Combat Mission

Rome to Victory

Fortress Italy

BATTLEFRONT.COM

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■ INSTALLATION & LICENSING

■ Installation from Disk

In order to install the game, insert the game disc into the DVD drive.

(PC) The Installation Menu should appear if you have CD Autostart enabled on your computer. Click on the "Install Game" option to begin the installation process. If you have CD Autostart disabled, or if the Installation Menu does not appear, please browse the contents of the disc and simply double-click on the file called "Setup.exe". This will manually launch the game installer.

(Mac) For the Mac version, simply open the disc icon and copy the game application into a place on your hard drive (for example, the Applications folder).

■ Installation for Download Version

After you have successfully downloaded the Combat Mission: Fortress Italy - Rome to Victory setup file, double-click on it to launch the installer.

Note: Battlefront.com now offers unlimited re-downloads, should you need them. But nothing is forever, so it is a good idea to keep a copy of the installer file you downloaded somewhere safe (e.g. burn to disc, USB stick or external hard drive) so you can reinstall the game later if needed.

■ License Overview

Combat Mission: Fortress Italy - Rome to Victory is protected by an online activation system that helps us restrict the illegal distribution of the software with minimal annoyance and intrusion for the legitimate customer.

■ How to Find Your License Key

For download versions, your license key is the same code that you used to download your game. You will find your license key in your online account at www.battlefront.com/store. After logging in, click on the "My Account" link in the top menu. If you forgot your login, go to www.battlefront.com/lostpw to retrieve a new random password as well as your username, both of which will be sent to you in the same email. The username is called "user account" in the email.

For mail delivery only versions, the license key is printed on the product itself, usually on the back of the case or the game manual, sometimes inside the case or manual cover, depending on the product. Do not lose this label because we may not be able to retrieve your license key for you if you do!

■ Activation / Licensing

When you first run Combat Mission: Fortress Italy - Rome to Victory, you will be prompted to activate your copy after the initial install. In most cases all you need to do is:

a) Make sure the computer on which you have installed the game has an active connection to the internet.

b) Choose "Online Activation" from the dialog window.

c) Enter your license key into the correct field.

d) Hit the "Activate" button and wait a few seconds while your license authorizes.

If you wish to install the game on a computer which has no internet connection, you must perform what is called a "Manual License Request".

(PC/Mac) After launching the game:

a) Click on the "Manual Activation" button.

b) Write down or memorize the Authorization Request Code presented to you

c) On a computer that is connected to the internet, go to http://www.battlefront.com/activate

d) Enter your License Key and the Authorization Request Code in the appropriate place.

e) Write down or memorize the Authorization Code.

f) Go back to the computer where the game is installed. Launch the game again and click on "Manual Activation". Ignore the Request code and click on the Next button. Enter the Authorization Code from step (e) above.

Off-line licensing is also a good workaround for online computers which experience problems with firewall, router or proxy settings which interfere with establishing an internet connection to the activation servers.

■ Additional Activations

Our End User License Agreement allows you to have the game activated on one PC and one backup PC. Our online activation system enforces this limit, but will allow you two additional activations without asking questions (so called "Overflow Activations"). These Overflow Activations are meant to be used when you switch to a new PC and would like to continue playing the game on the new PC.

Note: there is no way to "unlicense" a previously activated copy on a computer, which has the advantage that you can't ever forget to do so :^)

In addition to the previously described four activations, you can add one additional activation to your key every 365 days. In order to do this, please point your browser to http://www.battlefront.com/activate. You will be asked to login and enter your license key.

Note: If you forgot your login, go to "www.battlefront.com/lostpw" to retrieve a new random password as well as your username, both of which will be sent to you in the same email. The username is called "user account" in the email.

If your key is eligible for an additional activation (i.e. if you have not previously requested an additional activation within the past 365 days), then you'll be notified of your new activation and it will be automatically added to your key, so you can use it immediately.

Should you ever need an additional activation more than once during a 365 day period, you can always contact our License Activation Support staff for help (see below).

■ License Activation Support

Battlefront.com prides itself on customer service, and the implementation of our online licensing system is a part of this. Please check out our Knowledgebase section for more detailed information on how our online activation system works:

http://www.battlefront.com/helpdesk

If you ever need specific assistance, do not hesitate to email us with a description of your problem. We usually respond within 1 working day.

Please note: only the original Battlefront.com version of the game uses our online activation system. If you have purchased your game elsewhere (e.g. in a store), then you probably have a retail version of the game, which does NOT use our online activation system.

■ USEFUL SHORTCUT LINKS

The Installation program adds a number of useful links into your (PC) Windows Start>Programs group / (Mac) game installation folder by default, such as:

■ Direct Link to the PDF Manual

The game documentation is included as an Adobe PDF (Adobe Reader required from www.adobe.com) file, and it can be accessed quickly from here.

