

Campaign

**EQUIPMENT
FACTFINDER**

empire
S O F T W A R E

Equipment Index

Here follows a complete list of all nations military equipment that is contained within Campaign. You may find this section useful when looking up technical specifications during gameplay or when answering protection questions.

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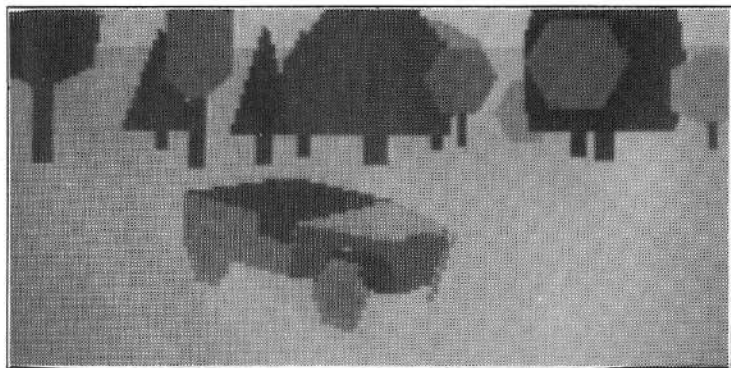
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United States Equipment Factfinder

United States **JEEP** Vehicles

Maximum road range (km)	300
Maximum elevation (degrees)	0
Minimum elevation (degrees)	0
Right traverse (degrees)	0
Left traverse (degrees)	0
Maximum indirect fire range (m)	0
Frontal armour (mm)	0
Side armour (mm)	0
Rear armour (mm)	0
HE defence	1
AP firepower (mm at 100 metres)	0
HE firepower	0
Maximum rounds carried	0
Road speed (km/h)	80
Cross country speed (km/h)	30
Speed in water (km/h)	0
Weight (tonnes)	1
Date first available	January 1939
Maximum towing weight (tonnes)	0

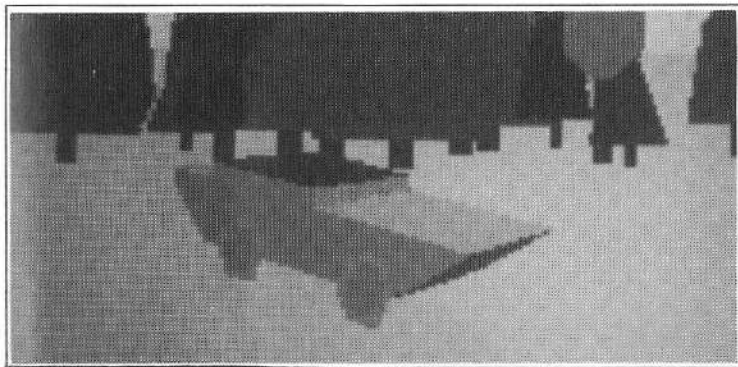
The ubiquitous jeep was used on virtually every battlefield throughout the war. Jeep is a corruption of GP (which stood for General Purpose).



AMPHIBIOUS JEEP

Maximum road range (km)	250
Maximum elevation (degrees)	0
Minimum elevation (degrees)	0
Right traverse (degrees)	0
Left traverse (degrees)	0
Maximum indirect fire range (m)	0
Frontal armour (mm)	0
Side armour (mm)	0
Rear armour (mm)	0
HE defence	1
AP firepower (mm at 100 metres)	0
HE firepower	0
Maximum rounds carried	0
Road speed (km/h)	80
Cross country speed (km/h)	27
Speed in water (km/h)	10
Weight (tonnes)	1
Date first available	January 1939
Maximum towing weight (tonnes)	1

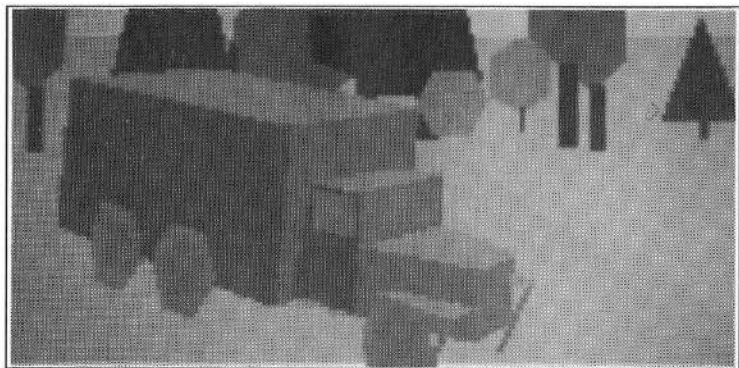
The amphibious jeep was similar to the standard jeep, but with flotation chambers built into a large hull. In the water it was driven by a propeller.



2.5-TON TRUCK

Maximum road range (km)	300
Maximum elevation (degrees)	0
Minimum elevation (degrees)	0
Right traverse (degrees)	0
Left traverse (degrees)	0
Maximum indirect fire range (m)	0
Frontal armour (mm)	0
Side armour (mm)	0
Rear armour (mm)	0
HE defence	5
AP firepower (mm at 100 metres)	0
HE firepower	0
Maximum rounds carried	0
Road speed (km/h)	80
Cross country speed (km/h)	20
Speed in water (km/h)	0
Weight (tonnes)	5
Date first available	May 1939
Maximum towing weight (tonnes)	3

The ubiquitous American truck, as seen in all war movies. About 800,000 of these vehicles were made during the war, mainly by GMC and Studebaker.

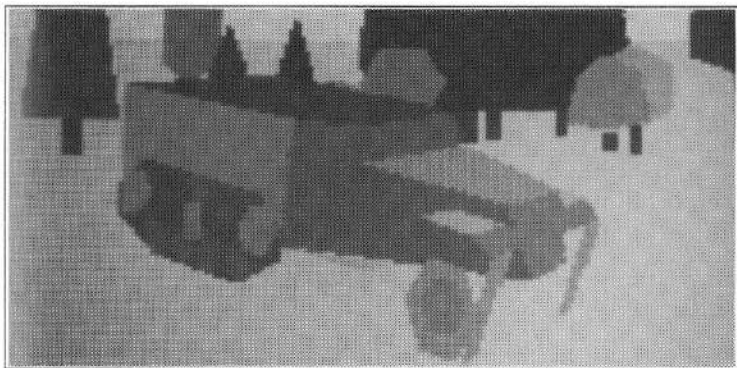


During the Ardennes Offensive in December 1944, the Germans disguised a number of their Panther tanks to look like American M10 Tank Destroyers, complete with American insignia.

M3 HALF-TRACK

Maximum road range (km)	320
Maximum elevation (degrees)	0
Minimum elevation (degrees)	0
Right traverse (degrees)	0
Left traverse (degrees)	0
Maximum indirect fire range (m)	0
Frontal armour (mm)	13
Side armour (mm)	6
Rear armour (mm)	6
HE defence	N/A
AP firepower (mm at 100 metres)	0
HE firepower	0
Maximum rounds carried	0
Road speed (km/h)	72
Cross country speed (km/h)	30
Speed in water (km/h)	0
Weight (tonnes)	9
Date first available	May 1941
Maximum towing weight (tonnes)	5

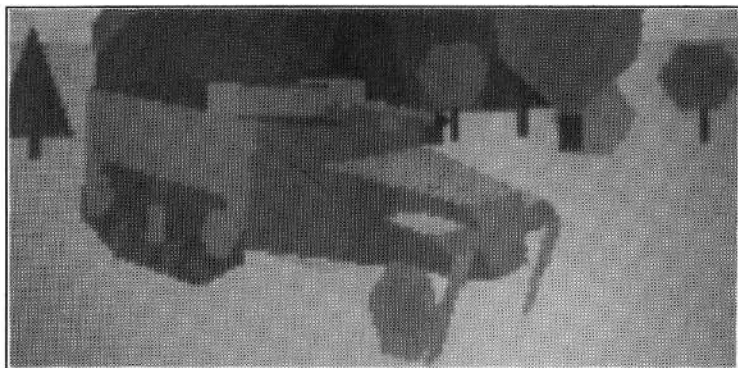
Another famous American design, the half-track was heavily used throughout the war by all the Allied nations. Could be used as a personnel carrier, or as a limber, or converted to a self-propelled gun (T48, M3 GMC).



M3 GMC 75mm

Maximum road range (km)	320
Maximum elevation (degrees)	29
Minimum elevation (degrees)	-5
Right traverse (degrees)	20
Left traverse (degrees)	-20
Maximum indirect fire range (m)	6335
Frontal armour (mm)	13
Side armour (mm)	6
Rear armour (mm)	6
HE defence	N/A
AP firepower (mm at 100 metres)	90
HE firepower	6
Maximum rounds carried	59
Road speed (km/h)	2
Cross country speed (km/h)	30
Speed in water (km/h)	0
Weight (tonnes)	9
Date first available	December 1941
Maximum towing weight (tonnes)	Unable to tow

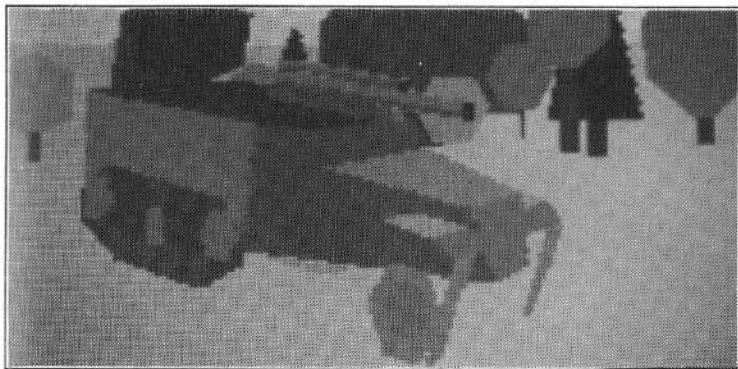
GMC stands for Gun Motor Carriage, and was used by the Americans to describe self-propelled guns. This was an M3 half-track with a 57mm anti-tank gun mounted on top as a simple tank destroyer.



T19 105mm HMC

Maximum road range (km)	320
Maximum elevation (degrees)	66
Minimum elevation (degrees)	-5
Right traverse (degrees)	23
Left traverse (degrees)	-23
Maximum indirect fire range (m)	11200
Frontal armour (mm)	13
Side armour (mm)	6
Rear armour (mm)	6
HE defence	N/A
AP firepower (mm at 100 metres)	80
HE firepower	15
Maximum rounds carried	59
Road speed (km/h)	72
Cross country speed (km/h)	30
Speed in water (km/h)	0
Weight (tonnes)	9
Date first available	December 1941
Maximum towing weight (tonnes)	Unable to tow

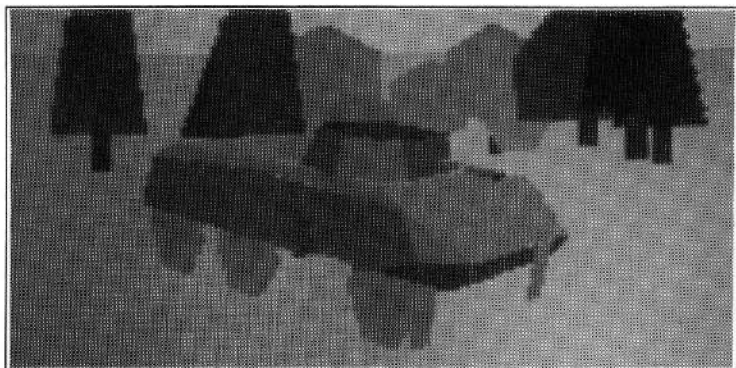
HMC means Howitzer Motor Carriage, since this half-track variant mounted the 105mm howitzer. It was superseded by the M7 HMC Priest.



M8 GREYHOUND

Maximum road range (km).....	560
Maximum elevation (degrees)	15
Minimum elevation (degrees)	-5
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	11750
Frontal armour (mm)	19
Side armour (mm)	12
Rear armour (mm)	12
HE defence	N/A
AP firepower (mm at 100 metres)	69
HE firepower	1
Maximum rounds carried	32
Road speed (km/h)	70
Cross country speed (km/h)	21
Speed in water (km/h)	0
Weight (tonnes)	8
Date first available	June 1942
Maximum towing weight (tonnes)	Unable to tow

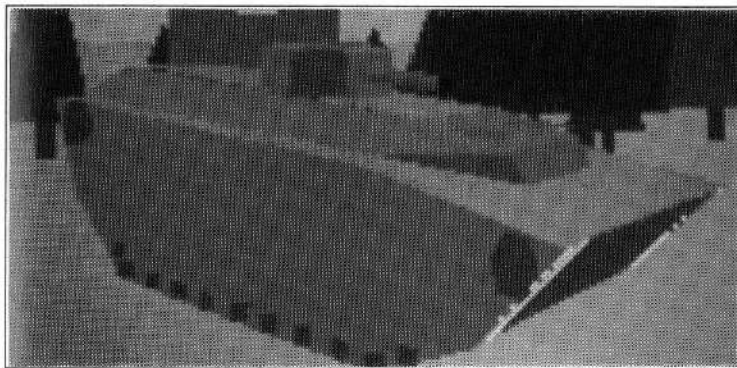
Lightly armoured car for scouting and spotting work. This vehicle was not designed to attack others, but could defend itself when necessary.



LVT(A)1

Maximum road range (km)	240
Maximum elevation (degrees)	20
Minimum elevation (degrees)	-10
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	11750
Frontal armour (mm)	10
Side armour (mm)	10
Rear armour (mm)	10
HE defence	N/A
AP firepower (mm at 100 metres)	69
HE firepower	1
Maximum rounds carried	104
Road speed (km/h)	40
Cross country speed (km/h)	20
Speed in water (km/h)	10
Weight (tonnes)	15
Date first available	January 1944
Maximum towing weight (tonnes)	Unable to tow

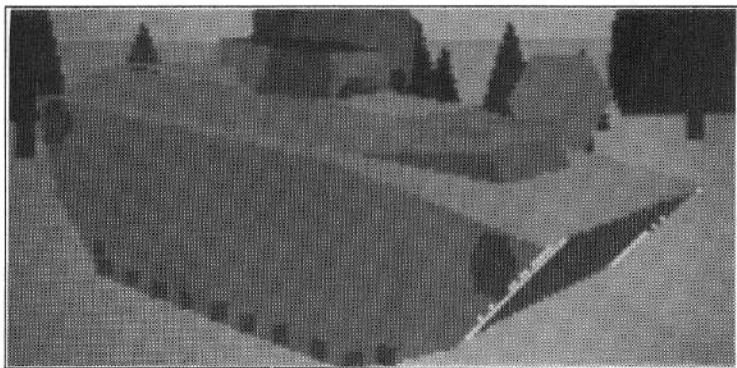
Armoured amphibious tank which really came into its own during the Pacific island-hopping battles in 1944 & 45. This could provide fire support for beach invasions. The gun and turret came from the M3 Stuart light tank.



LVT(A)4

Maximum road range (km)	240
Maximum elevation (degrees)	40
Minimum elevation (degrees)	-20
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	8800
Frontal armour (mm) 1	0
Side armour (mm)	10
Rear armour (mm)	10
HE defence	N/A
AP firepower (mm at 100 metres)	42
HE firepower	7
Maximum rounds carried	100
Road speed (km/h)	40
Cross country speed (km/h)	20
Speed in water (km/h)	10
Weight (tonnes)	18
Date first available	March 1944
Maximum towing weight (tonnes)	Unable to tow

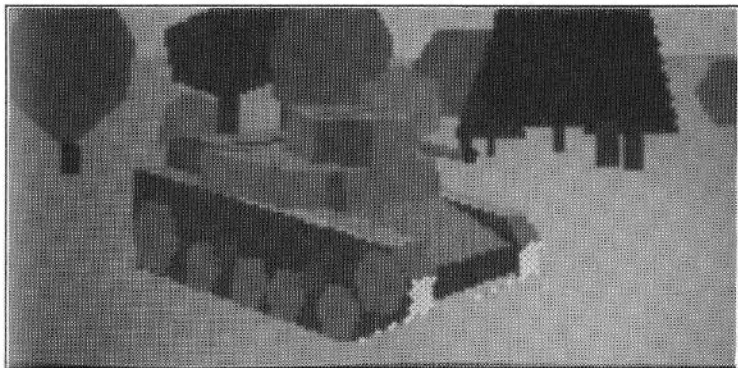
Similar to above, but armed with M8 GMC turret with its 75mm howitzer. Not designed for anti-tank use, but more suited to indirect fire support.



M3A1 STUART III

Maximum road range (km)	112
Maximum elevation (degrees)	20
Minimum elevation (degrees)	-10
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	11750
Frontal armour (mm)	51
Side armour (mm)	30
Rear armour (mm)	30
HE defence	N/A
AP firepower (mm at 100 metres)	69
HE firepower	1
Maximum rounds carried	116
Road speed (km/h)	57
Cross country speed (km/h)	32
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	13
Date first available	March 1941
Maximum towing weight (tonnes)	0

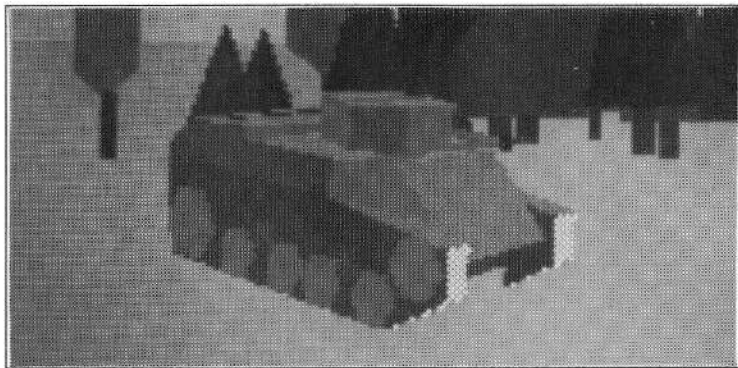
Early American light tank, armed with 37mm gun. This was issued to the British in the Sahara, who liked it so much that they called it "a honey of a tank".



M5A1 STUART VI

Maximum road range (km).....	160
Maximum elevation (degrees)	20
Minimum elevation (degrees)	-10
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	11750
Frontal armour (mm)	67
Side armour (mm).....	40
Rear armour (mm)	40
HE defence	N/A
AP firepower (mm at 100 metres)	69
HE firepower	1
Maximum rounds carried	133
Road speed (km/h).....	57
Cross country speed (km/h)	38
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	15
Date first available	February 1942
Maximum towing weight (tonnes)	0

Upated version of the above. Improvements included better armour (sloped and thicker), and a more powerful engine. Note that the M5 light tank was virtually identical to this one, and so has not been included.

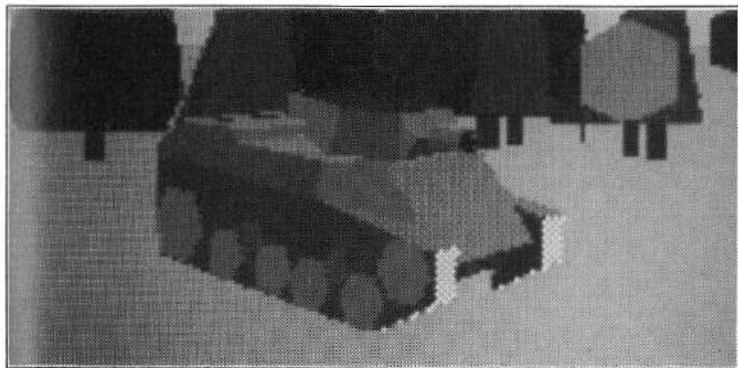


M8 GMC

Maximum road range (km)	160
Maximum elevation (degrees)	40
Minimum elevation (degrees)	-20
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	8800
Frontal armour (mm)	67
Side armour (mm)	40
Rear armour (mm)	40
HE defence	N/A
AP firepower (mm at 100 metres)	42
HE firepower	7
Maximum rounds carried	46
Road speed (km/h)	57
Cross country speed (km/h)	38
Speed in water (km/h)	0
Weight (tonnes)	16
Date first available	September 1942
Maximum towing weight (tonnes)	0

M5 light tank with a new turret. This was open at the top, and had a 75mm howitzer instead of the 37mm anti-tank gun. This was used to provide indirect fire support.

M

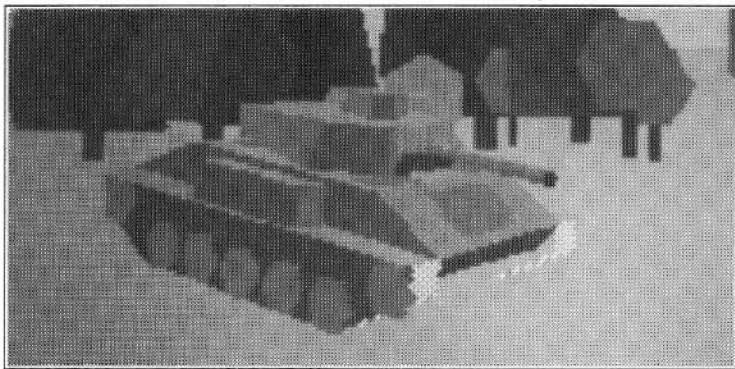


M24 CHAFFEE

Maximum road range (km)	160
Maximum elevation (degrees)	15
Minimum elevation (degrees)	-10
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	13695
Frontal armour (mm)	40
Side armour (mm)2	0
Rear armour (mm)	19
HE defence	N/A
AP firepower (mm at 100 metres)	90
HE firepower	7
Maximum rounds carried	48
Road speed (km/h)	56
Cross country speed (km/h)	40
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	18
Date first available	November 1944
Maximum towing weight (tonnes)	Unable to tow

Named after General Adna Chaffee, this was a totally new design of light tank, with a 75mm anti-tank gun similar to that in the standard Sherman. The hull formed the basis of a number

of vehicles for the post-war Light Combat Team.

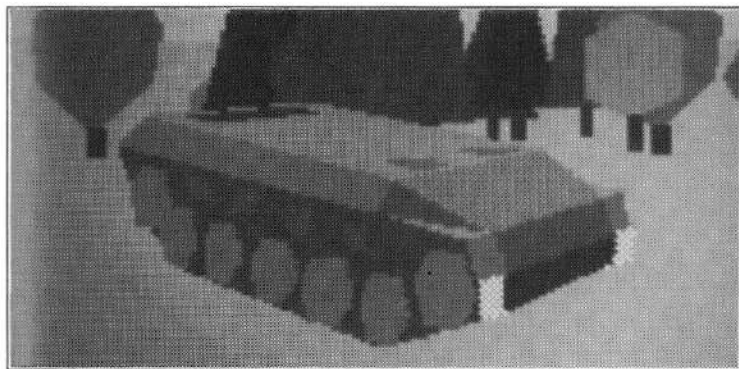


J Walter Christie, the eccentric American inventor, designed the Christie suspension used on the British Crusader, Cromwell and Comet tanks, and also the Russian BT series and T34. It was never used on United States tanks though.

M39 PRIME MOVER

Maximum road range (km)	240
Maximum elevation (degrees)	0
Minimum elevation (degrees)	0
Right traverse (degrees)	0
Left traverse (degrees)	0
Maximum indirect fire range (m)	0
Frontal armour (mm)	12
Side armour (mm)	7
Rear armour (mm)	7
HE defence	N/A
AP firepower (mm at 100 metres)	0
HE firepower	0
Maximum rounds carried	0
Road speed (km/h)	75
Cross country speed (km/h)	32
Speed in water (km/h)	0
Weight (tonnes)	16
Date first available	January 1945
Maximum towing weight (tonnes)	6

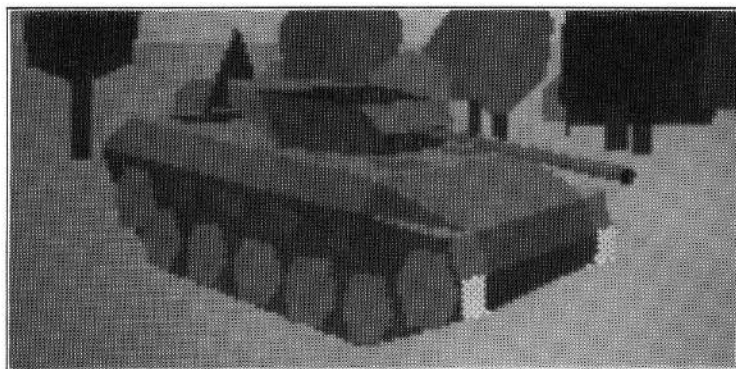
An M18 Hellcat without the turret, this was used as an artillery tractor, and also as a reconnaissance vehicle.



M18 GMC HELLCAT

Maximum road range (km)	240
Maximum elevation (degrees)	19
Minimum elevation (degrees)	-10
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	14000
Frontal armour (mm)	12
Side armour (mm)	7
Rear armour (mm)	7
HE defence	N/A
AP firepower (mm at 100 metres)	172
HE firepower	8
Maximum rounds carried	45
Road speed (km/h)	75
Cross country speed (km/h)	32
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	18
Date first available	February 1944
Maximum towing weight (tonnes)	Unable to tow

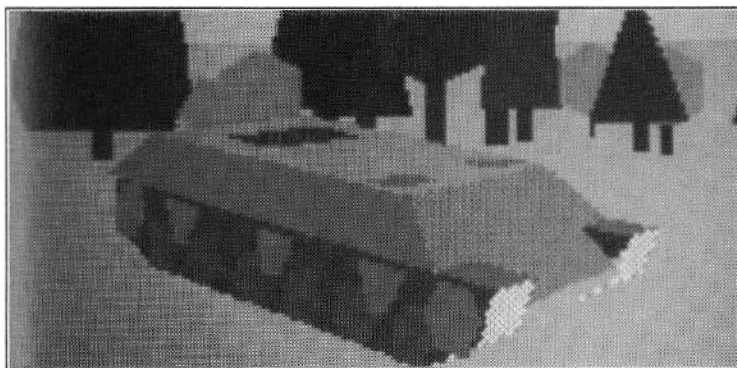
The fastest armoured tracked vehicle of the war, the Hellcat was a very lightly armoured but hard-hitting tank destroyer.



M35 PRIME MOVER

Maximum road range (km)	240
Maximum elevation (degrees)	0
Minimum elevation (degrees)	0
Right traverse (degrees)	0
Left traverse (degrees)	0
Maximum indirect fire range (m)	0
Frontal armour (mm)	53
Side armour (mm)	22
Rear armour (mm)	20
HE defence	N/A
AP firepower (mm at 100 metres)	0
HE firepower	0
Maximum rounds carried	0
Road speed (km/h)	48
Cross country speed (km/h)	29
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	25
Date first available	April 1943
Maximum towing weight (tonnes)	10

Turretless version of the M10/M36, which was used in a similar manner to the M39, but with a greater carrying capacity.

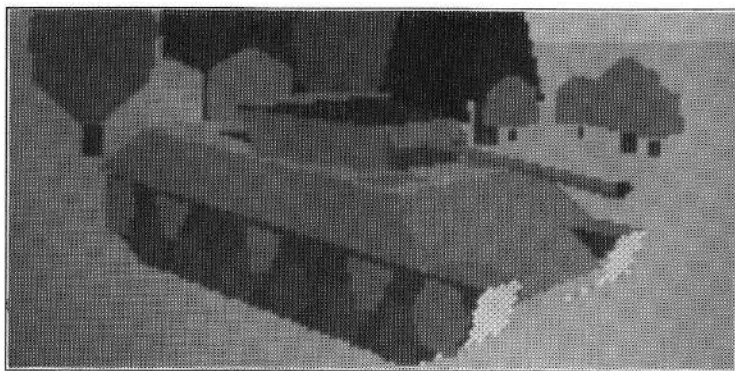


M10 GMC WOLVERINE

Maximum road range (km)	320
Maximum elevation (degrees)	19
Minimum elevation (degrees)	-10
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	14000
Frontal armour (mm)	53
Side armour (mm)	22
Rear armour (mm)	20
HE defence	N/A
AP firepower (mm at 100 metres)	155
HE firepower	8
Maximum rounds carried	54
Road speed (km/h)	48
Cross country speed (km/h)	29
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	30
Date first available	July 1942
Maximum towing weight (tonnes)	Unable to tow

Early tank destroyer, this used a large number of Sherman parts, but with a better shaped hull superstructure and 76mm gun in an open-topped turret. Designed to hit hard, and then run

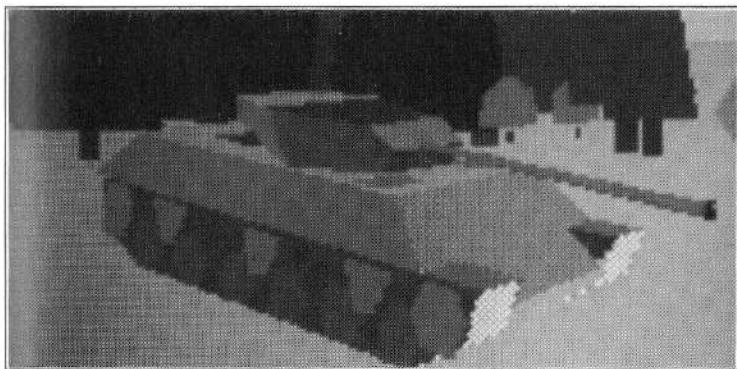
away before receiving return fire.



M36 GMC

Maximum road range (km)	240
Maximum elevation (degrees)	20
Minimum elevation (degrees)	-10
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	19600
Frontal armour (mm)	53
Side armour (mm)	22
Rear armour (mm)	20
HE defence	N/A
AP firepower (mm at 100 metres)	238
HE firepower	11
Maximum rounds carried	47
Road speed (km/h)	48
Cross country speed (km/h)	29
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	28
Date first available	July 1944
Maximum towing weight (tonnes)	Unable to tow

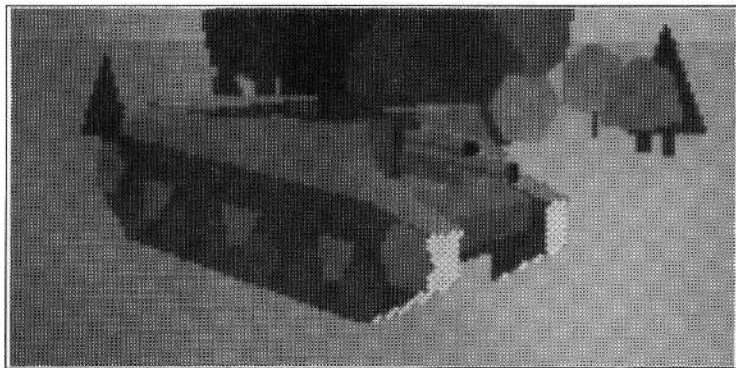
Upated version of the M10, this shared the hull, but had a new turret and gun. The turret was still open-topped, but the 90mm gun was very effective.



