

COMBAT MISSION

★ FINAL ★  
Blitzkrieg



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## ■ INTRODUCTION

Following the July breakout during Operation Cobra, liberation swept across France as the Allied forces rapidly advanced in the wake of German collapse. Wehrmacht forces, shattered from crippling defeats in August, reeled towards the German border so quickly that for a time the only obstacle holding back Allied forces from moving east was the inability for supply trains to keep up with the advance. In an act of operational improvisation, German commanders began to stabilize their defenses in September, as Allied forces ran up against the Siegfried Line and various rivers such as the Rhine. Met with determined German resistance and often rough terrain, the Allies began their long, hard slog into Germany.

During summer and fall of 1944 the Allies had been almost exclusively on the offensive. However, the Germans had been preparing a massive counter-attack of their own for months. Named Wacht am Rhein, or “Watch on the Rhine”, this bold operation was designed to launch a fast armored strike through the rugged Ardennes in southern Belgium, repeating Germany’s triumph in 1940. The ultimate goal of the offensive was the port of Antwerp, which would cut off a vital supply sources and separate the American and British armies. During early December 1944, the Ardennes was such a quiet front that the Americans had taken to using it as a proving grounds for green divisions and a rest area for burnt-out divisions. Meanwhile, the Germans quietly gathered a massive, freshly reinforced and re-equipped force on the other side of the front lines.

On December 16, 1944, a massive German artillery barrage shattered the cold and quiet morning, signaling the beginning of the last great German offensive, and what would later become known as the Battle of the Bulge.

## ■ What’s New in Combat Mission: Final Blitzkrieg

### ■ Setting

The base game of Final Blitzkrieg covers most of the Western Front, specifically the border regions of France, Germany, Belgium, and the Netherlands, from October 1944 to January 1945. The emphasis of Final Blitzkrieg encompasses the operations that became known as the Battle of the Bulge from December 1944 to January 1945, in the Ardennes region of Belgium.

Combat Mission: Final Blitzkrieg is a STANDALONE base game. Final Blitzkrieg does not require any other Combat Mission products in order to play. Future expansions (modules and packs) will expand Final Blitzkrieg to include additional nations, forces, and equipment, and extend the timeline of the Western Front all the way to VE (Victory Europe) Day in May 1945.

### ■ Weapons, Vehicles, and Equipment

Final Blitzkrieg encompasses a large amount of weapons and combat vehicles that saw service on the Western Front from October 1944 to January 1945: over 130 individual vehicles, 24 heavy weapons, and 32 infantry weapons! For a detailed list of the vehicles and weapons available in Final Blitzkrieg, consult the Encyclopedia chapter.

All vehicles have been given a new coat of whitewash camouflage in loving detail. This whitewash camouflage will automatically be applied on January 1945, if the ground condition is Light Snow or heavier.

United States Army vehicles include:

- M4A3E2 "Sherman Jumbo" assault tank (75mm, 76mm, and flamethrower variants), clad in armor thick enough to rival heavy German tanks!
- M4A3E8 "Easy Eight" medium tank, the most advanced Sherman model of the war.
- M36 GMC tank destroyer, armed with the deadly 90mm cannon.
- M24 Chaffee light tank.
- Flamethrower variants of the Sherman tank.

German Wehrmacht vehicles include:

- Jagdtiger, the heaviest armored fighting vehicle to see combat in World War II.
- Sturmtiger, equipped with a 380mm rocket launcher.
- Flammpanzer 38, a rare flamethrower-equipped Hetzer.
- Late models of many different German tanks, tank destroyers, and self-propelled guns, including the late Panther Ausf G equipped with chin mantlet.

## ■ Services and Formations

Combat Mission: Final Blitzkrieg's initial release concentrates on the American and German Wehrmacht forces. The following services are available for use in the game:

- United States Army.
- German Heer, Waffen-SS, and Luftwaffe (limited to Fallschirmjäger battalions).

New American formations include the Straggler Group, perfect for simulating disorganized retreating units in the early chaos of the December offensive. New German formations include Gebirgsjäger units (for both Heer and Waffen-SS), Fortress MG battalions, Sturmtiger companies, and a variety of late war Panzer battalion configurations. All previously existing formations are also available, and have been updated to historical TO&E seen in late 1944.