■ Activation Link

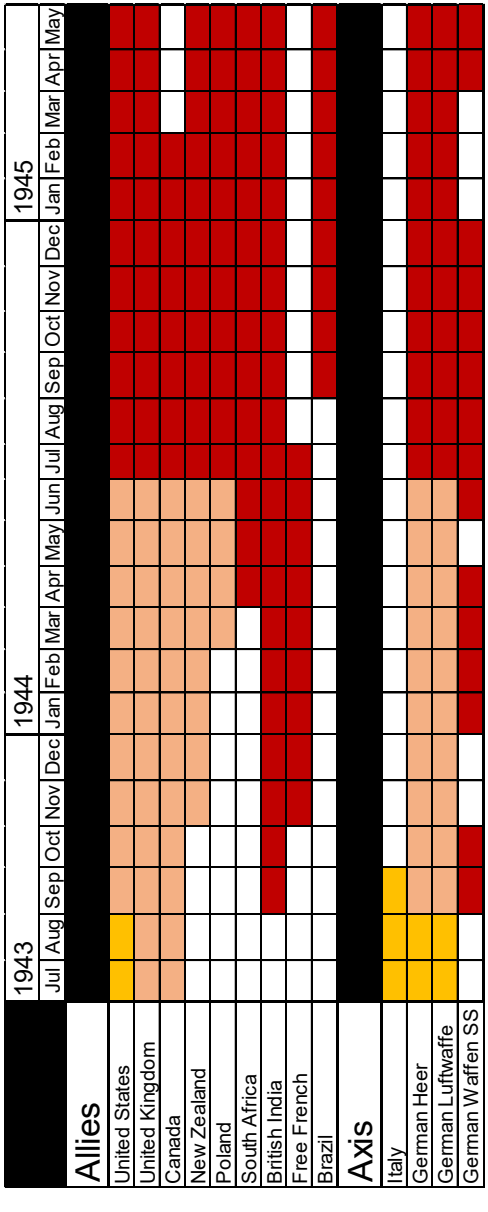
This is the shortcut link to activate your Module. You MUST run this for the first time after installation, and any time you need or wish to re-activate your module. This link is only used for activation, and once activated, you do not need to use it to launch the game.

■ Version Check Link

This is a quick way to check for updates online. The link is pre-coded to know which version of the game you have installed, and will automatically inform you if any patches or updates for your specific game combination are available.

■ NATIONALITIES QUICK GUIDE

The following section summarizes the dates of availability for nationalities and service branches.



Allies

United States

Availability.....All dates

Ranger formations are available under Infantry Branch from July 1943 to February 1944. Mountain Infantry formations (10th Mountain Division) become available beginning January 1945 under Infantry Branch.

Great Britain

Availability.....All dates

Canada

Availability.....July 1943 - February 1945

Organized and equipped under British Army conventions, with minor equipment differences. Infantry and Armoured branches are available throughout, while the Armoured Infantry branch becomes available in February 1944. In February 1945, Canadian forces were withdrawn from Italy to reinforce Northwest Europe.

Poland

Availability.....March 1944 - May 1945

Organized and equipped under British Army conventions, with minor equipment differences.

British India

Availability.....September 1943 - May 1945

Organized and equipped under British Army conventions. Infantry divisions only. Standard and Sikh uniform variants available.

South Africa

Availability.....April 1944 - May 1945

Organized and equipped under British Army conventions, with minor equipment differences.

Free France

Availability.....November 1943 - July 1944

Organized and equipped under United States Army conventions, with minor differences in small arms. Infantry divisions only. In addition, Free French forces have two unique formations: the Chasseurs Regiment (equipped with M10 tank destroyers), and the Spahis Regiment (armored car and light tank reconnaissance). Standard and 1st FED uniform variants available. Troops may be variably equipped with the M1903A3 Springfield or the M1917 Enfield, depending on equipment quality.

Brazil

Availability.....September 1944 - May 1945

Organized and equipped under United States Army conventions. Infantry division only.

■ Axis

■ Italy

Availability.....July 1943 - September 1943

■ Germany - Heer

Availability.....All dates

Infantry branch not available until September 1943. Armored Infantry and Armored branches have limited formations available until September 1943. Gebirgsjäger formations become available in January 1944 under Infantry Branch. Standard, Gebirgsjäger, and Gebirgsjäger Winter uniform variants are available.

■ Germany - Luftwaffe

Availability (Infantry Branch).....June 1944 - November 1944
Availability (Armored Infantry Branch).....July 1943 - July 1944
Availability (Armored Branch).....July 1943 - July 1944
Availability (Airborne Infantry Branch).....July 1943 - May 1945

Normal and Mixed Camo uniform variants available. Infantry branch consists of Luftwaffe Field Division formations. Armored Infantry and Armored branches come from the Hermann Göring Division. Airborne Infantry branch formations consist of Fallschirmjäger units.

■ Germany - Waffen SS

Availability (Infantry Branch).....September 1943 - October 1943
Availability (Infantry Branch).....April 1945 - May 1945
Availability (Armored Infantry Branch).....January 1944 - April 1944
Availability (Armored Infantry Branch).....June 1944 - December 1944

Normal and Mixed Camo uniform variants available. During January 1944 to April 1944, the Armored Infantry branch has extremely limited formations available.

