
ECIA L65/120 120mm Mortar (Rocket-Assisted Projectile)	Spain	Lrg	-1	0	190-280
Teruel 40x 140mm Multiple Rocket Launcher	Spain	2x Lrg	+1	+2	40-600
LARS/LARS-2 36x 110mm Multiple Rocket Launcher	FRG	2x Lrg	0	+1	40-330
LARS-2 36x 110mm Multiple Rocket Launcher (AT Mines)	FRG	Lrg	-	-	40-330
FH-70 155mm Howitzer	FRG/UK	Lrg	+1	+2	60-570
FH-70 155mm Howitzer (Rocket-Assisted Projectile)*	FRG/UK	Lrg	0	+1	570-720

* The FH-70 155mm Howitzer can also fire all types of US 155mm ammunition, so it's possible that they might also be able to fire the more esoteric rounds such as DPICM or artillery-delivered mines.



Non-Aligned Nations' Artillery Ratings 1980-1989

Artillery Unit Type	Nation	Template	V	TGsV	Range
mGrW 82 81mm Mortar	Austria	Sml	-1	0	5-150
GrW 86 120mm Mortar	Austria	Lrg	0	+1	20-210
GrW 86 120mm Mortar (Rocket-Assisted Projectile)	Austria	Lrg	-1	0	210-320
M51 32x 128mm Multiple Rocket Launcher (Czech RM-51)	Austria	2x Lrg	+1	+2	40-190
Haubits m/40 105mm Howitzer	Sweden	Lrg	-1	0	40-260
CWSW m/41D 120mm Mortar	Sweden	Lrg	0	+1	30-220
CWSW m/41D 120mm Mortar (Rocket-Assisted Projectile)	Sweden	Lrg	-1	0	220-350
Haubits F 155mm Howitzer (French Model 50)	Sweden	Lrg	+1	+2	60-430
FH77 155mm Howitzer	Sweden	Lrg	+1	+2	60-500
FH77 155mm Howitzer (Extended Range Round)	Sweden	Lrg	0	+1	500-570
Bandkannon 1A SP 155mm Howitzer*	Sweden	Lrg	+1	+2	60-610
Bandkannon 1A SP 155mm Howitzer (Rapid-Fire Mode)*	Sweden	Lrg	+2	+3	60-610
K1 60mm Gun-Mortar (Eland-60 and Ratel-60)	S. Africa	Sml	-2	-1	5-40
M1 60mm Mortar	S. Africa	Sml	-2	-1	2-50
M4/M6 'Patmor' 60mm Mortar	S. Africa	Sml	-2	-1	2-40
M3 81mm Mortar (French TDA LL)	S. Africa	Sml	-1	0	5-80
G1 88mm Field Gun (British 25pdr Field Gun)	S. Africa	Lrg	-1	0	40-290
M5 120mm Mortar (Israeli Soltam M-65)	S. Africa	Lrg	0	+1	20-170
M5 120mm Mortar (Rocket-Assisted Projectile)	S. Africa	Lrg	-1	0	170-240
G2 140mm Gun (British 5.5-inch Medium Gun)	S. Africa	Lrg	+1	+2	60-350
G2 140mm Gun (Rocket-Assisted Projectile)	S. Africa	Lrg	0	+1	350-500
G5 155mm Howitzer	S. Africa	Lrg	+1	+2	60-720
G5 155mm Howitzer (Extended-Range Round)	S. Africa	Lrg	0	+1	720-1200
G6 Rhino SP 155mm Howitzer	S. Africa	Lrg	+1	+2	60-720
G6 Rhino SP 155mm Howitzer (Extended-Range Round)	S. Africa	Lrg	0	+1	720-1200
Valkiri-22 Mk 1 24x 127mm Multiple Rocket Launcher	S. Africa	2x Lrg	0	+1	40-864
CITER L33 155mm Howitzer	Argentina	Lrg	+1	+2	60-500
CITER L33 155mm Howitzer (Extended-Range Round)	Argentina	Lrg	0	+1	500-600
Type 63 12x 107mm Multiple Rocket Launcher	China	1x Lrg	-1	0	40-190

* See special rules for Swedish 155mm Bandkannon 1A.

