
INTRODUCTION

This Supplement to the **Phoenix Command Mechanized Combat System** features the full range of Anti-Tank Guns used by the major powers in World War II. Full data for each weapon is presented, using the same format as PC Mechanized, and a few special rules have been included that apply specifically to Anti-Tank Guns in World War II. The Status Sheet for each Anti-Tank Gun includes a brief description of the weapon and its history.

TABLE OF CONTENTS

INTRODUCTION

1. WORLD WAR II ANTI-TANK GUNS

- | | | |
|-----|--------------------------|---|
| 1.1 | Overview | 2 |
| 1.2 | Special Rules and Values | 3 |

ANTI-TANK GUN STATUS SHEETS

Game Design

Barry Nakazono

Editing

David McKenzie

Illustration and Graphic Design

Toni Dennis

Cover Art

Todd Winter

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1

WORLD WAR II ANTI-TANK GUNS

This Supplement covers the most prominent Anti-Tank Guns of World War II. Both Basic and Advanced Weapon Data sections have been provided in a format identical to Status Sheets 1 and 3 of the **Phoenix Command Mechanized Combat System**. Additional values unique to Anti-Tank Guns are included on the left side of the Basic Data Table for each weapon. A description of these new values is included in Section 1.2. Definitions of standard values found on the Basic and Advanced Tables are included in the Mechanized System rule book. A discussion of each weapon and its history is found on the upper right portion of its Status Sheet.

The Anti-Tank Gun Status Sheets are arranged by Nationality in alphabetical order. Within each National grouping the weapons are listed from smallest to largest caliber. The upper portion of the page contains general data, weapon description, as well as the Basic Weapon Direct Fire Table. The lower portion of the page contains the Advanced Weapon Direct Fire Table, Target Size Modifiers, and Critical Hit Chances.

1.1

OVERVIEW

The Anti-Tank Gun is similar to standard Field Artillery but has been specialized for the anti-tank role. It is designed for direct fire and has a low silhouette, a gunshield to protect the crew, high penetrating power, high rate of fire, wide traverse, and limited elevation. Early in the war, these weapons were small caliber, high velocity guns which could be manually moved by a crew of five. Their light weight, small size, and high rate of fire made them ideal for protecting the infantry from the lightly armored vehicles of the time, as well as giving the infantry direct fire support. The 37mm to 47mm weapons of this supplement represent these early Anti-Tank Guns. In general, they were pulled from front line service by the end of 1942 as more powerful weapons became available.

As the protection of tanks increased, the caliber and weight of the Anti-Tank Gun increased. The earlier weapons were replaced by 57mm, 75mm, and later 88mm guns. The weight of the weapons increased beyond the limit of manual mobility, and trucks and tracked vehicles for transport became necessary. Once tracked vehicles were required to give the gun adequate mobility, the natural developments were the Self Propelled Gun and the Tank Destroyer; tracked, turretless tanks designed as tank hunters and to give the infantry mobile tank defense.

In this way World War II saw the complete evolution of the dedicated Anti-Tank Gun, from its birth to its maturity and extinction. By the end of the war many nations had adapted basic anti-tank features into their standard artillery and these weapons handled both roles. This was particularly true of the Soviet 76.2mm and 85mm weapons, which are actually Field Artillery but have been included in this supplement because of their frequent use in the anti-tank role.

Players familiar with the Mechanized System will find that the **Weapon Data Tables** have not changed. It should be noted that **Armor Piercing Composite Rigid (APCR)** ammunition was not generally available. APCR ammunition is described in the Mechanized System (Section 1.3) and was developed during WWII to improve performance. It was available only in limited quantity and was rationed. As a guide, Gun Crews have a 5% chance of having 4 rounds.

Below the Weapon Data Table is a **Battery Roster and Status Table** for the Gun battery. This includes places for recording the Crew's condition, the condition of the Gun, and ammunition use. Use of the Status Sheet is identical to that of Vehicle Status Sheet 1.

Advanced Weapon Data is the same as defined in the Mechanized System. The weapon's Target Size Modifiers for Front and Side profiles with the Gun in the open and "Dug In" have been included in the left hand column. Below the Target Size Modifiers are the Critical Hit Chances used to determine disabling hits to the Gun as described in Section 1.2.

Gunshield

Most anti-tank guns are equipped with gunshields. These simple armor plates mounted to the gun carriage providing cover for the gun crew from small arms fire. Considering the direct fire role of these weapons, a gunshield is a natural feature of these guns and greatly improved crew morale.

SPECIAL RULES AND VALUES

The following are special rules and a description of some of the unique features of Anti-Tank Guns.

General Information

The weapon's general data is given on the upper left side of the Status Sheet. This includes the weapon identification, its caliber and Nationality, Initial Service Date, and Weight (in pounds).

Crew

In general an Anti-Tank Gun Crew has a **Group Leader**, a **Gunner**, a **Loader**, and two support personnel who are classified as **Ammunition Movers**. In addition to these personnel, who are considered part of the Crew, there are two **Drivers**, one responsible for the Vehicle which moves the Gun, and the second who is responsible for the Vehicle which carries the ammunition. The Drivers remain with the Vehicles, which are normally driven to an area under cover, and are not part of the Crew.

For **Morale** purposes, damage to the Crew is tracked as if they were an Infantry Squad. The Group Leader and the Gunner are treated as the Squad Leader and the Assistant Squad Leader. A Gun Crew which loses both its Group Leader and Gunner must make a morale roll (Basic Morale rules of Mechanized Section 5.3). If the Crew makes its Morale roll they can no longer advance but can hold their ground and may continue to fire. A Crew which fails its Morale roll can only defend itself in Close Combat, is considered under available cover, and cannot fire the Gun. Note that the Crew does not have its effectiveness reduced by enemy fire until they have failed Morale, and that normal Infantry Offensive FP modifiers do not apply.

If the Gunner is killed, another member of the Crew takes his place (for fire purposes only.) In the Basic Game there is no change in Gun accuracy. In the Advanced rules, the accuracy of another member of the Crew is one Grade lower than the Gunner's. As an example, a Line Grade Battery with a Skill Modifier of +10 would drop to Green and a Skill Modifier of +7.

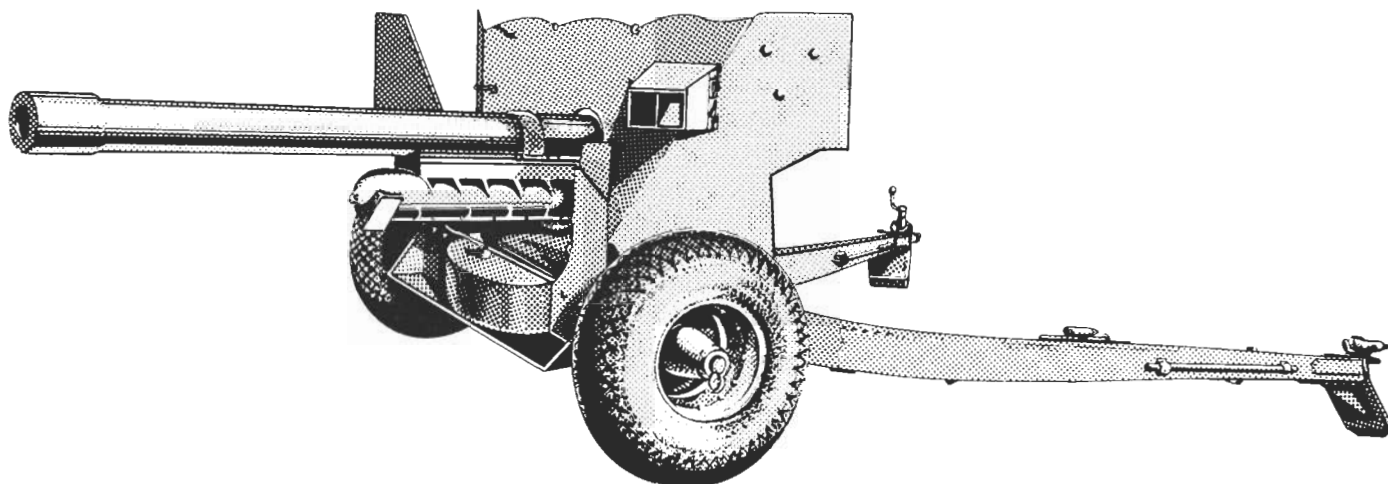
The normal **Reload Time** applies to a full Crew. As the Crew takes casualties, the Gun's Rate of Fire drops. The Reload Time increases by 2 Phases each time a Loader or one of the Ammunition Movers is incapacitated or leaves his station to assume another function. The Group Leader is available to fill in for injured Crew members if necessary.

Fixed Ammunition

Fixed Ammunition refers to ammunition whose projectile and case containing the propellant are one piece. Such ammunition is typical of tank ammunition and other high velocity direct fire guns which do not require a variable propellant charge.

British 6 Pounder Anti-Tank Gun

The 6 Pounder (57mm) replaced the 40mm 2 Pounder in 1942 and gave the British a weapon which could handle any contemporary German Tank except the Tiger. The Gun has good performance and in North Africa was one of the most powerful Anti-Tank Guns available. In mid 1944 Armor Piercing Discarding Sabot (APDS) ammunition became available in limited quantity, almost doubling the performance of the normal Armor Piercing shell.



Split Trail Mount

Most World War II Artillery and Anti-Tank Guns were of conventional Split Trail design. The Gun was mounted on a carriage, which rode on two wheels supported by a single axle perpendicular to the Gun's barrel and located close to the Gun's center of mass. To support the Gun in the firing position, two booms, or Trails, spread to the rear from the carriage and rested on the ground. Early Artillery pieces used a single Trail coming straight back in line with the Gun barrel. This was fine for Guns which always fired along the single trail's axis, but for the Gun to be stable over a wide traverse, a twin or Split Trail design was required. By spreading the Trails to each side of the carriage, the Gun could be traversed and still handle the recoil.