## ■ Features

Combat Mission: Final Blitzkrieg uses version 3.0 of the Combat Mission engine. The engine advances seen in the last several releases have been combined together into Final Blitzkrieg's core experience and updated for the Western Front (tank riders for Shermans!).

## ■ Regions

Regions supported by Combat Mission: Final Blitzkrieg include:

- Ardennes.
- France.
- Germany.
- Holland.

## ■ 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: Final Blitzkrieg 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: Final Blitzkrieg 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 saved in your online account at [www.battlefront.com/store](http://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](http://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: Final Blitzkrieg, 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](http://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](http://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.

## ■ TUTORIAL

This tutorial and the accompanying tutorial campaign will teach you the basics of tactical warfare in the Combat Mission environment. If you are new to Combat Mission, we highly recommend that you follow this tutorial. If you are a Combat Mission veteran, you can safely skip the tutorial, although you may wish to play the campaign as a gentle introduction to the Bulge battlefield.

During this tutorial, your controls will not be restricted and you are allowed to command your troops as you see fit. With the exception of a few step-by-step instructions for tricky procedures, you should view this tutorial as more of a guide, instead of a rote series of steps to follow. There is a saying that "no plan survives first contact with the enemy", and that saying applies to Combat Mission as well! Because Combat Mission simulates the chaos of real battlefields, it is possible that through bad or good luck, events will deviate from the outcomes described in this text. In these cases, you will do what every good battlefield commander would do: adapt to the situation and follow the spirit of the tutorial instructions.

### ■ Training Campaign Overview

In Combat Mission, a campaign is a series of linked missions. Missions are single battles, and winning or losing them may change the course of the Campaign. At the end of the Campaign, all mission results are tallied up and the Campaign results are determined. You can typically lose some missions and still win a Campaign, or vice versa.

The Training Campaign is designed to teach you Combat Mission tactics as it gradually increases in complexity, and enemy resistance becomes more difficult. The campaign is four missions long. Here is a peek at what the missions offer:

**Mission 1:** "Firing Range". Learn basic movement and combat commands on a practice patrol and firing range, as well as an introduction to calling for fire support.

**Mission 2:** "Counterattack at Lutrebois". Learn the basics of the attack by assaulting a German defensive position with a combined arms force of infantry, tanks, and artillery. Introduction to setup phase, victory conditions, and basic tactics.

**Mission 3:** "Panzers on the Move!". Defend Lutrebois from a heavy German attack, then seize the initiative and counterattack! Introduction to defensive tactics, antitank guns, and fortifications.

**Mission 4:** "Shield and Hammer". Combine the skills you have learned to assault and push the Germans out of Lutrebois once and for all. The Germans won't roll over this time, so be prepared to bring your A-game!

When you are ready to begin this tutorial, select "Campaign" from the main menu and select "Training Campaign", then select "Fight!" to start the campaign.

You will be asked to select a play mode and skill level. Combat Mission: Final Blitzkrieg (referred to from now on as "CM:FB") has two different play modes available for campaigns: turn-based and real time.



Turn-based play (also known as WEGO) in Combat Mission allows the player to order commands and examine the battlefield at their leisure while the action is paused; once the player begins the turn however, the action will continue for 60 seconds without interruption. The player can replay the turn as often as they like, and, once satisfied, a phase of giving orders begins, and so on.

In Real Time, the action will be continuous and you can issue orders at any time; you can also pause the game by pressing the ESC key and continue to issue orders. Replay is not available in Real Time mode.

For this campaign you may select either play mode, but WEGO is recommended. You will be prompted at the start of every mission in the campaign to choose a play mode.

Select Veteran skill level. Skill level primarily affects Fog Of War (FOW) and artillery support. The higher the skill level, the less you will know about enemy units and the longer it takes for fire support, such as artillery, to arrive.

After you have selected your play mode and skill mode, (WEGO and Veteran recommended), left-click "OK".

You will now be given the campaign briefing. This briefing will inform you of the entire campaign's scope and details, aided by an assortment of maps. Left-click "OK" to move to the first scenario of the campaign. After the loading screen, you will again find yourself at a briefing screen, this time for the first mission. You should read all briefings carefully for information that may be vital to your mission, but with a glance at your maps you can glean the basic facts.