M7 PRIEST HMC

Maximum road range (km)	136
Maximum elevation (degrees)	35
Minimum elevation (degrees)	-5
Right traverse (degrees)	30
Left traverse (degrees)	-15
Maximum indirect fire range (m)	11200
Frontal armour (mm)	62
Side armour (mm)	30
Rear armour (mm)	13
HE defence	N/A
AP firepower (mm at 100 metres)	80
HE firepower	15
Maximum rounds carried	6
Road speed (km/h)	40
Cross country speed (km/h)	24
Speed in water (km/h)	0
Weight (tonnes)	23
Date first available	February 1942
Maximum towing weight (tonnes)	0

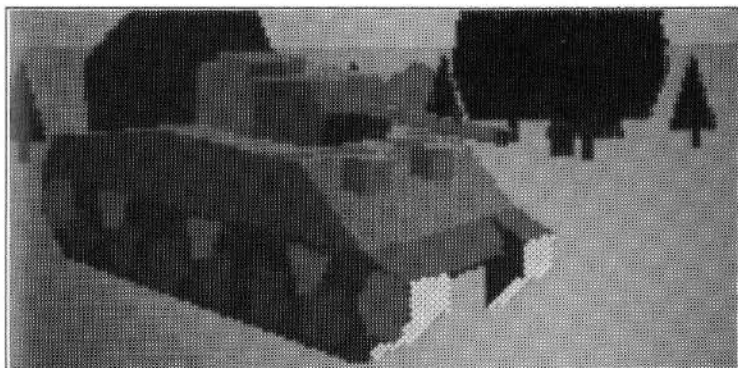
This was a 105mm howitzer mounted in the converted hull of an M3 Grant/Lee medium tank. HMC stood for Howitzer Motor Carriage, and it was called the Priest because of the large pulpit at the front for a machine-gun.



M4 SHERMAN

Maximum road range (km).....	208
Maximum elevation (degrees)	25
Minimum elevation (degrees)	-10
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	13695
Frontal armour (mm)	64
Side armour (mm).....	38
Rear armour (mm)	38
HE defence	N/A
AP firepower (mm at 100 metres)	90
HE firepower	7
Maximum rounds carried	97
Road speed (km/h)	43
Cross country speed (km/h)	27
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	30
Date first available	February 1942
Maximum towing weight (tonnes).....	Unable to tow

The standard American medium tank for the entire war, this tank was produced in huge quantities (over 50,000 of all types were made by the end of the war!). With a 75mm gun in a turret,



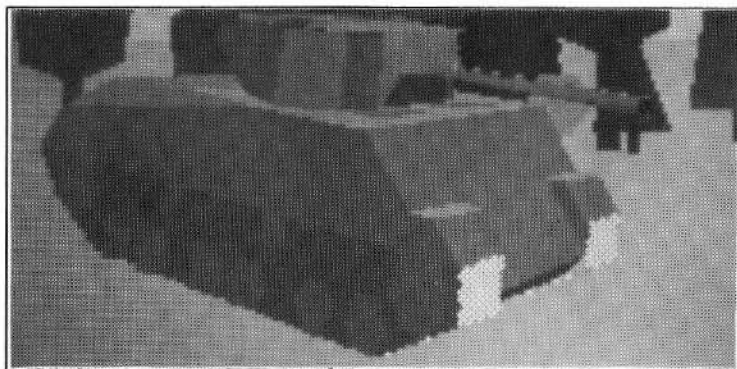
this tank replaced the M3 Grant/Lee medium which had a similar gun mounted in a side-sponson. The M3 is not represented here because of the difficulty of controlling a dual gun tank.

SHERMAN M4A3E8

Maximum road range (km)	208
Maximum elevation (degrees)	25
Minimum elevation (degrees)	-10
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	14000
Frontal armour (mm)	91
Side armour (mm)	38
Rear armour (mm)	38
HE defence	Not Applicable
AP firepower (mm at 100 metres)	172
HE firepower	8
Maximum rounds carried	71
Road speed (km/h)	43
Cross country speed (km/h)	27
Speed in water (km/h)	N/A
Weight (tonnes)	30
Date first available	September 1942
Maximum towing weight (tonnes)	Unable to tow

Upated version of standard Sherman, this one featured a new 76mm gun which was much more effective than the old 75mm. Also, better suspension and better armour made this much more

of a match for the German Panther and Tiger tanks.



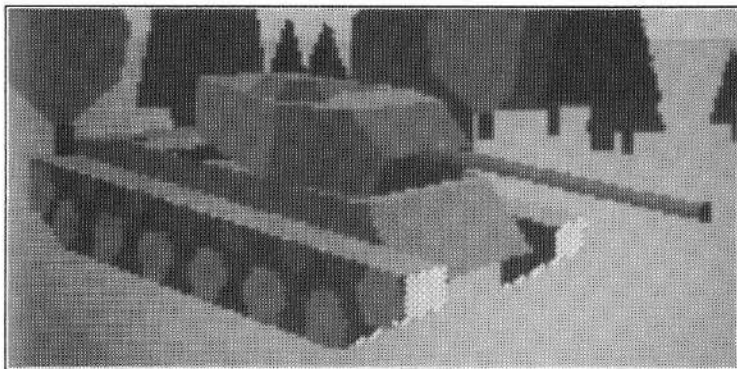
M26 PERSHING

Maximum road range (km)	147
Maximum elevation (degrees)	20
Minimum elevation (degrees)	-10
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	19600
Frontal armour (mm)	120
Side armour (mm)	76
Rear armour (mm)	51
HE defence	N/A
AP firepower (mm at 100 metres)	238
HE firepower	11
Maximum rounds carried	70
Road speed (km/h)	32
Cross country speed (km/h)	20
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	42
Date first available	February 1945
Maximum towing weight (tonnes)	Unable to tow

The United States developed a super-heavy tank during the war, known as the T28 (GMC T95). This had a 105mm gun, 200mm of armor throughout and a crew of 8. Unfortunately it was not delivered until after the war.

This was the only American heavy tank to take part in the war. An excellent design, it went on to become the basis for a whole string of tanks, culminating in the M60, which is still in use

today. The 90mm gun mounted in a well-armoured tank was a potent combination.

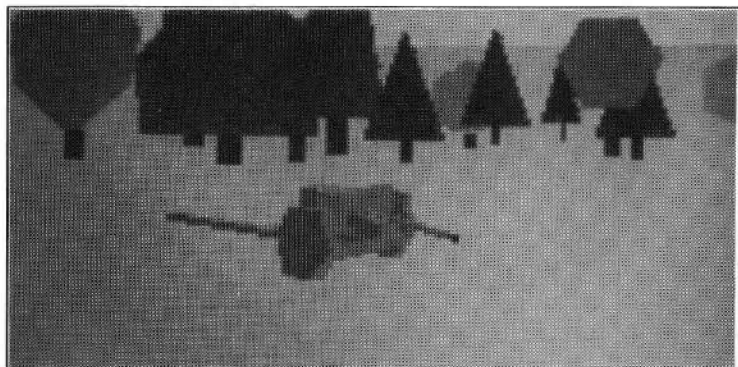


United States 37MM GUN M3

Artillery

Maximum road range (km)	0
Maximum elevation (degrees)	15
Minimum elevation (degrees)	-5
Right traverse (degrees)	30
Left traverse (degrees)	-30
Maximum indirect fire range (m)	11750
Frontal armour (mm)	10
Side armour (mm)	0
Rear armour (mm)	0
HE defence	8
AP firepower (mm at 100 metres)	69
HE firepower	1
Maximum rounds carried	100
Road speed (km/h)	1
Cross country speed (km/h)	1
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	1
Date first available	June 1938
Maximum towing weight (tonnes)	Unable to tow

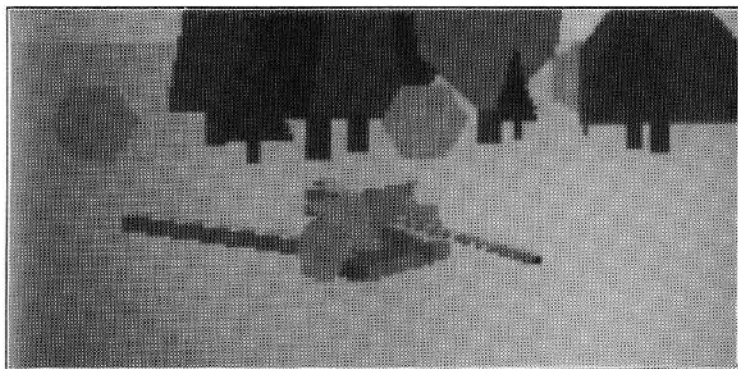
Contemporary of all the other 37mm anti-tank guns that were produced just before the war, when 37mm was considered enough to destroy any tank.



57MM GUN M1

Maximum road range (km)	0
Maximum elevation (degrees)	15
Minimum elevation (degrees)	-5
Right traverse (degrees)	45
Left traverse (degrees)	-45
Maximum indirect fire range (m)	11585
Frontal armour (mm)	10
Side armour (mm)	0
Rear armour (mm)	0
HE defence	12
AP firepower (mm at 100 metres)	90
HE firepower	6
Maximum rounds carried	100
Road speed (km/h)	1
Cross country speed (km/h)	1
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	1
Date first available	June 1941
Maximum towing weight (tonnes)	Unable to tow

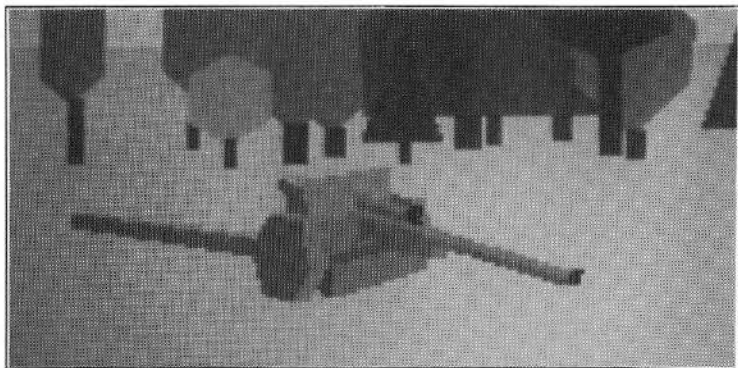
Very similar to the British Six Pounder, but with a shorter barrel (50 calibres rather than 57), so that the armour penetration was less effective. It was capable of firing HE shot, though.



3IN GUN M5

Maximum road range (km).....	0
Maximum elevation (degrees)	30
Minimum elevation (degrees)	-5
Right traverse (degrees)	22
Left traverse (degrees)	-22
Maximum indirect fire range (m)	14000
Frontal armour (mm)	10
Side armour (mm)	0
Rear armour (mm)	0
HE defence	14
AP firepower (mm at 100 metres)	155
HE firepower	8
Maximum rounds carried	100
Road speed (km/h)	1
Cross country speed (m/h)	1
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	2
Date first available	June 1941
Maximum towing weight (tonnes)	Unable to tow

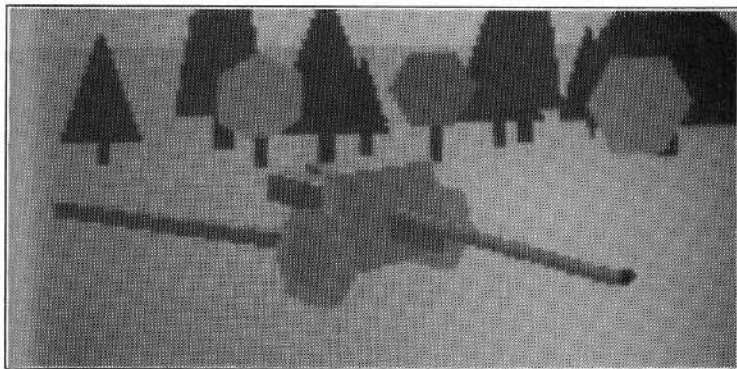
A 76mm gun (calibre length of 50), which was also mounted (after some modifications) in the M10 tank destroyer. Not as effective as the British 17 pounder, but still better than the 57mm.



90MM GUN T8

Maximum road range (km)	0
Maximum elevation (degrees)	20
Minimum elevation (degrees)	-5
Right traverse (degrees)	30
Left traverse (degrees)	-30
Maximum indirect fire range (m)	19600
Frontal armour (mm)	10
Side armour (mm)	0
Rear armour (mm)	0
HE defence	17
AP firepower (mm at 100 metres)	238
HE firepower	11
Maximum rounds carried	100
Road speed (km/h)	1
Cross country speed (km/h)	1
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	3
Date first available	June 1944
Maximum towing weight (tonnes)	Unable to tow

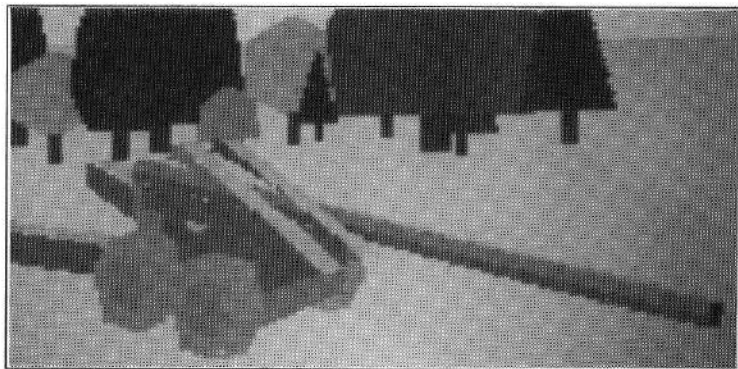
The American answer to the German 88mm guns. This gun was also mounted in the M36 TD and the Pershing heavy tank. The gun was similar in performance to the German FlaK 88, being a 90L52 weapon.



155MM LONG TOM

Maximum road range (km)	0
Maximum elevation (degrees)	63
Minimum elevation (degrees)	-5
Right traverse (degrees)	25
Left traverse (degrees)	-25
Maximum indirect fire range (m)	15000
Frontal armour (mm)	0
Side armour (mm)	0
Rear armour (mm)	0
HE defence	28
AP firepower (mm at 100 metres)	200
HE firepower	43
Maximum rounds carried	100
Road speed (km/h)	1
Cross country speed (km/h)	1
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	6
Date first availabl	June 1941
Maximum towing weight (tonnes)	Unable to tow

This was one of the largest artillery guns fielded during the war, and was designed for indirect fire, where its massive (43kg) shell could be used to good effect. This heavy gun required a prime mover, such as the M35 or M39, to tow it.

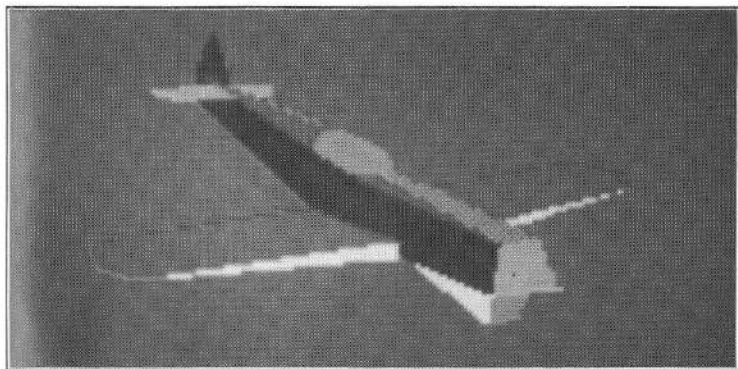


United States **CURTISS WARHAWK**

Aircraft

Maximum range (km)	976
Maximum airspeed (km/h)	582
Minimum airspeed (km/h)	100
Weight of each bomb (kg)	227
Maximum range of gun (m)	0
Total number of machine guns	6
HE defence	8
AP firepower (mm at 100 metres)	0
HE firepower	0
Number of rockets	0
Number of bombs	2
Aircraft type	Fighter
Weight (tonnes)	4
Date first available	Dec 1939

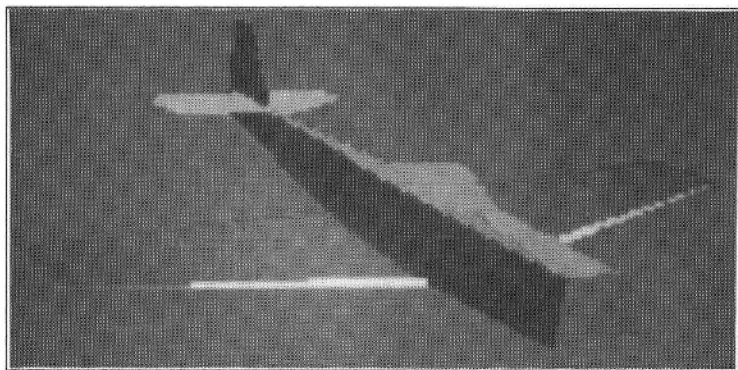
15,000 of these fighters were produced up to Dec 1944, and these were supplied to 28 different Allied and friendly nations throughout the war.



BELL AIRACOBRA

Maximum range (km)	724
Maximum airspeed (km/h)	660
Minimum airspeed (km/h)	100
Weight of each bomb (kg)	227
Maximum range of gun (m)	0
Total number of machine guns	2
HE defence	8
AP firepower (mm at 100 metres)	100
HE firepower	1
Number of rockets	0
Number of bombs	1
Aircraft type	Ground Attack
Weight (tonnes)	4
Date first available	Jan 1942

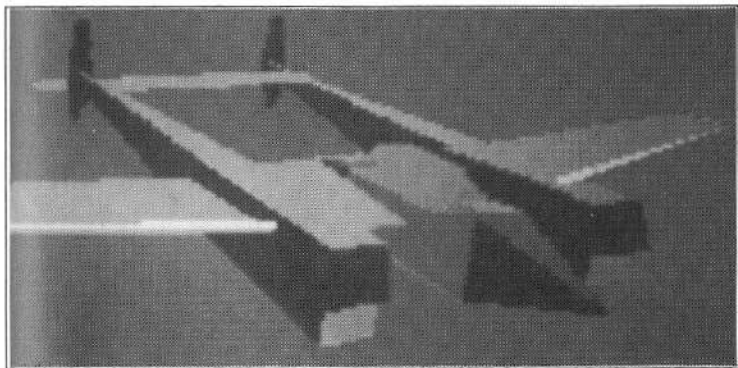
These aircraft were extensively used by Russia, as they took about 5000 of the total production of 9584. The 37mm cannon in the nose was extremely powerful, and could be used against ground vehicles.



LOCKHEED LIGHTNING

Maximum range (km)	736
Maximum airspeed (km/h)	662
Minimum airspeed (km/h)	100
Weight of each bomb (kg)	0
Maximum range of gun (m)	0
Total number of machine guns	5
HE defence	12
AP firepower (mm at 100 metres)	0
HE firepower	0
Number of rockets	0
Number of bombs	0
Aircraft type	Fighter
Weight (tonnes)	7
Date first available	March 1942

First military aircraft made by Lockheed, it served in a wide variety of roles up to the end of the war.



LOCKHEED LIGHTNING

Maximum range (km)	736
Maximum airspeed (km/h)	662
Minimum airspeed (km/h)	100
Weight of each bomb (kg)	726
Maximum range of gun (m)	0
Total number of machine guns	0
HE defence	12
AP firepower (mm at 100 metres)	0
HE firepower	0
Number of rockets	0
Number of bombs	2
Aircraft type	Bomber
Weight (tonnes)	7
Date first available	Nov 1943

The armament was removed, and a bombardier installed. Also, upto 1452 kg of bombs could now be carried.

LOCKHEED LIGHTNING

Maximum range (km)	736
Maximum airspeed (km/h)	662
Minimum airspeed (km/h)	100
Weight of each bomb (kg)	0
Maximum range of gun (m)	0
Total number of machine guns	5
HE defence	12
AP firepower (mm at 100 metres)	0
HE firepower	0
Number of rockets	10
Number of bombs	0
Aircraft type	Ground Attack
Weight (tonnes)	7
Date first available	Feb 1945

Ground-attack version equipped with rockets, in place of bombs

LOCKHEED LIGHTNING

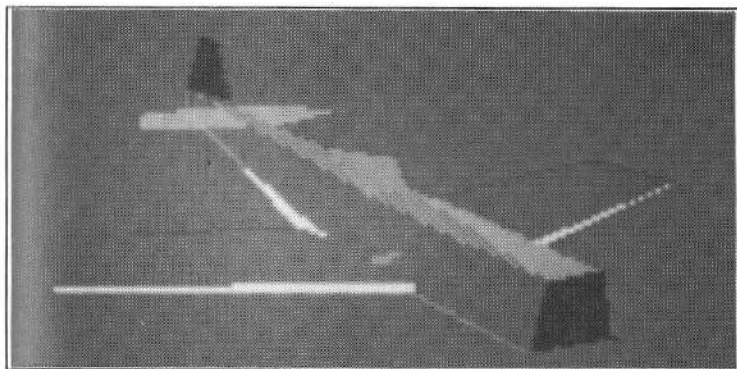
Maximum range (km)	736
Maximum airspeed (km/h)	678
Minimum airspeed (km/h)	100
Weight of each bomb (kg)	0
Maximum range of gun (m)	0
Total number of machine guns	0
HE defence	12
AP firepower (mm at 100 metres)	0
HE firepowe	0
Number of rockets	0
Number of bombs	0
Aircraft type	Spotter
Weight (tonnes)	7
Date first available	Aug 1942

Un-armed photo-reconnaissance version of the Lightning.

NORTH AMERICAN MUSTANG

Maximum range (km)	1000
Maximum airspeed (km/h)	712
Minimum airspeed (km/h)	100
Weight of each bomb (kg)	454
Maximum range of gun (m)	0
Total number of machine guns	6
HE defence	8
AP firepower (mm at 100 metres)	0
HE firepower	0
Number of rockets	0
Number of bombs	2
Aircraft type	Fighter
Weight (tonnes)	4
Date first available	July 1942

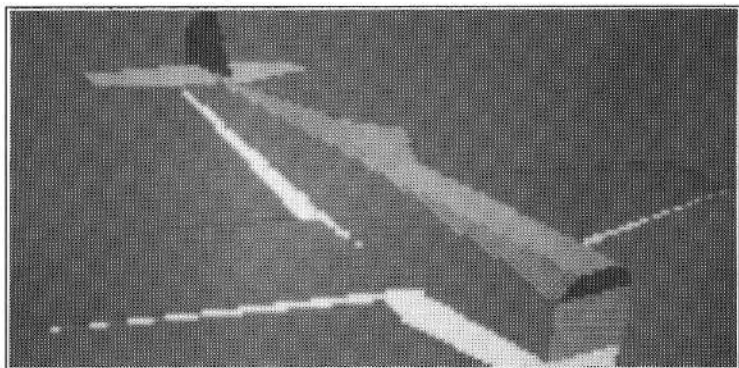
One of the most famous aircraft of the war, the Mustang was designed and built to a British specification and order. The design was completely overhauled during the war.



REPUBLIC THUNDERBOLT

Maximum range (km)	920
Maximum airspeed (km/h)	704
Minimum airspeed (km/h)	100
Weight of each bomb (kg)	454
Maximum range of gun (m)	0
Total number of machine guns	8
HE defence	10
AP firepower (mm at 100 metres)	0
HE firepower	0
Number of rockets	10
Number of bombs	2
Aircraft type	Ground Attack
Weight (tonnes)	6
Date first available	April 1943

Over 10,000 of these were made, and were supplied to Great Britain & Russia as well as the USAF. The armament of 10 rockets, 2x1000lb and 8 machine guns was quite formidable.

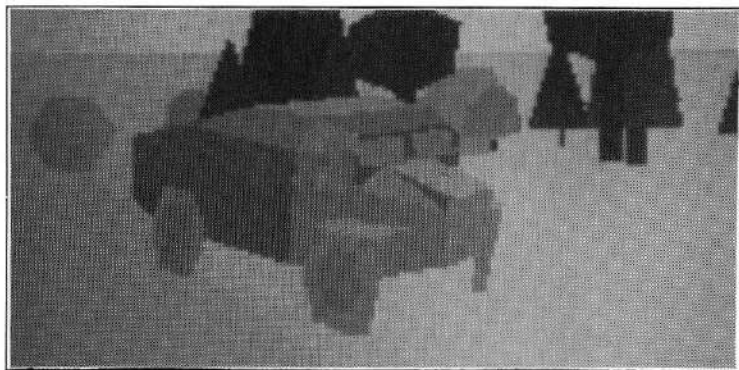


British Equipment Factfinder

British **QUAD LIMBER** Vehicles

Maximum road range (km)	200
Maximum elevation (degrees)	0
Minimum elevation (degrees)	0
Right traverse (degrees)	0
Left traverse (degrees)	0
Maximum indirect fire range (m)	0
Frontal armour (mm)	0
Side armour (mm)	0
Rear armour (mm)	0
HE defence	10
AP firepower (mm at 100 metres)	0
HE firepower	0
Maximum rounds carried	0
Road speed (km/h)	72
Cross country speed (km/h)	24
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	3
Date first available	January 1940
Maximum towing weight (tonnes)	5

Specifically designed as a limber (or FAT for Field Artillery Tractor) for the new 25 pounder gun, the Quad was made in large numbers.

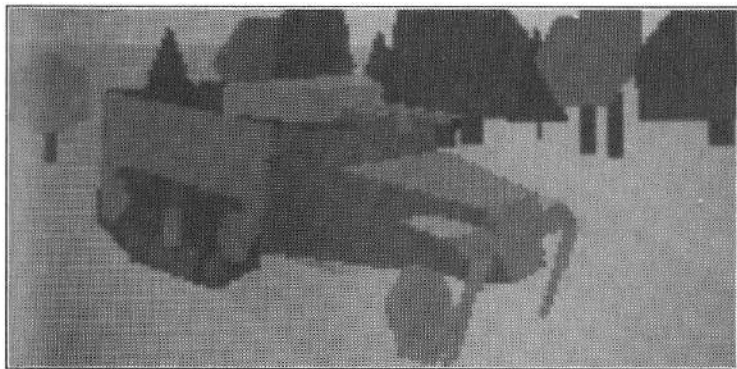


T48 GMC 57mm

Maximum road range (km)	320
Maximum elevation (degrees)	15
Minimum elevation (degrees)	-5
Right traverse (degrees)	25
Left traverse (degrees)	-25
Maximum indirect fire range (m)	11585
Frontal armour (mm)	12
Side armour (mm)	6
Rear armour (mm)	6
HE defence	N/A
AP firepower (mm at 100 metres)	94
HE firepower	3
Maximum rounds carried	99
Road speed (km/h)	72
Cross country speed (km/h)	30
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	9
Date first available	January 1943
Maximum towing weight (tonnes)	Unable to tow

This was an American weapon that was exported to both Britain and Russia, but not used by the American Army. It was a standard M3 half-track, with a 57mm anti-tank gun mounted

on top. In Russian service it was called SU57.

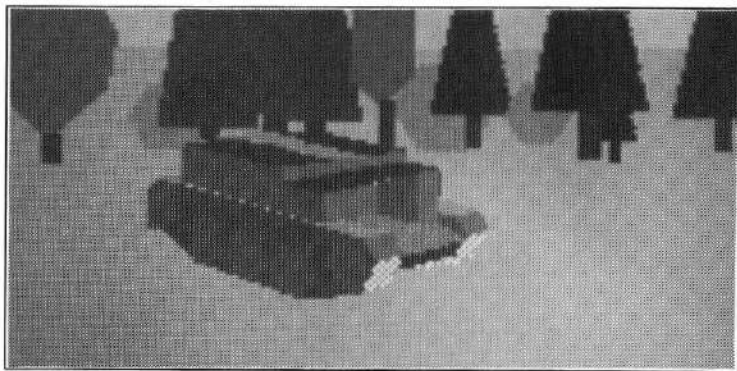


BREN CARRIER

Maximum road range (km)	256
Maximum elevation (degrees)	0
Minimum elevation (degrees)	0
Right traverse (degrees)	0
Left traverse (degrees)	0
Maximum indirect fire range (m)	0
Frontal armour (mm)	12
Side armour (mm)	12
Rear armour (mm)	12
HE defence	N/A
AP firepower (mm at 100 metres)	0
HE firepower	0
Maximum rounds carried	0
Road speed (km/h)	51
Cross country speed (km/h)	30
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	4
Date first available	January 1940
Maximum towing weight (tonnes)	2

Developed from the tankettes that found favour during the inter-war years (tankettes were small two man tanks which were very cheap), the Bren Carrier, or Universal Carrier could

transport infantry, or tow the 2 pounder or 6 pounder anti-tank guns.

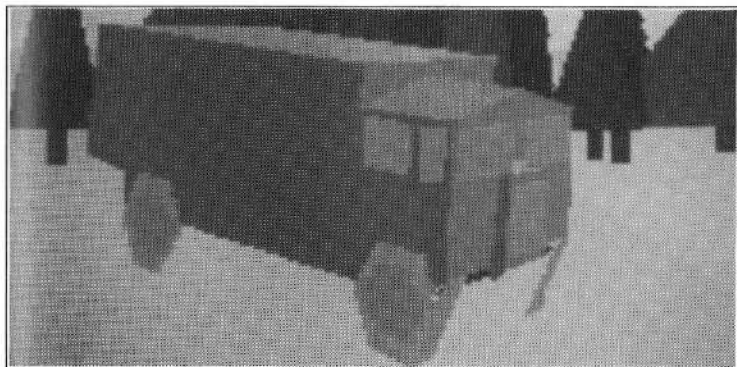


The British developed a super-heavy tank during the war called the Tortoise. It had a 32-pdr gun, a crew of 8 and resembled the German Jagdtiger. It was not delivered, however, until after the war.

MATADOR TRUCK

Maximum road range (km)	300
Maximum elevation (degrees)	0
Minimum elevation (degrees)	0
Right traverse (degrees)	0
Left traverse (degrees)	0
Maximum indirect fire range (m)	0
Frontal armour (mm)	0
Side armour (mm)	0
Rear armour (mm)	0
HE defence	5
AP firepower (mm at 100 metres)	0
HE firepower	0
Maximum rounds carried	0
Road speed (km/h)	67
Cross country speed (km/h)	22
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	4
Date first available	January 1939
Maximum towing weight (tonnes)	8

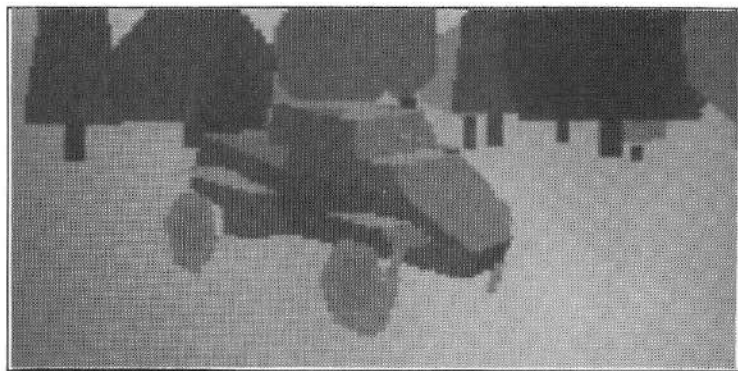
Used to tow large artillery pieces about, the Matador was used in large numbers to tow the 5.5" gun.