Ground Spades

Ground Spades were fixed to the end of the Trails and were designed to dig themselves into the ground when the Gun was fired. They served to anchor the Gun to the ground, helping to absorb the Gun's recoil and return it to the prefire position.

For **Spotting** purposes, the Crew of an Anti-Tank Gun is treated as an Infantry Squad when they are not firing the Gun. When firing the Gun, the Crew receives one Dedicated Spotting roll in the Zone of the Gun's Facing, the Group Leader receives another in any other Zone, and the rest of the Crew have a Secondary Spotting roll in all other Zones.

Gunshield PF, Crew Damage, and Small Arms Fire

The **Gunshield PF** gives the Protection Factor for the weapon's Gunshield. If the entry is a dash, the weapon has no Gunshield. If the Gunshield PF is greater than or equal to the Penetration (PEN) value of the weapon firing at the Gun Crew, the Crew is considered Under Blocking Cover while operating the Gun if the shooter is within the Gun's Traverse Limit (see below). This means that small arms fire at the Crew uses the **Under Blocking Cover** modifier when determining Crew casualties using the standard Infantry Combat System (Section 5.3 of the Mechanized System). The Gunshield does not cover the Crew from fire coming from outside the Gun's Traverse Limit and the Crew is considered as targets on their Hands and Knees, in the case of an exposed Gun position, and Prone size targets in the case of a Dug In position.

Crew Damage and Large Caliber Weapons

When large caliber weapons are fired at the Gun Crew, the Gun is normally the target. If the shot hits, the round detonates on the Gun or Gunshield, and the Crew is treated as if they were a tank Crew whose Vehicle had been penetrated. In the basic game this means the Gun and Crew are disabled. If Advanced Crew damage rules are being used, the Gunshield's PF is used to determine Crew damage following normal Vehicular rules for AP, HEAT, or APFSDS rounds. If an HE or APHE round hits the Gun, the Crew is considered automatically incapacitated.

Disabling the Gun depends on whether the Gun or critical elements have been hit or whether the round passes through the Gunshield and Crew stations only. If the round is an explosive, the Gun is treated as an Engine and the normal Engine Disabling rules of Mechanized Section 3.6 are used. If the round is AP, a 00 - 99 roll should be made. If less than or equal to the **Critical Hit Chance** found on the left column of the **Advanced Weapon Direct Fire Table**, is rolled, the Gun itself has been hit and Gun disability is treated as a hit to an Engine using the standard rules of Mechanized Section 3.6. If greater than the Critical Hit Chance is rolled the round passes through the Gunshield or Crew stations and the Gun is not disabled.

Elevation, Traverse Limit, Field of Fire, and Traverse Rate

To determine where a Gun can fire, there are three factors; the Elevation, the Traverse Limit (based on the Gun Mount Facing), and the Field of Fire (based on the Gun Facing.) The Gun's **Elevation** gives the angle the Gun can be elevated above horizontal and the angle it can be depressed below horizontal. The **Traverse Limit** gives the angle centered on the **Gun Mount's Facing**; this is the facing of the Gun's frame, and limits the area that can be covered by the Field of Fire. The Traverse Limit is the maximum angle the Gun can pivot on the Mount and still absorb the weapon's recoil. If the target is outside this Traverse Limit, the Gun must be Repositioned (described below) to bring the target into the Traverse Limit. The **Field of Fire** gives the angle centered on the **Gun's Facing** into which the Gun may be aimed and fired. If the target is in the Field of Fire, the Gun can be aimed and fired at it. If the target is outside the Field of Fire, the Gunner must Traverse the Gun to bring it to bear. The rate at which the Gun can be brought to bear is given by the **Traverse Rate** in degrees per Phase. To keep track of the Gun's Facing and the Mount's Facing, two markers are used. One marks the Facing of the Mount and the second the Facing of the Gun itself. This is similar to marking the Facing of a tank's Hull and Turret. For many of the lighter Guns, the Field of Fire is the same as the Traverse Limit. In this case only a single marker showing the Gun's Facing is used, since any target within the Gun's Traverse Limit is also in its Field of Fire.

Example: An 88mm Pak43 has a Traverse Limit of 360°, a Field of Fire of 38°, and Traverse Rate of 19° per Phase. A target appears on a road in the Gun's Field of Fire; the Gun immediately begins aiming at it, and it is destroyed when the Gun fires. A few Turns later, another target appears 45° to the left of the road. The Gun's Facing is still pointed at the road. Since the new target is 45° to the left, it is outside the Gun's Field of Fire (38°, or 19° to each side of the road). The Gun must be brought to bear on the new target. This means traversing the Gun 45°, which takes 3 Phases since the Traverse Rate is 19° per Phase. Three Phases after the target is spotted, the Gun has been brought to bear and Aim Time begins.

Deploy Time, Break Time, Rotation Rate, and Set Time

The **Deploy Time** gives the time in Turns to take the Gun from its traveling configuration and make it ready to fire. This includes establishing the Gun Mount's Facing, preparing ammunition, and so forth. Initially the Gun's Field of Fire coincides with the Mount's Facing.

Once Deployed, the Break Time, Rotation Rate, and Set Time give the time in Turns to change, or **Reposition**, the Gun **Mount's Facing**. The **Break Time** gives the time to break the Mount free from the ground and prepare to rotate it. Once the Break Time has been spent, the Gun can be rotated. The rate at which this can be done is given by the **Rotation Rate**, in degrees per Turn. Once the Gun Mount has been rotated to its new Facing, the **Set Time** gives the time in Turns to set up the Gun again and prepared it to fire. Aim Time and reloading begin after the Set Time is completed.

Example: A Pak40 75mm Gun Mount's Facing must be moved 45° to bring a new set of targets under fire. After 3 Turns (Break Time) the Gun has been broken from its old position and can be Rotated. This rotation takes 5 Turns (Rotation Rate is 9° per Turn). Once rotated into the new Facing, the Gun can be Set and made ready to load and fire in another Turn (Set Time of 1 Turn).

Movement Speeds

The **Manual Movement Speed** gives the speed in Mech Hexes Per Turn that the Gun may be manually moved by its Crew on flat or downhill terrain. If the entry is a dash, the weapon cannot be moved in this manner. In addition, no Gun can be moved Manually uphill.

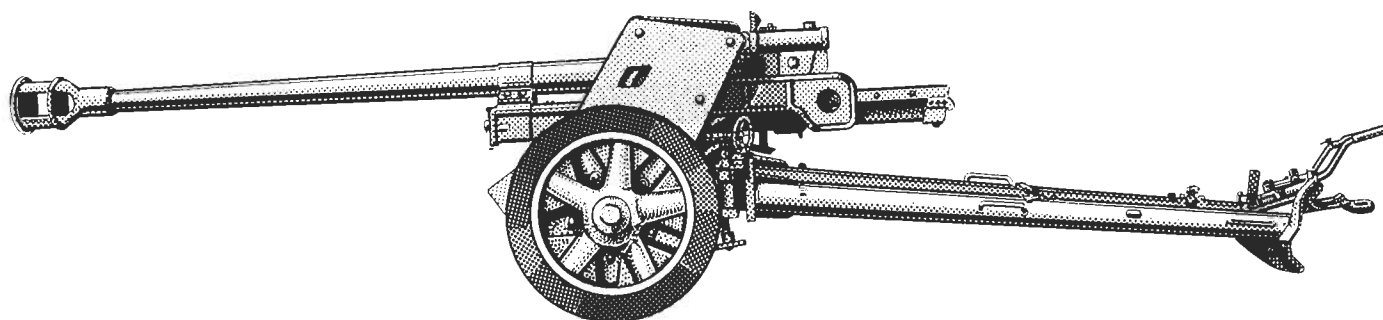
Movement Speeds for a Gun in its traveling configuration depend on the type of transportation used to pull it. The following tables give typical Movement Speeds for Trucks and Tractors (Tracked Vehicles) commonly used for this purpose. These Vehicles are "soft skinned", and their Crews are vulnerable to small arms fire and explosives.

TRUCK MOVEMENT / STALL CHANCE						
Grd Slp	Paved Road	Hard Grnd	Earth	Loose Soil	Mud	Deep Mud
0°	10.1 -	9.2 01	8.4 05	7.5 09	7.2 15	
10°	6.9 -	6.1 -2	5.2 06	4.3 10	4.0 18	
20°	3.9 -	3.0 03	2.0 09	1.1 15	.7 26	
30°	1.1 00	.1 06	19	32	54	
40°	.1 02	23	64	99	99	
50°	22	99	99	99	99	

TRACTOR MOVEMENT / STALL CHANCE						
Grd Slp	Paved Road	Hard Grnd	Earth	Loose Soil	Mud	Deep Mud
0°	4.8 -	4.7 -	4.6 -	4.5 -	4.5 -	4.4 00
10°	3.7 -	3.6 -	3.5 -	3.4 -	3.3 -	3.3 00
20°	2.6 -	2.5 -	2.4 -	2.3 -	2.2 -	2.2 00
30°	1.6 -	1.5 -	1.4 -	1.3 -	1.2 -	1.1 01
40°	.8 -	.6 -	.5 -	.4 -	.2 -	.2 01
50°	.1 -	-	-	-	-	.04

German Pak 40 Anti-Tank Gun

The Pak 40 was the mainstay of the German "Pak" or Anti-Tank force in the mid to late war years. It combined penetrating power with mobility and was the first German Anti-Tank weapon capable of taking on the Soviet T34 and KV tanks with any degree of success. Its penetrating power was only marginally successful against Soviet armor, but its moderate weight, low silhouette, and mobility made it one of the most common German Pak guns after 1943.



