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### Introduction

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The 2nd Edition of my Balagan house rules for armour in *Crossfire* bring rules that: are simpler and more consistent; span the entire war and all theatres; appeal to tank geeks by differentiating vehicles, but don't scare off normal players while doing that; making tanks grunty compared to HMG; support both soft skin vehicles and armoured vehicles; and give anti-tank rifles and 45mm anti-tank guns a useful purpose throughout the war. Although the primary focus is armour, in places these rules also change the rules for infantry and guns.

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### AT, AP, Armour Ratings

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All stands (infantry, guns and vehicles) now have two fire ratings, one for *anti-tank* (AT), used for shooting at armoured vehicles, and the other *anti-personnel* (AP) for shooting at everything else (don't confuse "AP" with *Armour Piercing*). Both AP and AT are a number of dice with hits (usually) on 5+, just like infantry shooting. Both ratings are either "none" or in the range 2d6 to 7d6.

The calibre of a gun suggests a starting place for both AT and AP. This is merely guidance as there are many variables which change this for a particular weapon.

Calibre	Calibre Band	Base AT and AP
up to 44mm	Super Light	3d6
45-64mm	Ultra Light	4d6
65-84mm	Light	5d6
85-104mm	Medium	6d6
105+mm	Heavy	7d6

The **AP rating** for squads and HMG is unchanged from the basic rules. AP for a vehicle combines the shooting for the main gun and machine guns into a single

shooting roll and reflects attributes like rate of fire, poor or absent HE shells and the number and type of machine guns. AP for a gun stand includes the number of guns firing, the availability of canister shells and any integral machine guns.

The **AT rating** of the stand is based on the quality of the anti-tank weapons and reflects factors such as accuracy, penetration, muzzle velocity, weight of shell, rate of fire, the reduced efficiency of a tank with a 2 man turret, the availability of specialised anti-tank shells, and number of anti-tank weapons firing from the stand.

Stands also have an **armour rating**. For unarmoured stands this is "None". Armoured stands have a rating of 0d6 (light), -1d6 (medium), -2d6 (heavy) or -3d6 (super heavy). Armour, when present, works like extra cover dice to AT fire.

Like infantry and guns, vehicles now have unlimited movement and fire.

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### Attacking a vehicle

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Attacks on vehicles are one of AP direct fire (against unarmoured), AP at armour, indirect fire at vehicles, AT direct fire, or movement related (minefield, bogging). Just like infantry direct fire, roll the number of dice allocated to the attack then check for hits.

The to hit scores for each die are:  
6 when AP shooting at an armoured target  
6 when AT shooting at a hull down vehicle  
5+ otherwise.

The more hits the more the impact:

1 Hit = Pinned. Tank engine has stalled and/or the turret has jammed and/or the crew are rattled. Vehicle cannot move or rotate turret (if any) but can fire.

2 Hits = Suppressed. Tank has minor damage and/or the crew is shaken and

possibly temporarily bailed out. Vehicle cannot move, rotate turret (if any) or fire. Two Suppresses cause the crew to bail out and the vehicle is Killed.

3 Hits = Killed. Tank is KO and/or the crew have permanently bailed out. Either remove the model to reduce clutter or leave the smoking ruin on the table for aesthetic appeal.

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### Anti-Personnel (AP) Direct Fire

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When against infantry, guns and unarmoured vehicles, AP fire is like normal infantry direct fire in Crossfire. Throw your AP dice and (usually) hit on 5+.

#### AP Dice Modifiers:

**Cover:** -1d6 when target in cover

**KILL Potential:** In addition to the normal PIN, SUPPRESS, KILL on the target stand, any extra hits above the first three splash onto enemy stands within one base width.

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### Anti-Personnel (AP) at Armour

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AP can be used for direct fire at armoured targets. This is like shooting at a bunker with -1d6 and hit on a 6 not 5+. Also the best result it can attain is a PIN (SUPPRESS and KILL become PIN).