HUMBER Mk IV ARMoured CAR

Maximum road range (km)	400
Maximum elevation (degrees)	20
Minimum elevation (degrees)	-10
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	11750
Frontal armour (mm)	15
Side armour (mm)	10
Rear armour (mm)	10
HE defence	N/A
AP firepower (mm at 100 metres)	69
HE firepower	1
Maximum rounds carried	50
Road speed (km/h)	72
Cross country speed (km/h)	30
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	7
Date first available	January 1944
Maximum towing weight (tonnes)	Unable to tow

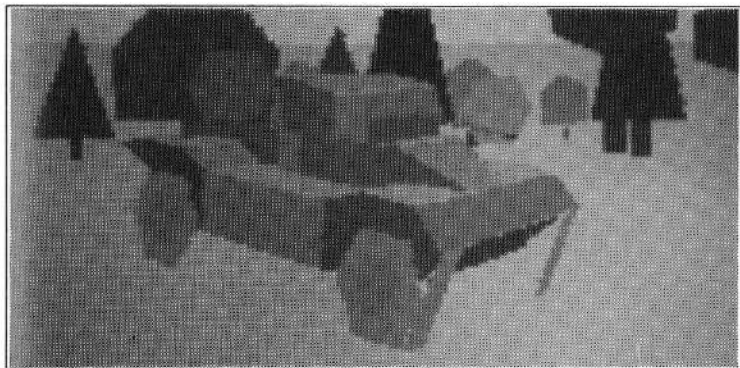
This was a light armoured car mounting the American 37mm gun. This was able to fire a small HE shot as well as an anti-tank shell. The earlier marks of Humber armoured cars were all armed with 15mm heavy machine guns



AEC Mkl ARMoured CAR

Maximum road range (km)	400
Maximum elevation (degrees)	15
Minimum elevation (degrees)	-15
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	5900
Frontal armour (mm)	30
Side armour (mm)	20
Rear armour (mm)	20
HE defence	N/A
AP firepower (mm at 100 metres)	77
HE firepower	0
Maximum rounds carried	58
Road speed (km/h)	66
Cross country speed (km/h)	25
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	11
Date first available	April 1942
Maximum towing weight (tonnes)	Unable to tow

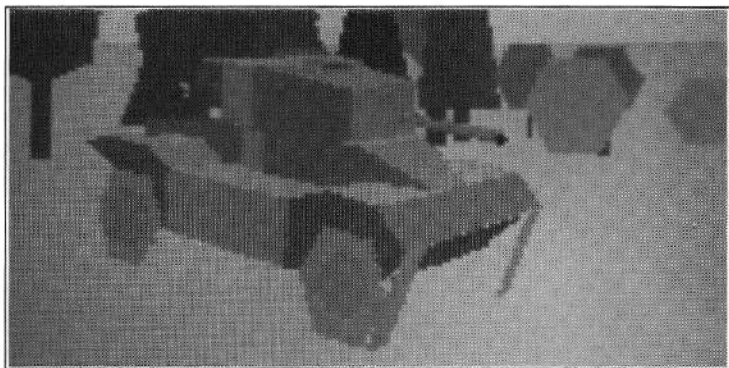
The AEC armoured cars were seen as wheeled tanks, and were armoured and armed accordingly. The Mkl had the turret and gun (2 pdr) from the Valentine tank.



AEC MkII ARMoured CAR

Maximum road range (km)	400
Maximum elevation (degrees)	20
Minimum elevation (degrees)	-12.5
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	5030
Frontal armour (mm)	30
Side armour (mm)	20
Rear armour (mm)	20
HE defence	N/A
AP firepower (mm at 100 metres)	109
HE firepower	0
Maximum rounds carried	30
Road speed (km/h)	66
Cross country speed (km/h)	25
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	13
Date first available	April 1943
Maximum towing weight (tonnes)	Unable to tow

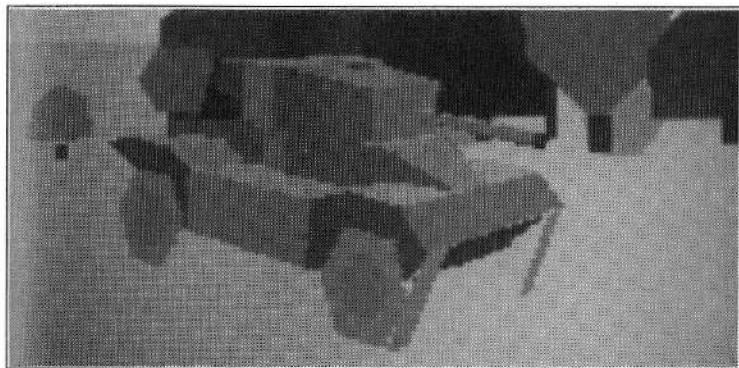
The hull was very similar to the earlier model, but the turret now mounted a 6 pdr gun, instead of the 2 pdr.



AEC MkIII ARMoured CAR

Maximum road range (km)	400
Maximum elevation (degrees)	20
Minimum elevation (degrees)	-12.5
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	13695
Frontal armour (mm)	30
Side armour (mm)	20
Rear armour (mm)	20
HE defence	N/A
AP firepower (mm at 100 metres)	90
HE firepower	7
Maximum rounds carried	30
Road speed (km/h)	66
Cross country speed (km/h)	25
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	13
Date first available	April 1944
Maximum towing weight (tonnes)	Unable to tow

The final mark of the AEC Heavy Armoured Car, this mounted the 75mm gun that was the latest standard tank gun at the time. The new turret used bore a strong resemblance to the one used on the Churchill VII.

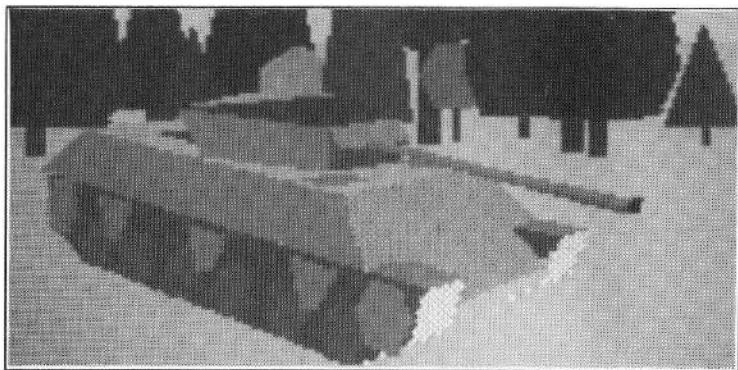


The only way that an Allied tank armed with the standard 75L40 gun could destroy a German Panther head on, was to try and deflect the shot off the underside of the gun cupola into the tinner roof armor. There is only one report of this working though.

17PDR SP ACHILLES

Maximum road range (km)	320
Maximum elevation (degrees)	19
Minimum elevation (degrees)	-10
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	9145
Frontal armour (mm)	53
Side armour (mm)	22
Rear armour (mm)	20
HE defence	N/A
AP firepower (mm at 100 metres)	206
HE firepower	8
Maximum rounds carried	54
Road speed (km/h) ^c	48
Cross country speed (km/h)	29
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	30
Date first available	October 1944
Maximum towing weight (tonnes)	Unable to tow

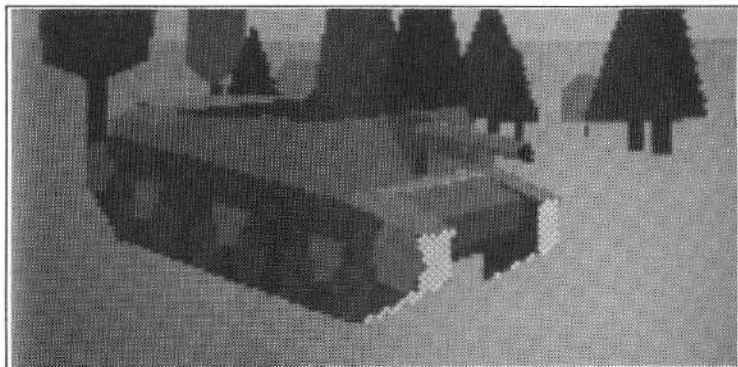
This was an American M10 tank destroyer with the 76mm gun replaced by the British 17pdr gun. This was much more potent than the original vehicle.



SEXTON SP GUN

Maximum road range (km)	200
Maximum elevation (degrees)	40
Minimum elevation (degrees)	-9
Right traverse (degrees)	15
Left traverse (degrees)	-25
Maximum indirect fire range (m)	12255
Frontal armour (mm)	25
Side armour (mm)	12
Rear armour (mm)	12
HE defence	N/A
AP firepower (mm at 100 metres)	80
HE firepower	11
Maximum rounds carried	87
Road speed (km/h)	40
Cross country speed (km/h)	32
Speed in water (km/h)	0
Weight (tonnes)	26
Date first available	April 1943
Maximum towing weight (tonnes)	0

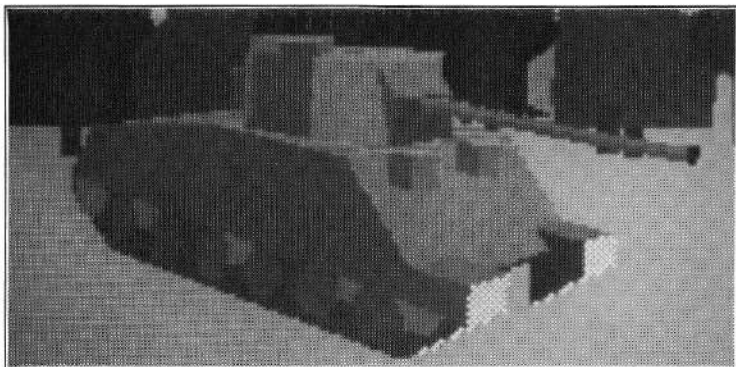
This was based upon the American M7 Priest, but mounted the 25pdr in place of the 105mm Howitzer. There were various other detail changes as well.



SHERMAN FIREFLY VC

Maximum road range (km)	208
Maximum elevation (degrees)	20
Minimum elevation (degrees)	-5
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	9145
Frontal armour (mm)	93
Side armour (mm)	38
Rear armour (mm)	38
HE defence	N/A
AP firepower (mm at 100 metres)	206
HE firepower	8
Maximum rounds carried	77
Road speed (km/h)	40
Cross country speed (km/h)	25
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	32
Date first available	February 1944
Maximum towing weight (tonnes)	Unable to tow

This was a standard American Sherman M4A3, with an extended turret, the bow machine-gun removed (and the space used for extra rounds), and a 17pdr gun installed.

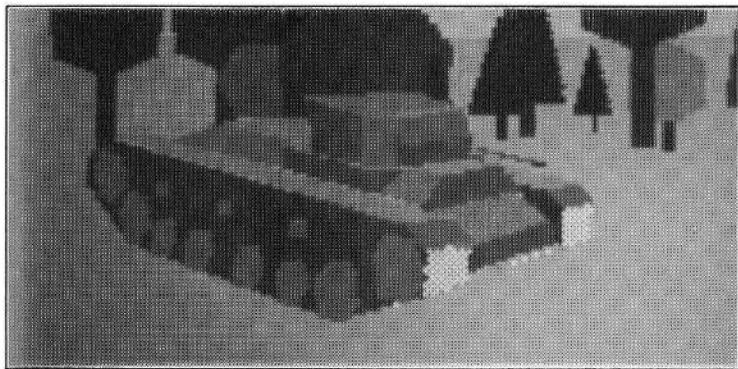


VALENTINE I

Maximum road range (km)	144
Maximum elevation (degrees)	20
Minimum elevation (degrees)	-5
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	5900
Frontal armour (mm)	65
Side armour (mm)	60
Rear armour (mm)	30
HE defence	N/A
AP firepower (mm at 100 metres)	77
HE firepower	0
Maximum rounds carried	79
Road speed (km/h)	24
Cross country speed (km/h)	12
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	18
Date first available	September 1940
Maximum towing weight (tonnes)	0

This was a contemporary of the Matilda II, and was quite similar in a number of respects, being designed as an Infantry tank. The name came from the fact that the contract to build the

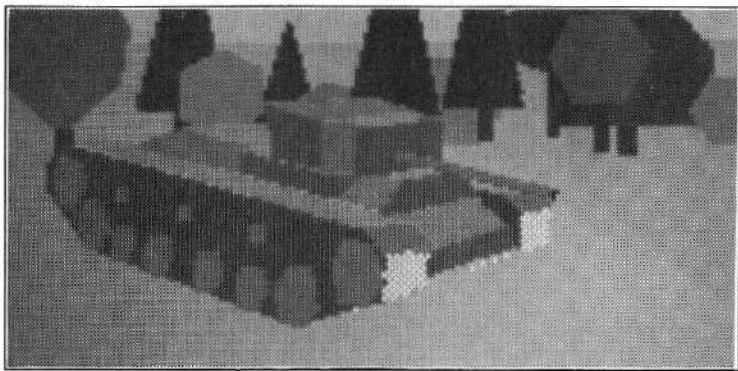
first order was signed on St. Valentine's day. The gun was the standard 2pdr.



VALENTINE VIII

Maximum road range (km)	144
Maximum elevation (degrees)	20
Minimum elevation (degrees)	-5
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	5030
Frontal armour (mm)	65
Side armour (mm)	60
Rear armour (mm)	30
HE defence	N/A
AP firepower (mm at 100 metres)	109
HE firepower	0
Maximum rounds carried	53
Road speed (km/h)	24
Cross country speed (km/h)	12
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	18
Date first available	March 1942
Maximum towing weight (tonnes)	0

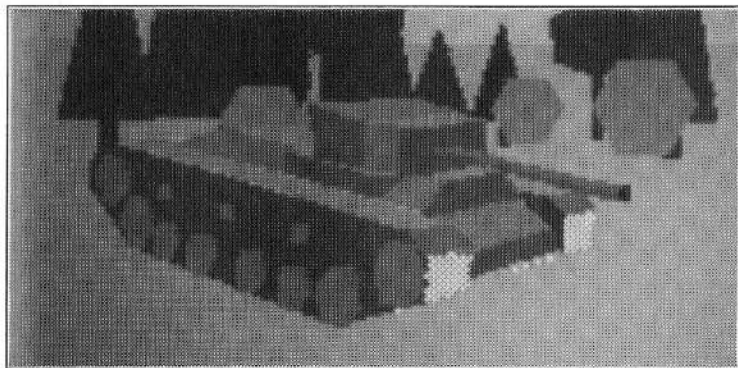
The infantry tanks were designed to be very heavily armoured, and to support infantry assaults. Therefore the top speed was not considered important. This version mounted the 6pdr.



VALENTINE XI

Maximum road range (km)	144
Maximum elevation (degrees)	20
Minimum elevation (degrees)	-5
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	13695
Frontal armour (mm)	65
Side armour (mm)	60
Rear armour (mm)	30
HE defence	N/A
AP firepower (mm at 100 metres)	90
HE firepower	7
Maximum rounds carried	53
Road speed (km/h)	24
Cross country speed (km/h)	12
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	18
Date first available	March 1943
Maximum towing weight (tonnes)	0

Final version of Valentine mounted a 75mm gun, which meant that the tank could fire HE shot. This was the main reason why the 6 pdr gun was dropped from all tank designs by this stage of the war.

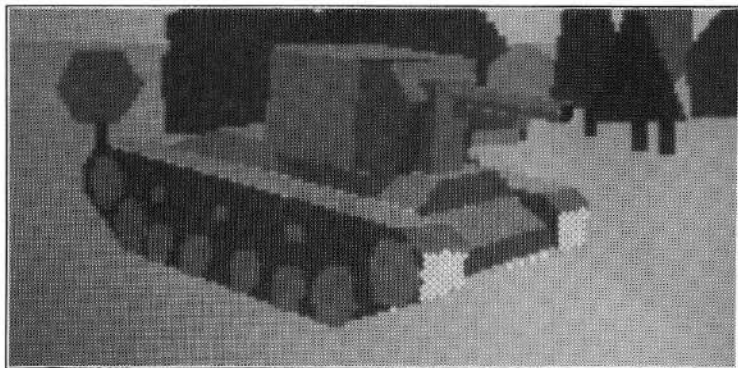


BISHOP SP GUN

Maximum road range (km)	144
Maximum elevation (degrees)	15
Minimum elevation (degrees)	-5
Right traverse (degrees)	4
Left traverse (degrees)	-4
Maximum indirect fire range (m)	5852
Frontal armour (mm)	65
Side armour (mm)	60
Rear armour (mm)	30
HE defence	N/A
AP firepower (mm at 100 metres)	80
HE firepower	11
Maximum rounds carried	32
Road speed (km/h)	24
Cross country speed (km/h)	12
Speed in water (km/h)	0
Weight (tonnes)	18
Date first available	April 1942
Maximum towing weight (tonnes)	0

This was a hasty design, to give the 25pdr gun an armoured mount so that they could be fielded more effectively. The method chosen was to build a fixed box in place of the turret

normally mounted on a Valentine tank. This was superseded by the Sexton.

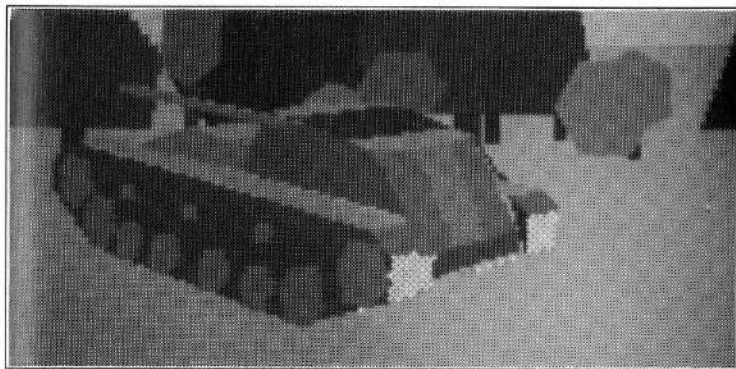


ARCHER SP GUN

Maximum road range (km)	144
Maximum elevation (degrees)	15
Minimum elevation (degrees)	-7.5
Right traverse (degrees)	191
Left traverse (degrees)	169
Maximum indirect fire range (m)	9145
Frontal armour (mm)	60
Side armour (mm)	20
Rear armour (mm)	20
HE defence	N/A
AP firepower (mm at 100 metres)	206
HE firepower	8
Maximum rounds carried	39
Road speed (km/h)	24
Cross country speed (km/h)	12
Speed in water (km/h)	0
Weight (tonnes)	18
Date first available	April 1944
Maximum towing weight (tonnes)	0

This was another variant built on the Valentine chassis. In this, the fighting compartment was at the front of the vehicle, with the 17 pdr gun facing rearwards. The gun could not be fired on

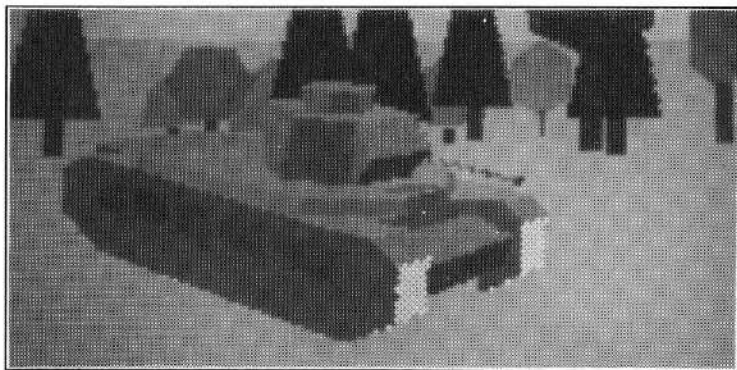
the move, since the recoil would hit the driver! It was however, ideal, for backing into position, and then running away after a few shots.



MATILDA II

Maximum road range (km)	256
Maximum elevation (degrees)	20
Minimum elevation (degrees)	-5
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	5900
Frontal armour (mm)	78
Side armour (mm)	70
Rear armour (mm)	60
HE defence	N/A
AP firepower (mm at 100 metres)	77
HE firepower	0
Maximum rounds carried	93
Road speed (km/h)	24
Cross country speed (km/h)	13
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	27
Date first available	September 1939
Maximum towing weight (tonnes)	Unable to tow

This was a famous infantry tank during its heyday in the Western Desert in 1941, when it was called "The Queen of the Battlefield", due to its armour being impervious to any weapon.



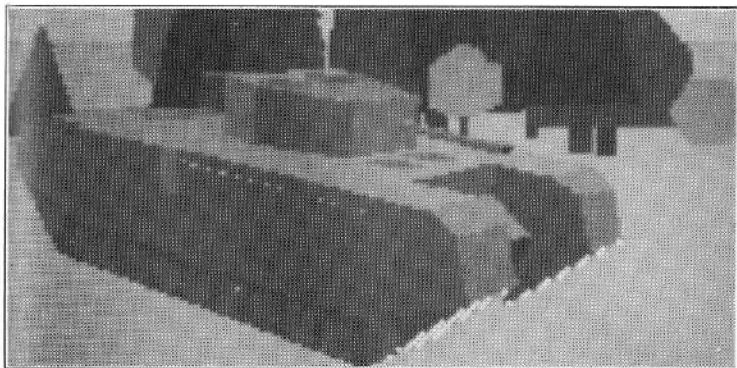
The Germans were forced to use their 88mm anti-aircraft guns on it, which gave the British quite a shock. It mounted the standard 2pdr gun.

CHURCHILL III

Maximum road range (km)	144
Maximum elevation (degrees)	20
Minimum elevation (degrees)	-12.5
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	5030
Frontal armour (mm)	102
Side armour (mm)	56
Rear armour (mm)	40
HE defence	N/A
AP firepower (mm at 100 metres)	109
HE firepower	0
Maximum rounds carried	84
Road speed (km/h)	25
Cross country speed (km/h)	13
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	40
Date first available	March 1942
Maximum towing weight (tonnes)	Unable to tow

The Churchill tank was so heavy and slow that the driver had to be very fast when changing gears otherwise the vehicle would stop whilst in neutral.

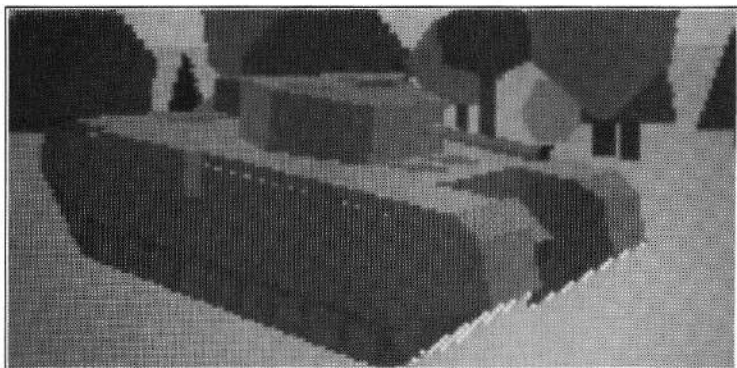
This was the last infantry tank to be designed, since the concept had not been a great success. This mounted the 6 pdr gun in a heavily armoured slow tank.



CHURCHILL VII

Maximum road range (km)	144
Maximum elevation (degrees)	20
Minimum elevation (degrees)	-12.5
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	13695
Frontal armour (mm)	152
Side armour (mm)	76
Rear armour (mm)	63
HE defence	N/A
AP firepower (mm at 100 metres)	90
HE firepower	7
Maximum rounds carried	84
Road speed (km/h)	20
Cross country speed (km/h)	13
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	41
Date first available	November 1943
Maximum towing weight (tonnes)	Unable to tow

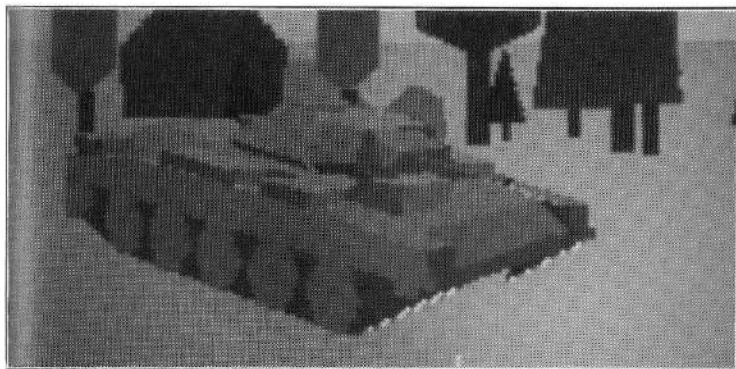
This was the standard model Churchill, with the 75mm gun. Also, it was up-armoured to 6 inches on the front.



CRUSADER II

Maximum road range (km)	160
Maximum elevation (degrees)	10
Minimum elevation (degrees)	-10
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	5900
Frontal armour (mm)	45
Side armour (mm)	28
Rear armour (mm)	28
HE defence	N/A
AP firepower (mm at 100 metres)	77
HE firepower	0
Maximum rounds carried	110
Road speed (km/h)	43
Cross country speed (km/h)	24
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	19
Date first available	April 1941
Maximum towing weight (tonnes)	0

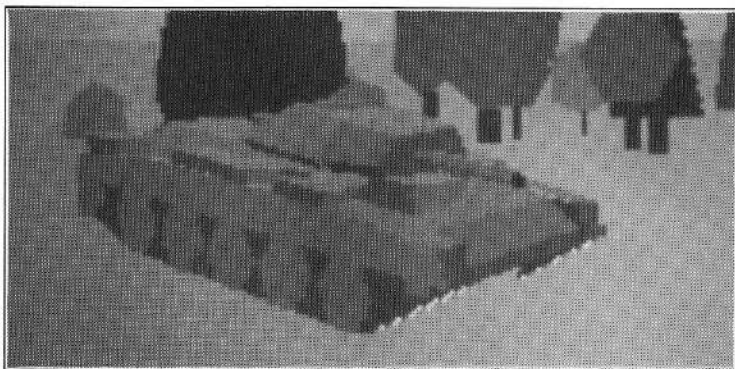
This was the successor to the Covenanter, which was a pre-war tank, and only used for training during the war. It mounted the 2 pdr in a light, fast tank. This was a Cavalry tank, as opposed to the Infantry tanks mentioned earlier.



CRUSADER III

Maximum road range (km)	160
Maximum elevation (degrees)	10
Minimum elevation (degrees)	-10
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	5030
Frontal armour (mm)	50
Side armour (mm)	29
Rear armour (mm)	28
HE defence	N/A
AP firepower (mm at 100 metres)	109
HE firepower	0
Maximum rounds carried	65
Road speed (km/h)	43
Cross country speed (km/h)	24
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	20
Date first available	October 1942
Maximum towing weight (tonnes)	0

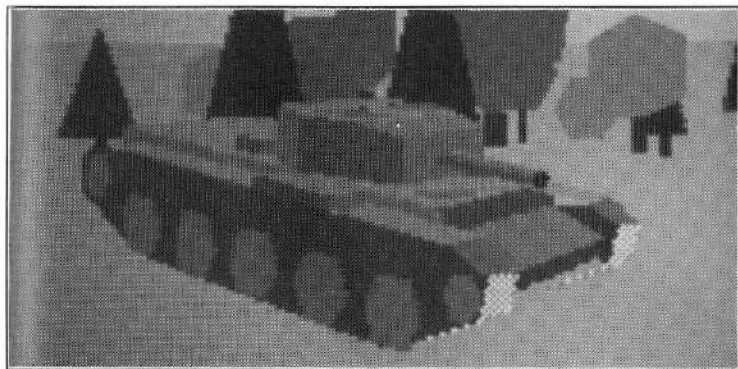
This was up-gunned to a 6 pdr, in a re-modeled turret, but was otherwise the same as the earlier mark. The armour was also slightly thickened, but not at the cost of mobility.



CROMWELL IV

Maximum road range (km)	277
Maximum elevation (degrees)	20
Minimum elevation (degrees)	-12.5
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	13695
Frontal armour (mm)	76
Side armour (mm)	30
Rear armour (mm)	30
HE defence	Not Applicable
AP firepower (mm at 100 metres)	90
HE firepower	7
Maximum rounds carried	64
Road speed (km/h)	64
Cross country speed (km/h)	29
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	28
Date first available	January 1944
Maximum towing weight (tonnes)	0

This was the successor to the Crusader, with the same suspension, but a newly designed hull and turret, mounting the 75mm gun. Also designed as a cavalry tank, with a good turn of speed.

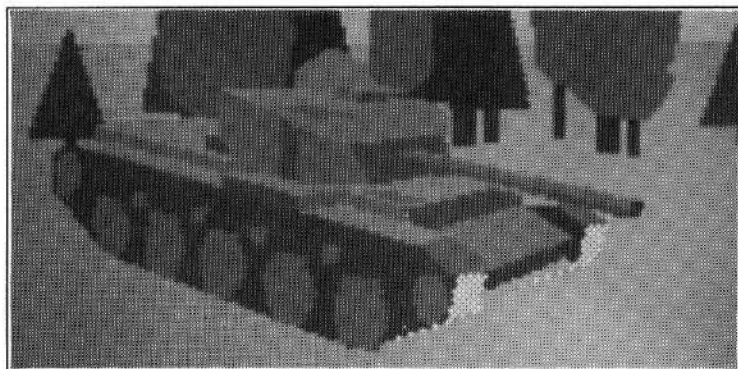


COMET

Maximum road range (km)	197
Maximum elevation (degrees)	20
Minimum elevation (degrees)	-12
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	9145
Frontal armour (mm)	101
Side armour (mm)	50
Rear armour (mm)	50
HE defence	N/A
AP firepower (mm at 100 metres)	206
HE firepower	8
Maximum rounds carried	58
Road speed (km/h)	46
Cross country speed (km/h)	26
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	36
Date first available	December 1944
Maximum towing weight (tonnes)	0

Improved Cromwell, with modified suspension, a new turret and a short 17 pdr designed to fit within the confines of a tank turret. This tank was a good combination of firepower, armour

and mobility, and was used extensively after the war.

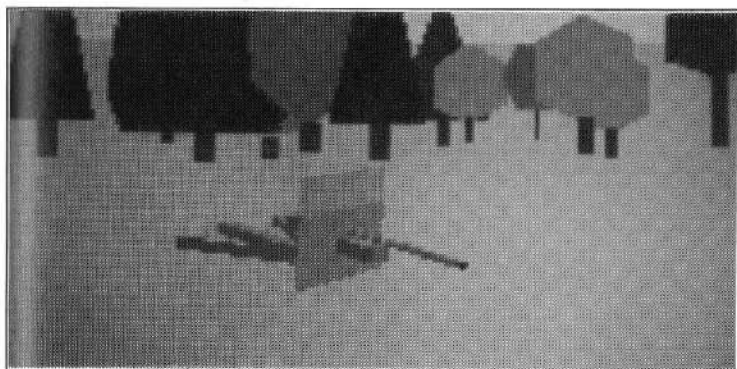


British Artillery Two POUNDER

Maximum road range (km)	0
Maximum elevation (degrees)	15
Minimum elevation (degrees)	-13
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	5900
Frontal armour (mm)	0
Side armour (mm)	0
Rear armour (mm)	0
HE defence	8
AP firepower (mm at 100 metres)	77
HE firepower	0
Maximum rounds carried	100
Road speed (km/h)	1
Cross country speed (km/h)	1
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	1
Date first available	December 1938
Maximum towing weight (tonnes)	Unable to tow

The 2 pdr gun was a 37L52, and so was directly comparable with other contemporary 37mm guns. Its main disadvantage was a lack of HE capacity. It was designed to be mounted on

a turntable, to which end it was supplied with three legs to support the recoil, even when traversed. Could be towed by a number of vehicles, including the Bren Carrier.