Cross Mount

Many Anti-Aircraft Guns and a few Anti-Tank Guns were equipped with Cross Mount Gun Carriages. The Gun was mounted on two beams which formed a cross and lay flat on the ground. This gave the weapon a full 360° traverse limit, providing a stable firing platform and making it ideal for the Anti-Aircraft role. The disadvantage was that this type of mount required a special four wheeled trailer to transport the Gun, and the Gun took considerable time to place or remove from the trailer.

Deployment

Anti-Tank Guns were often used to secure the flanks of mechanized forces and are generally considered a defensive weapon. Proper deployment depends on the Gun and the enemy's armor. An Anti-Tank Gun that can penetrate the enemy's armor at a range from which the enemy's return fire is inaccurate should be deployed in a way that takes advantage of its range. A Gun which can only penetrate the enemy at close range must depend on cover and concealment and wait for the enemy to approach. Massed Anti-Tank Guns supporting each other on a wide and deep front (called a Pak Front) can be counted on to slow or stop an armored advance providing time and opportunity for a counter attack by armored reserves.

Advanced Target Size

The Advanced Target Size Modifiers give the Target Size of the Gun for Front and Side profiles. **Dug In** entries apply to Guns which are in Gun Pits or are firing from behind blocking cover, where the Gun's lower carriage is out of the line of fire.

Critical Hit Chances

The Critical Hit Chances give the chance that a round hitting the Gun or the Crew stations will hit the Gun's critical components, Disabling the Gun. If the round is an explosive, the Gun is treated as an Engine and the normal Engine Disabling rules of Mechanized Section 3.6 are used. If the round is non-explosive, a 00 - 99 roll should be made. If less than or equal to the **Critical Hit Chance** found on the left column of the **Advanced Weapon Direct Fire Table** is rolled, the Gun itself has been hit and the chance of Disabling the Gun is treated as a hit to an Engine using the standard rules of Mechanized Section 3.6. If greater than the Critical Hit Chance is rolled, the round passes through the Gunshield or Crew stations and the Gun is not Disabled.

APHE Ammunition Modifier for Ammunition and Fuel Hits

The normal Ammunition Modifier found on **Table 3B** for AP with Explosive ammunition (+ 10), is based on modern APC-HE ammunition which have small grenade size explosive charges. These ammunitions have just enough explosive to incapacitate or kill the Crew without penalizing the shell's integrity and penetrating ability. Many World War II APHE shells were based on Naval shells which had a large explosive cavity and a base detonating fuse. This type of shell is now obsolete, but was much more effective against infantry and in explosive effect if a Vehicle was penetrated. To adjust the basic Ammunition Modifier of **Table 3B** for this type of shell, the Ammunition Modifier may be found on the following table opposite the shell's BC0 value.

APHE AMMUNITION MODIFIERS							
BC0	Mod	BC0	Mod	BC0	Mod	BC0	Mod
200	10	600	14	1500	18	3300	22
300	11	800	15	1900	19	3900	23
400	12	1000	16	2300	20	4600	24
500	13	1200	17	2700	21	5500+	25

Note that the **Explosive Shell** rules of **Section 4.10** of the **Mechanized System** should be used to determine Crew damage. In the basic system, an APHE shell which penetrates automatically incapacitates the Crew in the compartment penetrated. If the shell's BC0 value is greater than 10H, it incapacitates all other Crew members separated by interior partitions. This includes the rest of the Crew and applies to hits penetrating the Engine or front Drive Assembly.

For better resolution, when a tank is penetrated by an explosive round with a BC0 of 30 to 300, there is a 10% chance of incapacitating Crew members not in the penetrated compartment. A round with BC0 from 301 to 600 has a 25% chance of incapacitating the Crew; from 601 to 900 a 75% chance; 901 to 12H a 97%; and over 12H automatically incapacitates.

Second Shot after a Hit on Target

When an Anti-Tank Gun fires, the Gun's recoil system returns the Gun barrel close to its pre-fire orientation. (The ground Spades fixed to the tail spars of the gun are dug into the earth so the Gun Mount itself does not move.) Because of this, a second shot fired with no change to the Aim Point will fall close to the preceding one. This means that whenever a stationary Anti-Tank Gun hits a stationary target, the second shot's EAL at the same stationary target is equal to the ammunition's **Ballistic Accuracy (BA)** minus 5 plus the Target Size Modifier. This is independent of Aim Time and such shots can be fired as fast as the Gun can be reloaded. This models the Gun's recoil system returning the Gun close to its pre-fire orientation, from which a shot's accuracy depends primarily on the ammunition, the Gun's accuracy, and the target size.

This is particularly important for stationary Anti-Tank Guns and is why an immobilized tank is usually quickly dispatched. Once a Gun is correctly aimed at a stationary target, subsequent shots can be fired as fast as the Gun can be reloaded and retain excellent accuracy. This is similar to Artillery firing for effect once the Fire Mission is on target.

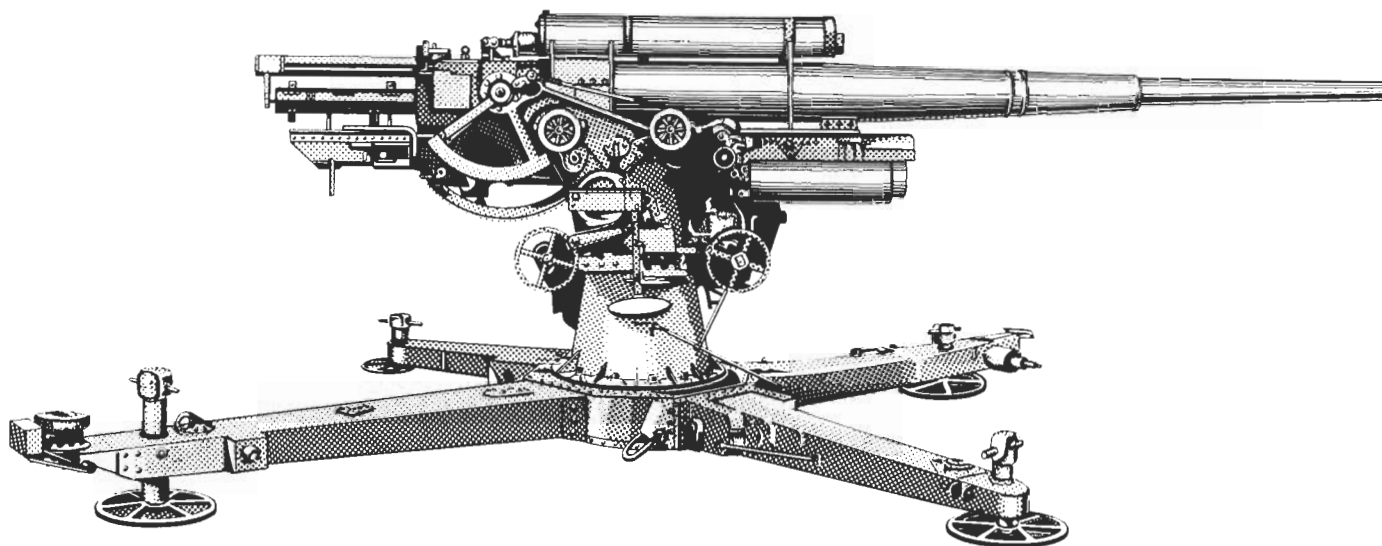
Note that the Second Shot Accuracy Rules only apply to Guns which are in position with ground Spades anchored. These Spades are normally anchored by firing the Gun. As the first three rounds are fired, the Gun's recoil digs the Spades into the ground. The Second Shot Accuracy rules do not

apply to the first three rounds fired from a Repositioned Gun. The same applies if the ground is frozen, concrete, or is otherwise too hard to allow the Spades to be anchored. Without the Spades anchored, the Gun Mount will move each time the Gun is fired and the Gun must be re-aimed for each shot.

Example: A Pak40 75mm Anti-Tank Gun fires at a stationary target at 50 Mech Hex range with 6 Phases of aim. The Odds of Hitting are 33. A23 is rolled, so the shot hits. A second shot is loaded in 2 Phases and fired. The EAL of this shot is 14 (Ballistic Accuracy from Status Sheet 3 at 50 MH) - 5 + 18 (Target Size) = 27 The Odds of Hitting for the second shot are 98. Note that the Odds of Hitting are now actually higher than the first shot, which had a longer Aim Time. The Gunner was lucky enough to hit with the first round. Proper aim established, the accuracy of the second shot is a function of the ammunition, the gun's accuracy, and target size rather than Aim Time.

German Flak 88 Anti-Aircraft Gun

The Flak 88 was an Anti-Aircraft Gun which was often used in the Anti-Tank role. During the invasion of France and in North Africa, the 88 played an especially important role in the German Anti-Tank defense and was a tremendous shock to Allied tank Crews. Unlike the British and US Anti-Aircraft Guns, the Flak 88 had Armor Piercing Rounds, making it effective against armor in the direct fire role.



WWII ANTI-TANK GUNS

The Pak 36 was used in large numbers during the early stages of WW II. With the invasion of Russia, it proved inadequate against the heavier Soviet tanks. It was in service until 1942, although it was nearly useless against the Soviet T34 and KV tanks.