EQUIPMENT ENCYCLOPEDIA

The following section is a quick reference for the vehicles and weapon systems available in Rome to Victory. It is by no means exhaustive and should be seen as a starting point for research; interested players will find countless and more detailed materials available in printed and online media.

United States

Because the United States was responsible for equipping the Brazilian and Free French forces present in the Italian theater, equipment for those nationalities are included in this section.

United States Tanks

M24 Light Tank

The Ordnance Committee's desire for a larger gun on a light tank led to the development of the M24 light tank, dubbed the "Chaffee" in later British service. Since the M5 light tank hull was too small, a new hull based on the experiences of the T7 light and M7 medium tank programs was designed. The tank's design was focused on keeping maximum weight below 20 tons, while providing a standardized chassis that could be modified for many different roles. The M24 Chaffee began service in late 1944, replacing the M5 series light tank in production and partially replacing it on the front lines. The M24 was well received by their crews, and after the war became the standard light tank in United States Army service.

The twin Cadillac engines and Hydra-Matic automatic transmission from the M5 series tank were retained. The installation of a torsion bar suspension system ensured a smoother ride than given by the typical vertical volute system seen on most other American tanks at the time. Armor protection was kept thin to save on weight, with a maximum turret armor thickness of only 37 mm. The 75 mm M6 gun was adapted from a lightweight aircraft cannon used by the B-25 Mitchell bomber, and fired the same ammunition as the M4 Sherman.

M4A3(76)W Medium Tank (early)

In response to the appearance of heavier German combat vehicles that were difficult to destroy with the Sherman's 75 mm main gun, the Ordnance Department developed a new 76 mm gun. Because the turret of the M4 Sherman was too small to fit the larger cannon, a modified version of the T20 medium tank prototype's turret was fitted to the M4 Sherman hull.

The 76 mm Sherman variants did not enter combat service until 1944, ensuring that although they became increasingly more available as the war progressed, they never completely replaced the 75 mm armed Sherman. In addition, the 76 mm high explosive round, although more effective against enemy armored vehicles, had a smaller HE payload than the 75 mm round, making it less desirable against the infantry which were the bulk of a typical Sherman's targets. The longer 76 mm cannon also initially lacked a muzzle brake, making the potential dirt cloud kicked up by firing a problem for continued shooting.

Later variants of the Sherman, including 76 mm armed versions, also included a major interior redesign that incorporated "wet storage" ammunition racks. This practice dramatically reduced the chances of ammunition fire in the case of a compartment penetration. Shermans fitted with this additional protection are denoted by the "W" following their model number.

An improved development of the M4A3, this variant incorporated wet ammo storage with increased ammo capacity, additional deployable smoke bombs, and improved armor manufacturing. A loader's hatch was also installed along with redesigned driver and radio operator hatches.

■ M4A3(76)W Medium Tank (mid)

The (mid) version moved the .50 caliber AAMG to a fixed pintle mount at the center-rear of turret, and the loader's split hatch was replaced by a single piece hatch. A muzzle brake was added to reduce dust clouds from firing, and grousers were added to the tracks to increase width.

■ M4A3(105) Medium Tank (mid)

Beginning standardization in 1943, assault gun variants of various M4 Sherman models were produced. These variants replaced the 75 mm gun with a 105 mm howitzer. The tank stocked 66 rounds and was powered by a stronger 460 hp engine. The turret was also manually traversed instead of using a power traverse as used on standard models.

Later versions moved the .50 caliber AAMG to a fixed pintle mount at the center-rear of turret, and a commander's cupola replaced the simple split hatch. A gyrostabilizer was also added.

■ M4 Sherman Crab

Some Shermans in British service were outfitted with a flail assembly on the front of the vehicle that could be used clear mines by beating the ground in front of the vehicle. While most Sherman Crabs were used by the British, a small number of vehicles were retained for U.S. Army use.

Sherman Crabs have a special movement command, "Clear Mines", available to them that allows them to engage their flails. Although the speed is slow, the flail will detonate mines in front of the vehicle, allowing the Crab and vehicles following in its tracks to more safely traverse the minefield. It is important to note that the Sherman will rotate the turret to the rear when the flail is in operation, leaving it unable to easily protect itself.

■ United States Tank Destroyers

■ M10 GMC (Gun Motor Carriage) (late)

(Late) variants of the M10 GMC possess several rounds of uncommon 76 mm Armor-Piercing Composite Rigid (APCR) ammunition. This ammunition was also referred to as tungsten ammunition, due to its tungsten carbide core penetrator surrounded by a lightweight aluminum body. This construction gave the round a much higher velocity and more penetrating power, allowing a cannon of the same size to be a deadlier threat to enemy armored vehicles.