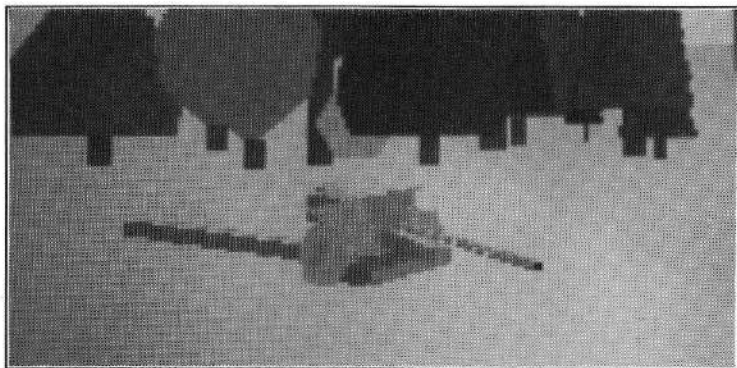


SIX POUNDER

Maximum road range (km)	0
Maximum elevation (degrees)	15
Minimum elevation (degrees)	-5
Right traverse (degrees)	45
Left traverse (degrees)	-45
Maximum indirect fire range (m)	5030
Frontal armour (mm)	0
Side armour (mm)	0
Rear armour (mm)	0
HE defence	12
AP firepower (mm at 100 metres)	109
HE firepower	0
Maximum rounds carried	100
Road speed (km/h)	4
Cross country speed (km/h)	2
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	1
Date first available	September 1941
Maximum towing weight (tonnes)	Unable to tow

This was a 57L57 weapon, and was a marked improvement on the old 2 pdr. It still could not fire HE though, but it was better at penetrating armour than the 2pdr. Commonly towed by the

Universal, or Bren Carrier.

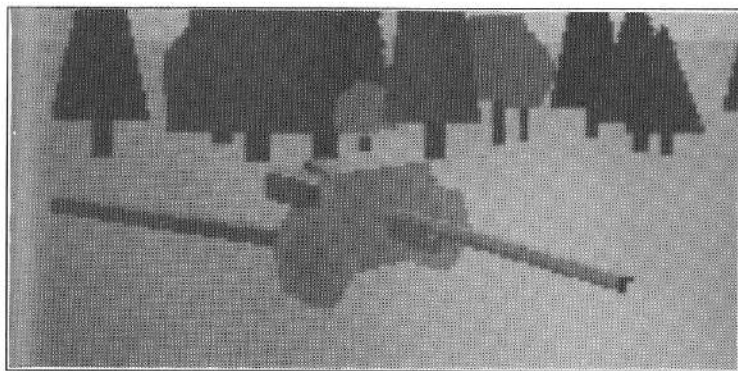


SEVENTEEN POUNDER

Maximum road range (km)	0
Maximum elevation (degrees)	16
Minimum elevation (degrees)	-6
Right traverse (degrees)	30
Left traverse (degrees)	-30
Maximum indirect fire range (m)	9145
Frontal armour (mm)	0
Side armour (mm)	0
Rear armour (mm)	0
HE defence	14
AP firepower (mm at 100 metres)	206
HE firepower	8
Maximum rounds carried	100
Road speed (km/h)	3
Cross country speed (km/h)	1
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	3
Date first available	August 1942
Maximum towing weight (tonnes)	Unable to tow

Designed to provide heavy anti-tank gun fire, this 76L60 gun was at last able to fire HE as well as AP shot. It used a discarding sabot to achieve a greater kinetic energy. This

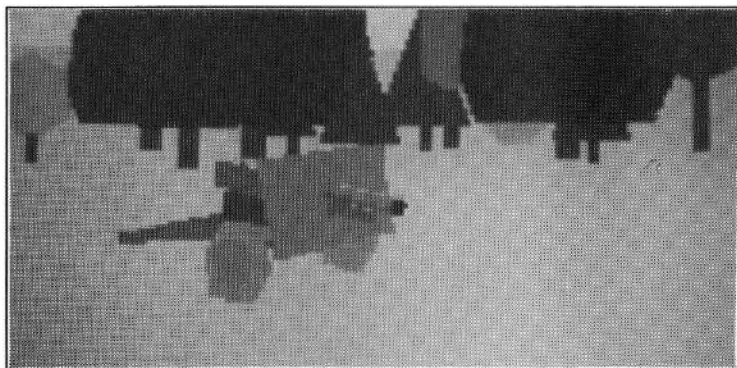
means that a part of the shell falls off after leaving the barrel, which imparts all the energy to the small projectile.



TWENTY FIVE POUNDER

Maximum road range (km)	0
Maximum elevation (degrees)	40
Minimum elevation (degrees)	-5
Right traverse (degrees)	4
Left traverse (degrees)	-4
Maximum indirect fire range (m)	12250
Frontal armour (mm)	0
Side armour (mm)	0
Rear armour (mm)	0
HE defence	17
AP firepower (mm at 100 metres)	80
HE firepower	11
Maximum rounds carried	100
Road speed (km/h)	3
Cross country speed (km/h)	1
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	2
Date first available	June 1940
Maximum towing weight (tonnes)	Unable to tow

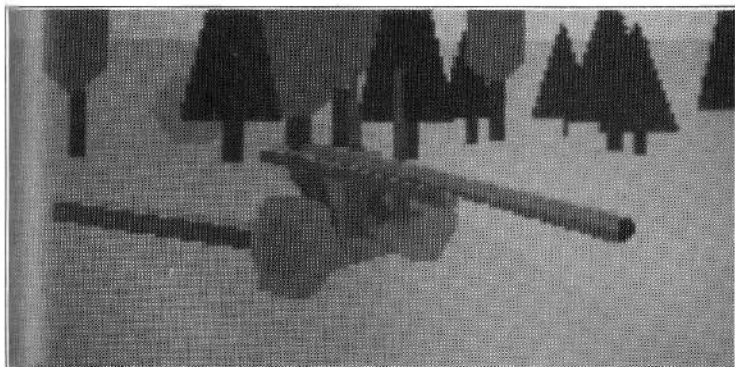
Designed as an artillery piece, this 88L26 could deliver an HE round very accurately. Also supplied with AP shot, the gun could be used in the direct fire mode, although this was not its forte.



5.5 INCH ARTILLERY GUN

Maximum road range (km)	0
Maximum elevation (degrees)	45
Minimum elevation (degrees)	-5
Right traverse (degrees)	30
Left traverse (degrees)	-30
Maximum indirect fire range (m)	14810
Frontal armour (mm)	0
Side armour (mm)	0
Rear armour (mm)	0
HE defence	24
AP firepower (mm at 100 metres)	200
HE firepower	45
Maximum rounds carried	100
Road speed (km/h)	1
Cross country speed (km/h)	1
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	6
Date first available	June 1941
Maximum towing weight (tonnes)	Unable to tow

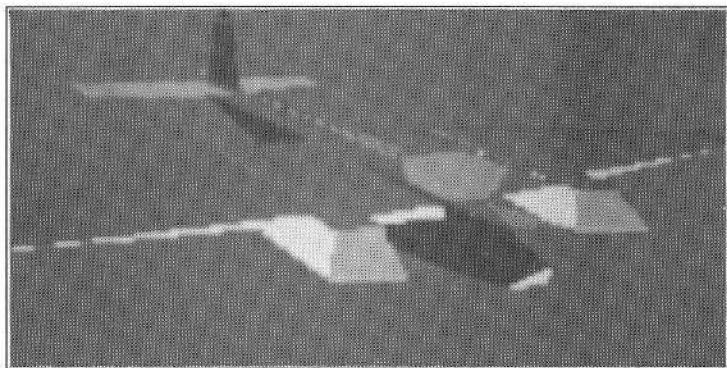
A 140L31 gun designed for indirect fire support, it also could fire an AP shot with devastating effect. It was only rarely used in this manner though, since it had no gun shield, and also had a high silhouette.



British Aircraft **DE HAVILLAND MOSQUITO**

Maximum range (km)	2400
Maximum airspeed (km/h)	640
Minimum airspeed (km/h)	100
Weight of each bomb (kg)	0
Maximum range of gun (m)	0
Total number of machine guns	8
HE defence	10
AP firepower (mm at 100 metres)	0
HE firepower	0
Number of rockets	0
Number of bombs	0
Aircraft type	Fighter
Weight (tonnes)	10
Date first available	July 1941

Numerous variants of the basic Mosquito were produced, and the type served with distinction in all of its guises. This was a version with 8 machine-guns - a pure fighter.



DE HAVILLAND MOSQUITO

Maximum range (km)	2400
Maximum airspeed (km/h)	640
Minimum airspeed (km/h)	100
Weight of each bomb (kg)	300
Maximum range of gun (m)	0
Total number of machine guns	0
HE defence	10
AP firepower (mm at 100 metres)	0
HE firepower	0
Number of rockets	0
Number of bombs	6
Aircraft type	Bomber
Weight (tonnes)	10
Date first available	July 1941

This variant was un-armed, and relied upon either fighter escort, or its superior turn of speed to get out of trouble. The weight saved by having no machine-guns was used to increase the bomb-load.

DE HAVILLAND MOSQUITO

Maximum range (km)	2400
Maximum airspeed (km/h)	640
Minimum airspeed (km/h)	100
Weight of each bomb (kg)	0
Maximum range of gun (m)	0
Total number of machine guns	0
HE defence	10
AP firepower (mm at 100 metres)	0
HE firepower	0
Number of rockets	0
Number of bombs	0
Aircraft type	Spotter
Weight (tonnes)	10
Date first available	July 1941

Completely un-armed, this was designed to fly high and fast to escape attacks.

DE HAVILLAND MOSQUITO

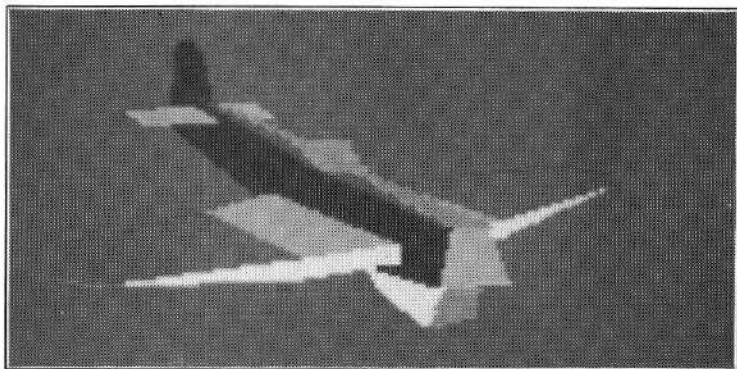
Maximum range (km)	2400
Maximum airspeed (km/h)	640
Minimum airspeed (km/h)	100
Weight of each bomb (kg)	900
Maximum range of gun (m)	0
Total number of machine guns	8
HE defence	10
AP firepower (mm at 100 metres)	0
HE firepower	0
Number of rockets	8
Number of bombs	1
Aircraft type	Fighter
Weight (tonnes)	10
Date first available	July 1941

This was a combination fighter-bomber with a 900kg bomb, yet still retaining its machine-guns for local defence.

HAWKER TYPHOON

Maximum range (km)	1000
Maximum airspeed (km/h)	640
Minimum airspeed (km/h)	100
Weight of each bomb (kg)	900
Maximum range of gun (m)	0
Total number of machine guns	4
HE defence	5
AP firepower (mm at 100 metres)	0
HE firepower	0
Number of rockets	8
Number of bombs	1
Aircraft type	Fighter
Weight (tonnes)	5
Date first available	June 1942

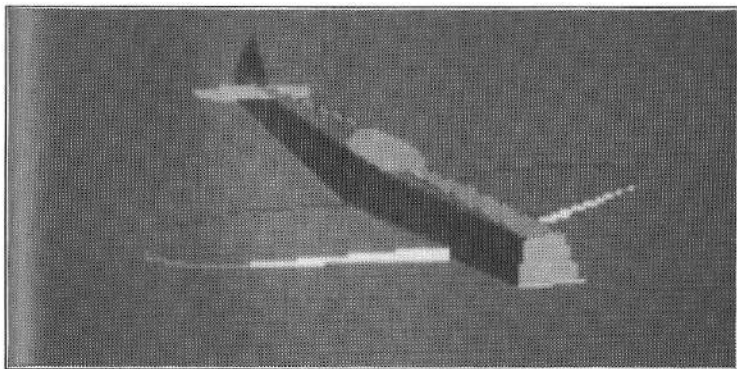
This fighter was best known for its ground-attack role, when the four rockets that it could carry under each wing would be used to devastating effect against the hapless panzer divisions.



SUPERMARINE SPITFIRE

Maximum range (km)	1000
Maximum airspeed (km/h)	640
Minimum airspeed (km/h)	100
Weight of each bomb (kg)	225
Maximum range of gun (m)	0
Total number of machine guns	6
HE defence	5
AP firepower (mm at 100 metres)	0
HE firepower	0
Number of rockets	0
Number of bombs	1
Aircraft type	Fighter
Weight (tonnes)	3
Date first available	June 1938

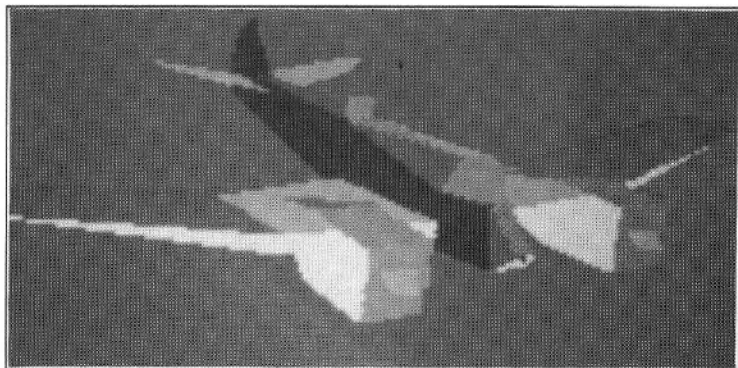
The most famous British fighter of World War II, the Spitfire was more than a match for the German Me109, and a continual series of improvements throughout the war kept the type in front-line service.



BRISTOL BEAUFIGHTER MkI

Maximum range (km)	2253
Maximum airspeed (km/h)	500
Minimum airspeed (km/h)	100
Weight of each bomb (kg)	0
Maximum range of gun (m)	0
Total number of machine guns	11
HE defence	10
AP firepower (mm at 100 metres)	0
HE firepower	0
Number of rockets	0
Number of bombs	0
Aircraft type	Fighter
Weight (tonnes)	7
Date first available	August 1940

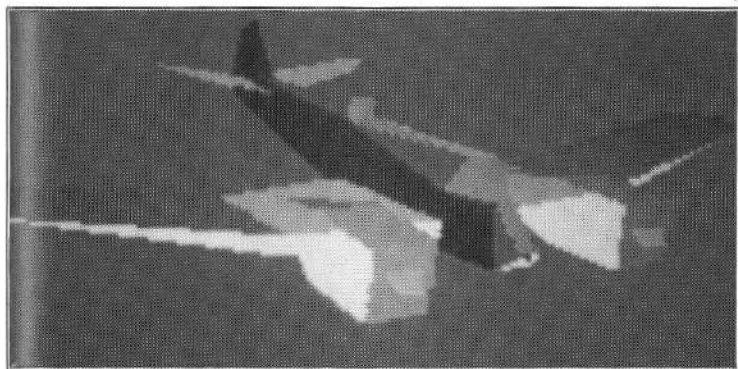
This had a turret behind the pilot for defensive work, and was otherwise well equipped for fighting, with the large number of machine-guns available.



BRISTOL BEAUFIGHTER MkIV

Maximum range (km)	2253
Maximum airspeed (km/h)	500
Minimum airspeed (km/h)	100
Weight of each bomb (kg)	450
Maximum range of gun (m)	0
Total number of machine guns	5
HE defence	10
AP firepower (mm at 100 metres)	0
HE firepower	0
Number of rockets	8
Number of bombs	1
Aircraft type	Fighter
Weight (tonnes)	7
Date first available	March 1944

This was a ground-attack variant of the above, and even carried a bomb as well as rockets and machine-guns. Thus it could deliver a hefty punch to most targets.

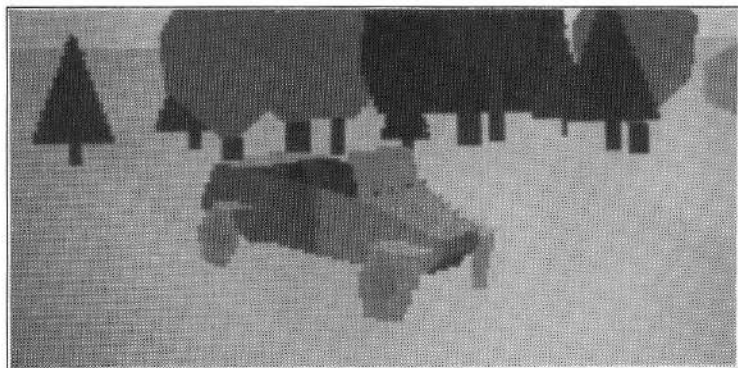


German Equipment Factfinder

German Vehicles **KUBELWAGEN**

Maximum road range (km)	300
Maximum elevation (degrees)	0
Minimum elevation (degrees)	0
Right traverse (degrees)	0
Left traverse (degrees)	0
Maximum indirect fire range (m)	10000
Frontal armour (mm)	0
Side armour (mm)	0
Rear armour (mm)	0
HE defence	1
AP firepower (mm at 100 metres)	0
HE firepower	0
Maximum rounds carried	0
Road speed (km/h)	80
Cross country speed (km/h)	26
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	1
Date first available	January 1939
Maximum towing weight (tonnes)	1

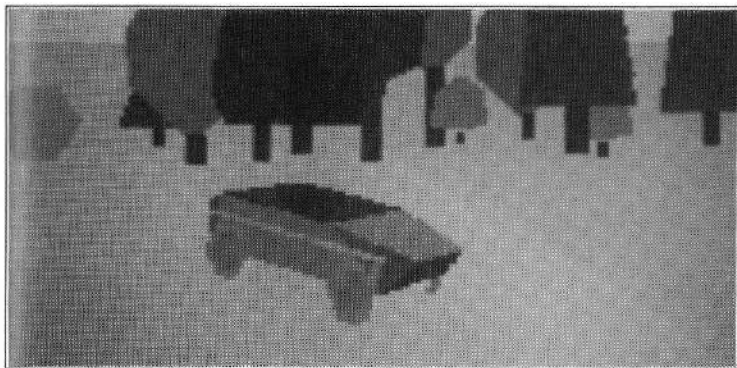
The German equivalent of the American Jeep, the Kubelwagen served on every front throughout the war.



SCHWIMMWAGEN

Maximum road range (km)	200
Maximum elevation (degrees)	0
Minimum elevation (degrees)	0
Right traverse (degrees)	0
Left traverse (degrees)	0
Maximum indirect fire range (m)	0
Frontal armour (mm)	0
Side armour (mm)	0
Rear armour (mm)	0
HE defence	1
AP firepower (mm at 100 metres)	0
HE firepower	0
Maximum rounds carried	0
Road speed (km/h)	80
Cross country speed (km/h)	26
Speed in water (km/h)	10
Weight (tonnes)	1
Date first available January	1940
Maximum towing weight (tonnes)	1

This was the amphibious version of the Kubelwagen. It consisted of a small waterproof hull with propellers for use when floating.

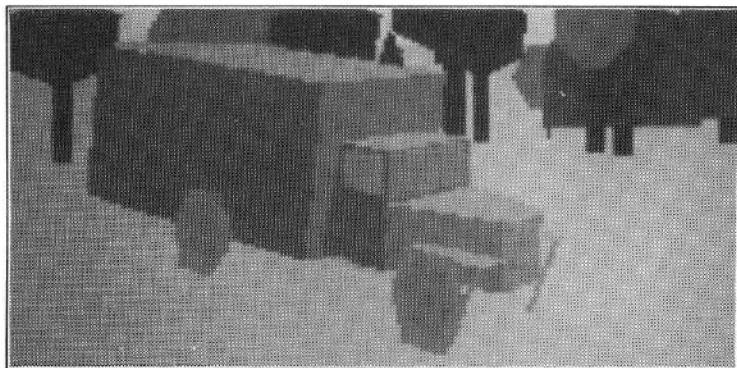


OPEL BLITZ TRUCK

Maximum road range (km)	400
Maximum elevation (degrees)	0
Minimum elevation (degrees)	0
Right traverse (degrees)	0
Left traverse (degrees)	0
Maximum indirect fire range (m)	0
Frontal armour (mm)	0
Side armour (mm)	0
Rear armour (mm)	0
HE defence	5
AP firepower (mm at 100 metres)	0
HE firepower	0
Maximum rounds carried	0
Road speed (km/h)	67
Cross country speed (km/h)	22
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	3
Date first available January	1939
Maximum towing weight (tonnes)	5

The Tiger I tank was so wide that the outer four road wheels had to be removed when it was being transported by rail. Also, it was too heavy for most bridges but was able to wade through rivers upto 5 metres deep.

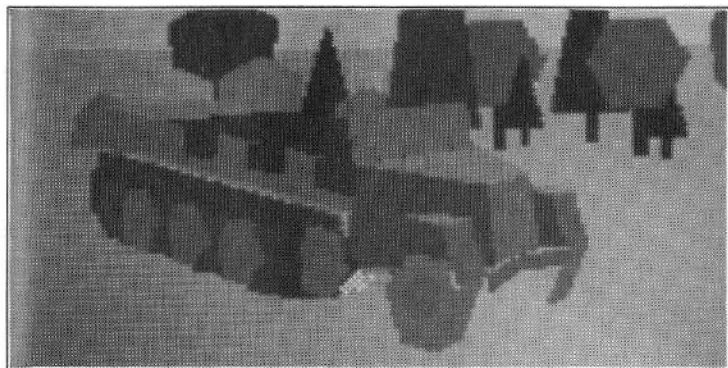
Standard 3-tonne truck used to transport infantry, stores, guns, etc. throughout the war.



SdKfz 7

Maximum road range (km)	250
Maximum elevation (degrees)	0
Minimum elevation (degrees)	0
Right traverse (degrees)	0
Left traverse (degrees)	0
Maximum indirect fire range (m).....	0
Frontal armour (mm)	0
Side armour (mm)	0
Rear armour (mm).....	0
HE defence	10
AP firepower (mm at 100 metres).....	0
HE firepower	0
Maximum rounds carried	0
Road speed (km/h)	50
Cross country speed (km/h)	30
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	8
Date first available	January 1939
Maximum towing weight (tonnes)	8

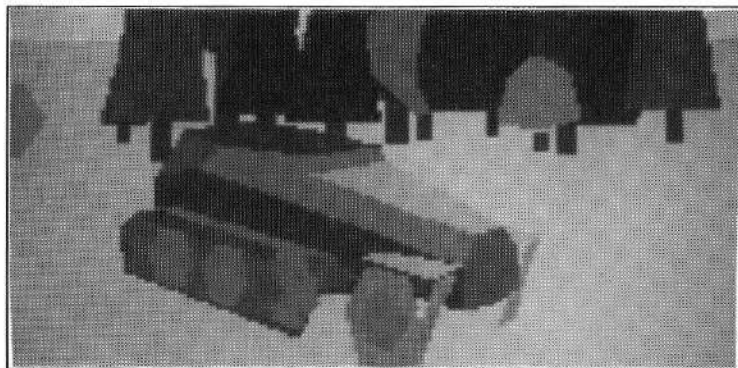
Un-armoured half-track used for a variety of roles, including limber (for larger guns such as the FlaK 88), infantry transporter, recovery vehicle, etc.



SdKfz 250

Maximum road range (km)	320
Maximum elevation (degrees)	0
Minimum elevation (degrees)	0
Right traverse (degrees)	0
Left traverse (degrees)	0
Maximum indirect fire range (m)	0
Frontal armour (mm)	15
Side armour (mm)	10
Rear armour (mm)	10
HE defence	N/A
AP firepower (mm at 100 metres)	0
HE firepower	0
Maximum rounds carried	0
Road speed (km/h)	60
Cross country speed (km/h)	40
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	6
Date first available	June 1941
Maximum towing weight (tonnes)	3

Small armoured half-track used for a variety of specialist roles. Rommel used one (called "Greif") in the Western Desert. It was decided to simplify production in 1943 by halving the



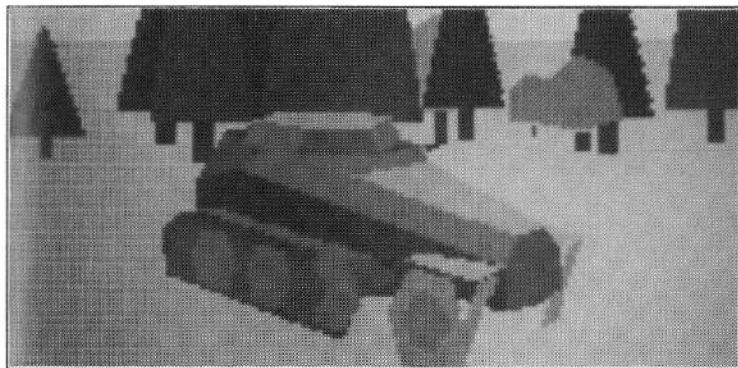
number of armour plates, which resulted in a functionally identical, but slightly different, shape. This new version has not been included since it was done purely for production reasons.

SdKfz 250/9

Maximum road range (km)	320
Maximum elevation (degrees)	85
Minimum elevation (degrees)	-10
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	2000
Frontal armour (mm)	15
Side armour (mm)	10
Rear armour (mm)	10
HE defence	N/A
AP firepower (mm at 100 metres)	50
HE firepower	0
Maximum rounds carried	100
Road speed (km/h)	60
Cross country speed (km/h)	40
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	6
Date first available	May 1943
Maximum towing weight (tonnes)	Unable to tow

This was a version of the aforementioned Sdkfz 250, with a 20mm gun mounted in a small open-topped turret, similar to the Sdkfz 222's. Sdkfz stands for Sonder Kraftzeug, which means

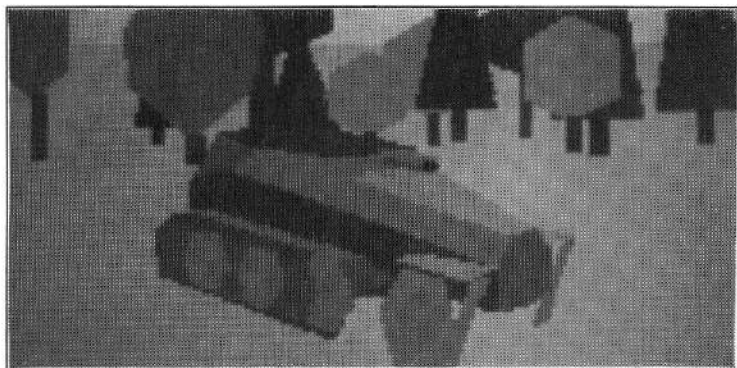
Special Purpose Vehicle.



SdKfz 250/8

Maximum road range (km)	320
Maximum elevation (degrees)	12
Minimum elevation (degrees)	-10
Right traverse (degrees)	12
Left traverse (degrees)	-12
Maximum indirect fire range (m)	5000
Frontal armour (mm)	15
Side armour (mm)	10
Rear armour (mm)	10
HE defence	N/A
AP firepower (mm at 100 metres)	105
HE firepower	7
Maximum rounds carried	20
Road speed (km/h)	60
Cross country speed (km/h)	40
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	6
Date first available	April 1943
Maximum towing weight (tonnes)	Unable to tow

Another variant, this one mounted a short 75mm gun. There were a number of these guns from refitted Panzer IVs, and it was decided to use them by fitting them on a variety of mounts.

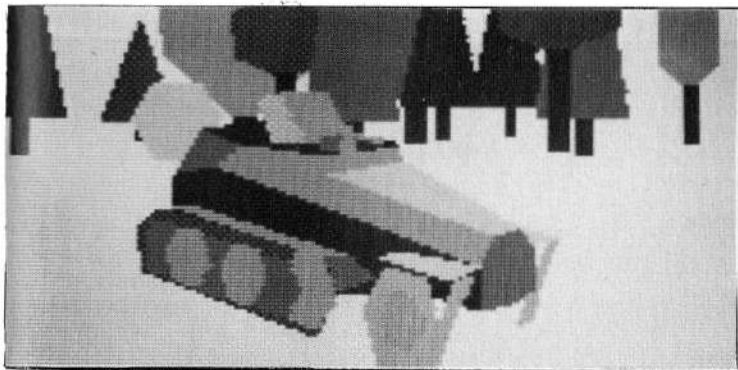


SdKfz 250/10

Maximum road range (km)	320
Maximum elevation (degrees)	25
Minimum elevation (degrees)	-8
Right traverse (degrees)	30
Left traverse (degrees)	-30
Maximum indirect fire range (m).....	4025
Frontal armour (mm)	15
Side armour (mm)	10
Rear armour (mm)	10
HE defence	N/A
AP firepower (mm at 100 metres).....	67
HE firepower	1
Maximum rounds carried	216
Road speed (km/h)	60
Cross country speed (km/h)	40
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	6
Date first available	January 1943
Maximum towing weight (tonnes)	Unable to tow

This mounted the standard 37mm PaK 36 anti-tank gun, complete with shield, on the Sdkfz250 half-track. There were other variants, but these were mainly for engineers or commu-

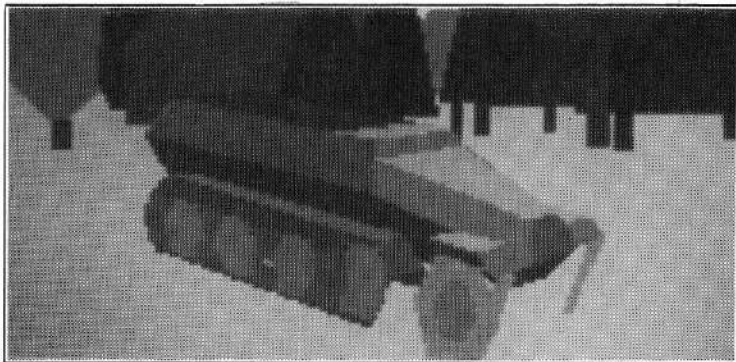
nications, and so have not been included.



SdKfz 251

Maximum road range (km)	300
Maximum elevation (degrees)	0
Minimum elevation (degrees)	0
Right traverse (degrees)	0
Left traverse (degrees)	0
Maximum indirect fire range (m)	0
Frontal armour (mm)	15
Side armour (mm)	10
Rear armour (mm)1	0
HE defence	N/A
AP firepower (mm at 100 metres)	0
HE firepower	0
Maximum rounds carried	0
Road speed (km/h)	53
Cross country speed (km/h)	35
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	8
Date first available	June 1939
Maximum towing weight (tonnes)	5

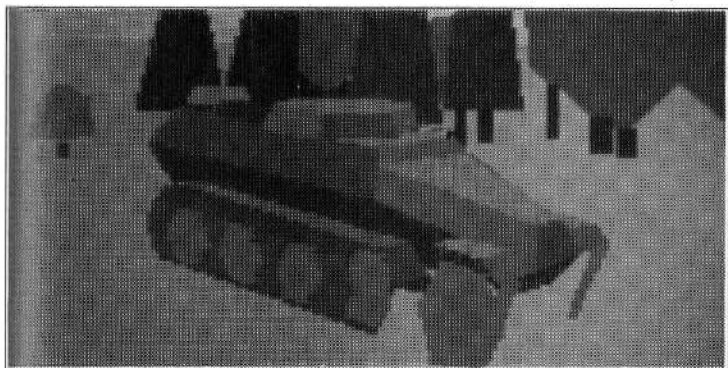
Very similar to Sdkfz250 above, but with a longer body. It was available earlier in the war, and so was converted to even more specialist roles.