The Grenade 41 was an explosive shell which was stuck into the muzzle of the Gun and fired like a Rifle Grenade. The Grenade had good penetration but a limited range; in the basic rules, if Effective Range is only 4 MH. If using the Advanced Rules for Ballistic Accuracy, the Maximum Range is 30 MH.

[illegible][illegible]

WWII ANTI-TANK GUNS

ADVANCED WEAPON DATA																							
Weapon Characteristics		Aim Mods Ph Md		Direct Fire Data		Target Range in 20 Yard Mech Hexes																	
						4	10	15	20	30	40	50	60	70	80	90	100	120	140	160	180	200	
Pak 38 50mm		RT 2P	1 -14 2 -8 3 -6 4 -4 5 -3 6 -1 7 0	APHE	PEN	311	300	290	281	263	247	232	217	203	191	179	168	147	130	114	100	88	
RT 2P	AOI																						
	NID			10	10	9	9	9	8	8	7	7	6	6	6	5	4	4	4	4	3		
	DFE			303	118	77	56	36	25	19	15	13	11	9	8	6	5	4	3	2			
	BC0 250			BA	36	28	25	22	18	16	13	11	10	8	7	6	3	2	0	-2	-3		
	MCD 2			TOF	1	2	3	5	7	9	12	14	17	20	23	25	31	37	44	51	57		
	Target Size			HE	PEN	68	65	62	60	55	51	47	44	40	37	35	32	28	24	21	18	16	
					PENF	41	39	37	36	33	30	28	25	23	21	20	18	15	13	11	9	8	
				AOI															1	1	1	1	
				DFE	130	50	32	24	15	10	8	6	5	4	3	3	2	2	1	1	1	1	
		BC0 785	BA	35	28	24	21	17	14	11	9	7	6	4	3	1	-1	-3	-4	-6			
DFS 2		TOF	1	3	5	7	11	14	18	23	27	31	36	40	50	60	71	82	93				
Critical Hit Chance		APCR	PEN	678	609	555	505	413	332	260	197	141	106	93	82	64	50	39	30	24			
			AOI																				
		NID	7	6	6	6	5	5	4	4	3	3	3	2	2	1	1	1	1	1			
		DFE	500	225	143	102	62	43	31	24	19	15	12	10	7	5	4	3	2				
	BA	29	18	12	9	3	-1	-4	-7	-9	-11	-12	-14	-16	-18	-20	-21	-23					
	MCD 2A	TOF	1	2	2	3	5	7	9	11	13	15	18	20	25	31	36	42	48				
	Gren 41	PEN	969	969	969	969	969																
		AOI		1	1	1	2																
		BC0 86H	DFE	4	2	1	1	0															
		DFS 7	BA	7	-5	-11	-15	-21															
MCD 5		TOF	7	19	29	39	59																

BASIC GAME DATA				WWII ANTI-TANK GUNS							
Pak 97 / 38 75mm		Ammunition	Cap	RT	PEN	FP	NID	BC0	PALM	Aim Time Phases	SA
Nationality	Germany	APHE		2P	255	20	17	521	—	1	-4
Initial Service Date	1941	HE			49	34	—	21H	—	2	2
Weight	2623									3	4
Crew	5	HEAT			751	34	—	16H	—	4	6
Gunshield PF	24									5	7
Elevation	+25° / -8°									6	9
Traverse Limit	60°									7	10
Field of Fire	60°	The Pak 97 / 38 was the first German large caliber Anti-Tank weapon to see action. It was a French Model 1897 Field Gun, with a shortened barrel and a muzzle brake, which was placed on a Pak 38 mount. Performance was poor, but it filled the need for a large caliber Anti-Tank Gun until the Pak 40 became available. A HEAT round was produced for this low velocity Gun to give it adequate performance, and was its standard ammunition. This round was inaccurate beyond 40 Mech Hexes; see the Ballistic Accuracy values in the Advanced Weapon Data below.									
Traverse Rate	34° / P										
Deploy Time	6 T										
Break Time	3 T										
Rotation Rate	14° / T										
Set Time	1 T										
Manual Movement Speed	.7										

BATTERY ROSTER AND STATUS TABLE																								
Status	1				2				3				4				5				6			
Crew	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T
Group Leader	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Gunner	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Loader	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Ammo Mover	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Ammo Mover	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Ammunition																								
Main Gun	☐				☐				☐				☐				☐				☐			

ADVANCED WEAPON DATA																					
Weapon Characteristics		Aim Mods Ph Md		Direct Fire Data																	
				Target Range in 20 Yard Mech Hexes																	
				4	10	15	20	30	40	50	60	70	80	90	100	120	140	160	180	200	
Pak 97 / 38 75mm RT 2P			APHE	PEN	294	284	277	269	255	241	229	217	205	194	184	174	156	140	125	113	101
		1 -14		AOI															1	1	
		2 -8		NID	20	19	19	18	17	16	16	15	14	13	13	12	11	10	9	8	7
		3 -6		DFE	141	55	36	27	17	12	9	8	6	5	4	4	3	2	2	2	1
		4 -4	BC0 521	BA	36	28	25	22	19	16	13	11	10	8	7	6	3	2	0	-1	-3
		5 -3	MCD 3	TOF	1	3	5	7	10	14	17	21	25	28	32	36	45	53	62	72	81
		6 -1																			
Target Size Front Front Dug In Side Side Dug In		7 0	HE	PEN	61	58	56	54	50	46	43	40	37	34	32	30	26	23	20	18	16
			PENF	35	33	32	31	28	26	24	22	20	18	17	15	13	11	9	8	7	
			AOI														1	1	1	1	2
			DFE	87	34	22	16	10	7	5	4	3	3	2	2	1	1	1	1	1	1
			BC0 21H	BA	35	26	22	19	14	11	8	6	4	2	1	-1	-3	-5	-7	-8	-10
			DFS 4	TOF	2	4	6	8	13	18	22	28	33	38	44	49	61	73	86	100	114
Critical Hit Chance Front Front Dug In Side Side Dug In			HEAT	PEN	751	751	751	751	751	751	751	751	751	751	751	751	751	751	751	751	751
				AOI										1	1	1	1	2	2	3	4
			BC0 16H	DFE	45	17	11	8	5	3	2	2	2	1	1	1	1	0	0	0	0
			DFS 5	BA	31	21	16	12	7	3	0	-3	-5	-7	-8	-10	-12	-14	-16	-18	-19
			MCD 3C	TOF	2	6	9	12	18	25	32	39	47	55	63	71	89	108	127	148	169

BASIC GAME DATA				WWII ANTI-TANK GUNS									
Pak 40	75mm	Ammunition	Cap	RT	PEN	FP	NID	BC0	PALM	Aim Time Phases	SA		
Nationality	Germany	APHE		2P	450	20	29	521	—	1	-5		
Initial Service Date	1941	HE			90	38	—	21H	—	2	1		
Weight	3142											3	4
Crew	5	APCR			436	7	22	—	—	4	6		
Gunshield PF	27											5	8
Elevation	+22° / -6°	HEAT			751	34	—	16H	—	6	9		
Traverse Limit	65°											7	11
Field of Fire	56°											8	12
Traverse Rate	28° / P	The Pak 40 75mm was the first German Anti-Tank Gun which could deal with the Soviet T34 and KV tanks. It was developed in under two years and served throughout the war. The Gun is similar to the high velocity Main Gun of the late model Pz IV tank. Armor Piercing Composite Rigid (APCR), or Hard Core ammunition, was developed in 1940, but by 1942 supplies of tungsten, which were essential to APCR ammunition, became limited and production was discontinued. The HEAT round is similar to that of the Pak 97 / 38 and was inaccurate beyond 40 Mech Hexes.											
Deploy Time	7 T												
Break Time	3 T												
Rotation Rate	9° / T												
Set Time	1 T												
Manual Movement Speed	.8												

BATTERY ROSTER AND STATUS TABLE																								
Status	1				2				3				4				5				6			
Crew	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T
Group Leader	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Gunner	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Loader	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Ammo Mover	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Ammo Mover	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Ammunition																								
Main Gun	☐				☐				☐				☐				☐				☐			

ADVANCED WEAPON DATA																							
Weapon Characteristics		Aim Mods Ph Md		Direct Fire Data		Target Range in 20 Yard Mech Hexes																	
						4	10	15	20	30	40	50	60	70	80	90	100	120	140	160	180	200	
Pak 40 75mm	RT	2P	1 -15	APHE	PEN	510	495	484	472	450	428	408	389	370	353	336	320	290	263	239	217	197	
					AOI																		
				BC0 521	NID	32	31	31	30	29	27	26	25	24	23	22	21	19	18	16	15	14	
					DFE	245	96	63	46	30	22	17	13	11	9	8	7	5	4	4	3	2	
				MCD 3	BA	36	28	25	23	19	16	14	12	10	9	7	6	4	2	1	-1	-2	
					TOF	1	2	4	5	8	10	13	16	19	21	24	27	33	40	47	53	60	
				HE	PEN	105	101	98	95	90	84	79	74	70	66	62	59	52	46	41	37	33	
					PENF	63	61	59	57	53	50	47	44	41	38	36	34	30	26	23	20	17	
Target Size																							
Front	14																						
Front Dug In	11																						
Side	14																						
Side Dug In	11																						
Critical Hit Chance				APCR	PEN	657	602	559	516	436	362	293	250	232	216	201	186	161	139	120	103	89	
					AOI																		
				BC0 21H	NID	26	25	24	23	22	20	19	18	16	15	14	14	12	10	9	8	7	
					DFE	374	145	94	69	43	31	23	18	15	12	10	9	7	5	4	3	3	
				MCD 3A	BA	33	23	18	15	10	6	3	1	-2	-3	-5	-6	-9	-11	-13	-14	-16	
					TOF	1	2	3	4	6	8	11	13	16	18	21	23	29	34	40	47	53	
				HEAT	PEN	751	751	751	751	751	751	751	751	751	751	751	751	751	751	751	751	751	751
					AOI																		