■ M18 GMC (Gun Motor Carriage)

Nicknamed the "Hellcat", the M18 GMC was a tank destroyer in service with the U.S. Army beginning in 1944. The Hellcat was the fastest tracked armored fighting vehicle in World War II with a top speed of 97 km/h (60 mph). The Hellcat's speed and mobility were due to a very high power-to-weight ratio from low weight, a Continental R-975 400 hp gasoline engine, and an innovative torsion bar suspension. The Hellcat's mobility meant that it could accelerate, decelerate, and turn fast enough to flank enemy tanks.

The Hellcat's agility came at a price: the open-topped turret left the crew vulnerable to snipers and shell fragments, while the rest of the vehicle was very thinly armored. The Hellcat was equipped with a 76 mm gun and was often stocked with several potent APCR shells for engaging enemy heavy tanks.

United States Self-Propelled Guns

M7B1 HMC (Howitzer Motor Carriage)

The M7B1's major difference from the M7 was that it was based on the later M4 Sherman chassis, as opposed to the M7 which was a modified M3 Grant chassis. Most M7B1's saw action in North West Europe, but some made their way to the Italian theater.

United States Small Arms

M1917 Enfield

Originally the standard issue rifle of American Expeditionary Forces in World War I, the M1917 was relegated to limited use by artillery troops by World War II. However, the M1917 found a new life as a Lend-Lease weapon. In Fortress Italy, the M1917 is one of the standard issue rifles for Free French forces.

The M1917 Enfield may be equipped with the M2 grenade launcher.

Cartridge.....30-06 Springfield
Action.....Modified Mauser turn bolt
Feed system.....6-round magazine, 5-round clip fed
Rate of fire.....Bolt action
Effective range.....600 meters

M3 Grease Gun

The M3 was an American .45 caliber submachine gun that entered U.S. Army service in 1942 and slowly began to replace the .45 caliber Thompson series submachine guns. The M3 was designed as a cost effective alternative, optimized for mass production. The M3 is commonly referred to as the "grease gun", owing to its visual similarity to the common mechanic's tool.

Cartridge.....45 ACP
Action.....Blowback, open bolt
Feed system.....30-round box magazine
Rate of fire.....450 rounds/minute
Effective range.....100 meters

■ FN 24/29

The Fusil-mitrailleur Mle 1924, or FN 24, entered French service in the mids 1920s. With a design partly inspired by the American BAR, the FN 24/29 saw military service for over 50 years. In 1929, the FN 24 was rechambered for a safer and shorter 7.5x54 mm round, making it the FN 24/29. Free French forces in the Italian theater retained as many copies in service as they could, where it filled the same role in the rifle squad as the BAR.

Cartridge.....7.5x54 mm French
Action.....Gas-operated
Feed system.....25-round detachable box magazine
Rate of fire.....450 rounds/minute
Effective range.....1,500 meters

■ United States Heavy Weapons

■ M9A1 Bazooka

The M9A1 model replaced the earlier M1, M1A1 and M9 variants by late 1944. The M9A1 featured an optical sight and reinforced launch tube. Like the earlier M9, the M9A1 also used the newer and improved M6A3 rocket. The weapon could also be disassembled into two halves for easier carrying, and the battery ignition was replaced by a trigger magneto for better reliability.

Effective range.....175 meters

■ M1A1 Flamethrower

The M1 series of flamethrowers were the standard U.S. Army portable flamethrowers for much of World War II. Man-portable flamethrowers were mostly used by the U.S. military on the Pacific front, but the weapons saw some use in Europe as well. The M1 series consisted of a fuel tank and a nitrogen propellant tank connected to a long pipe and hose via a high-pressure valve. As the fuel exited the nozzle, it was ignited by a hydrogen-powered ignitor.

The M1A1 model improved the flamethrower by switching the flammable agent from a gasoline and oil mixture to napalm. Napalm was a superior substance because it could be shot out in a thick stream that was capable of bouncing off of surfaces to ricochet into doorways and stick to surfaces. Upgrades to the fuel system also increased the maximum effective range.

Flamethrowers were usually operated by either combat engineers or specially formed units, and used to dislodge enemy soldiers from fortified positions that were resistant to explosives.

Effective range.....44 meters

■ T32 Mountain Gun

The 10th Mountain Division had unique requirements for portable gear that were not easily met by standard issue equipment. The T32 mountain gun was a modified M3A1 37 mm anti-tank gun, mounted on a detachable tripod. The weapon could be disabled and man packed up mountain slopes, allowing the mountain troops to lob direct fire 37 mm HE at normally inaccessible targets.

Rate of fire.....11 rounds per minute
Effective range.....2000 meters

■ United States Artillery Support

■ T27E2 Xylophone Rocket Launcher

Development of the Xylophone with twenty-four rocket-launching tubes instead of eight. Surnamed "Honeycomb", it replaced the original T27 towards the end of the war.