SdKfz 251/23

Maximum road range (km)	300
Maximum elevation (degrees)	85
Minimum elevation (degrees)	-10
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	2000
Frontal armour (mm)	15
Side armour (mm)	10
Rear armour (mm)	10
HE defence	N/A
AP firepower (mm at 100 metres)	50
HE firepower	0
Maximum rounds carried	100
Road speed (km/h)	53
Cross country speed (km/h)	35
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	8
Date first available	January 1945
Maximum towing weight (tonnes)	Unable to tow

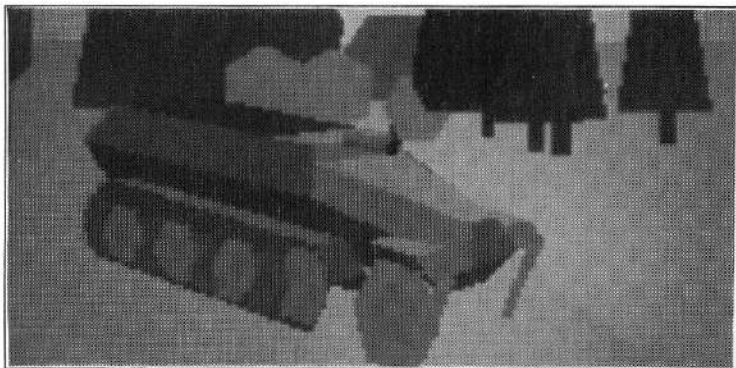
Very similar in concept to the Sdkfz 250/9, mentioned earlier. Both these vehicles had a better cross-country performance than the Sdkfz 222, and were seen as replacements for the armoured car.



SdKfz 251/9

Maximum road range (km)	300
Maximum elevation (degrees)	12
Minimum elevation (degrees)	-10
Right traverse (degrees)	12
Left traverse (degrees)	-12
Maximum indirect fire range (m)	5000
Frontal armour (mm)	15
Side armour (mm)	10
Rear armour (mm)	10
HE defence	N/A
AP firepower (mm at 100 metres)	105
HE firepower	7
Maximum rounds carried	52
Road speed (km/h)	53
Cross country speed (km/h)	35
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	8
Date first available	August 1942
Maximum towing weight (tonnes)	Unable to tow

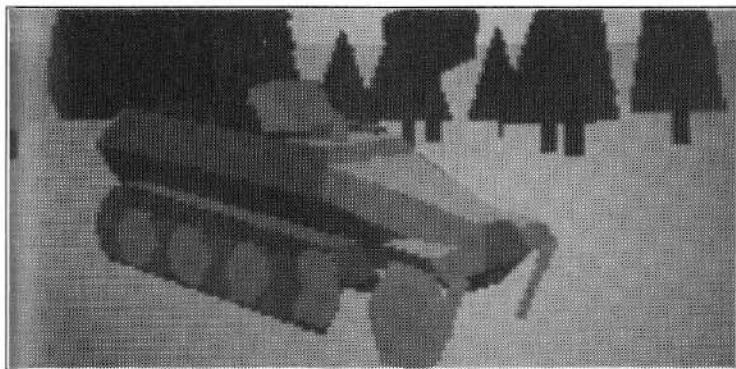
This was another example of re-using obsolete tank guns, (exactly the same idea was later used in the Sdkfz 250/8). The same short 75mm gun from re-fitted Panzer IVs was used.



SdKfz 251/10

Maximum road range (km)	300
Maximum elevation (degrees)	25
Minimum elevation (degrees)	-8
Right traverse (degrees)	30
Left traverse (degrees)	-30
Maximum indirect fire range (m)	4025
Frontal armour (mm)	15
Side armour (mm)	10
Rear armour (mm)	10
HE defence	N/A
AP firepower (mm at 100 metres)	67
HE firepower	1
Maximum rounds carried	168
Road speed (km/h)	53
Cross country speed (km/h)3	5
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	8
Date first available	January 1940
Maximum towing weight (tonnes)	Unable to tow

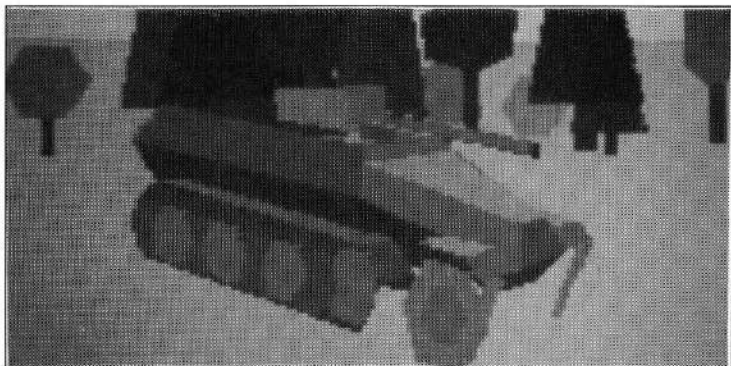
This was produced quite early in the war, when the PaK 36 37mm gun was the standard anti-tank gun. The Sdkfz 250/10 which fulfilled the same role appeared much later.



SdKfz 251/22

Maximum road range (km)	300
Maximum elevation (degrees)	22
Minimum elevation (degrees)	-3
Right traverse (degrees)	18
Left traverse (degrees)	-20
Maximum indirect fire range (m)	7680
Frontal armour (mm)	15
Side armour (mm)	10
Rear armour (mm)	10
HE defence	N/A
AP firepower (mm at 100 metres)	147
HE firepower	7
Maximum rounds carried	22
Road speed (km/h)	53
Cross country speed (km/h)	35
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	8
Date first available	December 1944
Maximum towing weight (tonnes)	Unable to tow

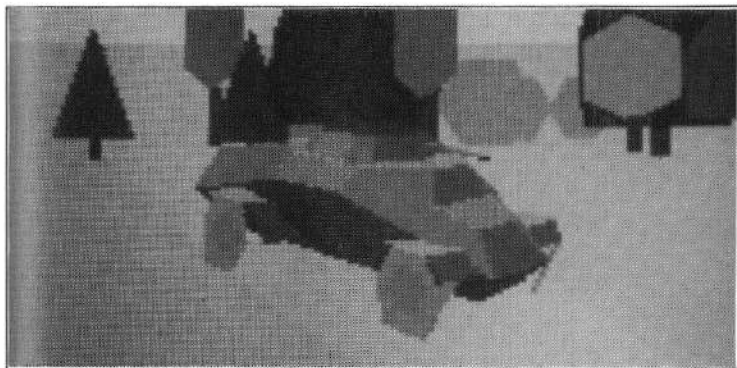
This was one of the few versions of the Sdkfz 251 which was not duplicated on the Sdkfz 250. This was a mount for the PaK 40 75mm anti-tank gun, which made the vehicle quite a potent weapon.



SdKfz 222

Maximum road range (km)	300
Maximum elevation (degrees)	87
Minimum elevation (degrees)	-4
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	2000
Frontal armour (mm)	10
Side armour (mm)	10
Rear armour (mm)	10
HE defence	N/A
AP firepower (mm at 100 metres)	50
HE firepower	0
Maximum rounds carried	180
Road speed (km/h)	85
Cross country speed (km/h)	22
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	5
Date first available	December 1936
Maximum towing weight (tonnes)	Unable to tow

This was the standard light armoured car used throughout the war for reconnaissance purposes. The 20mm gun had a high rate of fire, since it was adapted from an anti-aircraft cannon.

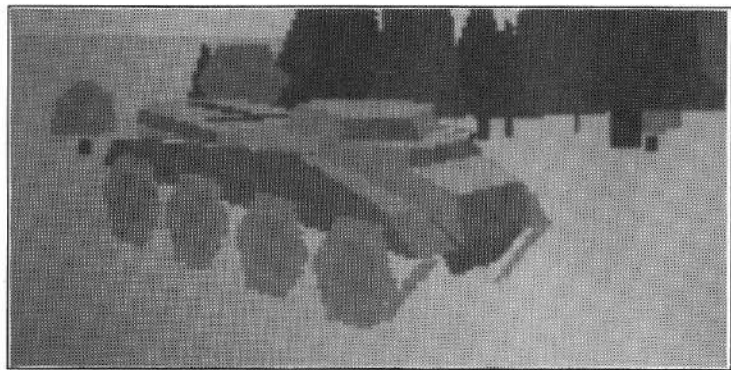


Elefant tank-destroyers initially had no secondary armament, and had to use their massive main gun to deal with infantry attacks. Thus a number were knocked out when they got too far ahead of their accompanying soldiers.

SdKfz 234/1

Maximum road range (km)	900
Maximum elevation (degrees)	70
Minimum elevation (degrees)	-4
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	2000
Frontal armour (mm)	40
Side armour (mm)	10
Rear armour (mm)	10
HE defence	N/A
HE firepower	0
Maximum rounds carried	255
Road speed (km/h)	80
Cross country speed (km/h)	22
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	12
Date first available	July 1944
Maximum towing weight (tonnes)	Unable to tow

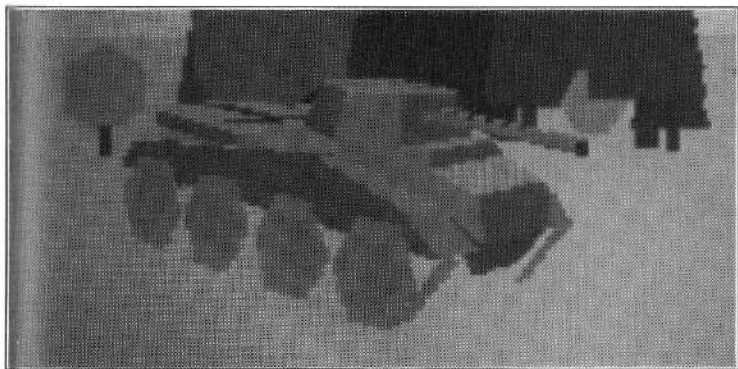
This was a lightly armed heavy armoured car which mounted the 20mm gun in the standard open-topped turret. The hull of this car was the successor to the earlier Sdkfz 232 series, which was similar in appearance.



SDKFZ 234/2 (PUMA)

Puma Maximum road range (km)	900
Maximum elevation (degrees)	20
Minimum elevation (degrees)	-10
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	2650
Frontal armour (mm)	40
Side armour (mm)	10
Rear armour (mm)	10
HE defence	N/A
AP firepower (mm at 100 metres)	107
HE firepower	2
Maximum rounds carried	55
Road speed (km/h)	80
Cross country speed (km/h)	22
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	12
Date first available	September 1943
Maximum towing weight (tonnes)	Unable to tow

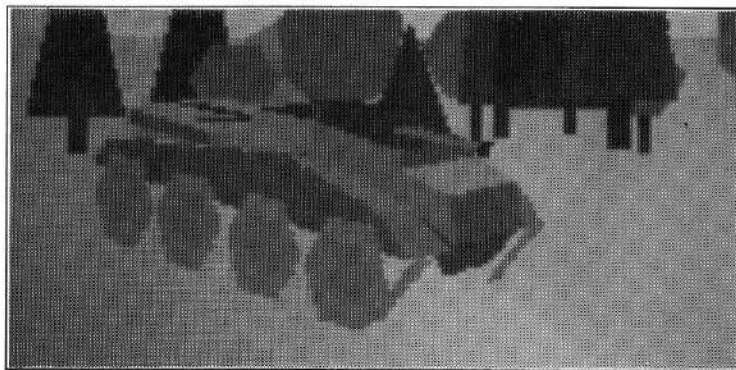
This was a much better idea than the previous vehicle, and placed the 50mm anti-tank gun, used in the Panzer III Ausf J, on a turretted armoured car.



SdKfz 234/3

Maximum road range (km)	900
Maximum elevation (degrees)	12
Minimum elevation (degrees)	-10
Right traverse (degrees)	12
Left traverse (degrees)	-12
Maximum indirect fire range (m)	5000
Frontal armour (mm)	30
Side armour (mm)	10
Rear armour (mm)	10
HE defence	Not Applicable
AP firepower (mm at 100 metres)	105
HE firepower	7
Maximum rounds carried	50
Road speed (km/h)	80
Cross country speed (km/h)	22
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	12
Date first available	June 1944
Maximum towing weight (tonnes)	Unable to tow

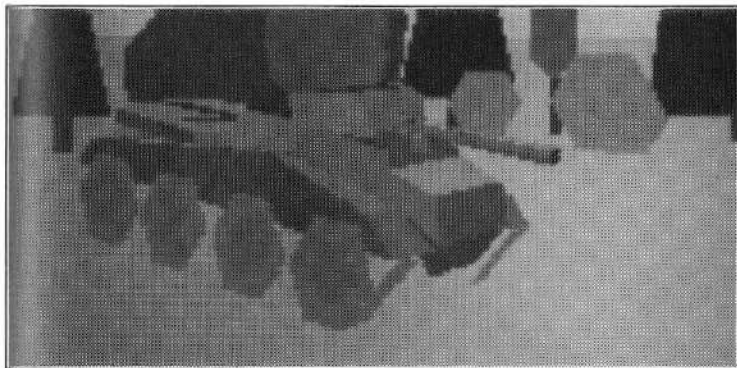
This was the basic Sdkfz 234 hull, but with the turret removed and the space used to provide an open-topped fighting compartment, with a short 75mm gun (which was surplus to requirements from refitted Panzer IVs).



SdKfz 234/4

Maximum road range (km)	900
Maximum elevation (degrees)	22
Minimum elevation (degrees)	-3
Right traverse (degrees)	12
Left traverse (degrees)	-12
Maximum indirect fire range (m)	7680
Frontal armour (mm)	30
Side armour (mm)	10
Rear armour (mm)	10
HE defence	N/A
AP firepower (mm at 100 metres)	147
HE firepower	7
Maximum rounds carried	12
Road speed (km/h)	80
Cross country speed (km/h)	22
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	12
Date first available	December 1944
Maximum towing weight (tonnes)	Unable to tow

This was similar to the above, but with the much better long 75mm PaK 40 anti-tank gun. This could fire the same HE shell as the short barrelled gun, but the AP shot was much more effective owing to the much longer barrel.

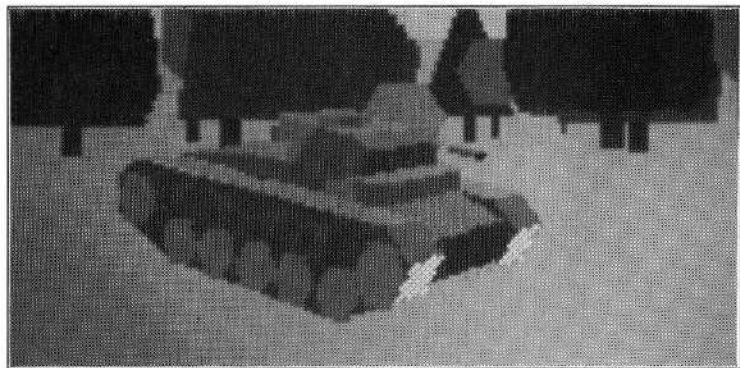


PANZER II

Maximum road range (km)	200
Maximum elevation (degrees)	20
Minimum elevation (degrees) -	9.5
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	2000
Frontal armour (mm)	15
Side armour (mm)	15
Rear armour (mm)	15
HE defence	N/A
AP firepower (mm at 100 metres)	50
HE firepower	0
Maximum rounds carried	180
Road speed (km/h)	40
Cross country speed (km/h)	25
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	9
Date first available	June 1938
Maximum towing weight (tonnes)	Unable to tow

One of the earliest tanks produced by Germany in quantity, this was seen as a light battle tank, with the Panzer I being designed mainly for training and the Panzer III and IV for engaging

enemy armour. The gun mounted was the 20mm cannon, which was barely adequate for a tank.

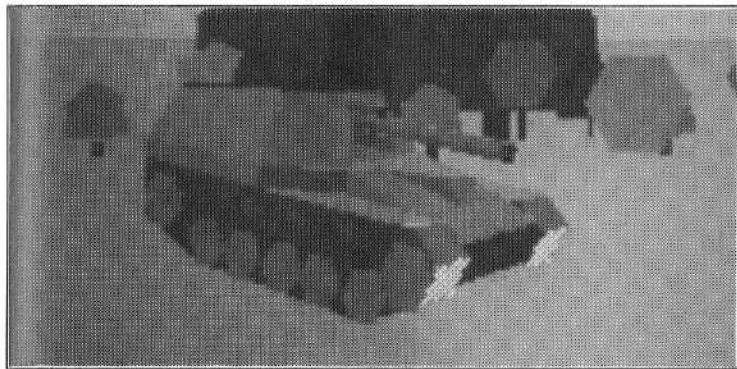


WESPE

Maximum road range (km)	220
Maximum elevation (degrees)	42
Minimum elevation (degrees)	-5
Right traverse (degrees)	17
Left traverse (degrees)	-17
Maximum indirect fire range (m)	10675
Frontal armour (mm)	20
Side armour (mm)	15
Rear armour (mm)	15
HE defence	N/A
AP firepower (mm at 100 metres)	105
HE firepower	15
Maximum rounds carried	32
Road speed (km/h)	40
Cross country speed (km/h)	25
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	11
Date first available	February 1943
Maximum towing weight (tonnes)	Unable to tow

The Panzer II was retired early in the war, since it was out-gunned. The old hulls were converted by moving the engine to the middle and building a fixed fighting compartment at the

rear of the vehicle. A standard 105mm field gun was then mounted and the resulting self-propelled gun was a very popular little vehicle.

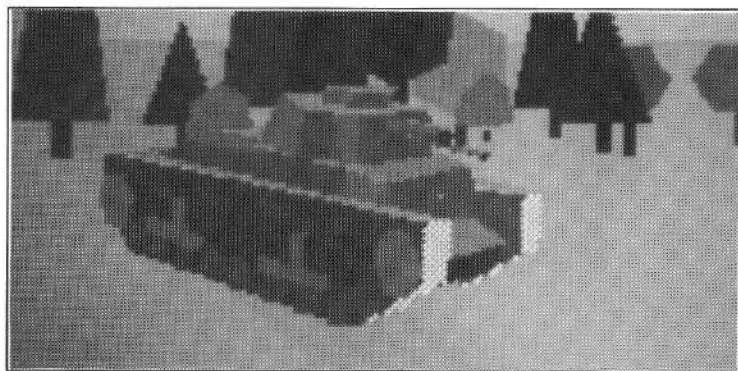


PANZER 35(t)

Maximum road range (km)	190
Maximum elevation (degrees)	25
Minimum elevation (degrees)	-10
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	4000
Frontal armour (mm)	25
Side armour (mm)	15
Rear armour (mm)	15
HE defence	N/A
AP firepower (mm at 100 metres)	37
HE firepower	1
Maximum rounds carried	72
Road speed (km/h)	35
Cross country speed (km/h)	20
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	11
Date first available	March 1939
Maximum towing weight (tonnes)	Unable to tow

When Germany annexed Czechoslovakia in March 1939, she took over all stocks of tanks there. The two most popular were the LT-35 and LT-38. The LT-35 became the Panzer 35(t),

with the "t" standing for "Czechoslovakian" in German. It mounted a 37mm gun.

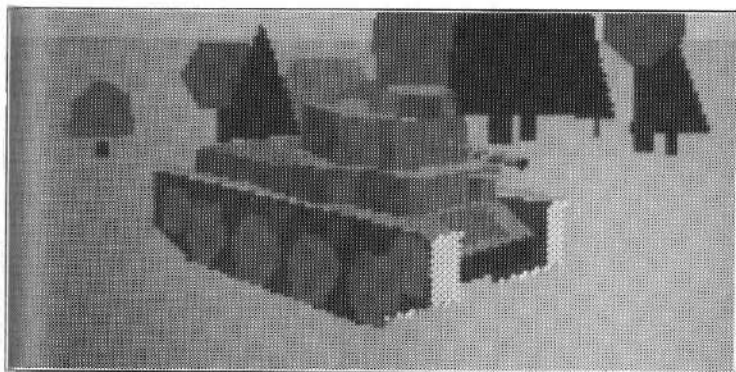


PANZER 38(T)

Maximum road range (km)	250
Maximum elevation (degrees)	25
Minimum elevation (degrees)	-10
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	4025
Frontal armour (mm)	25
Side armour (mm)	15
Rear armour (mm)	15
HE defence	N/A
AP firepower (mm at 100 metres)	67
HE firepower	1
Maximum rounds carried	90
Road speed (km/h)	42
Cross country speed (km/h)	15
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	10
Date first available	November 1940
Maximum towing weight (tonnes)	Unable to tow

This tank was the other main Czechoslovakian tank taken into German service. This was a better tank in a number of respects than the LT-35, and production continued during the war,

unlike the LT-35. It also mounted a 37mm gun, but a later model which had a much greater armour-piercing capability.

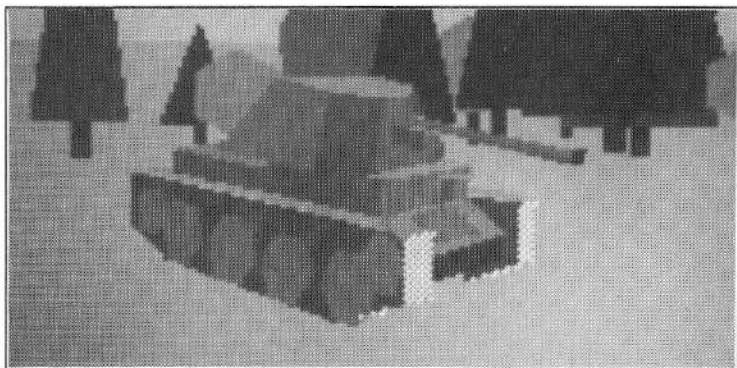


MARDER III

Maximum road range (km)	240
Maximum elevation (degrees)	22
Minimum elevation (degrees)	-5
Right traverse (degrees)	30
Left traverse (degrees)	-30
Maximum indirect fire range (m)	7680
Frontal armour (mm)	50
Side armour (mm)	15
Rear armour (mm)	0
HE defence	N/A
AP firepower (mm at 100 metres)	147
HE firepower	7
Maximum rounds carried	38
Road speed (km/h)	35
Cross country speed (km/h)	15
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	11
Date first available	April 1942
Maximum towing weight (tonnes)	Unable to tow

This was based upon the obsolescent Panzer 38(t) chassis. The turret was removed, and a simple shield was placed on the top of the hull. In this was mounted the PaK 40 75mm anti-tank

gun. This was an exercise in expediency, since the result was very high and ungainly.

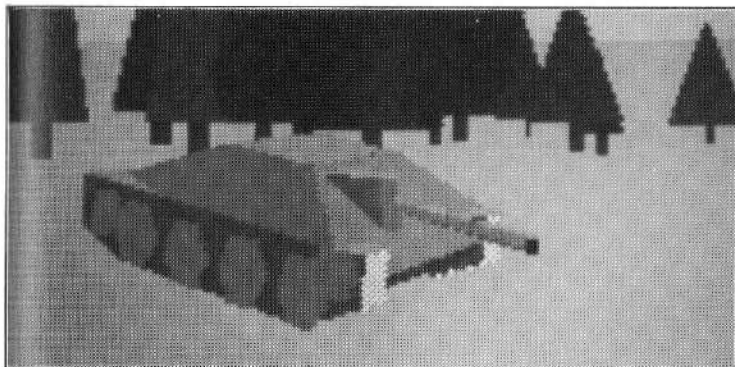


JAGDPANZER HETZER

Maximum road range (km)	177
Maximum elevation (degrees)	12
Minimum elevation (degrees)	-6
Right traverse (degrees)	11
Left traverse (degrees)	-5
Maximum indirect fire range (m)	7680
Frontal armour (mm)	100
Side armour (mm)	26
Rear armour (mm)	23
HE defence	N/A
AP firepower (mm at 100 metres)	147
HE firepower	7
Maximum rounds carried	41
Road speed (km/h)	42
Cross country speed (km/h)	15
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	16
Date first available	April 1944
Maximum towing weight (tonnes)	Unable to tow

This was a much better way of putting a PaK 40 75mm gun on an old chassis. The hull was a completely re-designed Panzer 38(t) with a new superstructure, which resulted in a very low

silhouette with excellent armour, essential in a tank destroyer (Jagdpanzer means Hunting Tank).

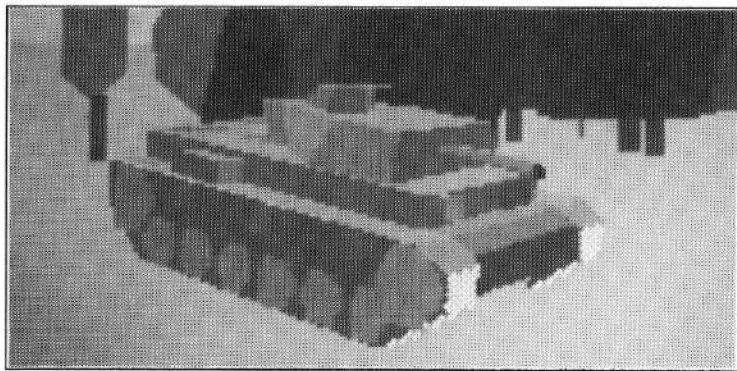


PANZER III AUSF E

Maximum road range (km)	165
Maximum elevation (degrees)	20
Minimum elevation (degrees)	-10
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	4025
Frontal armour (mm)	30
Side armour (mm)	30
Rear armour (mm)	25
HE defence	N/A
AP firepower (mm at 100 metres)	67
HE firepower	1
Maximum rounds carried	131
Road speed (km/h)	40
Cross country speed (km/h)	18
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	19
Date first available	December 1938
Maximum towing weight (tonnes)	Unable to tow

This was the first type of Panzer III to enter service, and was produced in small numbers as a main battle tank, to supplement the Panzer II. Armed with a 37mm gun, it was designed to

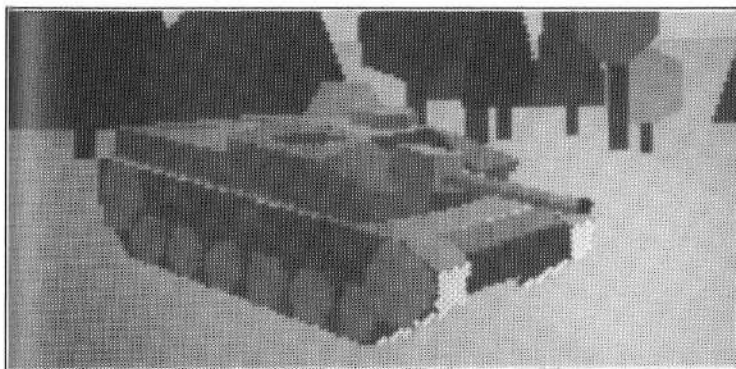
provide direct fire support against enemy armour.



PANZER III AUSF G

Maximum road range (km)	165
Maximum elevation (degrees)	20
Minimum elevation (degrees)	-10
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	2650
Frontal armour (mm)	30
Side armour (mm)	30
Rear armour (mm)	30
HE defence	N/A
AP firepower (mm at 100 metres)	96
HE firepower	2
Maximum rounds carried	99
Road speed (km/h)	40
Cross country speed (km/h)	18
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	20
Date first available	April 1940
Maximum towing weight (tonnes)	Unable to tow

This was an uprated version, with a 50L42 cannon mounted in place of the earlier 37mm, which had shown itself to be inadequate against the heavy French and British armour of the

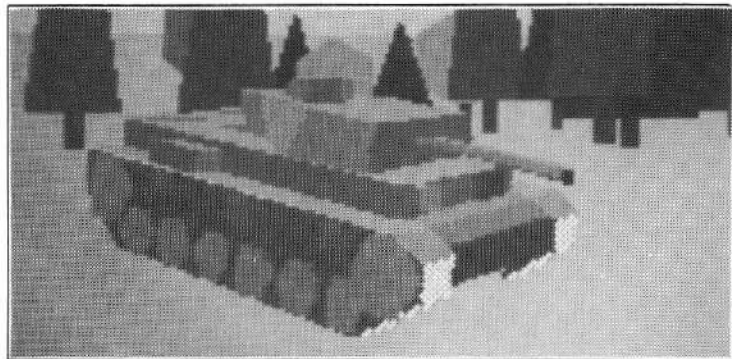


period. All guns can be measured by calibre and muzzle length, so 50L42 means 50mm bore and 42 units long. The longer the barrel, the greater the muzzle velocity and the greater the hitting power for armour-piercing.

PANZER III AUSF J

Maximum road range (km)	165
Maximum elevation (degrees)	20
Minimum elevation (degrees)	-10
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	2650
Frontal armour (mm)	55
Side armour (mm)	30
Rear armour (mm)	40
HE defence	N/A
AP firepower (mm at 100 metres)	107
HE firepower	2
Maximum rounds carried	99
Road speed (km/h)	40
Cross country speed (km/h)	18
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	21
Date first available	March 1941
Maximum towing weight (tonnes)	Unable to tow

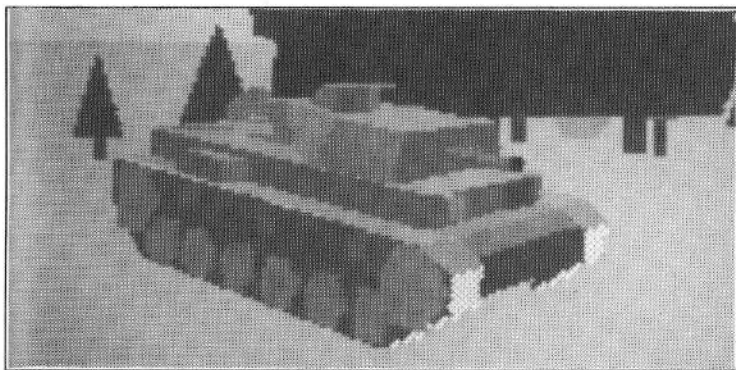
This was the next in the series of a continual process of upgrading. The gun mounted was the new 50L60 gun, with a better armour penetration. Also the armour was thickened to withstand the heavier weapons that the tank was now facing.



PANZER III AUSF N

Maximum road range (km)	165
Maximum elevation (degrees)	20
Minimum elevation (degrees)	-8
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	5000
Frontal armour (mm)	60
Side armour (mm)	30
Rear armour (mm)	40
HE defence	N/A
AP firepower (mm at 100 metres)	105
HE firepower	7
Maximum rounds carried	56
Road speed (km/h)	40
Cross country speed (km/h)	18
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	23
Date first available	June 1942
Maximum towing weight (tonnes)	Unable to tow

This was the end of the line for the Panzer III. It now mounted the close support howitzer from early Panzer IVs, the 75L24, which mainly increased its high-explosive capability.