BASIC GAME DATA										WWII ANTI-TANK GUNS	
Pak 36(r) 76.2mm		Ammunition	Cap	RT	PEN	FP	NID	BC0	PALM	Aim Time Phases	SA
Nationality	Germany	APHE		2P	475	21	32	551	—	1	-6
Initial Service Date	1942									2	0
Weight	3814	HE			95	39	—	22H	—	3	3
Crew	5									4	4
Gunshield PF	27	APCR			586	7	26	—	—	5	6
Elevation	+22° / -6°									6	8
Traverse Limit	60°									7	9
Field of Fire	46°									8	10
Traverse Rate	23° / P	The Pak 36(r) was made from captured Soviet 76.2mm Field Guns which were rechambered for the longer and more powerful German cartridge case. Large numbers of 76.2mm Guns were captured during the invasion of the Soviet Union and many found their way onto German Tank Destroyers and Pak Guns. Weapons like the Pak 36(r) were produced from 1942 to 1943, after which captured inventories had been depleted and production was standardized to German Guns similar to the Pak 40.									
Deploy Time	7 T										
Break Time	3 T										
Rotation Rate	7° / T										
Set Time	1 T										
Manual Movement Speed	.7										

BATTERY ROSTER AND STATUS TABLE																								
Status	1				2				3				4				5				6			
Crew	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T
Group Leader	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Gunner	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Loader	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Ammo Mover	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Ammo Mover	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Ammunition																								
Main Gun	☐				☐				☐				☐				☐				☐			

ADVANCED WEAPON DATA																						
Weapon Characteristics		Aim Mods Ph Md		Direct Fire Data		Target Range in 20 Yard Mech Hexes																
						4	10	15	20	30	40	50	60	70	80	90	100	120	140	160	180	200
Pak 36(r) 76.2mm	RT 2P	1 -16	APHE	PEN	535	520	508	497	475	453	433	414	395	378	361	345	315	287	262	239	218	
		2 -10		AOI																		
		3 -7		DFE	239	94	61	45	29	21	16	13	11	9	8	7	5	4	4	3	3	
		4 -6	BC0 551	BA	36	29	25	23	19	16	14	12	11	9	8	7	5	3	1	0	-1	
		5 -4	MCD 3	TOF	1	2	4	5	8	10	13	16	19	22	25	28	34	40	47	54	61	
		6 -2																				
		7 -1	HE	PEN	110	106	103	100	95	90	85	80	75	71	67	64	57	51	46	41	37	
		8 0		PENF	66	64	62	60	57	53	50	47	44	42	39	37	33	29	26	23	20	
Target Size				AOI															1	1	1	
Front	14			DFE	127	49	32	24	15	11	8	7	5	5	4	3	3	2	2	1	1	
Front Dug In	11	BC0 22H	BA	35	28	24	22	18	15	12	10	8	7	5	4	2	0	-2	-3	-5		
Side	14	DFS 4	TOF	1	3	5	7	11	14	18	22	26	30	35	39	48	57	67	77	88		
Side Dug In		11																				
Critical Hit Chance			APCR	PEN	828	768	720	674	586	505	429	358	292	256	239	223	193	168	146	126	110	
Front	65			AOI																		
Front Dug In	64			NID	30	29	28	27	26	24	23	21	20	19	18	16	14	13	11	10	9	
Side	73			DFE	425	165	107	78	49	35	27	21	17	14	12	10	8	6	5	4	3	
Side Dug In	76			BA	33	23	19	15	10	6	3	1	-1	-3	-5	-6	-9	-11	-13	-14	-16	
		MCD 3A	TOF	1	2	3	4	6	8	10	12	15	17	19	22	27	32	38	43	49		

WWII ANTI-TANK GUNS

The Pak 41 was a unique weapon which had a tapered barrel that deformed the shell as it moved down the barrel, compressing it from 75mm to 55mm diameter. This "Squeeze Bore" allowed very high velocities to be attained, but the project was cancelled in 1941 because its ammunition relied on tungsten, which was in short supply in wartime Germany. Only 150 Pak 41's were made. Had resources allowed it to go into production, its light weight and high performance would have made it one of the best Anti-Tank weapons of the war.

[illegible]

Weapon Characteristics		Aim Mods		Direct Fire Data																	Target Range in 20 Yard Mech Hexes																													
		Ph	Md	4					10					15					20					30					40		50		60		70		80		90		100		120		140		160		180	
Pak 41	75 / 55mm	RT	2P	1 -15 2 -9 3 -6 4 -4 5 -2 6 -1 7 1 8 2	APCR	PEN	11H	10H	993	949	864	784	709	637	570	506	446	404	361	322	287	256	228																											
																								AOI																										
																									NID																									
																										25																								
																											24																							
																												23																						
																													23																					
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20																																																		
	19																																																	
		18																																																
			17																																															
				17																																														
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						15																																												
							14																																											
12																																																		
	11																																																	
		9																																																
			10																																															
				9																																														
					MCD			2A	TOF	1	1	2	3	5	6	8	9	11	13	15	17	20	24	28	33	37																								
						HE																																												
							PEN																																											
206																																																		
	199																																																	
		193																																																
			187																																															
				176																																														
					166																																													
						156																																												
							147																																											
138																																																		
	130																																																	
		122																																																
			115																																															
				102																																														
					90																																													
						80																																												
							71																																											
63																																																		
	PENF							129	124	120	116	109	103	97	91	85	80	75	71	62	55	49	43	38																										
		AOI																																																
			DFE																																															
				352																																														
					137																																													
						89																																												
							65																																											
42																																																		
	30																																																	
		23																																																
			18																																															
				15																																														
					12																																													
						11																																												
							9																																											
7																																																		
	5																																																	
		4																																																
			4																																															
				3																																														
					BC0			641	BA	31	20	15	11	6	2	-1	-4	-6	-8	-9	-11	-13	-15	-17	-19	-20																								
						DFS																																												
							2																																											
TOF																																																		
	1																																																	
		2																																																
			3																																															
				4																																														
					6																																													
						9																																												
							11																																											
13																																																		
	16																																																	
		18																																																
			21																																															
				23																																														
					29																																													
						35																																												
							40																																											
47																																																		
	53																																																	
		Critical Hit Chance						Front	65																																									
			Front Dug In																																															
				64																																														
					Side																																													
						73																																												
							Side Dug In																																											
76																																																		

WWII ANTI-TANK GUNS

The Flak 36 was an Anti-Aircraft Gun whose cross mount provided a full 360° traverse. The Gun was equipped with a Gunshield and was often used in the Anti-Tank role. Guns like this played a major part in North Africa, where the Germans used them as Anti-Tank Guns. The large Crew includes two members whose job it was to set the fuse length on the Anti-Aircraft shells. This large Crew insured that ammunition was rapidly brought forward, where the fast semi-automatic breech gave the weapon a high rate of fire.

[illegible]

Weapon Characteristics		Aim Mods Ph Md		Direct Fire Data		Target Range in 20 Yard Mech Hexes																
						4	10	15	20	30	40	50	60	70	80	90	100	120	140	160	180	200
Flak 36 88mm RT 2P	1	-21	APHE	PEN	782	762	745	729	698	669	640	613	587	562	538	515	472	433	397	364	333	
	2	-12		AOI																		
	3	-9		NID	58	57	56	55	53	51	49	47	45	43	42	40	37	34	32	29	27	
	4	-6		DFE	276	108	71	52	34	25	19	15	13	11	9	8	6	5	4	4	3	
	5	-4	BC0	728	BA	36	28	25	22	19	16	14	12	10	9	7	6	4	2	0	-1	-2
	6	-2	MCD	7	TOF	1	2	4	5	7	10	12	15	17	20	23	25	31	37	43	49	56
	7	0	HE	PEN	290	282	276	269	257	246	235	225	215	205	196	187	171	157	143	131	120	
	8	2		PENF	180	175	171	167	159	152	145	138	132	126	120	115	105	95	87	79	72	
		AOI																				
		DFE		293	115	75	56	36	26	20	16	13	11	10	8	7	5	4	4	3		
Target Size		BC0 28H DFS 6	BA	35	28	25	22	18	15	13	11	9	8	6	5	3	1	-1	-2	-4		
Front 15																						
Front Dug In 13																						
Side 15																						
Side Dug In 13																						
Critical Hit Chance		APCR	PEN	11H	11H	10H	966	874	787	705	627	554	485	419	358	265	237	211	188	168		
Front 62		AOI	NID	51	49	48	47	44	42	40	38	36	34	32	31	28	25	23	20	18		
Front Dug In 64																						
Side 77																						
Side Dug In 81																						
		MCD	6	TOF	1	2	3	4	6	8	11	13	15	18	20	23	28	33	39	45	51	