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### Indirect Fire at Vehicles

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Indirect fire can be called in against a stationary vehicle (PINNED or SUPPRESSED). For armoured vehicles, this is like shooting at a bunker with -1d6 and hit on a 6 not 5+. The normal rules about FO having visibility apply.

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### Anti-tank (AT) Direct Fire

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Anti-tank direct fire with tanks / guns now works like normal infantry direct fire. Look up the AT rating and throw that number of dice with hits (usually) on 5+.

#### AT Dice Modifiers:

**Cover:** -1d6 when target in cover

**Armour:** Armour rating of the target is a modifier e.g. heavy armour provides a -2d6 modifier

**Flank/Rear:** +1d6 when shooting at the flank/rear of the tank

**Stationary:** +1d6 for attacks against a stationary vehicle (PINNED or SUPPRESSED)

### Infantry Anti-tank Weapons

The anti-tank weapons of infantry stands define their anti-tank ratings. An anti-tank rifle is 3d6. A piat, bazooka, panzerfaust or panzerschreck is 6d6 / 2d6 i.e. 6d6 when shooting within a base width and 2d6 beyond.

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### Movement Related Attacks

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In some cases a stand can be attacked if it moves.

### Minefield

When a stand (including Squads and Vehicles) takes a move action in a minefield, the enemy has the option of a 4d6 attack by the minefield (hits on 5+). This attack is treated like a reactive fire in all ways except there are no modifiers e.g. armour is ignored.

### Bogging

Vehicles, like infantry, get unlimited movement actions. However, certain moves risk bogging. Bogging can be triggered by movement in difficult terrain and/or by pivoting in the open.

Scenarios specify which terrain features may cause bogging down and the severity of the bogging attack (in the range 1d6 to

4d6 with hits on 5+). The bogging attack is treated like a reactive fire in all ways except there are no modifiers e.g. armour is ignored.

If the scenario does not specify the bogging rules then use:

**Bogging Special Rule**

Impassable terrain: Buildings  
Easy terrain: roads  
Difficult terrain: woods, rough ground, rock field, boulder field, bocage, stream, and anti-tank obstacle (ditch, barricade).  
Other terrain: Open and anything not mentioned above

No bogging attack when the move action is entirely in easy terrain.  
Automatic bogging (Suppress) when attempts move action in impassable terrain.  
3d6 bogging attack when a vehicle attempts a move action in difficult terrain.  
1d6 bogging attack when the attempted move action starts with a pivot in other terrain.

**Vehicle Rally**

Vehicles are rated Green, Regular or Veteran and rally in the normal way. This is regardless of the cause of the PIN or SUPPRESS (fire, bogging, minefields).

**Turret Rotation**

Arc of fire for all vehicles is +/- 45 degrees. Vehicles without turrets fire straight ahead. Turreted vehicles fire in the direction of the turret.

Turret rotation occurs as part of movement. A vehicle without a turret gets normal move actions with two elements Pivot+MoveStraight whereas a turreted vehicle move action has three elements Pivot+MoveStraight+RotateTurret

**Vehicles and Close Combat**

Armoured vehicles can initiate close combat with infantry in entrenchments and with gun stands, but not other stands. APCs cannot initiate close combat.

Only one infantry squad can close assault a vehicle at a time; a commander can accompany the assaulting squad. Squads armed with Infantry Anti-tank weapons get a +1 against vehicles in close combat. The +1 for SMG in close combat does not apply against vehicles. All other modifiers apply.

Vehicles get a close combat modifier if in the open and further than one base width from buildings. Vehicle close combat modifiers depend of whether the vehicle has a turret and whether it has a closed/open top:

	Turreted	Turretless
Close Topped	+3	+2
Open Topped <sup>1</sup>	+2	+1

Notes:

(1) Open topped vehicles include most half-tracks, the SU-76, Marder I, II and III, Hornisse/Nashorn, Wespe, and Archer. The M10 Tank Destroyer has a turret but is also is open topped.