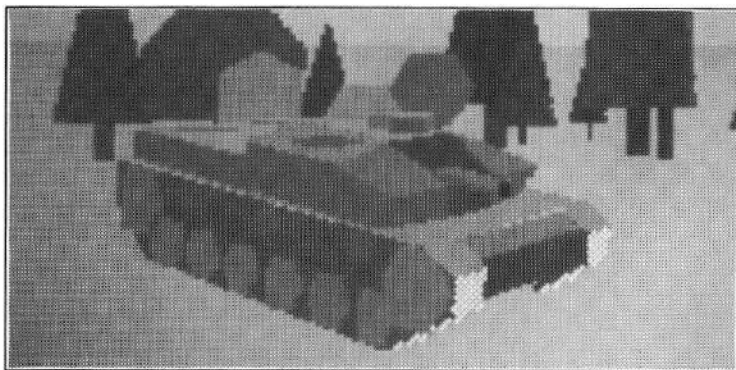


STuG III Ausf E

Maximum road range (km)	160
Maximum elevation (degrees)	20
Minimum elevation (degrees)	-10
Right traverse (degrees)	12
Left traverse (degrees)	-12
Maximum indirect fire range (m)	5000
Frontal armour (mm)	50
Side armour (mm)	30
Rear armour (mm)	30
HE defence	N/A
AP firepower (mm at 100 metres)	105
HE firepower	7
Maximum rounds carried	44
Road speed (km/h)	40
Cross country speed (km/h)	18
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	21
Date first available	September 1941
Maximum towing weight (tonnes)	Unable to tow

An assault gun based upon the Panzer III hull, this had a low fully-enclosed fighting compartment with a 75L24 gun mounted in it. It was originally intended to provide close fire

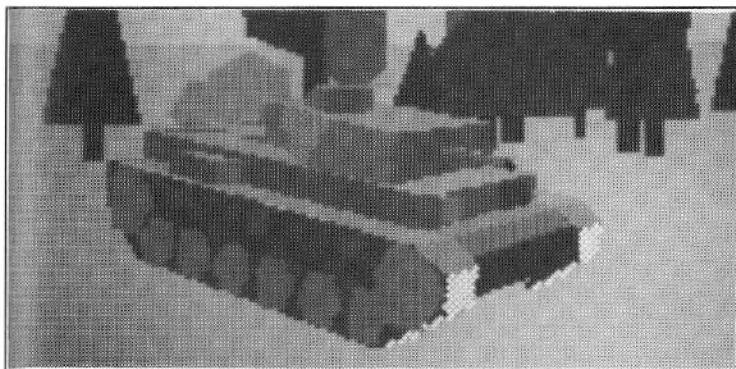
support for attacking infantry, but was soon used as a surrogate tank by other branches of the army.



STuG III Ausf G

Maximum road range (km)	155
Maximum elevation (degrees)	20
Minimum elevation (degrees)	-6
Right traverse (degrees)	10
Left traverse (degrees)	-10
Maximum indirect fire range (m)	7680
Frontal armour (mm)	80
Side armour (mm)	30
Rear armour (mm)	40
HE defence	N/A
AP firepower (mm at 100 metres)	147
HE firepower	7
Maximum rounds carried	54
Road speed (km/h)	40
Cross country speed (km/h)	18
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	24
Date first available	September 1942
Maximum towing weight (tonnes)	Unable to tow

This was similar to the above, but featured the new 75L48 gun to greatly increase the AP capability. Production of the Panzer III hull was stopped, but the StuG III was still requested by the

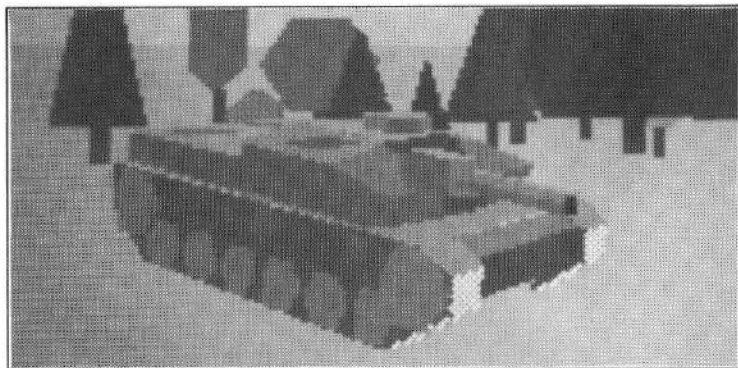


Army, so a new version was built on Panzer IV hulls instead. This was very similar to the above so the StuG IV has not been included.

STURHAUBITZE 42

Maximum road range (km)	155
Maximum elevation (degrees)	20
Minimum elevation (degrees)	-6
Right traverse (degrees)	10
Left traverse (degrees)	-10
Maximum indirect fire range (m)	10675
Frontal armour (mm)	80
Side armour (mm)	30
Rear armour (mm)	40
HE defence	N/A
AP firepower (mm at 100 metres)	105
HE firepower	15
Maximum rounds carried	36
Road speed (km/h)	40
Cross country speed (km/h)	18
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	24
Date first available	March 1943
Maximum towing weight (tonnes)	Unable to tow

This was the standard StuG III, but with a 105mm howitzer mounted in place of the 75mm gun for close fire support.

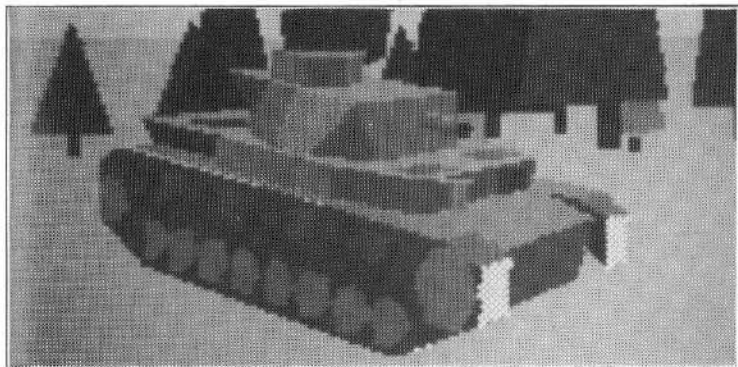


PANZER IV AUSF F

Maximum road range (km)	200
Maximum elevation (degrees)	20
Minimum elevation (degrees)	-8
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	5000
Frontal armour (mm)	50
Side armour (mm)	30
Rear armour (mm)	25
HE defence	N/A
AP firepower (mm at 100 metres)	105
HE firepower	7
Maximum rounds carried	80
Road speed (km/h)	42
Cross country speed (km/h)	20
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	23
Date first available	April 1941
Maximum towing weight (tonnes)	Unable to tow

The Panzer IV was designed to provide close fire support for the Panzer II and Panzer III, and was equipped with a 75L24 gun for the purpose. However, it was envisioned that this might

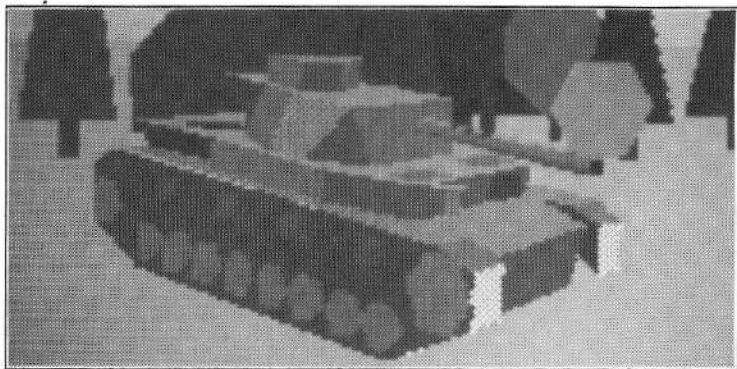
need to be upgraded at some point, and so the turret was made large enough to take a more powerful gun if required.



PANZER IV AUSF G

Maximum road range (km)	210
Maximum elevation (degrees)	20
Minimum elevation (degrees)	-8
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	7680
Frontal armour (mm)	50
Side armour (mm)	30
Rear armour (mm)	25
HE defence	N/A
AP firepower (mm at 100 metres)	147
HE firepower	7
Maximum rounds carried	87
Road speed (km/h)	40
Cross country speed (km/h)	20
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	24
Date first available	May 1942
Maximum towing weight (tonnes)	Unable to tow

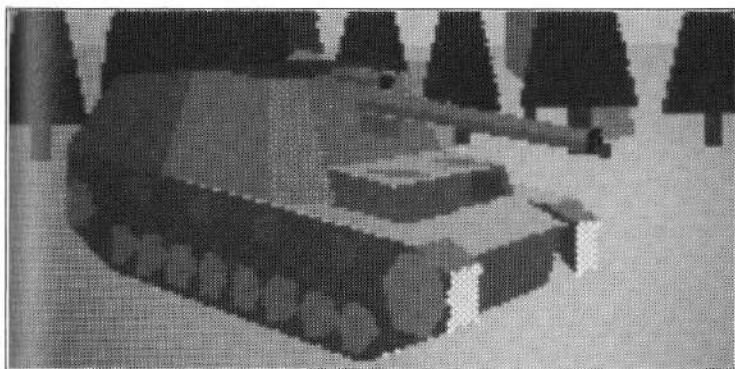
This was the next version; the new 75L48 gun was able to be mounted with a minimum of fuss and enabled the Germans to tackle the increasing numbers of new Shermans and T34s.



HUMMEL

Maximum road range (km)	215
Maximum elevation (degrees)	42
Minimum elevation (degrees)	-3
Right traverse (degrees)	15
Left traverse (degrees)	-15
Maximum indirect fire range (m)	13250
Frontal armour (mm)	21
Side armour (mm)	13
Rear armour (mm)	13
HE defence	N/A
AP firepower (mm at 100 metres)	165
HE firepower	44
Maximum rounds carried	18
Road speed (km/h)	42
Cross country speed (km/h)	20
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	24
Date first available	February 1943
Maximum towing weight (tonnes)	Unable to tow

The Hummel (Bumble Bee) was a Panzer IV hull with the engine moved forwards, and a large open-topped fighting compartment built at the rear. In this was put a standard 150mm



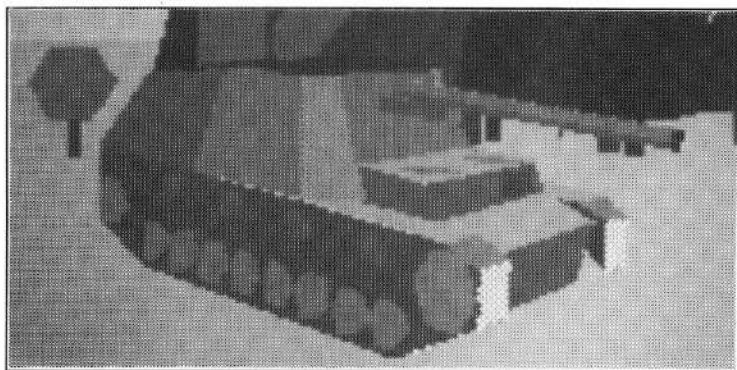
field gun for indirect fire support. This vehicle complemented the lighter Wespe (Wasp) as a self-propelled gun.

NASHORN

Maximum road range (km)	215
Maximum elevation (degrees)	20
Minimum elevation (degrees)	-5
Right traverse (degrees)	15
Left traverse (degrees)	-15
Maximum indirect fire range (m)	17500
Frontal armour (mm)	21
Side armour (mm)	15
Rear armour (mm)	15
HE defence	N/A
AP firepower (mm at 100 metres)	243
HE firepower	10
Maximum rounds carried	40
Road speed (km/h)	42
Cross country speed (km/h)	20
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	24
Date first available	February 1943
Maximum towing weight (tonnes)	Unable to tow

The Nashorn (rhinoceros) was also known as the Hornisse (Hornet), and mounted the extremely potent PaK 43 88L71 in the same hull as the Hummel. It was (like the Hummel) very

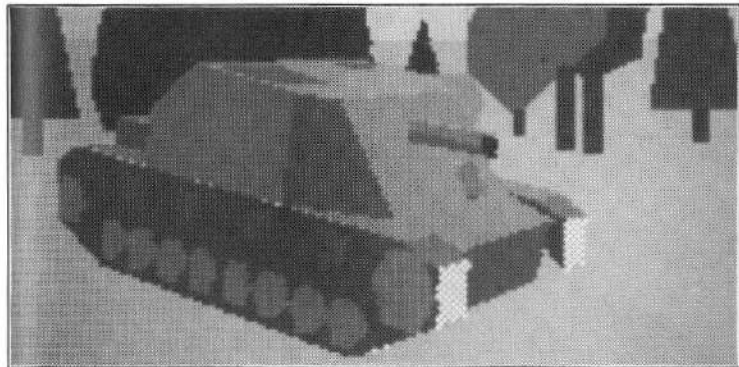
lightly armoured, and so was best used from a concealed position, where its high silhouette was at a smaller disadvantage.



STURMPANZER IV

Maximum road range (km)	210
Maximum elevation (degrees)	20
Minimum elevation (degrees)	-7
Right traverse (degrees)	10
Left traverse (degrees)	-10
Maximum indirect fire range (m)	6000
Frontal armour (mm)	100
Side armour (mm)	45
Rear armour (mm)	30
HE defence	N/A
AP firepower (mm at 100 metres)	165
HE firepower	25
Maximum rounds carried	38
Road speed (km/h)	40
Cross country speed (km/h)	20
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	28
Date first available	April 1943
Maximum towing weight (tonnes)	Unable to tow

Designed as a demolition tank for street fighting, this mounted a heavy 150mm howitzer in a thickly armoured superstructure. This was also known as the Brummbär which means Grizzly Bear in German.

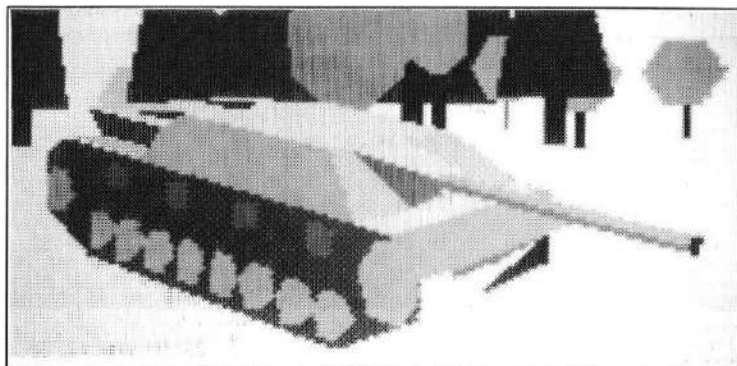


JAGDPANZER IV/70(V)

Maximum road range (km)	210
Maximum elevation (degrees)	15
Minimum elevation (degrees)	-5
Right traverse (degrees)	10
Left traverse (degrees)	-10
Maximum indirect fire range (m)	15000
Frontal armour (mm)	124
Side armour (mm)	40
Rear armour (mm)	20
HE defence	N/A
AP firepower (mm at 100 metres)	198
HE firepower	7
Maximum rounds carried	55
Road speed (km/h)	35
Cross country speed (km/h)	20
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	26
Date first available	August 1944
Maximum towing weight (tonnes)	Unable to tow

There were several attempts to mount the long 75L70 gun used in the Panther on a Panzer IV. An attempt to cram it into the turret was not a success, so a low, heavily armoured superstructure

was built to fit onto a standard Panzer IV chassis. The one here was built by Vomag (hence the V suffix). Alkett also produced a similar machine, but with a taller and more clumsy fighting compartment. Early versions were provided with 75L48 guns due to a shortage of 75L70s.



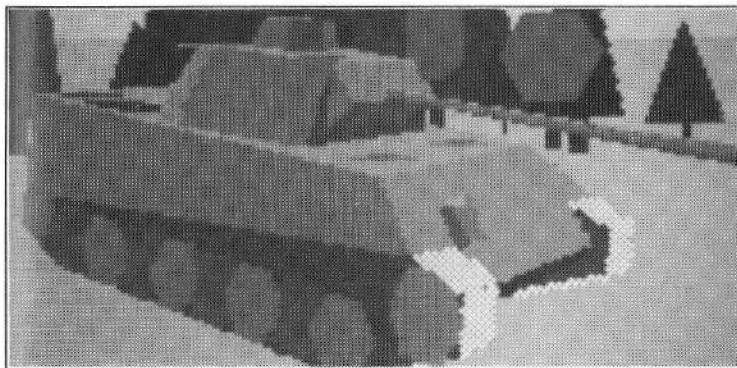
PANTHER

Maximum road range (km)	200
Maximum elevation (degrees)	18
Minimum elevation (degrees)	-8
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	15000
Frontal armour (mm)	120
Side armour (mm)	57
Rear armour (mm)	46
HE defence	N/A
AP firepower (mm at 100 metres)	198
HE firepower	7
Maximum rounds carried	80
Road speed (km/h)	46
Cross country speed (km/h)	24
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	45
Date first available	January 1943
Maximum towing weight (tonnes)	Unable to tow

During the Battle of Kursk, the new Panther, Tiger I and Elefant tanks were first used. More Panthers were lost to mechanical breakdowns than to enemy action.

The Panther (or Panzer V) was an excellent combination of firepower, armour and mobility, and proved itself on the battlefield, where the Americans reckoned to lose 5 Shermans

for every Panther destroyed. There were three marks of Panther, but all mounted the same gun and the changes were mainly production details, such as a new bow machine gun mounting, steel rimmed wheels, etc.

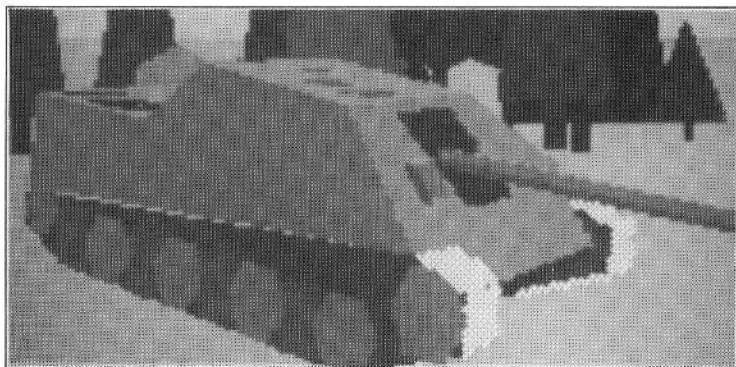


JAGDPANTHER

Maximum road range (km)	160
Maximum elevation (degrees)	14
Minimum elevation (degrees)	-8
Right traverse (degrees)	13
Left traverse (degrees)	-13
Maximum indirect fire range (m)	17500
Frontal armour (mm)	140
Side armour (mm)	57
Rear armour (mm)	46
HE defence	N/A
AP firepower (mm at 100 metres)	243
HE firepower	10
Maximum rounds carried	57
Road speed (km/h)	46
Cross country speed (km/h)	24
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	46
Date first available	January 1944
Maximum towing weight (tonnes)	Unable to tow

The standard German practice of putting the next most powerful gun on a tank chassis resulted in the Jagdpanther, which featured the excellent PaK43 88L71 gun in a well-sloped

superstructure. Many experts believe this to be the best tank destroyer to come out of the war, on any side.

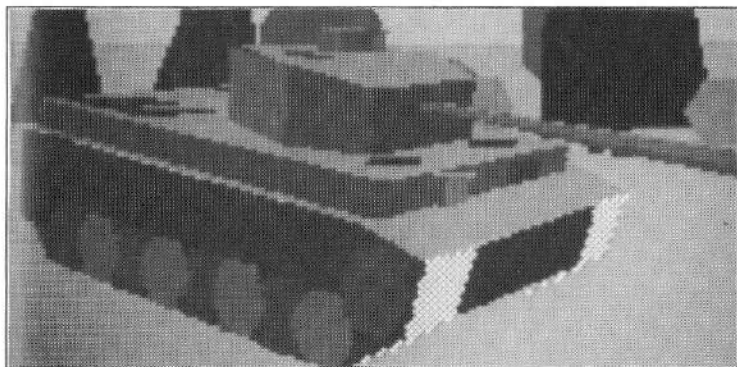


TIGER I

Maximum road range (km)	140
Maximum elevation (degrees)	17
Minimum elevation (degrees)	-7
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	10000
Frontal armour (mm)	110
Side armour (mm)	80
Rear armour (mm)	80
HE defence	N/A
AP firepower (mm at 100 metres)	190
HE firepower	9
Maximum rounds carried	92
Road speed (km/h)	38
Cross country speed (km/h)	20
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	57
Date first available	July 1942
Maximum towing weight (tonnes)	Unable to tow

Built to dominate the battlefield, the Tiger inspired fear wherever it was encountered. The gun was the 88L56 that Rommel had used to such good effect in the desert, and the vehicle was

impervious to most contemporary anti-tank guns.

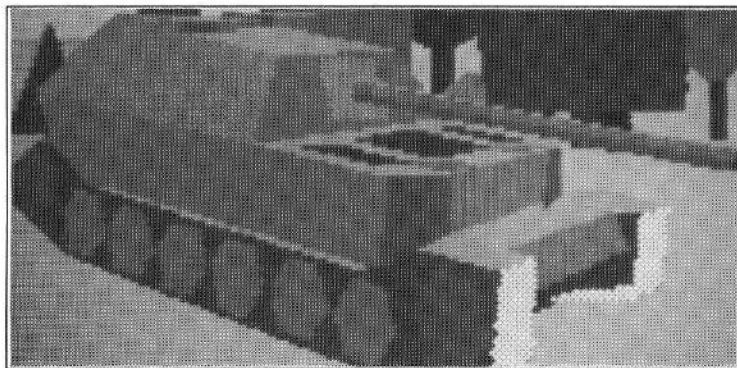


ELEFANT/FERDINAND

Maximum road range (km)	150
Maximum elevation (degrees)	14
Minimum elevation (degrees)	-8
Right traverse (degrees)	14
Left traverse (degrees)	-14
Maximum indirect fire range (m)	17500
Frontal armour (mm)	200
Side armour (mm)	80
Rear armour (mm)	80
HE defence	N/A
AP firepower (mm at 100 metres)	243
HE firepower	10
Maximum rounds carried	50
Road speed (km/h)	30
Cross country speed (km/h)	15
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	65
Date first available	June 1943
Maximum towing weight (tonnes)	Unable to tow

Porsche had started making their version of the Tiger, before it was officially decided to concentrate on the Henschel version. The completed Porsche hulls were then converted to

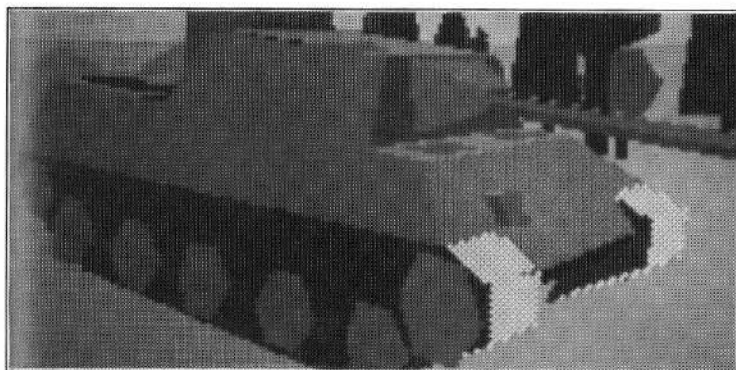
Jagdpanzer by moving the engine to the middle and building a massively armoured fixed fighting compartment at the rear. In this was placed the new PaK43 88L71 gun. The Elefant was also known as the "Ferdinand", after Dr. Ferdinand Porsche.



JAGDTIGER

Maximum road range (km)	170
Maximum elevation (degrees)	15
Minimum elevation (degrees)	-7
Right traverse (degrees)	10
Left traverse (degrees)	-10
Maximum indirect fire range (m)	24400
Frontal armour (mm)	250
Side armour (mm)	80
Rear armour (mm)	80
HE defence	N/A
AP firepower (mm at 100 metres)	213
HE firepower	28
Maximum rounds carried	40
Road speed (km/h)	35
Cross country speed (km/h)	17
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	70
Date first available	July 1944
Maximum towing weight (tonnes)	Unable to tow

Only 56 examples of this formidable tank destroyer were made. It mounted a 128mm gun in an extremely well-armoured box-like superstructure on a slightly lengthened Tiger II hull. The

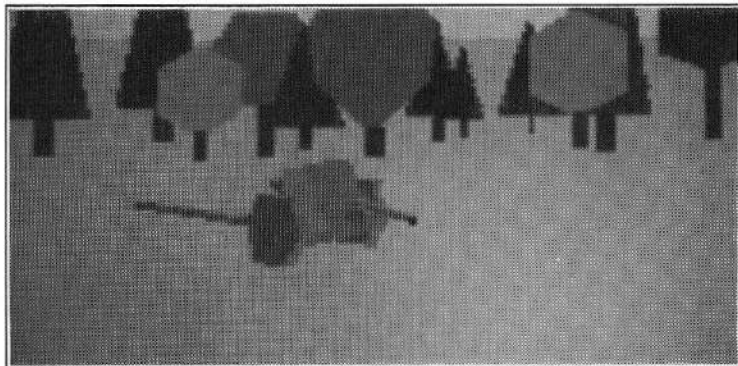


vehicle was too heavy, however, and was only really useful for defensive work, where it could quite easily knock out any opposition.

German Artillery 37MM PAK 36

Maximum road range (km)	0
Maximum elevation (degrees)	25
Minimum elevation (degrees)	-8
Right traverse (degrees)	30
Left traverse (degrees)	-30
Maximum indirect fire range (m)	4025
Frontal armour (mm)	0
Side armour (mm)	0
Rear armour (mm)	0
HE defence	8
AP firepower (mm at 100 metres)	67
HE firepower	1
Maximum rounds carried	100
Road speed (km/h)	5
Cross country speed (km/h)	3
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	1
Date first available	December 1936
Maximum towing weight (tonnes)	Unable to tow

This weapon was the standard anti-tank gun of the Wehrmacht in the opening stages of the war. It was a 37L43 weapon, which was also mounted on a variety of light vehicles to provide extra fire-support.

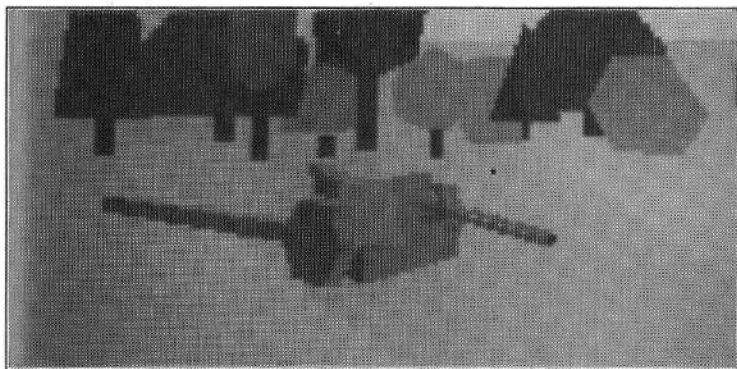


50MM PAK 38

Maximum road range (km)	0
Maximum elevation (degrees)	27
Minimum elevation (degrees)	-8
Right traverse (degrees)	32
Left traverse (degrees)	-32
Maximum indirect fire range (m)	2650
Frontal armour (mm)	0
Side armour (mm)	0
Rear armour (mm)	0
HE defence	12
AP firepower (mm at 100 metres)	105
HE firepower	2
Maximum rounds carried	100
Road speed (km/h)	4
Cross country speed (km/h)	2
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	1
Date first available	November 1940
Maximum towing weight (tonnes)	Unable to tow

The PaK36 was not powerful enough to deal with the heavy armour now appearing, and so this 50L60 weapon was developed. A shortened version was also fitted to the Panzer III,

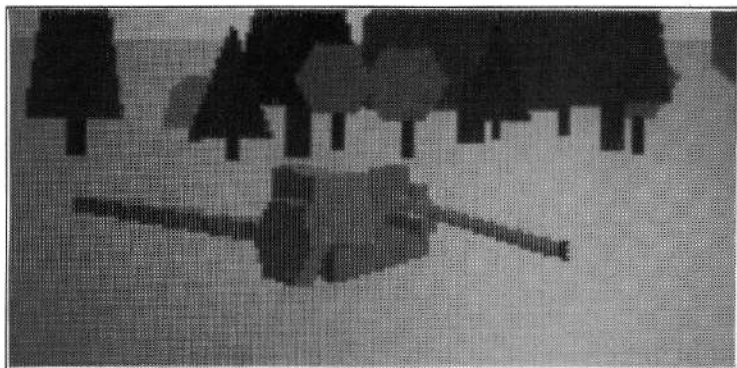
before a modified turret was made which could accept the full length gun.



75MM PaK 40

Maximum road range (km)	0
Maximum elevation (degrees)	22
Minimum elevation (degrees)	-5
Right traverse (degrees)	32
Left traverse (degrees)	-32
Maximum indirect fire range (m)	7680
Frontal armour (mm)	0
Side armour (mm)	0
Rear armour (mm)	0
HE defence	14
AP firepower (mm at 100 metres)	147
HE firepower	7
Maximum rounds carried	100
Road speed (km/h)	4
Cross country speed (km/h)	2
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	2
Date first available	November 1941
Maximum towing weight (tonnes)	Unable to tow

This was produced and used in a bewildering variety of guises to the end of the war. This 75L48 gun was a scaled-up version of the earlier PaK 38, and proved very popular.

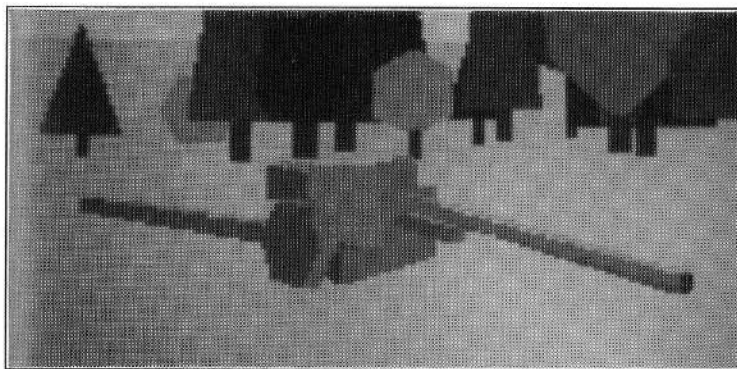


88MM PAK 43

Maximum road range (km)	0
Maximum elevation (degrees)	40
Minimum elevation (degrees)	-8
Right traverse (degrees)	30
Left traverse (degrees)	-30
Maximum indirect fire range (m)	17500
Frontal armour (mm)	0
Side armour (mm)	0
Rear armour (mm)	0
HE defence	25
AP firepower (mm at 100 metres)	243
HE firepower	10
Maximum rounds carried	100
Road speed (km/h)	3
Cross country speed (km/h)	1
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	5
Date first available	November 1943
Maximum towing weight (tonnes)	Unable to tow

This was an exceptionally hard-hitting gun, which, coupled with its very low silhouette, made it greatly feared by the Allies.

The calibre was 88L71, and this same gun was mounted on various panzerjaeger and also on the Tiger II.

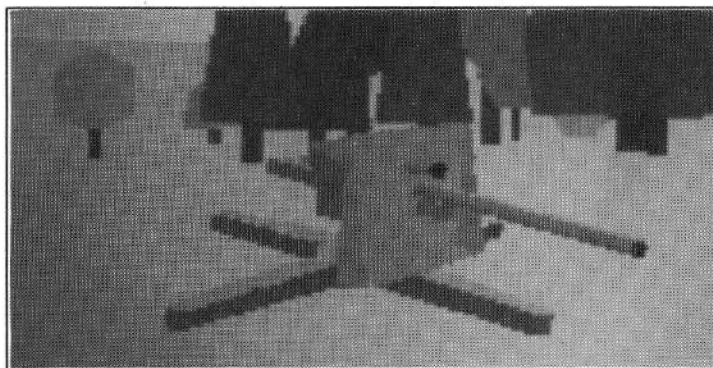


88MM FLAK 88

Maximum road range (km)	0
Maximum elevation (degrees)	85
Minimum elevation (degrees)	0
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	9900
Frontal armour (mm)	0
Side armour (mm)	0
Rear armour (mm)	0
HE defence	20
AP firepower (mm at 100 metres)	190
HE firepower	9
Maximum rounds carried	100
Road speed (km/h)	0
Cross country speed (km/h)	0
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	5
Date first available	December 1937
Maximum towing weight (tonnes)	Unable to tow

As can be seen from the title, this gun was designed for anti-aircraft use, which is why the elevation is so great. During the Western Desert campaigns it was also discovered to have an

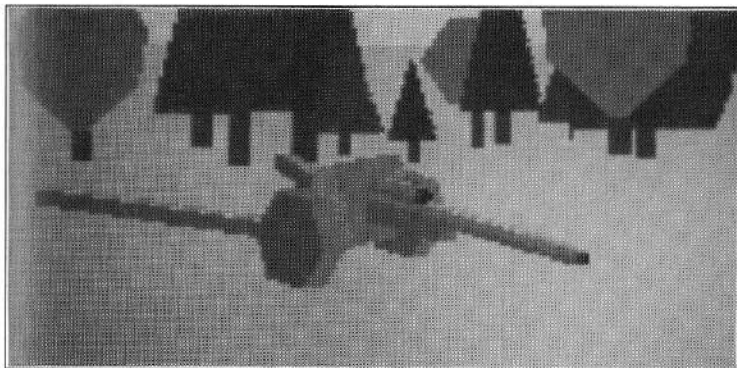
excellent AP capability, which saw it later mounted on the Tiger I. Calibre was 88L56.