## ■ Mission 1: Firing Range

When you are done reading the briefing, press "OK" to enter the mission. If you wish to revisit the briefing, you can always find it by left-clicking on "Menus" in the lower right-hand corner and then "Briefing".



## ■ The User Interface

Upon entering the mission you will be greeted with a view of your troops on a road.

Before you begin to give them commands, take a moment to become accustomed to the interface. Most of the screen is occupied by the view of the battlefield, with the user interface located along the bottom of the screen. Select one of your squads by left-clicking on the round green icon that floats above them (the squad icon will look like a soldier, the image to the right). The interface below will then be populated with specific information on that unit.



On the left is the Unit Info Panel (1), where you will find basic information about the selected unit, including what type of unit it is, its name, experience, ammunition levels, and so on.

The next box to the right (2) shows what special equipment the unit is carrying, such as binoculars, Panzerfaust, and demolition charges.

The center panel, called the Team Info Panel (3), gives detailed information about each soldier in the squad, such as what weapon he is carrying, whether he possesses a specialty skill, and whether he is wounded. Each column represents a different team within the squad.

The panel furthest to the right (4) is the Command Panel. Here you can select Commands to give to the selected unit. The Commands are separated into four tabs by function: Movement, Combat, Special, and Admin. Move between tabs by either using the hotkeys F5-F8 or by pressing the buttons above the panel: M for Movement, C for Combat, S for Special, and A for Admin. You can also bring up a pop-up list of Commands by pressing the Spacebar. In this mission we will only be concerned with the Movement and Combat tabs. Don't worry about what all the Commands mean just yet; we will get to them later.

At the bottom-right of the interface (5), you will find the Menu button. Left-clicking this button will bring up various game menus, such as the mission briefing, a list of hotkeys, a save game function, or an option to exit the mission. The buttons to the right (6) will advance the turn, pause the game, and control the replay feature in turn-based play mode. The white numbers underneath the red button tell you how much time remains before the mission ends.

Take some time to explore the interface. Some of the interface elements will generate tool-tips if you hover your cursor over them. You should also take a look at the Hotkeys window within the menu options (5). If you ever want to know more about the equipment displayed in the

User Interface, such as rifles and tank models, you can consult the Encyclopedia chapter of this manual.

Your troops are almost ready to begin their training, but first you must learn how to use the camera.

## ■ Using the Camera

CM:FB features a precision camera for viewing the detailed 3-D battlefield from any angle or position. Because this camera is much more flexible than those found in most games, it is controlled differently, so it may take some practice for you to smoothly move around with it.

There are three different camera modes that you can use to move around in the game: Standard, First Person Shooter (FPS), and Real Time Strategy (RTS). Each mode controls the camera differently: FPS and RTS each use a control scheme similar to games of that genre, while Standard is the traditional Combat Mission control scheme. Standard is the default active camera control mode when the game is installed, so you will learn how to use Standard in this tutorial. However, it is highly recommended that you experiment with the other control modes and pick one that suits your preferences. You can change your camera controls by selecting "Options" in the main menu and then selecting "Controls", then left-clicking on "Camera Config".

The Standard camera controls can use either the mouse or keyboard (or both) to control the camera.

To pan the camera (i.e. move it forward, backward, left, or right across the battlefield):

- Mouse: Press and hold the left mouse button and drag the mouse. The camera will pan and follow your motion. The further you drag the mouse, the faster the camera will move.
- Keyboard: Use the W, A, S, and D keys to pan the camera. Press and release to make small incremental adjustments, and hold the keys down to pan the camera quickly.

To swivel the camera (i.e. change which direction it is facing: left, right, up, or down):

- Mouse: Press and hold the right mouse button and drag the mouse in any direction. The camera facing will follow the motion of the mouse. Once again, the further you drag the mouse, the faster the camera will turn.
- Keyboard: Use keys Q and E to rotate the camera to the left and right.

To change the altitude of the camera (i.e. how close it is to the ground):

- Mouse: Scroll up or down with the mouse wheel to raise and lower the camera.
- Keyboard: Use key R to raise the camera and key F to lower the camera.