■ T34 Calliope

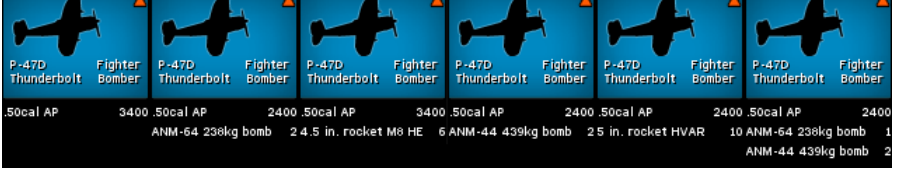
The Rocket Launcher T34 (Calliope) was a tank-mounted multiple rocket launcher used by the United States Army. The launcher was placed atop an M4 Sherman, and fired a barrage of M8 4.5 inch rockets from 60 launch tubes. It was developed in 1943; small numbers were produced and were used by various armored units in 1944-45. The weapon adopted its name from the musical instrument "Calliope".

■ United States Air Support

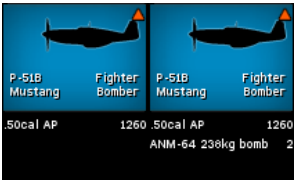
■ P-47D Thunderbolt Fighter Bomber

Republic Aviation's P-47 Thunderbolt, also known as the "Jug", was the largest, heaviest, and most expensive single reciprocating engine fighter aircraft in history. The P-47 was very effective in air combat but proved especially adept at ground attack. It had eight .50 caliber machine guns, four per wing. When fully loaded the P-47 could weigh up to eight tons.

Configurations: ..... Strafe, Light, Light Rockets, Heavy, Rockets, Maximum



■ P-51B Mustang Fighter Bomber



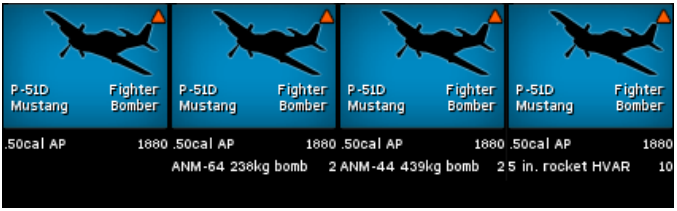
The North American Aviation P-51 Mustang was a long-range single-seat fighter aircraft. As well as being cheap to produce, the Mustang was fast, agile, and durable.

Configurations: ..... Strafe, Light

■ P-51D Mustang Fighter Bomber

The definitive version of the P-51, the P-51D, was powered by the Packard V-1650, a two-stage two-speed supercharged version of the legendary Rolls-Royce Merlin engine, and was armed with six .50 caliber M2 Browning machine guns.

Configurations: ..... Strafe, Light, Heavy, Maximum, Rockets



■ United States Fortifications

■ 57 mm AT Bunker

American forces have access to "what if" concrete reinforced bunkers containing a 57 mm antitank gun and crew.

Commonwealth Forces

Commonwealth Tanks

Sherman IB

The Sherman IB was a Sherman I, itself a Lend-Lease M4, equipped with a 105 mm howitzer.

Sherman IIA

The Sherman IIA was a Lend-Lease Sherman M4A1(76)W with a 76 mm gun.

Sherman IC Firefly

The Firefly conversion was a highly successful British project to equip a Sherman tank with a QF 17 pounder gun that could reliably penetrate the thick armor of German heavy tanks. Firefly variants were made of most Lend-Lease Sherman models, with the IC Firefly being a conversion of the M4.

The resulting vehicle required numerous modifications to accommodate the larger gun, including a large counterweight on the rear of the turret. In order to fit more 17 pounder ammunition, the hull gunner's position was eliminated, reducing the crew to four. The gun mantlet armor was also made 13 mm thicker.

■ Sherman IC Hybrid Firefly

The Hybrid was a IC Firefly with a cast armor front from the M4A1, and welded rear armor from the M4.

■ Sherman VC Firefly

This was a Firefly conversion of the Sherman V, the M4A4.

Sherman Crab

One solution for mine clearing was the Sherman “flail” tank, known at the time as the Crab. It is an otherwise normal Sherman with the addition of a front mounted rotating drum with heavy chains attached. The idea was the chains would either detonate the mines or render them inoperable.

When the Clear Mines Command is used the flail operates and is usually able to detonate any mines it comes into contact with. Unfortunately, there is a chance that some mines will not be detonated, which means there’s always a chance of casualties when moving units through cleared lanes.

Churchill VII

The Churchill VII was the second major redesign of the Churchill series, and one of the most produced variants. The 6 pounder gun was replaced with a 75 mm gun. The VII was also wider and had thicker armor, and a heavier suspension. With 50% more frontal armor than a Tiger I, the tank was sometimes known as the "Heavy Churchill".

Churchill NA75

The NA75 was a special modification made to Churchill IVs. The conversion was performed by taking the 75 mm guns and mantlets from scrapped Sherman tanks and fitting them to the cast turret of a Churchill IV. The Sherman's gun had to be turned upside down for it to function within the Churchill turret. Roughly 200 conversations were made, and all saw service in Italy.

■ Churchill Crocodile

The “Croc” version of Churchill VII had a flame projector installed in the hull in lieu of the hull machine gun. The flamethrower had a range of about 100 m, and an armoured trailer towed behind the tank held the flamethrower's fuel.