BASIC GAME DATA				WWII ANTI-TANK GUNS							
Pak 43	88mm	Ammunition	Cap	RT	PEN	FP	NID	BC0	PALM	Aim Time Phases	SA
Nationality	Germany	APHE		3P	11H	24	80	728	—	1	-11
Initial Service Date	1943	HE			346	44	—	28H	—	2	-2
Weight	8046									3	1
Crew	7	APCR			17H	10	64	—	—	4	4
Gunshield PF	27									5	6
Elevation	+40° / -8°									6	8
Traverse Limit	360°									7	10
Field of Fire	38°									8	12
Traverse Rate	19° / P	The Pak 43 went into production in 1943 and made use of the high velocity 88mm Gun of 71 caliber. This was the same Gun which was mounted on the King Tiger tank and Hunting Panther Tank Destroyer and is considered one of the best Anti-Tank weapons of the war. The Pak 43 made use of a cross mount similar to that of an Anti-Aircraft Gun and had a 360° traverse. It was transported on a wheeled trailer and could be fired from there in an emergency. When on the trailer, the Gun's Target Size should be increased by 4.									
Deploy Time	70 T										
Break Time	—										
Rotation Rate	—										
Set Time	—										
Manual Movement Speed	—										

BATTERY ROSTER AND STATUS TABLE																								
Status	1				2				3				4				5				6			
Crew	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T
Group Leader	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Gunner	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Loader	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Ammo Mover	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Ammo Mover	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Ammo Mover	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Ammo Mover	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Ammunition																								
Main Gun	☐				☐				☐				☐				☐				☐			

ADVANCED WEAPON DATA																										
Weapon Characteristics		Aim Mods Ph Md		Direct Fire Data																						
				4 10 15 20 30										Target Range in 20 Yard Mech Hexes 40 50 60 70 80 90 100 120 140 160 180 200												
Pak 43	88mm	RT	3P	1 -21 2 -12 3 -9 4 -6 5 -4 6 -2 7 0 8 2	APHE	PEN	12H	12H	12H	12H	11H	11H	10H	993	955	918	882	848	784	724	669	619	572			
RT	3P					AOI																				
						NID	88	86	85	83	80	78	75	72	70	67	65	63	58	54	51	47	44			
						DFE	437	172	113	83	54	39	31	25	21	18	15	13	10	8	7	6	5			
						BC0 728	BA	36	29	25	23	19	16	14	12	10	9	8	6	4	2	1	-1	-2		
						MCD 7	TOF	1	2	3	4	6	8	10	12	14	16	18	20	25	29	34	39	44		
						HE	PEN	387	377	369	361	346	332	318	304	292	279	268	256	235	216	199	182	168		
						PENF	241	235	230	225	215	206	197	189	181	173	166	158	145	133	122	112	102			
Target Size			AOI																							
Front	15		DFE	394	155	101	75	48	35	27	22	18	15	13	12	9	7	6	5	4						
Front Dug In	13		BC0 28H	BA	36	28	25	22	18	15	13	11	9	8	6	5	3	1	-1	-2	-3					
Side	15		DFS 6	TOF	1	2	3	4	6	8	10	12	15	17	19	21	26	31	36	41	47					
Side Dug In	13																									
Critical Hit Chance					APCR	PEN	18H	18H	17H	17H	17H	15H	14H	13H	12H	11H	10H	940	777	630	498	379	274			
Front	62				AOI																					
Front Dug In	64				NID	72	70	69	67	64	61	58	55	53	50	48	46	42	38	35	31	29				
Side	77				DFE	500	217	142	104	67	48	37	30	24	21	18	15	12	9	8	6	5				
Side Dug In	81				BA	34	25	21	18	13	9	6	4	2	0	-1	-3	-5	-7	-9	-11	-12				
					MCD 6	TOF	1	2	2	3	5	7	9	10	12	14	16	18	23	27	31	36	41			

BASIC GAME DATA				WWII ANTI-TANK GUNS							
Pak 43 / 41 88mm		Ammunition	Cap	RT	PEN	FP	NID	BC0	PALM	Aim Time Phases	SA
Nationality	Germany	APHE		3P	11H	24	80	728	—	1	-11
Initial Service Date	1943	HE			346	44	—	28H	—	2	-2
Weight	9590	APCR			17H	10	64	—	—	3	1
Crew	7									4	4
Gunshield PF	24									5	6
Elevation	+38° / -5°									6	8
Traverse Limit	56°									7	10
Field of Fire	38°									8	12
Traverse Rate	19° / P	The Pak 43 / 41 is an 88mm L71 Gun on a conventional wheeled mount. The Gun was very heavy, making it difficult for the Crew to place it into position, but its penetrating power and flat trajectory made it one of the best Anti-Tank Guns of the war. War shortages led to the Gun having a higher weight than necessary since low weight alloys were not available. APCR ammunition was probably not available for this Gun during the war.									
Deploy Time	12 T										
Break Time	5 T										
Rotation Rate	4° / T										
Set Time	2 T										
Manual Movement Speed	.5										

BATTERY ROSTER AND STATUS TABLE																								
Status	1				2				3				4				5				6			
Crew	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T
Group Leader	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Gunner	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Loader	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Ammo Mover	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Ammo Mover	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Ammo Mover	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Ammo Mover	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Ammunition																								
Main Gun	☐				☐				☐				☐				☐				☐			

ADVANCED WEAPON DATA																			
Weapon Characteristics		Aim Mods Ph Md	Direct Fire Data																
			Target Range in 20 Yard Mech Hexes																
			4	10	15	20	30	40	50	60	70	80	90	100	120	140	160	180	200
Pak 43 / 41 88mm	RT 3P	APHE	PEN 12H	12H	12H	12H	11H	11H	10H	993	955	918	882	848	784	724	669	619	572
		AOI																	
		NID	88	86	85	83	80	78	75	72	70	67	65	63	58	54	51	47	44
		DFE	437	172	113	83	54	39	31	25	21	18	15	13	10	8	7	6	5
		BC0 728	BA 36	29	25	23	19	16	14	12	10	9	8	6	4	2	1	-1	-2
		MCD 7	TOF 1	2	3	4	6	8	10	12	14	16	18	20	25	29	34	39	44
		HE	PEN 387	377	369	361	346	332	318	304	292	279	268	256	235	216	199	182	168
		PENF	241	235	230	225	215	206	197	189	181	173	166	158	145	133	122	112	102
Target Size		AOI																	
		DFE	394	155	101	75	48	35	27	22	18	15	13	12	9	7	6	5	4
		BC0 28H	BA 36	28	25	22	18	15	13	11	9	8	6	5	3	1	-1	-2	-3
		DFS 6	TOF 1	2	3	4	6	8	10	12	15	17	19	21	26	31	36	41	47
Critical Hit Chance		APCR	PEN 18H	18H	17H	17H	17H	15H	14H	13H	12H	11H	10H	940	777	630	498	379	274
		AOI																	
		NID	72	70	69	67	64	61	58	55	53	50	48	46	42	38	35	31	29
		DFE	500	217	142	104	67	48	37	30	24	21	18	15	12	9	8	6	5
		BA	34	25	21	18	13	9	6	4	2	0	-1	-3	-5	-7	-9	-11	-12
		MCD 6	TOF 1	2	2	3	5	7	9	10	12	14	16	18	23	27	31	36	41

WWII ANTI-TANK GUNS

The Italian army was equipped with a variety of foreign weapons in World War II, principally German, Czechoslovakian, and French. The Canone da 47 / 32 Model 35 was a light Anti-Tank Gun produced before the war. It was a Bohler (Austrian) design produced under license in Italy. It had no Gunshield and was often used as an infantry support weapon. Performance was poor for a weapon of its caliber.

[illegible]

WWII ANTI-TANK GUNS

The Model 94 is a conventional light Anti-Tank Gun which has no Gunshield. It is relatively heavy for a weapon of its type but has a semi-automatic breech, giving it a high rate of fire. It was primarily employed as a direct fire infantry support weapon firing high explosive shells. Its penetrating power was poor and it could defeat only the lightest enemy armor.

[illegible][illegible]

WWII ANTI-TANK GUNS

The Model 01 is a conventional 47mm light Anti-Tank Gun. It was heavy and had good performance, but it could only be counted on to defeat the side armor of all but the lightest tanks. Japanese Anti-Tank Guns were designed to defeat light tanks similar to those found in the Japanese Army, and could not deal with the front armor on medium tanks like the American Sherman.

[illegible][illegible]

BASIC GAME DATA										WWII ANTI-TANK GUNS	
Model 1942 45mm		Ammunition	Cap	RT	PEN	FP	NID	BC0	PALM	Aim Time Phases	SA
Nationality	USSR	APHE		2P	183	15	5	242	—	1	-2
Initial Service Date	1942									2	3
Weight	1254	HE			102	22	—	633	—	3	6
Crew	5									4	7
Gunshield PF	17	APCR			283	5	4	—	—	5	9
Elevation	+25° / -8°									6	10
Traverse Limit	60°	In 1942 an improved version of the model 1937 Anti-Tank Gun was introduced as the Model 42. The Model 42 had a semi-automatic breech and longer barrel which improved its rate of fire and penetrating power. The Model 42 is a light, high performance Gun which was in service long after World War II. It is considered one of the best small caliber Anti-Tank Guns of the war.									
Field of Fire	60°										
Traverse Rate	48° / P										
Deploy Time	4 T										
Break Time	2 T										
Rotation Rate	33° / T										
Set Time	1 T										
Manual Movement Speed	2.1										

BATTERY ROSTER AND STATUS TABLE																								
Status	1				2				3				4				5				6			
Crew	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T
Group Leader	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Gunner	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Loader	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Ammo Mover	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Ammo Mover	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Ammunition																								
Main Gun	☐				☐				☐				☐				☐				☐			