Other useful controls:

- You can jump to preset altitudes by pressing keys 1-9. Keys 2, 3, and 4 are often the most useful
- CTRL-left clicking on the ground will instantly jump the camera to that point. This is useful on large maps where you can avoid panning for long distances.
- Pressing V will flip the camera view around 180 degrees.
- The camera can be zoomed up to 20.0x. Press X to zoom in, and Z to zoom out.

Some useful tips for controlling the camera:

- It is important to know where your cursor is on the screen, because the sensitivity of these changes decreases as the cursor approaches the edge of the screen. To move quickly, click

your cursor in the center of the screen; to make small adjustments to the camera, click your cursor when it is nearer to the edge of the screen.

- You can also move the camera by touching the edge of the screen with the cursor. The camera will quickly pan in that direction.

- It is best to make slow dragging motions with your mouse when moving the camera.

Being able to move the camera around the battlefield quickly and precisely will be important to your battlefield success. Be sure to practice the controls described above throughout the mission.

## ■ Selecting Units

A unit in Combat Mission is a vehicle or a group of soldiers that receives commands and acts together as a group. Soldier units are typically either teams of 2-7 men or squads of 2-3 teams. When you give a command to a squad unit or team unit, all of the soldiers in that unit will carry out the command. Vehicles are always a single unit. Each unit is marked with a floating icon that floats above it on the battlefield.

To select a unit, left-click on its floating icon, or on any of the soldiers in the unit. The floating icon will blink and pulsing green circles will appear underneath the soldiers. To select a group of units, press and hold the Shift key, then, while holding down the left mouse button, drag a box around the units you wish to select. In this manner, you can give multiple units the same movement or targeting command. You can also select all of the units within a small formation, such as a platoon, by double-clicking on the floating icon of any of the units in the platoon. This will automatically select all of the units belonging to the platoon.

## ■ Move Out!

Your first objective is to move your platoon to the objective labeled "(1) Farmstead". The objective is signified by white text floating above neon green tinted ground. To fulfill this objective you must move a unit onto this zone.

1. Select your platoon headquarters (HQ) by left-clicking on the floating icon that resembles a flag.

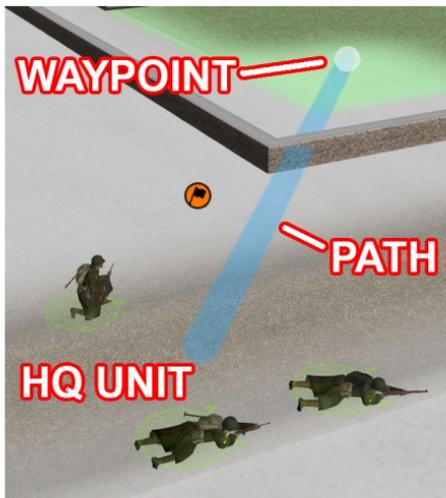


2. Ensure that the Movement tab is open by pressing the F5 key.
3. Left-click on the Move command button and then left-click on the green ground inside the objective.

*Note: A white ball will appear at this point with a colored line connecting the HQ unit to the point. This white ball at the destination is known as a Waypoint, and when the action starts the soldiers will move themselves to this point.*

4. Right-click anywhere on the screen to end the order.

*IMPORTANT: If you mess up an order and want to re-do it, press the Backspace key to delete the last waypoint.*



Repeat this process for your two rifle squads following the HQ. Assign them Move commands to anywhere in the objective area. You can move troops into buildings by simply left-clicking on the building. When you give a movement order to the building, a prompt will pop up asking you to choose which floor you want to move the unit to.

Try moving one of your rifle squads into the building; you will know that you have successfully set a waypoint in the building if the building turns translucent while the rifle squad is selected.

*Note: Press Alt-P to activate Show All Move Paths: this will allow you to see other units' movement orders when you have a unit selected.*

Your orders for this turn are complete! When you are ready to watch the action, left-click the red button in the lower right-hand corner of the screen.

You will now watch for sixty seconds as the game plays. Remember, you will not be able to modify or give new orders until sixty seconds have elapsed. The Move command orders soldiers to walk at a relaxed pace. This command is useful for moving units long distances without tiring them.