■ Churchill AVRE

The Churchill Assault Vehicle Royal Engineers, or AVRE, was a Mark III or IV with a turret mounted 290 mm spigot mortar. This was designed to be used by combat engineers to destroy fortifications and clear paths through minefields. The 18 kg charge had a limited range of 80 m. The tank also carried a 3-man sapper team that could dismount.

■ Commonwealth Tank Destroyers

■ Achilles

The Achilles was an American Lend-Lease M10 tank destroyer fitted with the more capable 17 pounder anti-tank gun.

■ Archer

The unusual Archer was a self-propelled anti-tank gun built on the chassis of a valentine tank. The turret of the Valentine was replaced with a rear-facing low silhouette superstructure containing a 17 pounder gun. Facing the gun to the rear made the vehicle shorter, and allowed the crew to drive out of a firing position quickly after engagement.

■ Commonwealth Carriers

■ Priest Kangaroo

Canadian forces were the first to use fully tracked armoured personnel carriers on a large scale. The carriers were field improvisations made from American “Priest” self propelled artillery. The howitzer was removed, armor added, and benches placed for troops to sit in.

The Kangaroo was operated by special units created to transport a battalion of infantry into battle. As with halftracks, the goal of the Kangaroo was to get their passengers as close to combat as possible, while not deliberately exposing them to enemy fire. The Kangaroos had the additional advantage of sharing the mobility of their tank counterparts.

■ Sherman Kangaroo

Following the success of the Priest and Stuart Kangaroos, surplus Shermans, Churchills, and Rams were converted as well. Creating APCs from medium and heavy tanks was a major improvement for infantry, as the heavier tank armour better protected their cargo. In Italy, the British Eighth Army converted Sherman III tanks into a Kangaroo capable of carrying ten soldiers. The firepower of the vehicle was limited to a single hull-mounted machine gun.

■ Carrier Wasp Mk II

The deadly little Wasp was a universal carrier equipped with a flamethrower. The Mk II had a flexible flamethrower mount in front of the co-driver, and carried 100 gallons of fuel.

■ Carrier Wasp Mk IIC

The Canadian version of the Wasp, the Mk IIC moved the fuel tank to the outer rear of the vehicle and reduced its size to 75 gallons. This allowed a third crew member to be added.

■ Commonwealth Armoured Cars

■ AEC Mk II

The AEC (Associated Equipment Company) 4-wheel armoured cars were loosely based on the Matador artillery tractor chassis. In British and British Indian Army units, the AEC series fulfilled the same role as the Staghound. The initial Mk I had a Valentine turret with a QF 2 pounder gun. This weapon was upgraded to a QF 6 pounder in the Mk II. Along with the heavier gun was a more powerful engine and heavier turret.

■ AEC Mk III

A close support variant of the AEC armoured car, the Mk III was equipped with a QF 75 mm gun.

■ Commonwealth Unarmored Vehicles

■ Morris C9B

The C9B was a longer version of the venerable Morris 15 cwt truck and designed as a self-propelled light anti-aircraft truck, with a Bofors 40 mm gun.

■ Commonwealth Fortifications

■ 6 Pounder AT Bunker

These "what if" concrete reinforced bunkers contain a 6 pounder antitank gun and crew.

German Wehrmacht

German Tanks

Panzer IIIM (Flame)

The Flammpanzer version of the Panzer IIIM replaced the main 50 mm gun with a vehicle flamethrower, disguised by a long dummy barrel. About 100 vehicles of this type were built.

Panzer IVJ (Early)

Despite addressing the mobility problems introduced by the previous model, the final production version of the Panzer IV (the Ausf. J) was considered a retrograde from the Ausf. H. Born of German necessity to replace heavy losses, it was greatly simplified to speed production. The electric generator that powered the tank's turret traverse was removed, so the turret had to be rotated manually. However, the engine was upgraded and the hull and turret top armor were strengthened.

Panzer IVJ (Late)

The Pz IVJ (late) is like the Pz IVJ (early) except that the Nahverteidigungswaffe close-defense system has been installed. This system was a rotating 92 mm launcher, which could shoot smoke candles or have a flare pistol (armed with smoke or grenade ammunition) shot through it.

■ Panzer VA Panther (Late)

Later production versions of the Panther VA had improved gunner's optics and added the Nahverteidigungswaffe close-defense system.

■ Panzer VIE Tiger (Latest)

The (latest) Tiger variant is like the (late) variant, but with a higher main gun ammunition capacity: 108 rounds instead of 92.

German Tank Destroyers

Jagdpanzer 38(t)

Also known post-war as the Hetzer, the Jagdpanzer 38(t) was light tank destroyer based on the Czechoslovakian Panzer 38(t) chassis. It was armed with a 75 mm PaK 39 L/48 and had up to 60 mm of sloped front armor. The fully enclosed armor made the vehicle much more survivable than the open-topped Marder series of tank destroyers. It was also mechanically reliable and had a remote-controlled machine gun. Although it entered the war late when it first saw combat in July 1944, it became one of the most common German tank destroyers of late World War II.