ADVANCED WEAPON DATA																						
Weapon Characteristics		Aim Mods Ph Md		Direct Fire Data		Target Range in 20 Yard Mech Hexes																
						4	10	15	20	30	40	50	60	70	80	90	100	120	140	160	180	200
M1942 45mm	RT	2P	1 -12 2 -7 3 -4 4 -3 5 -1 6 0	APHE	PEN AOI NID DFE BC0 242 BA MCD 2 TOF	227	216	207	199	183	169	155	143	132	121	112	103	87	74	63	53	45
						6	5	5	5	5	4	4	4	3	3	3	3	2	2	2	2	1
						290	112	72	53	33	23	18	14	11	9	8	7	5	4	3	2	2
						35	28	24	21	17	14	11	9	7	6	4	3	1	-1	-3	-4	-6
						1	2	3	5	7	10	12	15	18	21	24	27	33	40	47	54	62
						Target Size	12 9 13 11	HE	PEN PENF AOI DFE BC0 633 BA DFS 2 TOF	125	119	114	110	102	94	87	80	74	68	63	59	50
77	73	70	68	62	57					53	49	45	41	38	35	30	25	21	18	15		
290	112	72	53	33	23					18	14	11	9	8	7	5	4	3	2	2		
35	28	24	21	17	14					11	9	7	6	4	3	1	-1	-3	-4	-6		
1	2	3	5	7	10					12	15	18	21	24	27	33	40	47	54	62		
Critical Hit Chance	70 76 67 75	APCR	PEN AOI NID DFE BA MCD 2A TOF	459	414					378	345	283	228	179	135	115	102	91	81	65	51	41
				5	5	5	4	4	4	3	3	3	2	2	2	2	1	1	1	1		
				490	186	119	85	52	36	27	20	16	13	11	9	6	5	4	3	2		
				32	21	16	13	7	3	0	-2	-4	-6	-8	-9	-12	-14	-15	-17	-18		
				1	2	3	4	6	8	10	12	14	17	19	22	27	33	39	45	52		

WWII ANTI-TANK GUNS

The ZIS-2 was introduced in 1943 and replaced the earlier 45mm Anti-Tank weapons. It is a high performance light Anti-Tank Gun with high rate of fire and low silhouette. It is of conventional Split Trail design and in many respects is similar to the British and American 57mm Guns. Unlike the British weapons, the ZIS-2 fired an APHE shell rather than solid shot, which reduced its penetrating power but increased its lethality upon penetration. Like the 45mm M42, the ZIS-2 has impressive penetrating power for its relative light weight.

Status	1				2				3				4				5				6			
Crew	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T
Group Leader	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Gunner	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Loader	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Ammo Mover	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Ammo Mover	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Ammunition																								
Main Gun	☐				☐				☐				☐				☐							

Weapon Characteristics		Aim Mods Ph Md		Direct Fire Data		Target Range in 20 Yard Mech Hexes																		
						4	10	15	20	30	40	50	60	70	80	90	100	120	140	160	180	200		
ZIS-2	57mm	RT	2P	APHE	PEN	507	490	477	464	440	416	394	373	353	334	316	299	268	241	216	193	173		
	1				-14	AOI																		
	2				-8	NID	21	20	20	19	18	17	16	16	15	14	13	13	12	11	10	9	8	
	3				-6	DFE	427	167	109	80	51	37	28	23	19	16	13	12	9	7	6	5	4	
	4				-4	BC0 366	BA	36	28	25	22	19	16	14	12	10	8	7	6	4	2	0	-1	-2
	5				-3	MCD 2	TOF	1	2	3	4	6	8	10	12	14	16	19	21	26	31	36	41	47
	6				-1																			
Target Size	7	0	HE	PEN	128	123	119	115	108	101	94	88	82	77	72	68	59	52	46	40	36			
		PENF		79	75	73	70	66	61	57	53	50	46	43	40	35	30	26	23	20				
		AOI																			1			
	Front	14		DFE	216	84	54	40	25	18	14	11	9	7	6	5	4	3	2	2	2			
	Front Dug In	11		BC0 11H	BA	35	28	24	22	17	14	12	10	8	7	5	4	2	0	-2	-4	-5		
	Side	14		DFS 2	TOF	1	3	4	5	8	11	14	17	20	24	27	30	38	45	53	61	69		
Critical Hit Chance	Side Dug In	12	APCR	PEN	929	864	812	762	669	583	504	432	366	305	249	211	178	150	126	107	90			
		AOI																						
	Front	74		NID	17	16	15	15	14	13	12	11	10	9	9	8	7	6	5	4	4			
	Front Dug In	69		DFE	500	268	173	126	79	55	42	33	26	22	18	15	11	9	7	5	4			
	Side	74		BA	32	23	18	14	9	5	2	0	-2	-4	-6	-7	-10	-12	-14	-15	-17			
	Side Dug In	79		MCD 2A	TOF	1	1	2	3	5	6	8	10	12	13	15	17	22	26	31	35	40		

BASIC GAME DATA				WWII ANTI-TANK GUNS							
ZIS-3 76.2mm		Ammunition	Cap	RT	PEN	FP	NID	BC0	PALM	Aim Time Phases	SA
Nationality	USSR	APHE		2P	313	22	21	641	—	1	-4
Initial Service Date	1942									2	1
Weight	2460	HE			144	39	—	22H	—	3	3
Crew	5									4	5
Gunshield PF	12	APCR			359	7	14	—	—	5	7
										6	8
Elevation	+37° / -8°	HEAT			671	34	—	16H	—	7	9
Traverse Limit	54°									8	10
Field of Fire	48°										
Traverse Rate	24° / P										
Deploy Time	6 T	The ZIS-3 is often classified as Field Artillery, but its limited elevation and high rate of fire semi-automatic breech are characteristic of Anti-Tank Guns. Guns like this were often used in the Anti-Tank role and by the end of the war the Soviets had incorporated direct fire Anti-Tank features into most of their Field Artillery. A low velocity, spun stabilized, HEAT round occasionally available during the war. This round was a copy of the German HEAT round produced for the Pak 40.									
Break Time	3 T										
Rotation Rate	11° / T										
Set Time	1 T										
Manual Movement Speed	1.0										

BATTERY ROSTER AND STATUS TABLE																
Status	1				2				3				4			
Crew	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T
Group Leader	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Gunner	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Loader	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Ammo Mover	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Ammo Mover	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Ammunition																
Main Gun	☐				☐				☐				☐			

ADVANCED WEAPON DATA																						
Weapon Characteristics		Aim Mods Ph Md		Direct Fire Data		Target Range in 20 Yard Mech Hexes																
						4	10	15	20	30	40	50	60	70	80	90	100	120	140	160	180	200
ZIS-3 76.2mm	RT	2P	APHE	PEN	362	350	340	331	313	296	280	265	251	237	224	212	190	170	152	136	122	
				AOI																		1
				NID	24	23	23	22	21	20	19	18	17	16	15	15	13	12	11	10	9	
				DFE	187	73	48	35	22	16	12	10	8	7	6	5	4	3	2	2	2	
				BC0 641	BA	35	28	25	22	18	15	13	11	9	7	6	5	2	1	-1	-3	-4
				MCD 3	TOF	1	3	4	6	9	12	15	18	21	25	28	32	39	47	54	63	71
				HE	PEN	167	161	157	153	144	137	129	122	116	110	104	98	88	79	71	64	58
				PENF	102	99	96	93	88	83	78	74	70	66	62	59	52	47	42	37	33	
Target Size			AOI																	1		
				DFE	201	78	51	38	24	17	13	11	9	7	6	5	4	3	3	2	2	
				BC0 22H	BA	35	28	24	22	18	15	12	10	8	7	5	4	2	0	-2	-3	-5
				DFS 4	TOF	1	3	4	6	8	11	14	18	21	24	27	31	38	45	53	61	69
				APCR	PEN	634	564	509	456	359	272	193	160	144	130	117	106	86	70	57	46	37
				AOI																		
				NID	18	17	17	16	14	13	12	11	10	9	8	8	6	5	4	4	3	
				DFE	400	153	98	71	44	30	23	17	14	11	9	8	6	4	3	3	2	
Critical Hit Chance			BA	28	16	11	7	1	-3	-6	-8	-11	-13	-14	-16	-18	-20	-22	-24	-25		
				MCD 3A	TOF	1	2	3	4	6	8	11	13	16	18	21	24	30	36	42	49	56
				HEAT	PEN	671	671	671	671	671	671	671	671	671	671	671	671	671	671	671	671	671
				AOI																		
				BC0 16H	DFE	45	17	11	8	5	3	2	2	2	1	1	1	1	0	0	0	0
				DFS 5	BA	31	20	15	11	6	2	-1	-4	-6	-8	-9	-11	-13	-15	-17	-18	-20
				MCD 3C	TOF	2	6	9	12	18	25	32	39	47	55	63	72	89	108	128	149	170