You will notice that, as the first soldiers move over the green-colored objective space, the green coloration disappears and a message informs you that your unit has reached the objective. This is a "Touch" objective, and entering it once will award you victory points; you will not have to occupy it for the entire battle. All of the ground objectives in this mission are Touch objectives. In contrast, "Occupy" objectives require you to keep troops inside the green zone.



You can watch your troops move for the full sixty seconds, or left-click the red button again to end the replay phase immediately and skip to the next turn. If you watch the full sixty seconds, you will see a "DONE" text pop up, at which point you should left-click the red button to enter the next turn. You will then be back in Command Phase and can give your units fresh commands, or modify pre-existing ones.

### ■ Quick Move Command

Your patrol is behind schedule! Issue your platoon a Quick movement command to the objective "(2) Forest". Remember, after you've set down the Quick command, right-click to end the order. Your men will now run at a slow jog, much faster than the previous Move command. The extra speed will come at a cost, however. The faster your men move, the less aware they are of their surroundings, and the more likely the enemy is to spot them.

*Reminder: If you mess up an order and want to re-do it, press the Backspace key to delete the last waypoint.*

After issuing your orders and beginning the action, you will notice that your troops automatically move around obstacles in their path, such as the tall wall next to the farmstead. Units usually do not follow your commands precisely, and will alter their path as needed to avoid obstacles and take advantage of terrain.

### ■ Fast Move Command and Fatigue

It's time to see how fleet of foot your men are. Issue the platoon a Fast movement command to the "(3) Field" objective and start the action. The soldiers will now move in a fast run, covering a lot more ground in one turn. Fast is useful if you need to get somewhere very quickly without stopping for any reason. Running across streets that may be covered by enemy fire is a good situation to use a Fast Command. However, it comes at a cost: fatigue.

After the turn has ended and you have entered the next Command Phase, you will notice that your squads display "Tiring" or "Tired" in the left-hand Unit Info panel of the interface. They have become fatigued from running and may have to rest before they can use the Fast command again. As long as they do not move too quickly, the unit fatigue level will improve over a number of turns as the soldiers catch their breath. Be careful to not run your troops too hard before they enter into combat with the enemy, or they may wind up being too tired to fight or move effectively!



## ■ Multiple Waypoint Commands

To conclude the patrol, you will move your platoon to the objective "(4) Firing Line" for some target practice. However, this time we will give them multi-waypoint orders. Select one of your units and give it a Move command to the fence between them and the objective. However, instead of right-clicking to end the order, left-click a bit further ahead, onto the road running alongside the fence. A second line and waypoint will appear. Right-click to stop giving Move commands. Now select the Quick command, and left-click on the "(4) Firing Line" objective, just next to the short wall running along the objective. Right-click again to stop giving commands. Repeat this process for the other units, and mix up the command types if you want to experiment.

*Reminder: If you mess up an order and want to re-do it, press the Backspace key to delete the last waypoint.*



Advance the turn. Your units will move to each of the waypoints in the order they were laid down. At each waypoint (the white pyramid-shaped joints connecting the colored lines), they will change movement speeds as commanded, so you will see your troops move from a walk to a jog as they arrive at the waypoint that separates the Move and Quick commands. You'll also notice that waypoints are color-coded to the type of command they use: blue for Move, yellow for Quick, orange for Fast, and so on. You can edit the movement command used by an already existing waypoint by left-clicking on the colored line and selecting a new movement command. The color of the line will change to match the new command. Left-click anywhere on the screen to stop editing the waypoint.

You can combine multiple waypoints and movement commands in as many combinations as you want. Multiple waypoints are especially useful when following terrain features such as curved roads. You can adjust the location of waypoints after you place them by left-clicking the waypoint and then dragging it across the map.

## ■ Target Practice

It will take two or three turns for your troops to reach the objective, depending on how fast you move them. When they reach it, they will automatically align themselves along the wall, spot targets, and begin shooting. Don't panic when you see the Axis tanks appear; they are harmless target dummies.