Jagdpanzer 38(t) (Late)

Late production versions of the Hetzer were equipped with a new exhaust system.

Jagdpanzer IV (Late)

The late production version was up armored to 80 mm upper front hull armor and 40 mm upper side hull armor, and added the Nahverteidigungswaffe close-defense system.

■ German Assault Guns

■ StuG IIIG (Late)

The late versions featured the "box" shaped gun mantlet again, as the two mantlet types were in co-production for a time. A coaxial machine gun was fitted, and the top-mounted MG34 was replaced with a remote-control MG42. The frontal armor was no longer face-hardened.

■ StuG IIIG (Latest)

The latest production models added the Nahverteidigungswaffe close-defense system and returned to a redesigned curved Saukopf gun mantlet.

■ StuG IV

The StuG IV had the same role and basic design as the StuG III, the primary difference being that it was a Pz III superstructure on a Pz IV chassis.

■ StuH 42 (Late)

The late production model of the StuH 42 was equivalent to the StuG III (Late) with a return to the box gun mantlet, along with a new coaxial MG and remote-controlled top-mounted MG.

■ StuH 42 (Latest)

The latest production models added the Nahverteidigungswaffe close-defense system.

■ Sturmpanzer IV (Late)

The (late) variant of the Sturmpanzer IV represents the third series of the vehicle that began service in mid 1944. The superstructure was modified to contain a commander's cupola and a ball-mounted machine gun mount on the upper front.

■ German Self-Propelled Artillery

■ Wespe

The Sd.Kfz. 124 Wespe (German for "Wasp"), also known as Leichte Feldhausbitze 18 auf Fahrgestell Panzerkampfwagen II ("Light field howitzer 18 on Panzer II chassis"), was a German self-propelled artillery vehicle developed and used during World War II. The design for the Wespe was produced by Alkett, and was based on the Panzer II Ausf. F chassis. The vehicle's main gun was the 105 mm leFH 18 light howitzer.

■ Hummel

The Sd.Kfz. 165 self-propelled howitzer, nicknamed the "Hummel" (Bumblebee), was designed to provide German Panzer divisions with mobile artillery support. Designed in 1942, the Hummel first saw major action at the Battle of Kursk in July 1943. The Hummel used the same III/IV chassis as the Nashorn, combining parts from the Panzer III and IV. On top of this chassis an open-topped lightly armored superstructure housed a 150 mm sFH 18 L/30 howitzer and a crew of six.

■ German Anti-Aircraft Vehicles

■ Sd.Kfz. 10/5

A Sd.Kfz. 10 prime mover halftrack converted into an anti-aircraft vehicle in the same manner as the Sd.Kfz. 7, mounting a single FlaK 38 20 mm gun on a rotating platform.

■ German Halftracks

■ SPW 250 Neu series

Beginning in late 1943, a new version of the Sd.Kfz. 250 began production, with the angled plates being replaced with simple straight plates in order to simplify and speed production.

■ SPW 251/16 Ausf. D

Also called the Flammpanzerwagen, this halftrack had two vehicle flamethrowers, one mounted on each side. Flammpanzerwagens were assigned to Panzergrenadier regimental Pioneer companies.

■ SPW 251/17 Ausf. D

A fire support variant of the Sd.Kfz. 251 armed with a KwK 38 20 mm gun in an armored turret. The 251/17 was often used in Panzergrenadier platoons to provided additional firepower.

■ German Small Arms

■ Gewehr 33/40(t)

After the German occupation of Czechoslovakia, the production of many Czech vehicles and equipment was continued for German use. The vz. 33 rifle became the Gewehr 33/40(t) carbine under German service, and was used primarily by mountain troops due to their much shorter length compared to the Kar 98k.

Cartridge.....7.92x57 mm Mauser
Action.....Bolt action
Feed system .....5-round internal magazine

■ FG 42 (late)

The late production variant of the FG 42 incorporated numerous improvements based on battlefield experience, including adjusting the pistol grip to a more conventional vertical angle,

relocating the bipod attachment forward to the muzzle for increased stability, and changing the stock from metal to wood.

Cartridge.....7.92x57 mm Mauser
Action.....Gas-operated, rotating bolt
Feed system .....10 or 20-round detachable box magazine
Rate of fire.....750 rounds/minute
Effective range .....500 meters

■ StG 44

The MP 44, or StG 44 (Sturmgewehr 44 or "assault rifle 44"), is considered by many historians to be the first modern assault rifle be deployed by a major military power. The rifle was chambered for the 7.92x33 Kurz cartridge, a shorter version of the German standard rifle round. The combination of this round and the StG 44's selective fire design provided a compromise between the controllable firepower of a submachine gun at close range with the accuracy and power of a Kar98 at intermediate ranges.

Cartridge.....7.92x33 mm Kurz
Action.....Gas-operated, tilting bolt
Feed system .....30-round detachable box magazine
Rate of fire.....600 rounds/minute
Effective range .....300 meters

■ Panzerfaust 60

A further improvement of the Panzerfaust began production in September 1944. The Panzerfaust 60 had a maximum range of 60 meters and improved sight and trigger mechanisms.