105MM LEFH18

Maximum road range (km)	0
Maximum elevation (degrees)	40
Minimum elevation (degrees)	0
Right traverse (degrees)	28
Left traverse (degrees)	-28
Maximum indirect fire range (m)	10675
Frontal armour (mm)	0
Side armour (mm)	0
Rear armour (mm)	0
HE defence	17
AP firepower (mm at 100 metres)	105
HE firepower	15
Maximum rounds carried	100
Road speed (km/h)	2
Cross country speed (km/h)	1
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	2
Date first available	December 1935
Maximum towing weight (tonnes)	Unable to tow

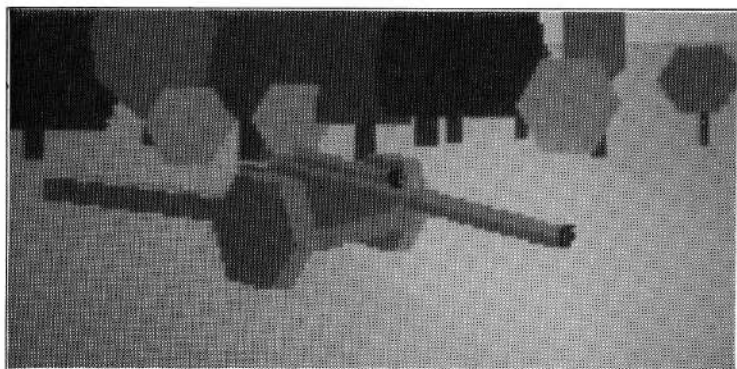
This was a medium artillery gun for indirect fire support. Also mounted in the Wespe to provide a more mobile platform, this gun was heavily used by the Germans.



150MM sFH18

Maximum road range (km)	0
Maximum elevation (degrees)	45
Minimum elevation (degrees)	0
Right traverse (degrees)	32
Left traverse (degrees)	-32
Maximum indirect fire range (m)	13250
Frontal armour (mm)	0
Side armour (mm)	0
Rear armour (mm)	0
HE defence	27
AP firepower (mm at 100 metres)	160
HE firepower	44
Maximum rounds carried	100
Road speed (km/h)	2
Cross country speed (km/h)	1
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	6
Date first available	December 1934
Maximum towing weight (tonnes)	Unable to tow

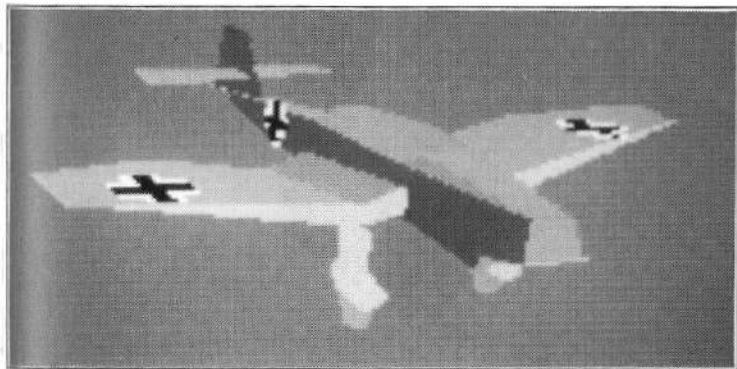
Heavy artillery piece, this was also mounted in the Hummel self-propelled gun. Roughly comparable to the American Long Tom gun, this also was extensively used during the war.



German Aircraft **JUNKERS STUKA Ju87B**

Maximum range (km)	600
Maximum airspeed (km/h)	387
Minimum airspeed (km/h)	100
Weight of each bomb (kg)	1000
Maximum range of gun (m)	0
Total number of machine guns	3
HE defence	10
AP firepower (mm at 100 metres)	0
HE firepower	0
Number of rockets	0
Number of bombs	1
Aircraft type	Dive Bomber
Weight (tonnes)	6
Date first available	January 1938

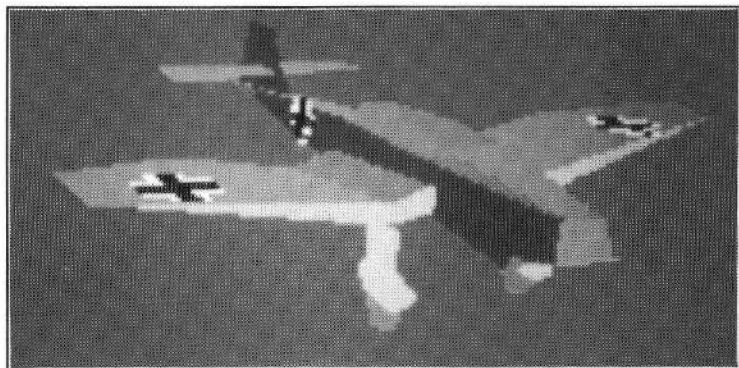
With its cranked wings and fixed under-carriage, the Stuka was easily recognizable wherever it appeared. Designed for dive-bombing, it could achieve pin-point accuracy. Its main disadvantage was relatively low speed, which made it an easy target for fighters.



JUNKERS STUKA Ju87D

Maximum range (km)	1000
Maximum airspeed (km/h)	408
Minimum airspeed (km/h)	100
Weight of each bomb (kg)	1800
Maximum range of gun (m)	0
Total number of machine guns	4
HE defence	10
AP firepower (mm at 100 metres)	0
HE firepower	0
Number of rockets	0
Number of bombs	1
Aircraft type	Dive Bomber
Weight (tonnes)	6
Date first available	June 1940

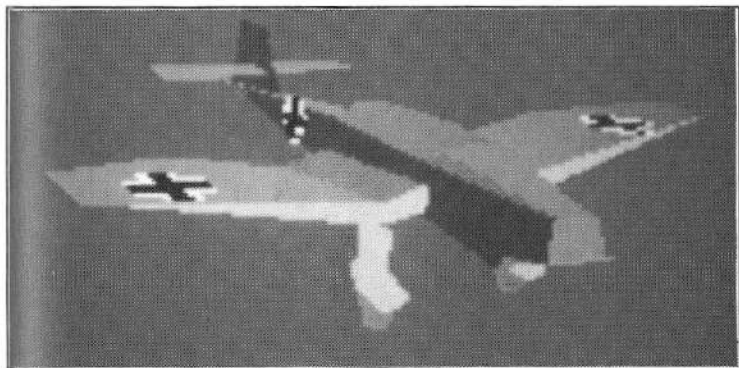
Up-rated engine gave the Stuka a new lease of life when it was being retired. The new engine boosted the top speed, and doubled the bomb size.



JUNKERS STUKA JU87G

Maximum range (km)	1000
Maximum airspeed (km/h)	408
Minimum airspeed (km/h)	100
Weight of each bomb (kg)	0
Maximum range of gun (m)	0
Total number of machine guns	4
HE defence	10
AP firepower (mm at 100 metres)	100
HE firepower	1
Number of rockets	0
Number of bombs	0
Aircraft type	Ground Attack
Weight (tonnes)	6
Date first available	June 1943

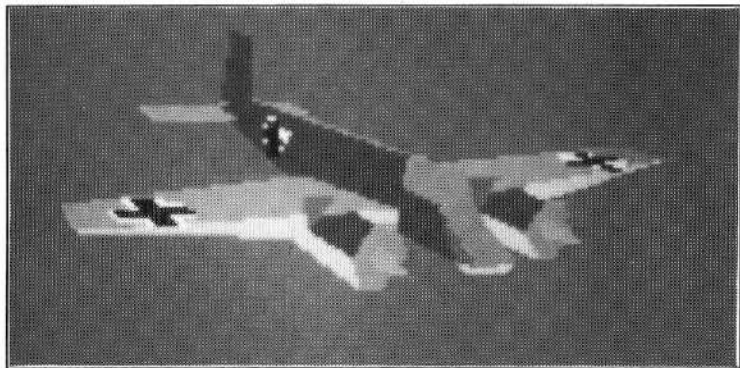
This was a ground-attack version with two 37mm Flak 18 or 36 cannon in under-wing pods. The Stuka name was dropped in 1943 and replaced by Schlacht, meaning battle or ground-attack aircraft.



HENSCHEL Hs129

Maximum range (km)	560
Maximum airspeed (km/h)	408
Minimum airspeed (km/h)	100
Weight of each bomb (kg)	0
Maximum range of gun (m)	0
Total number of machine guns	4
HE defence	15
AP firepower (mm at 100 metres)	100
HE firepower	1
Number of rockets	0
Number of bombs	0
Aircraft type	Ground Attack
Weight (tonnes)	4
Date first available	June 1942

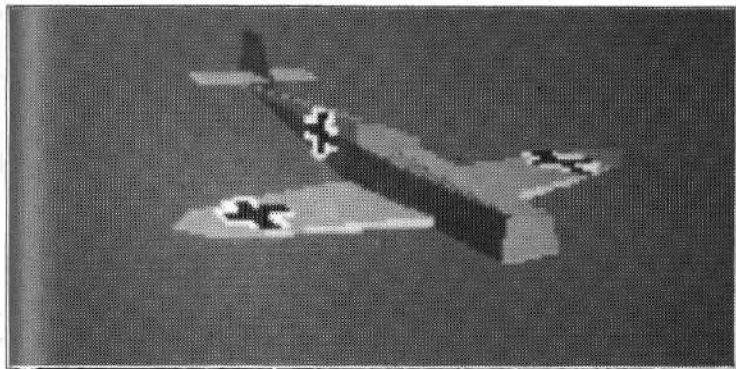
A purpose-designed ground-attack aircraft, the Hs 129 was armed with a 30mm MK101 cannon in a pod under the fuselage. This was an effective combination, but production was too slow to provide enough of these.



MESSERSCHMITT Me109

Maximum range (km)	569
Maximum airspeed (km/h)	550
Minimum airspeed (km/h)	100
Weight of each bomb (kg)	250
Maximum range of gun (m)	0
Total number of machine guns	3
HE defence	7
AP firepower (mm at 100 metres)	0
HE firepower	0
Number of rockets	0
Number of bombs	1
Aircraft type	Fighter
Weight (tonnes)	3
Date first available	January 1939

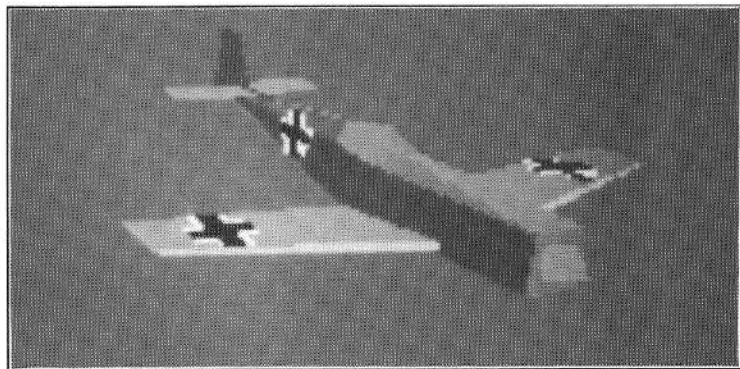
Standard German fighter aircraft, this type flew against Spitfires and Hurricanes during the Battle of Britain, and continued to serve with distinction for the rest of the war. The 250kg bomb was only carried during the latter phases of the war.



FOCKE-WULF Fw190A

Maximum range (km)	900
Maximum airspeed (km/h)	650
Minimum airspeed (km/h)	100
Weight of each bomb (kg)	500
Maximum range of gun (m)	0
Total number of machine guns	4
HE defence	7
AP firepower (mm at 100 metres)	0
HE firepower	0
Number of rockets	0
Number of bombs	1
Aircraft type	Fighter
Weight (tonnes)	4
Date first available	June 1941

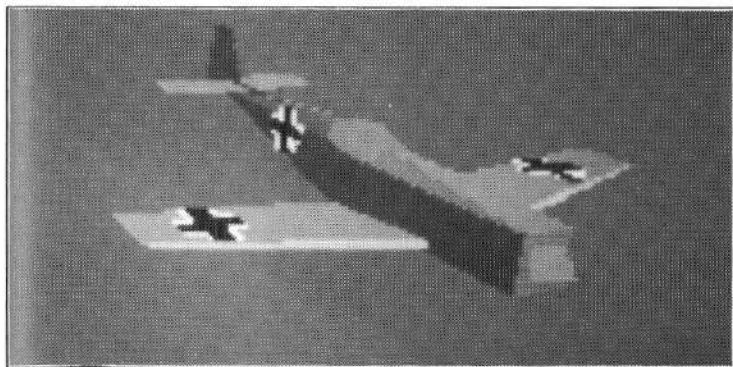
A replacement for the Me109, the Fw190A was 100km/h faster, and could carry a bomb of double the size of the Me109. However, production difficulties ensured that the Me109 assembly-line was continued.



FOCKE-WULF Fw190G

Maximum range (km)	1500
Maximum airspeed (km/h)	650
Minimum airspeed (km/h)	100
Weight of each bomb (kg)	1800
Maximum range of gun (m)	0
Total number of machine guns.....	4
HE defence	7
AP firepower (mm at 100 metres).....	0
HE firepower	0
Number of rockets	0
Number of bombs	1
Aircraft type	Fighter
Weight (tonnes)	4
Date first available	January 1942

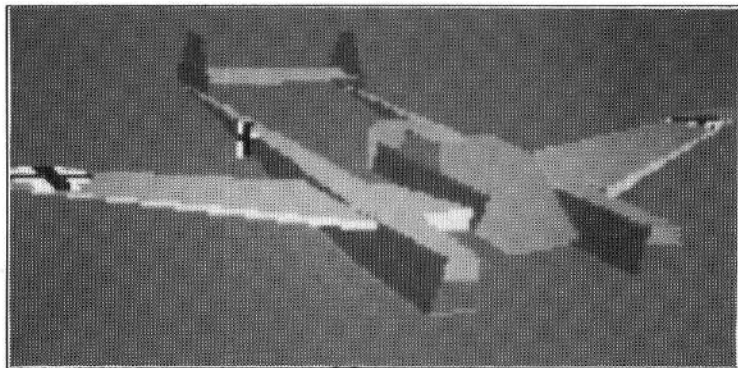
An uprated engine meant that an extremely large (almost 2 tonnes!) bomb could be carried without reducing the top speed. The aircraft was not produced in sufficient quantity to achieve its full potential.



FOCKE-WULF Fw189 UHU

Maximum range (km)	690
Maximum airspeed (km/h)	340
Minimum airspeed (km/h)	100
Weight of each bomb (kg)	0
Maximum range of gun (m)	0
Total number of machine guns	1
HE defence	7
AP firepower (mm at 100 metres)	0
HE firepower	0
Number of rockets	0
Number of bombs	0
Aircraft type	Spotter
Weight (tonnes)	3
Date first available	August 1941

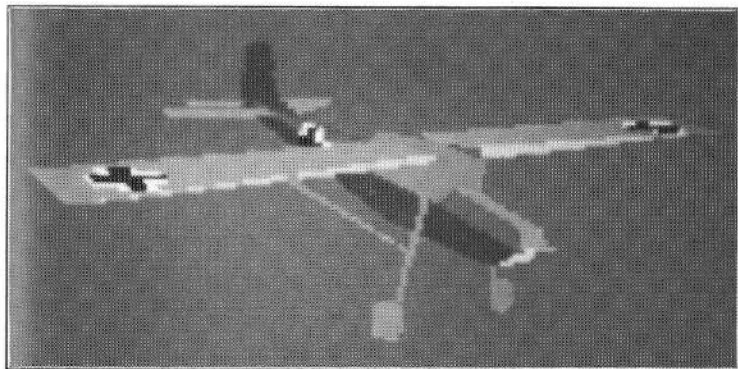
A reconnaissance aircraft designed to provide maximum visibility for the crew, this twin-boom cabin monoplane proved too slow to evade hostile fighters, and total production only amounted to 900 machines.



FIESELER STORCH

Maximum range (km)	700
Maximum airspeed (km/h)	100
Minimum airspeed (km/h)	51
Weight of each bomb (kg)	0
Maximum range of gun (m)	0
Total number of machine guns	1
HE defence	3
AP firepower (mm at 100 metres)	0
HE firepower	0
Number of rockets	0
Number of bombs	0
Aircraft type	Spotter
Weight (tonnes)	1
Date first available	January 1939

An extremely light aircraft designed to have a very short take-off and landing, the Storch (Stork) was used for a wide variety of roles, including flying Generals around above the battles so that they could command in this way, with General von Manteuffel expressing the view that tank division commanders should use these versatile little aircraft.

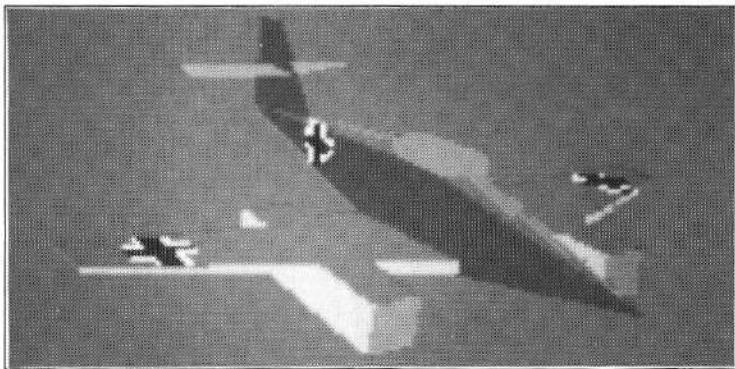


MESSERSCHMITT Me262

Maximum range (km)	600
Maximum airspeed (km/h)	840
Minimum airspeed (km/h)	200
Weight of each bomb (kg)	1000
Maximum range of gun (m)	0
Total number of machine guns	4
HE defence	5
AP firepower (mm at 100 metres)	0
HE firepower	0
Number of rockets	0
Number of bombs	1
Aircraft type	Fighter
Weight (tonnes)	7
Date first available	September 1944

Messerschmitt of Germany developed the 163B Komet, a rocket-powered aircraft that had a range of 130km. It was very effective at intercepting Allied bombers since it could be operational much more quickly than conventional fighters. It had one major disadvantage though, once the motor was turned off, it could not be restarted and the aircraft then became a glider.

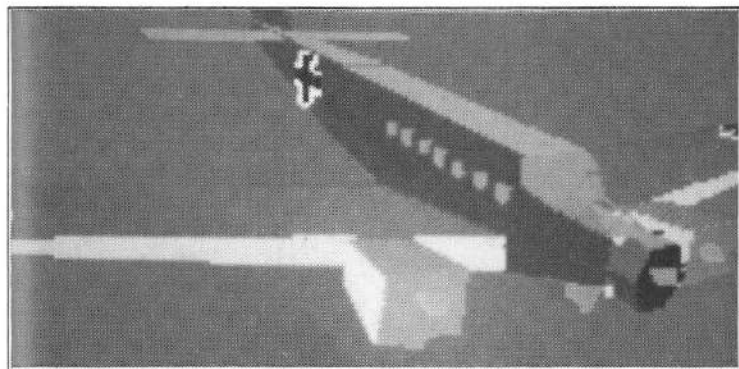
The only operational jet-propelled fighter of the war, the Me262 could easily out-run and out-class any opponent. Again, the problem of production stopped it from achieving its full potential.



JUNKERS Ju52

Maximum range (km)	1280
Maximum airspeed (km/h)	250
Minimum airspeed (km/h)	100
Weight of each bomb (kg)	250
Maximum range of gun (m)	0
Total number of machine guns	3
HE defence	20
AP firepower (mm at 100 metres)	0
HE firepower	0
Number of rockets	0
Number of bombs	16
Aircraft type	Bomber
Weight (tonnes)	10
Date first available	June 1935

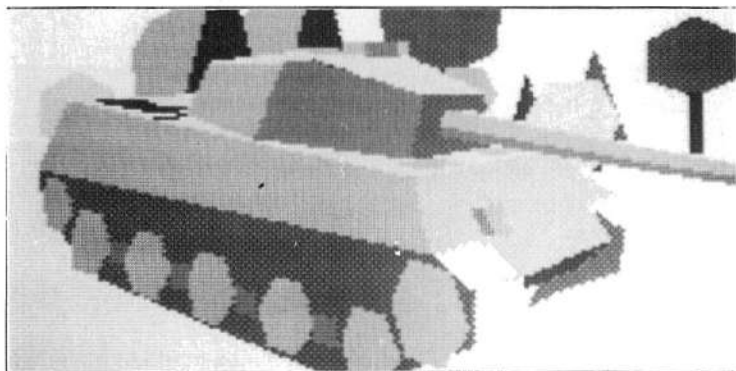
The venerable Ju52, with its distinctive three engines, was first employed as a bomber during the Spanish Civil War. It was also used as a transport aircraft, supplying beleaguered garrisons and panzer divisions.



TIGER II

Maximum road range (km)	170
Maximum elevation (degrees)	15
Minimum elevation (degrees)	-7
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	17500
Frontal armour (mm)	200
Side armour (mm)	90
Rear armour (mm)	90
HE defence	N/A
AP firepower (mm at 100 metres)	243
HE firepower	10
Maximum rounds carried	72
Road speed (km/h)	35
Cross country speed (km/h)	17
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	68
Date first available	January 1944
Maximum towing weight (tonnes)	Unable to tow

Immediately after the Tiger I was designed, attention turned to its successor. This was to feature sloped armour, and use as many common components with the Panther as possible. The 88L71 gun was used, and the armour was thick enough to



withstand hits from virtually any gun. Again, both Porsche and Henschel designed prototypes, with Henschel winning the contract. Porsche had, again, started building turrets, so the first 50 Tiger IIs had Porsche turrets, which were very similar to the Henschels. The Tiger II was also called the King Tiger.

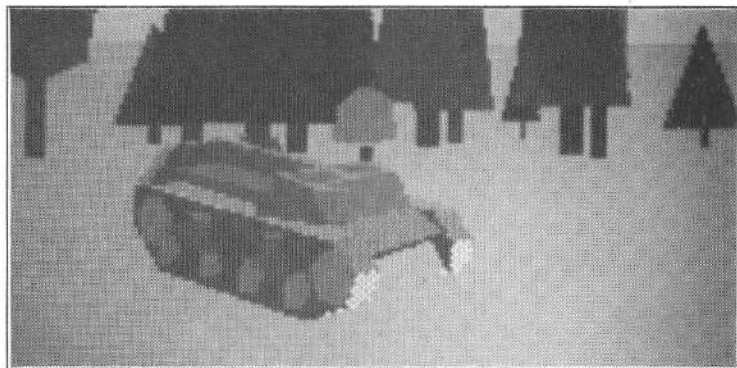
Russian Equipment Factfinder

Russian Vehicles

KOMSOMLETS

Maximum road range (km)	150
Maximum elevation (degrees)	0
Minimum elevation (degrees)	0
Right traverse (degrees)	0
Left traverse (degrees)	0
Maximum indirect fire range (m)	0
Frontal armour (mm)	12
Side armour (mm)	0
Rear armour (mm)	6
HE defence	N/A
AP firepower (mm at 100 metres)	0
HE firepower	0
Maximum rounds carried	0
Road speed (km/h)	40
Cross country speed (km/h)	25
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	1
Date first available	June 1937
Maximum towing weight (tonnes)	1

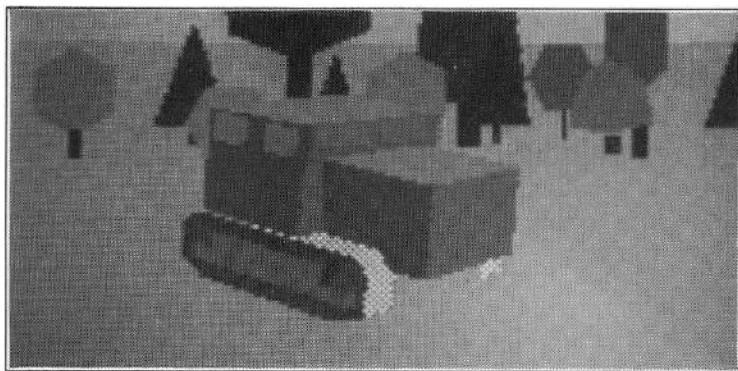
Standard pre-war infantry carrier, this was used in much the same way as the British Bren Carrier as a general purpose light transporter. Also towed light anti-tank guns.



STALINETS TRACTOR

Maximum road range (km)	100
Maximum elevation (degrees)	0
Minimum elevation (degrees)	0
Right traverse (degrees)	0
Left traverse (degrees)	0
Maximum indirect fire range (m)	0
Frontal armour (mm)	0
Side armour (mm)	0
Rear armour (mm)	0
HE defence	10
AP firepower (mm at 100 metres)	0
HE firepower	0
Maximum rounds carried	0
Road speed (km/h)	20
Cross country speed (km/h)	13
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	5
Date first available	January 1937
Maximum towing weight (tonnes)	6

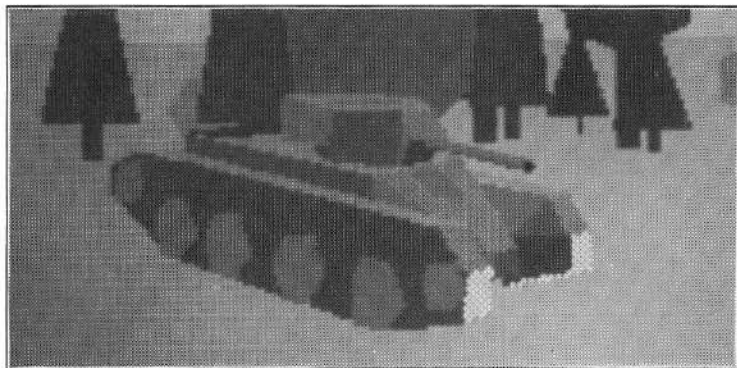
Conversion of a civilian agricultural tractor, the Stalinets was used as a fully-tracked prime mover to tow artillery.



BT5

Maximum road range (km)	200
Maximum elevation (degrees)	20
Minimum elevation (degrees)	-10
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	8900
Frontal armour (mm)	13
Side armour (mm)	10
Rear armour (mm)	10
HE defence	N/A
AP firepower (mm at 100 metres)	62
HE firepower	2
Maximum rounds carried	115
Road speed (km/h)	72
Cross country speed (km/h)	40
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	12
Date first available	January 1934
Maximum towing weight (tonnes)	Unable to tow

BT stands for Fast Tank in Russian, and this was a direct copy of the American Christie tank. The American Army did not buy Christie's ideas about suspension, but the British (Crusader,

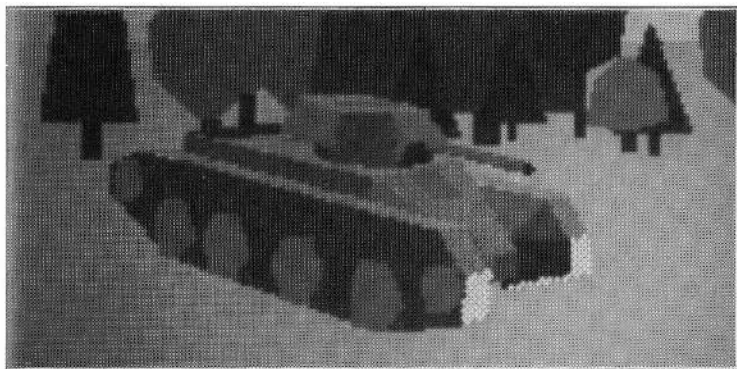


Cromwell, Comet, Centurian, Chieftain and even the new Challenger) and the Russians (BT, T34, T54/55, T62, T70, etc.) certainly did! Very lightly armoured, this tank used speed as its main defence.

BT7

Maximum road range (km)	250
Maximum elevation (degrees)	20
Minimum elevation (degrees)	-10
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	8900
Frontal armour (mm)	22
Side armour (mm)	13
Rear armour (mm)	13
HE defence	N/A
AP firepower (mm at 100 metres)	62
HE firepower	2
Maximum rounds carried	146
Road speed (km/h)	86
Cross country speed (km/h)	30
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	14
Date first available	January 1936
Maximum towing weight (tonnes)	Unable to tow

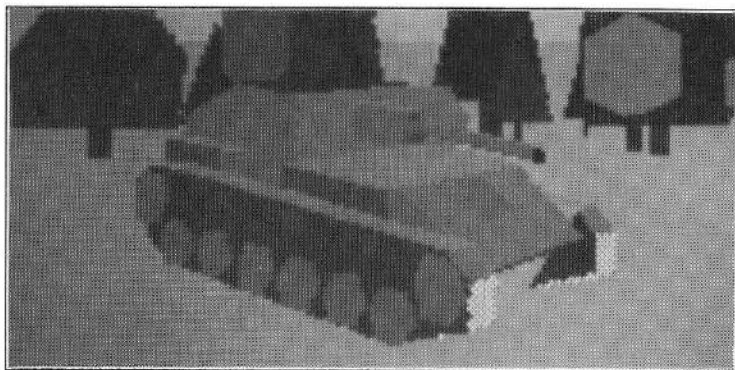
Last version of the BT series, this featured a new turret, and increased armour (which degraded the cross-country performance).



SU76

Maximum road range (km)	265
Maximum elevation (degrees)	20
Minimum elevation (degrees)	-10
Right traverse (degrees)	10
Left traverse (degrees)	-10
Maximum indirect fire range (m)	12185
Frontal armour (mm)	35
Side armour (mm)	16
Rear armour (mm)	16
HE defence	N/A
AP firepower (mm at 100 metres)	92
HE firepower	6
Maximum rounds carried	60
Road speed (km/h)	45
Cross country speed (km/h)	25
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	11
Date first available	October 1942
Maximum towing weight (tonnes)	Unable to tow

This used a lengthened T70 light tank hull, with a 76mm gun mounted in an open topped fixed structure at the rear of the vehicle. This was a cheap way of providing a 76mm gun in a self-propelled mounting.



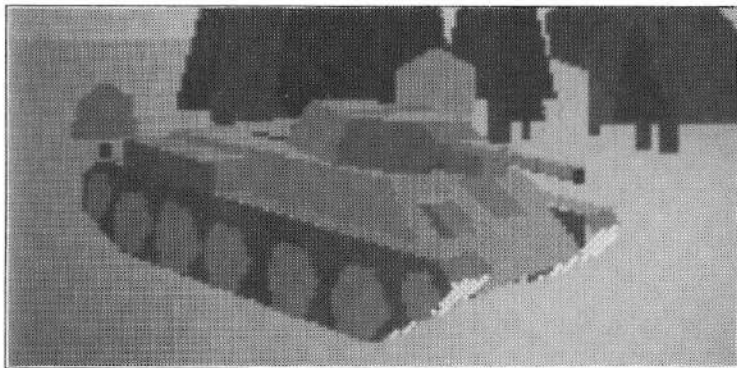
T34/76

The designer of the famous Russian T34 tank, MI Koshkin, died of pneumonia shortly after an endurance trial of the new tank, which he had personally supervised.