**Guns and Movement**

Gun stands are a variation on infantry so are shot at with AP fire. A gun is a stand, but tows are not. Tows are markers, and like other markers, tows indicate status, in this case being limbered. As a marker, tows cannot be targeted by the enemy.

At any point in time gun stands are unlimbered, limbering, limbering or unlimbering. Only unlimbered guns can fire. Limbering and unlimbering are special move actions as a tow marker is placed or removed (similar to ground hugging).

A limbered gun is treated as an unarmoured vehicle. As a vehicle a limbered gun is at risk of bogging.

Unlimbered guns up to 100 mm can pivot by man handling. They can only pivot and do not get the straight ahead part of a move action.

Small unlimbered gun can make one man handled move action per initiative, including both a pivot and move straight ahead. “Small” in this context means Infantry Guns up to 76.2 mm and Anti-tank Guns up to 45 mm (but not British 2 pounders).

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### **Design Notes**

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You can find extensive design notes at <https://balagan.info/cf-armour-musing>

**German Sample Data Sheets**

Vehicle	Armour	AT	AP	Gun
Pz 38(t) E-F, S	0d6	4d6	4d6	
Pz III H-M	1d6	5d6	5d6	
Pz IV G-H	1d6	6d6	5d6	7.5cm L/43 or L/48, Superior ATG
Pz V Panther	2d6	6d6	5d6	7.5cm L/70, Superior ATG
Pz VI, Tiger I	2d6	7d6	5d6	8.8cm L/56 KwK 36, Superior ATG
Pz VI B, Tiger II	3d6	7d6	5d6	8.8cm L/71 KwK 43, Superior gun
StuG III F-G	1d6	6d6	5d6	7.5cm L/48, Superior ATG
SdKfz 231 (8-RAD)	0d6	4d6	3d6	
SdKfz 250/1 HT	0d6	None	4d6	
3.7cm PaK 35/36 ATG	None	4d6	3d6	
5.0cm PaK 38 ATG	None	5d6	3d6	
7.5cm PaK 40 ATG	None	6d6	4d6	7.5cm L/46, Superior ATG
8.8cm PaK 43 ATG	None	6d6	5d6	8.8cm L/71 KwK 43, Superior ATG
8.8cm Flak 18, 36	None	6d6	6d6	8.8cm Flak 18/36/37/41, Superior ATG

**British / Commonwealth Sample Data Sheets**

Vehicle	Armour	AT	AP	Gun
Matilda	1d6	4d6	4d6	
Sherman 75mm	1d6	5d6	5d6	
Sherman 105mm	1d6	2d6	7d6	low velocity gun (472 m/s) and no anti-tank shells
Sherman Firefly	1d6	6d6	3d6	76.2 mm (3 inch) Ordnance QF 17 pounder, Superior ATG, no hull machine guns
Churchill VII	1d6	5d6	6d6	
Churchill VIII	2d6	5d6	7d6	
2 pdr ATG	None			
6 pdr ATG	None	5d6	3d6	
17 pdr ATG	None	6d6	4d6	76.2 mm (3 inch) Ordnance QF 17 pounder, Superior ATG

**Soviet Sample Data Sheets**

Vehicle	Armour	AT	AP	Gun
T-26	0d6	4d6	4d6	
T-34/76	1d6	5d6	6d6	
T-34/85	1d6	6d6	7d6	85mm D-5T tank gun, Superior ATG
KV-1C M1941	2d6	5d6	6d6	
KV-2 M1940	2d6	6d6	7d6	
SU-122	1d6	6d6	5d6	
SU-152	2d6	6d6	5d6	
ISU-122	2d6	6d6	7d6	
45mm ATG M1937	None	4d6	3d6	
45mm ATG M1942	None	5d6	4d6	
57mm ATG (57/73)	None	6d6	4d6	
76.2mm Field Gun (76/41)	None	5d6	6d6	
76.2mm IG	None	4d6	6d6	