WWII ANTI-TANK GUNS

ADVANCED WEAPON DATA																					
Weapon Characteristics		Aim Mods Ph Md		Direct Fire Data																	
				Target Range in 20 Yard Mech Hexes																	
				4	10	15	20	30	40	50	60	70	80	90	100	120	140	160	180	200	
D-44 85mm RT 2P			APHE	PEN	655	638	624	610	584	559	535	512	490	469	448	429	393	360	329	301	276
		1 -16		AOI																	
		2 -10		NID	53	52	51	50	48	46	44	43	41	39	38	36	34	31	29	26	24
		3 -7		DFE	280	110	72	53	34	25	19	16	13	11	9	8	6	5	4	4	3
		4 -6	BC0 16H	BA	36	28	25	23	19	16	14	12	10	9	7	6	4	2	0	-1	-2
		5 -4	MCD 7	TOF	1	2	3	5	7	10	12	15	17	20	23	25	31	37	43	49	56
		6 -2																			
		7 -1																			
Target Size Front 16 Front Dug In 14 Side 16 Side Dug In 16 Critical Hit Chance Front 66 Front Dug In 72 Side 85 Side Dug In 90		8 0	HE	PEN	292	285	279	273	262	251	241	231	221	212	203	195	179	165	152	140	129
				PENF	181	177	173	169	162	155	149	143	137	131	125	120	110	101	93	85	78
				AOI																	
				DFE	275	108	71	52	34	24	19	15	13	11	9	8	6	5	4	4	3
			BC0 23H	BA	36	29	25	23	19	16	14	12	10	9	8	6	4	2	1	-1	-2
			DFS 6	TOF	1	2	4	5	7	10	12	15	17	20	23	26	31	37	43	49	56
			APCR	PEN	903	832	775	719	615	518	428	344	288	268	249	231	200	172	149	128	111
				AOI																	
				NID	40	38	37	36	33	31	29	27	26	24	22	21	18	16	14	12	11
				DFE	459	178	115	84	53	38	29	23	18	15	13	11	8	6	5	4	3
				BA	32	21	16	13	7	3	0	-2	-4	-6	-8	-9	-12	-14	-16	-17	-19
		MCD 6	TOF	1	2	3	4	6	8	10	12	14	16	19	21	26	31	37	42	48	
			HEAT (post war)	PEN	24H	24H	24H	24H	24H	24H	24H	24H	24H	24H	24H	24H	24H	24H	24H	24H	24H
				AOI																	
			BC0 28H	DFE	308	120	79	58	37	27	21	17	14	12	10	9	7	5	4	4	3
			DFS 7	BA	34	25	21	18	13	9	6	4	2	0	-1	-3	-5	-7	-9	-11	-12
			MCD 5	TOF	1	2	3	4	7	9	12	14	17	19	22	24	30	36	42	48	54

WWII ANTI-TANK GUNS

The D-10 is a powerful Anti-Tank Gun which uses the same Gun which was mounted on the SU-100 Tank Destroyer and the T54 tank. It fires fixed ammunition of a variety of types and remained in service long after the war. The High Explosive Anti-Tank (HEAT) ammunition was not available during World War II and is a fin stabilized round. The APHE round contains a small explosive charge which is similar to that found on armor piercing rounds of medium field artillery.

Status	1				2				3				4				5				6			
Crew	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T
Group Leader	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Gunner	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Loader	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Ammo Mover	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Ammo Mover	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Ammo Mover	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Ammunition																								
Main Gun	☐				☐				☐				☐				☐							

Weapon Characteristics		Aim Mods Ph Md		ADVANCED WEAPON DATA																		
				Direct Fire Data				Target Range in 20 Yard Mech Hexes														
					4	10	15	20	30	40	50	60	70	80	90	100	120	140	160	180	200	
D-10 100mm RT Target Size Front 16 Front Dug In 14 Side 16 Side Dug In 16	3P	1 -21 2 -14 3 -10 4 -8 5 -6 6 -4 7 -3 8 -1 9 0	APHE	PEN	956	937	921	905	874	844	816	788	761	735	710	686	640	597	557	520	485	
				AOI																		
				NID	122	120	118	116	113	109	106	103	100	97	94	91	85	80	75	71	66	
			BC0 318	DFE	355	140	92	68	44	32	25	20	17	15	13	11	9	7	6	5	4	
				BA	36	29	25	23	19	17	15	13	11	10	8	7	5	4	2	1	-1	
				MCD 9	TOF	1	2	3	4	6	8	11	13	15	17	20	22	27	32	37	42	48
			HE	PEN	465	455	447	440	425	410	396	383	370	357	345	333	311	290	271	253	236	
				PENF	290	284	279	274	264	255	246	238	230	222	214	207	193	179	167	156	145	
				AOI																		
Critical Hit Chance Front 66 Front Dug In 72 Side 85 Side Dug In 90			BC0 42H	DFE	355	140	92	68	44	32	25	20	17	15	13	11	9	7	6	5	4	
				BA	36	29	25	23	19	17	14	13	11	10	8	7	5	3	2	0	-1	
				DFS 8	TOF	1	2	3	4	6	8	11	13	15	17	20	22	27	32	37	42	48
			APCR	PEN	18H	17H	17H	17H	16H	15H	15H	14H	13H	12H	11H	939	734	555	397	286	252	
				AOI																		
				NID	70	68	66	64	60	57	54	51	48	45	43	40	36	32	28	25	23	
			MCD 10	DFE	500	338	220	161	102	73	56	44	36	30	26	22	17	13	11	9	7	
				BA	30	21	16	13	8	4	1	-2	-4	-5	-7	-8	-11	-13	-15	-16	-18	
				TOF	1	1	2	3	4	6	7	9	10	12	13	15	18	22	26	30	34	
HEAT (post war)	PEN	34H	34H	34H	34H	34H	34H	34H	34H	34H	34H	34H	34H	34H	34H	34H	34H	34H	34H			
	AOI																					
	BC0 30H	DFE	354	139	91	68	44	32	25	20	17	14	12	11	8	7	6	5	4			
	DFS 9	BA	35	26	22	19	14	11	8	6	4	2	0	-1	-3	-6	-7	-9	-10			
MCD 13	TOF	1	2	3	4	6	8	11	13	15	18	20	22	27	32	38	43	49				

WWII ANTI-TANK GUNS

The 2 Pounder is a 40mm anti-tank gun with excellent performance and range. It had a mount which provided a full 360° Traverse Limit. Its only drawback was that it was not provided with a High Explosive shell and its Armor Piercing shell was solid shot with no explosive filler. Solid shot provided better penetration than rounds with explosive fillers but did not have the lethality following penetration that an APHE round had. The 2 Pounder was a very good weapon for its time, and in the ranks of small caliber Anti-Tank Guns had very good penetrating ability.

[illegible][illegible]

WWII ANTI-TANK GUNS

The 17 Pounder entered British service in 1942. It had a Split Trail carriage, but in other respects its carriage was similar to that of the 25 Pounder Field Artillery. The Gun did not have a High Explosive shell, but had a high performance Armor Piercing Discarding Sabot (APDS) shell. APDS ammunition became available for the 17 Pounder late in 1944 making it one of the most powerful Guns in the British and US service.

[illegible]

BASIC GAME DATA				WWII ANTI-TANK GUNS							
M3 37mm		Ammunition	Cap	RT	PEN	FP	NID	BC0	PALM	Aim Time Phases	SA
Nationality	USA	APHE		3P	166	12	2	151	—	1	-2
Initial Service Date	1938										
Weight	913	HE			75	19	—	444	—	3	6
Crew	5										
Gunshield PF	15	APCR			265	4	2	—	—	5	9
Elevation	+15° / -8°										
Traverse Limit	60°	The M3 37mm was the only Anti-Tank Gun in the US service at the start of the war. It was of conventional design, firing Armor Piercing High Explosive (APHE), High Explosive (HE), or Armor Piercing Composite Rigid (APCR) shells. The M3 had good performance for a Gun of its caliber but had a relatively low rate of fire because of its manual breech.									
Field of Fire	60°										
Traverse Rate	63° / P										
Deploy Time	4 T										
Break Time	2 T										
Rotation Rate	34° / T										
Set Time	1 T										
Manual Movement Speed	2.0										

BATTERY ROSTER AND STATUS TABLE																								
Status	1				2				3				4				5				6			
Crew	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T	Abd	Inc	KIA	Inc T
Group Leader	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Gunner	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Loader	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Ammo Mover	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Ammo Mover	☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐		☐	☐	☐	
Ammunition																								
Main Gun	☐				☐				☐				☐				☐				☐			

ADVANCED WEAPON DATA																						
Weapon Characteristics		Aim Mods Ph Md	Direct Fire Data		Target Range in 20 Yard Mech Hexes																	
					4	10	15	20	30	40	50	60	70	80	90	100	120	140	160	180	200	
M3 37mm RT	2P	1 -12 2 -7 3 -4 4 -3 5 -1 6 0	APHE	PEN	220	206	195	185	166	149	134	120	108	97	87	78	63	51	41	33	26	
				AOI																	1	
				NID	3	3	2	2	2	2	2	2	1	1	1	1	1	1	1			
				DFE	334	127	82	59	36	25	19	14	11	9	8	6	5	3	3	2	2	
				BC0 151	BA	35	27	23	20	15	12	9	7	5	3	2	0	-2	-4	-6	-7	-8
				MCD 1	TOF	1	2	3	4	7	9	12	14	17	20	23	26	33	39	47	54	62
Target Size Front Front Dug In Side Side Dug In	12 10 13 11		HE	PEN	98	92	88	83	75	67	61	55	50	45	40	37	30	25	20	17	14	
				PENF	60	57	54	51	46	41	37	33	30	27	24	21	17	14	11	9	7	
				AOI																	1	
				DFE	334	127	82	59	36	25	19	14	11	9	8	6	5	3	3	2	2	
				BC0 444	BA	35	27	23	20	15	12	9	7	5	3	2	0	-2	-4	-6	-7	-8
				DFS 1	TOF	1	2	3	4	7	9	12	14	17	20	23	26	33	39	47	54	62
Critical Hit Chance Front Front Dug In Side Side Dug In	70 76 67 75		APCR	PEN	452	403	364	328	265	210	162	121	86	57	49	42	31	23	17	13	9.7	
				AOI																	1	
				NID	2	2	2	2	2	1	1	1	1	1	1	1	1					
				DFE	487	182	115	82	49	33	24	18	14	11	9	7	5	4	3	2	1	
				BA	30	19	14	10	5	1	-2	-5	-7	-8	-10	-12	-14	-16	-18	-19	-20	
				MCD 1A	TOF	1	2	3	4	6	8	10	12	15	18	20	23	29	35	42	49	56

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