Effective range .....60 meters

■ Panzerfaust 100

The Panzerfaust 100 was produced beginning in November 1944. The warhead, which was launched at 60 m per second, could penetrate up to 200 mm of armor.

Effective range .....100 meters

■ German Heavy Weapons

■ Flammenwerfer 41

The Flammenwerfer 41 was a manpack flamethrower used by Germany during World War II. The flamethrower carried 28 kilograms of fuel and could fire it up to about 30 meters away, depending on conditions and fuel usage. The flamethrower used a tar and gasoline mixture ignited by a hydrogen torch.

Flamethrowers were usually operated by either combat engineers or specially formed units, and used to dislodge enemy soldiers from fortified positions that were resistant to explosives or small arms fire.

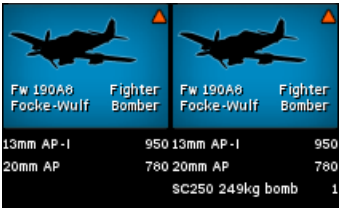
Note: Flamethrowers have very limited fuel. Choose your shots carefully!

■ German Air Support

■ Focke-Wulf 190A8

The Focke-Wulf Fw 190 Würger (Shrike) was a German single-seat, single radial engine fighter aircraft designed by Kurt Tank in the late 1930s. It was used by the Luftwaffe during the Second World War in a variety of roles. Like the Messerschmitt Bf 109, the Fw 190 was employed as a "workhorse", and proved suitable for a wide variety of roles, including air superiority fighter, strike fighter, ground-attack aircraft, and also operated to a lesser degree as a night fighter.

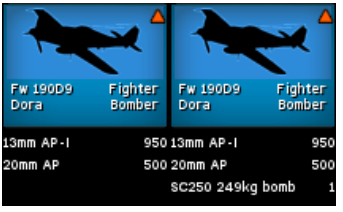
Configurations ... Strafe, Light



■ Focke-Wulf 190D9

Nicknamed the "Dora", the D series of Fw 190 were designed for improved high-altitude performance in order to fight heavy bombers.

Configurations ... Strafe, Light

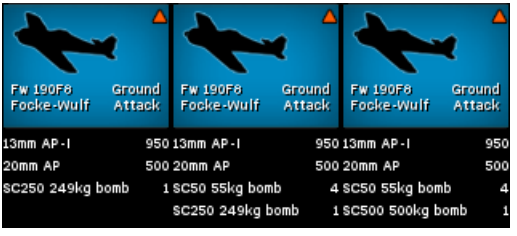


■ Focke-Wulfe 190F8

The Fw 190 F-8 differed from the A-8 model with a slightly modified injector on the compressor which allowed for increased performance at lower altitudes for several minutes.. Armament on the Fw 190 F-8 was two 20 mm MG 151/20 cannon in the wing roots and two 13 mm MG 131 machine guns above the engine.

Configurations ...

Light, Heavy, Maximum



German Fortifications

AT Gun Bunkers

These are concrete bunkers armed with an antitank gun and crew. The bunker can be equipped with a 50 mm PaK 38, 75 mm PaK 40, or 76 mm PaK 36(r).

CREDITS

Game Engine Design
Charles Moylan
Stephen Grammont

The Battlefront Team
Charles Moylan
Stephen Grammont
Mike Duplessis
John Costello
Christopher Nelson

Programming
Charles Moylan
Phil Culliton

Lead Tech Support
John Costello

Lead Artist
Cassio Lima

User Interface Artwork
Jean-Vincent Roy

3D Models and Animations
Cassio Lima Studio

Cover Art
Cassio Lima

Voice Actors
JC Winterbach
Alan Fawcett
Gagan Pathak
Sameer Arif

2D Art
Cassio Lima Studio
Mike Duplessis
Marco Bergman
Christopher Nelson
Kari Salo

Game Manual
Christopher Nelson

Quick Battles
Mark Ezra

Campaign Designer
Christopher Nelson

Scenario Designers
Matt Adema
Mike Duplessis
Mark Ezra
Gregory Keller
Chad Lennerts
Christopher Nelson
Kari Salo

Special Thanks
JC Winterback for his invaluable help with research on South African forces.

Beta Testers
Matt Adema
Boris Ajdukovic
David Anderson
Steven Burke
Joe Callan
Alan K. Davis

Beta Testers Cont'd
Ben Donaldson
Mark Ezra
Brent Fox
Michael Graham
Bil Hardenberger
Jean-Charles Hare
Jim Holland
Gregory Keller
Kevin Kinscherf
Jerry Lenaburg
Chad Lennerts
Ian Leslie
Jon Martina
Robert Massart
George McEwan
Ken McManamy
Chris Meacham
Markus Mohr
Vincent Manaco
John Osborne
Josh Peterson
Karl Saville
Philip Skelton
David Sluiter
Jeffrey Smith
Luke Wallace
Pete Wenman
Thomas West
Karl White
Michel van der Meyden

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