Maximum road range (km)	352
Maximum elevation (degrees)	15
Minimum elevation (degrees)	-10
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	12185
Frontal armour (mm)	73
Side armour (mm)	60
Rear armour (mm)	40
HE defence	N/A
AP firepower (mm at 100 metres)	92
HE firepower	6
Maximum rounds carried	77
Road speed (km/h)	50
Cross country speed (km/h)	38
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	28
Date first available	June 1940
Maximum towing weight (tonnes)	Unable to tow

The standard Red Army tank during the war, this was the Russian equivalent of the American Sherman, although it was better in most respects. A 76mm gun mounted on a well

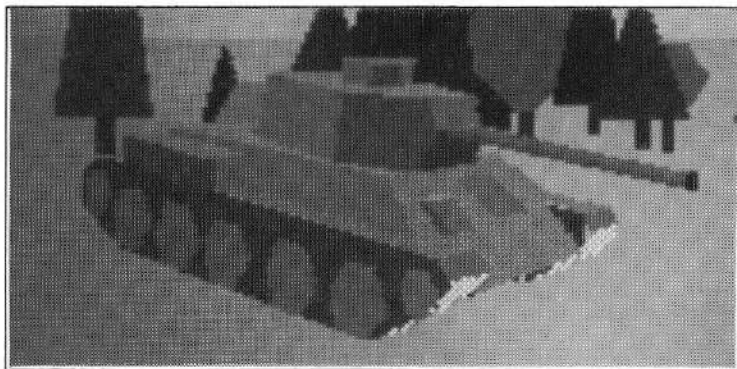
armoured and speedy hull, it was more than a match for the first German tanks to encounter it. The German Panther was a direct answer to the T34.



T34/85

Maximum road range (km)	336
Maximum elevation (degrees)	15
Minimum elevation (degrees)	-10
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	15500
Frontal armour (mm)	73
Side armour (mm)	60
Rear armour (mm)	40
HE defence	Not Applicable
AP firepower (mm at 100 metres)	130
HE firepower	10
Maximum rounds carried	55
Road speed (km/h)	50
Cross country speed (km/h)	38
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	32
Date first available	December 1943
Maximum towing weight (tonnes)	Unable to tow

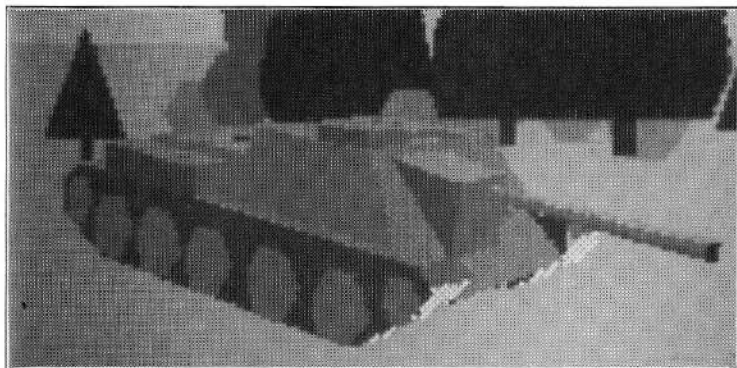
Up-gunned version of the T34/76. The larger gun was mounted in a new, enlarged turret, but was otherwise very similar to the standard T34.



SU85

Maximum road range (km)	400
Maximum elevation (degrees)	20
Minimum elevation (degrees)	-10
Right traverse (degrees)	10
Left traverse (degrees)	-10
Maximum indirect fire range (m)	15500
Frontal armour (mm)	63
Side armour (mm)	45
Rear armour (mm)	63
HE defence	N/A
AP firepower (mm at 100 metres)	130
HE firepower	10
Maximum rounds carried	48
Road speed (km/h)	47
Cross country speed (km/h)	38
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	30
Date first available	August 1943
Maximum towing weight (tonnes)	Unable to tow

T34 hull with the front and side plates extended upwards to form an armoured fighting compartment. This had a very low silhouette, and was ideally suited to tank destroying.

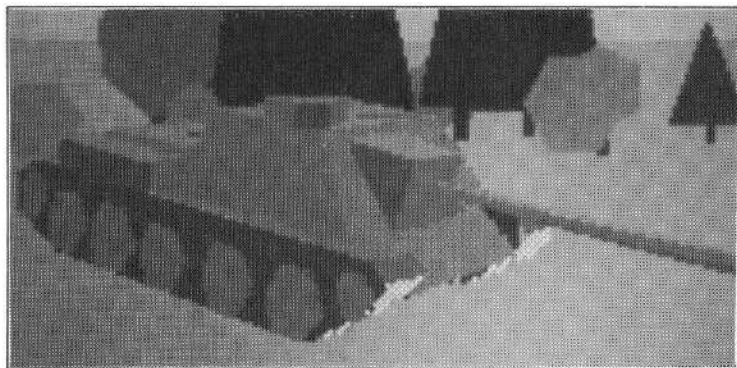


SU100

Maximum road range (km)	320
Maximum elevation (degrees)	20
Minimum elevation (degrees)	-10
Right traverse (degrees)	10
Left traverse (degrees)	-10
Maximum indirect fire range (m)	20000
Frontal armour (mm)	63
Side armour (mm)	45
Rear armour (mm)	63
HE defence	N/A
AP firepower (mm at 100 metres)	179
HE firepower	16
Maximum rounds carried	34
Road speed (km/h)	48
Cross country speed (km/h)	36
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	32
Date first available	September 1944
Maximum towing weight (tonnes)	Unable to tow

Later variant of SU85, to provide even more firepower, and also because the standard T34 now mounted an 85mm gun. This type continued in service long after the war, and was sold

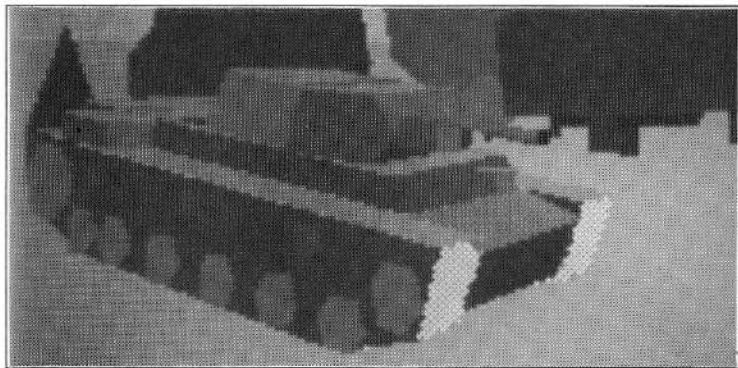
abroad in large numbers.



KV-Ic

Maximum road range (km)	225
Maximum elevation (degrees)	20
Minimum elevation (degrees)	-10
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	12185
Frontal armour (mm)	110
Side armour (mm)	100
Rear armour (mm)	100
HE defence	N/A
AP firepower (mm at 100 metres)	92
HE firepower	6
Maximum rounds carried	114
Road speed (km/h)	32
Cross country speed (km/h)	16
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	50
Date first available	February 1940
Maximum towing weight (tonnes)	Unable to tow

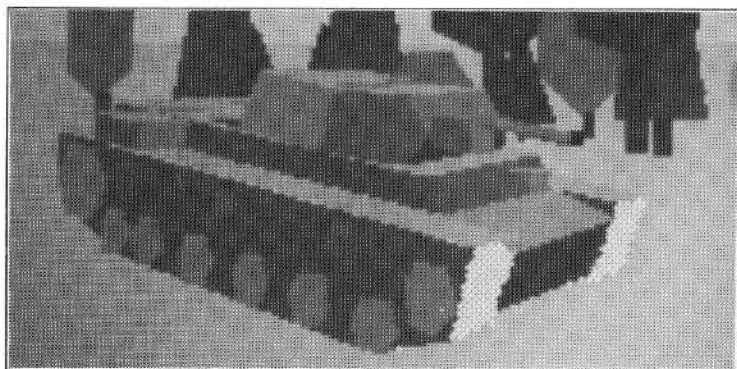
KV stood for Klementy Voroshilov, who was a Marshal of the Soviet Union. The gun mounted was the same as the T34/76, even though the KV series were classed as heavy tanks.



KV-Is

Maximum road range (km)	225
Maximum elevation (degrees)	20
Minimum elevation (degrees)	-10
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	12185
Frontal armour (mm)	75
Side armour (mm)	60
Rear armour (mm)	40
HE defence	N/A
AP firepower (mm at 100 metres)	92
HE firepower	6
Maximum rounds carried	102
Road speed (km/h)	45
Cross country speed (km/h)	30
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	42
Date first available	August 1942
Maximum towing weight (tonnes)	Unable to tow

The KVI was quite slow, and in an offensive battle tended to fall behind the T34s. To remedy this, the armour was decreased. The resultant weight loss boosted the top speed to a much faster value (the S suffix means Speedy).

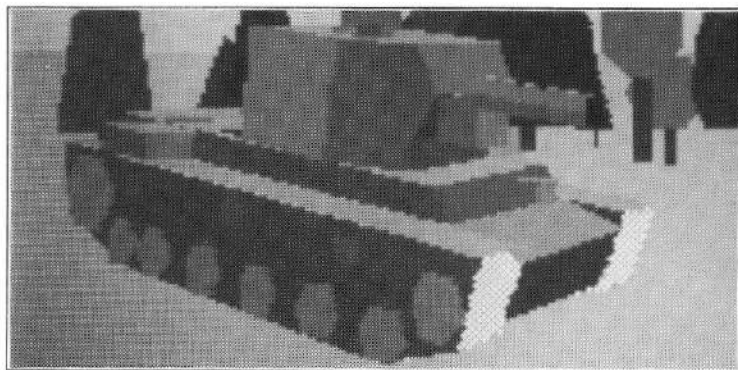


KV-II

Maximum road range (km)	134
Maximum elevation (degrees)	10
Minimum elevation (degrees)	-10
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	12400
Frontal armour (mm)	110
Side armour (mm)	75
Rear armour (mm)	75
HE defence	N/A
AP firepower (mm at 100 metres)	80
HE firepower	40
Maximum rounds carried	36
Road speed (km/h)	26
Cross country speed (km/h)	17
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	53
Date first available	February 1940
Maximum towing weight (tonnes)	Unable to tow

An early variant of the KVI, the KVII was designed to provide heavy fire support with its 152mm howitzer. It suffered from a very high centre of gravity, and with no power traverse the

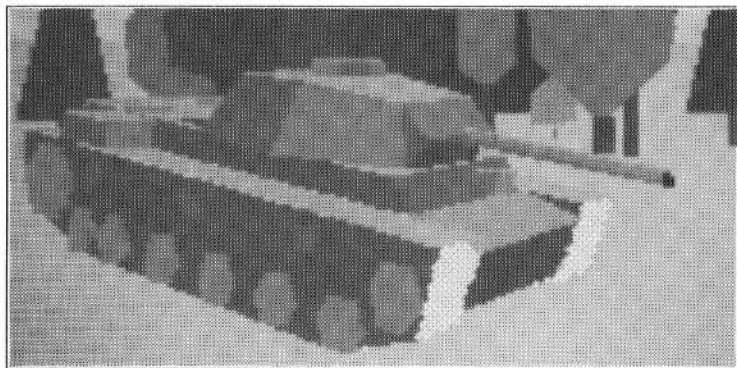
turret could only be turned on level ground.



KV-85

Maximum road range (km)	330
Maximum elevation (degrees)	20
Minimum elevation (degrees)	-10
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	15500
Frontal armour (mm)	75
Side armour (mm)	65
Rear armour (mm)	60
HE defence	N/A
AP firepower (mm at 100 metres)	130
HE firepower	10
Maximum rounds carried	71
Road speed (km/h)	35
Cross country speed (km/h)	18
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	46
Date first available	October 1943
Maximum towing weight (tonnes)	Unable to tow

This was an interim tank between the end of the KV series and the start of the JS series. The JSI/II turret was mounted on the KV hull, with the 85mm gun which later appeared as a stop-gap on the JSI.



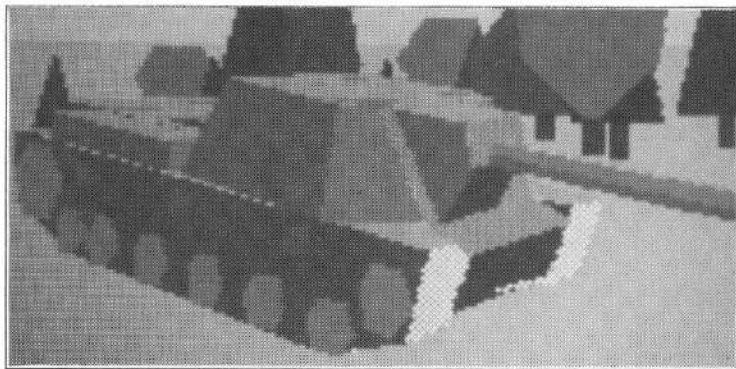
SU152

Maximum road range (km)	330
Maximum elevation (degrees)	15
Minimum elevation (degrees)	-5
Right traverse (degrees)	5
Left traverse (degrees)	-5
Maximum indirect fire range (m)	17280
Frontal armour (mm)	65
Side armour (mm)	60
Rear armour (mm)	60
HE defence	N/A
AP firepower (mm at 100 metres)	107
HE firepower	43
Maximum rounds carried	20
Road speed (km/h)	43
Cross country speed (km/h)	18
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	46
Date first available	May 1943
Maximum towing weight (tonnes)	Unable to tow

This was a logical extension of the general principle of tank destroyers, which was to take a standard tank, remove the turret, and extend the hull superstructure to form a large

fighting compartment.

Then mount the next gun up from that used in the tank version. This idea was also used by the Germans with the Jagd variants. Initially based on the KV hull, production continued on the JS hull when the new tank was standardised.

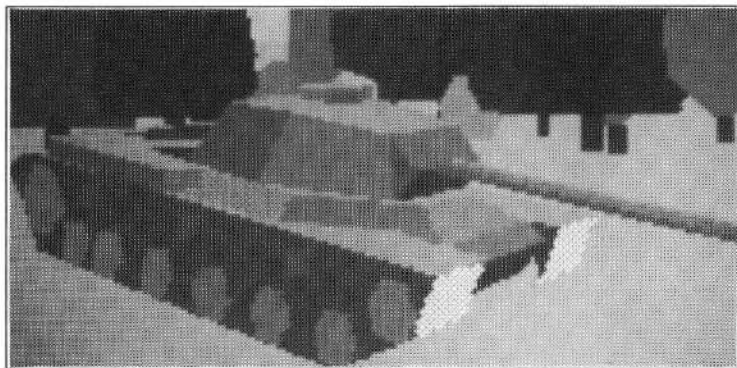


JS-II

Maximum road range (km)	208
Maximum elevation (degrees)	15
Minimum elevation (degrees)	-10
Right traverse (degrees)	Fully traversable
Left traverse (degrees)	Fully traversable
Maximum indirect fire range (m)	20800
Frontal armour (mm)	186
Side armour (mm)	95
Rear armour (mm)	60
HE defence	N/A
AP firepower (mm at 100 metres)	173
HE firepower	25
Maximum rounds carried	28
Road speed (km/h)	37
Cross country speed (km/h)	20
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	45
Date first available	February 1944
Maximum towing weight (tonnes)	Unable to tow

This was a re-design of the KV tank. The armour was sloped better, and was heavier. Also the new turret could mount the 122mm anti-tank gun. JS stood for Josef Stalin, since

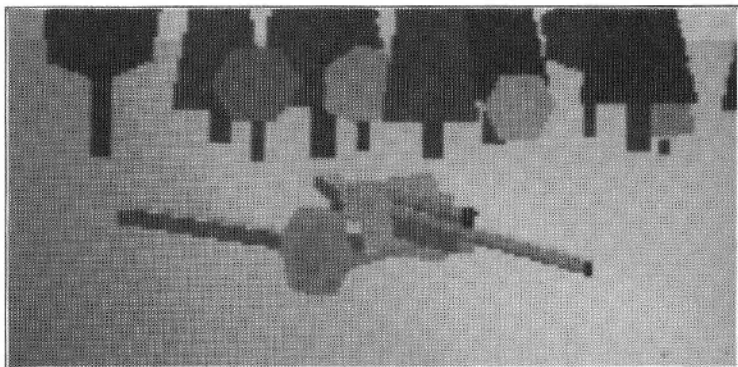
Klementy Voroshilov had fallen from favour by this time. The JSI was identical, but mounted the same 85mm gun that appeared in the KV85, and was only produced in small numbers before the 122mm gun became available.



Russian Artillery 57MM ZIS-2

Maximum road range (km)	0
Maximum elevation (degrees)	18
Minimum elevation (degrees)	-10
Right traverse (degrees)	28
Left traverse (degrees)	-28
Maximum indirect fire range (m)	8400
Frontal armour (mm)	10
Side armour (mm)	0
Rear armour (mm)	0
HE defence	10
AP firepower (mm at 100 metres)	151
HE firepower	4
Maximum rounds carried	100
Road speed (km/h)	4
Cross country speed (km/h)	2
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	1
Date first available	June 1941
Maximum towing weight (tonnes)	Unable to tow

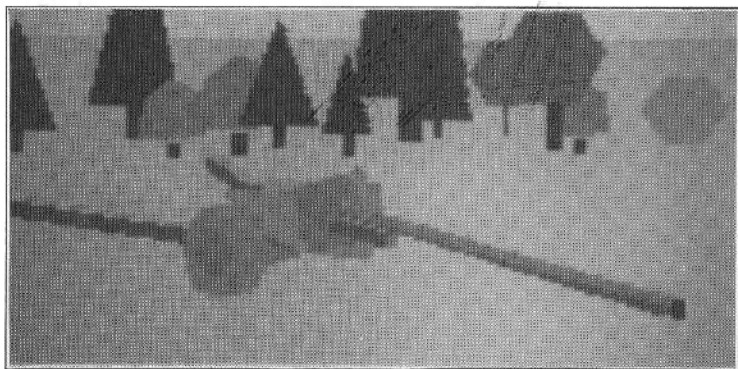
An excellent 57L73 anti-tank gun, it exacted a large toll against German armour, and yet could be towed even by the humble Komsomolets.



100MM BS-3

Maximum road range (km)	0
Maximum elevation (degrees)	45
Minimum elevation (degrees)	-5
Right traverse (degrees)	28
Left traverse (degrees)	-28
Maximum indirect fire range (m)	20000
Frontal armour (mm)	10
Side armour (mm)	0
Rear armour (mm)	0
HE defence	20
AP firepower (mm at 100 metres)	179
HE firepower	16
Maximum rounds carried	100
Road speed (km/h)	3
Cross country speed (km/h)	1
Speed in water (km/h)	Not Amphibious
Weight (tonnes)	4
Date first available	June 1944
Maximum towing weight (tonnes)	Unable to tow

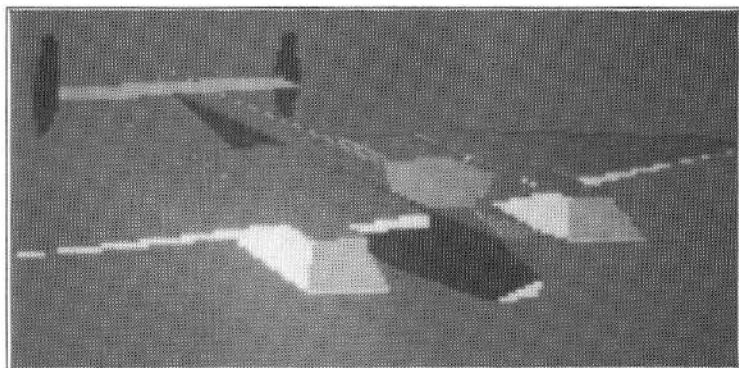
A later addition to the Red Army, this 100L61 gun was also mounted in the SU100 tank destroyer. It did require a heavier limber than the ZIS2, usually the Stalinets.



Russian PE-3 Aircraft

Maximum range (km)	1000
Maximum airspeed (km/h)	540
Minimum airspeed (km/h)	100
Weight of each bomb (kg)	100
Maximum range of gun (m)	0
Total number of machine guns	2
HE defence	12
AP firepower (mm at 100 metres)	0
HE firepower	0
Number of rockets	0
Number of bombs	10
Aircraft type	Bomber
Weight (tonnes)	8
Date first available	June 1942

Designed by Petlyakov, this was a twin-engine monoplane, similar in concept to the British Mosquito, and equally capable of filling a wide variety of roles.



PE-3

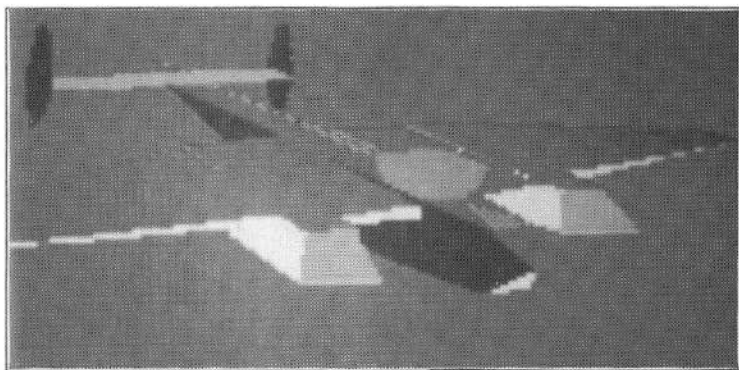
Maximum range (km)	1000
Maximum airspeed (km/h)	540
Minimum airspeed (km/h)	100
Weight of each bomb (kg)	0
Maximum range of gun (m)	0
Total number of machine guns	4
HE defence	12
AP firepower (mm at 100 metres)	0
HE firepower	0
Number of rockets	8
Number of bombs	0
Aircraft type	Ground Attack
Weight (tonnes)	8
Date first available	June 1942

Rocket-armed variant for low-level attacks.

PE-2

Maximum range (km)	1000
Maximum airspeed (km/h)	540
Minimum airspeed (km/h)	100
Weight of each bomb (kg)	0
Maximum range of gun (m)	0
Total number of machine guns	4
HE defence	12
AP firepower (mm at 100 metres)	0
HE firepower	0
Number of rockets	0
Number of bombs	0
Aircraft type	Spotter
Weight (tonnes)	6
Date first available	June 1942

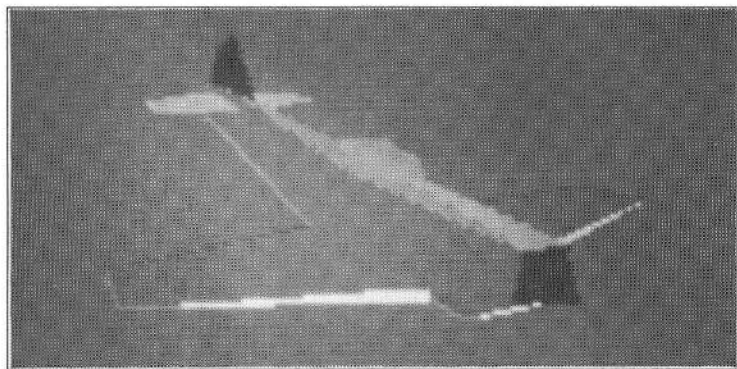
Fighter-reconnaissance version of the above.



YAK-9D

Maximum range (km)	1040
Maximum airspeed (km/h)	592
Minimum airspeed (km/h)	100
Weight of each bomb (kg)	0
Maximum range of gun (m)	0
Total number of machine guns	3
HE defence	8
AP firepower (mm at 100 metres)	0
HE firepower	0
Number of rockets	6
Number of bombs	0
Aircraft type	Fighter
Weight (tonnes)	4
Date first available	July 1942

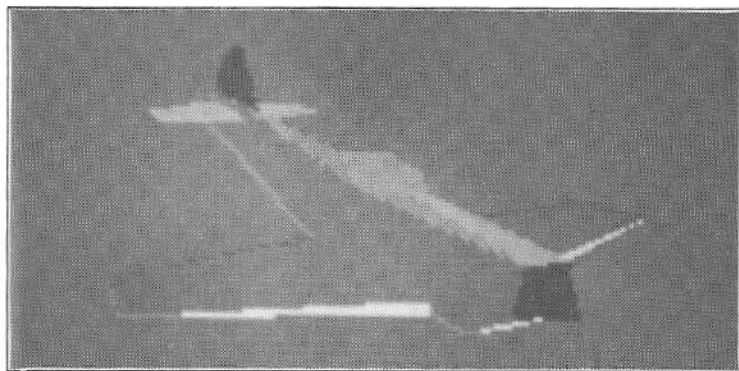
Fighter aircraft, designed by Alexander Yakovlev, this followed the earlier YAK-1.



YAK-9T

Maximum range (km)	1040
Maximum airspeed (km/h)	592
Minimum airspeed (km/h)	100
Weight of each bomb (kg)	0
Maximum range of gun (m)	0
Total number of machine guns	2
HE defence	12
AP firepower (mm at 100 metres)	100
HE firepower	1
Number of rockets	6
Number of bombs	0
Aircraft type	Ground Attack
Weight (tonnes)	4
Date first available	July 1942

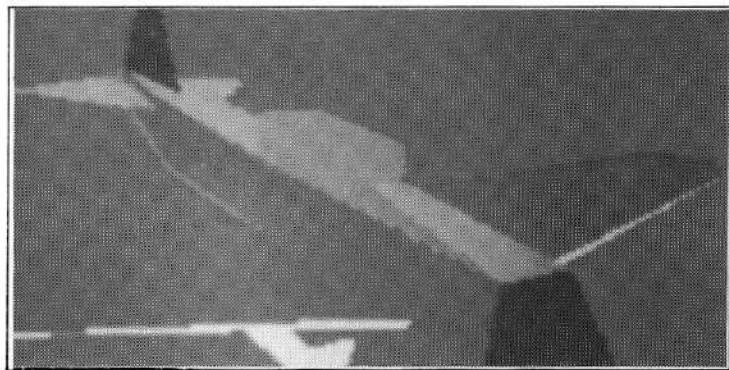
37mm cannon mounted in the nose, in place of the 20mm gun in the fighter version.



IL-2 STORMOVIK

Maximum range (km)	800
Maximum airspeed (km/h)	448
Minimum airspeed (km/h)	100
Weight of each bomb (kg)	300
Maximum range of gun (m)	0
Total number of machine guns	3
HE defence	20
AP firepower (mm at 100 metres)	100
HE firepower	2
Number of rockets	8
Number of bombs	2
Aircraft type	Ground Attack
Weight (tonnes)	6
Date first available	June 1941

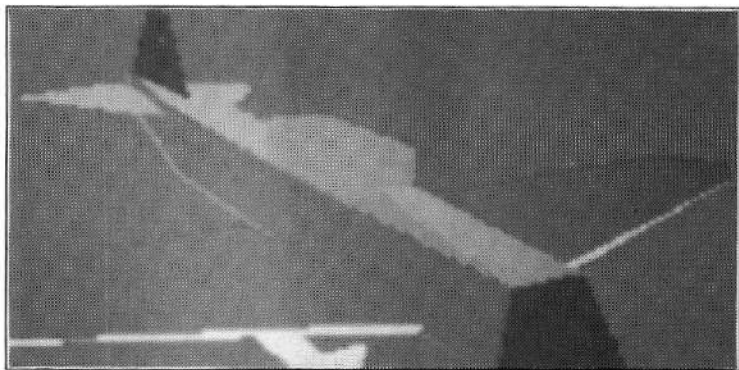
Revolutionary approach to making ground attack aircraft, by building the plane around a fully armoured crew area. This made it a veritable “flying tank”.



IL-10 STORMOVIK

Maximum range (km)	800
Maximum airspeed (km/h)	530
Minimum airspeed (km/h)	100
Weight of each bomb (kg)	500
Maximum range of gun (m)	0
Total number of machine guns	3
HE defence	30
AP firepower (mm at 100 metres)	100
HE firepower	2
Number of rockets	8
Number of bombs	2
Aircraft type	Fighter
Weight (tonnes)	6
Date first available	August 1944

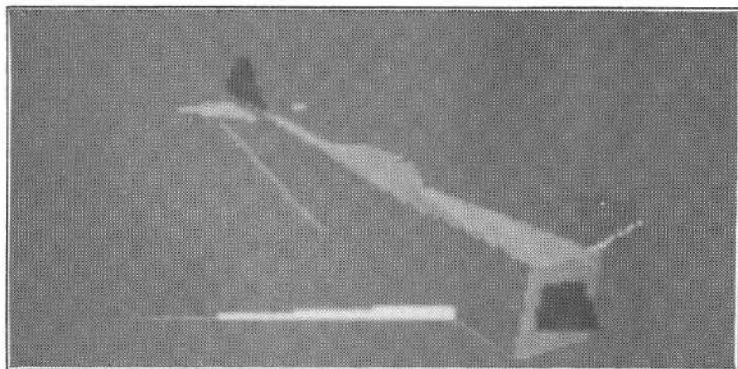
Up-rated version of the above (more powerful engine and even better armour for the crew).



LA-5FN

Maximum range (km)	640
Maximum airspeed (km/h)	647
Minimum airspeed (km/h)	100
Weight of each bomb (kg)	50
Maximum range of gun (m)	0
Total number of machine guns	2
HE defence	8
AP firepower (mm at 100 metres)	0
HE firepower	0
Number of rockets	0
Number of bombs	4
Aircraft type	Fighter
Weight (tonnes)	3
Date first available	July 1943

This was first used at Stalingrad, and remained in service for the duration of the war, when about 10,000 had been completed.



Naval Vessels Factfinder



Special Note

For the purposes of Campaign, all nations share these following generic types of naval vessel.

BATTLESHIP

Maximum range (km)	20000
Torpedo range (metres)	5000
HE attack value of torpedo	50
Number of torpedoes	40
Maximum HE range of guns (metres)	20000
HE defence value	20000
HE firepower (per salvo/100)	90
Number of salvos available	60
Submerged speed (km/h)	0
Maximum surface speed (km/h)	60
Weight (tonnes/1000)	45
Date first available	January 1935

CRUISER

Maximum range (km)	20000
Torpedo range (metres)	5000
HE attack value of torpedo	50
Number of torpedoes	40
Maximum HE range of guns (metres)	5000
HE defence value	5000
HE firepower (per salvo/100)	8
Number of salvos available	60
Submerged speed (km/h)	0
Maximum surface speed (km/h)	60
Weight (tonnes/1000)	10
Date first available	January 1935

DESTROYER

Maximum range (km)	20000
Torpedo range (metres)	5000
HE attack value of torpedo	50
Number of torpedoes	30
Maximum HE range of guns (metres)	5000
HE defence value	1000
HE firepower (per salvo/100)	1
Number of salvos available	60
Submerged speed (km/h)	0
Maximum surface speed (km/h)	75
Weight (tonnes/1000)	2
Date first available	January 1935

SUBMARINE

Maximum range (km)	15000
Torpedo range (metres)	5000
HE attack value of torpedo	50
Number of torpedoes	20
Maximum HE range of guns (metres)	0
HE defence value	2000
HE firepower (per salvo/100)	0
Number of salvos available	0
Submerged speed (km/h)	20
Maximum surface speed (km/h)	40
Weight (tonnes/1000)	2
Date first available	January 1935