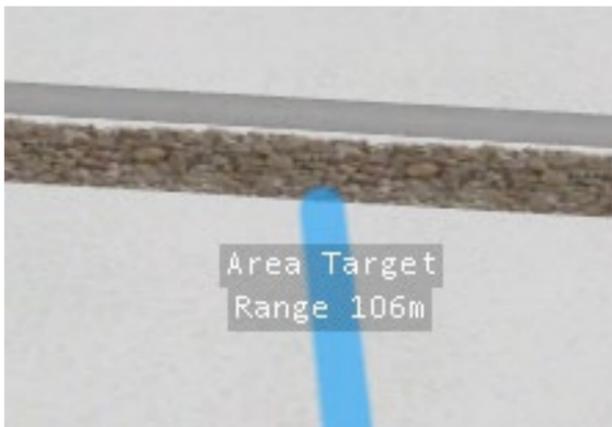
## ■ Combat Commands

For the most part, your troops will intelligently select their own targets without any need of commands from you. However, sometimes you will want to specify a target for your units. Select one of your units and open the Combat command panel (hotkey F6). Left-click on Target, then move the cursor onto the map. A line will be drawn between your unit and the cursor's location. This line indicates your line of fire (LOF) and the distance to the target in meters. If the line is light blue, you have a clear LOF and can fire at the target. If the line is dark blue and pink, then the line of fire is blocked somewhere along the way and you cannot fire at the target. A grey line means that you can issue a fire order, but not all of the soldiers in the unit can see the target and fire at it.



Left-click somewhere on the wall that German troops are hiding behind to designate it as a target, then advance the turn. Your unit will shoot at it until you order it to stop by using the Clear Target order in the Combat command panel.

You can also order a unit to fire at a specific enemy unit by left-clicking the Target command and then left clicking on either the enemy unit itself or the floating icon above it. Your unit will then attack it until it is destroyed, out of sight or range, or your unit is no longer capable of firing.



Issuing a Target order against the ground or a building will order the unit to perform what is known as Area Fire. The unit will fire at the terrain without knowing whether it is hitting any enemy units or not. Area Firing units will spread their shots around to cover the nearby terrain, and will automatically switch to target enemy units if they appear in the nearby area.

*Note: The Clear Target command does not tell a unit to stop firing altogether, it just tells the unit that they are no longer required to fire at the target previously specified. If Clear Target is used, the unit will return to firing at will on its own targets.*

### ■ More Toys!

If you look to the southeast, you should notice that reinforcements have arrived. A platoon of M4 Sherman tanks have appeared on the road. With these vehicles, you have some real firepower! Move the tanks up to the firing line and let them shoot for a turn. They will automatically begin firing at the enemy tanks, changing targets as each is destroyed.

Tanks and other vehicle units are usually equipped with not only a main gun, but also secondary machineguns. Although vehicle units will usually choose the most appropriate weapon to engage a target with, you may want to save main gun ammunition by not wasting it on low-threat infantry targets. Giving vehicle units a Target Light command from the Combat command panel tells them to engage a target with secondary weapons only, such as machineguns. Try giving one of your Shermans a Target Light command aimed at the infantry targets.

Sometimes you will want your units to focus their fire in a specific area. The Target Arc command was made for this purpose. A unit with a Target Arc command will usually attack only enemy

units that are located in the designated area, unless it feels immediately threatened by an enemy outside its arc.

Select one of the Shermans, open the Combat command tab, and then select the Target Arc command. By left-clicking on the map twice, make a small highlighted arc in front of the tank.



You can use the Clear Target command to erase the Target Arc command. The tank will then continue to fire at targets, but it will no longer be constrained by the Target Arc command.

An alternative to Target Arc is Target Armor Arc. It functions the same as Target Arc, except that a unit with this command will only engage enemy armored vehicles within its arc, and will leave soft targets like infantry alone. This is useful if you do not want your anti-tank weapons to reveal themselves too soon against enemy scouts.

## ■ End

You have now completed all objectives for the mission. When you are ready to move on to the next battle, select "Cease Fire" from the Menus tab. This will end the scenario. Press "OK" to move past the After Action Report (AAR) screen to the next scenario (we will address the AAR screen in Mission 2).

At this point, you will be prompted to save your campaign progress. You should always make a unique save file at the beginning of every mission in a campaign; you might want to backtrack or replay a mission.

**Note: Combat Mission DOES NOT MAKE AUTOSAVES. Always save between missions or before exiting a mission in progress!**

## ■ Mission 2: Counterattack at Lutrebois

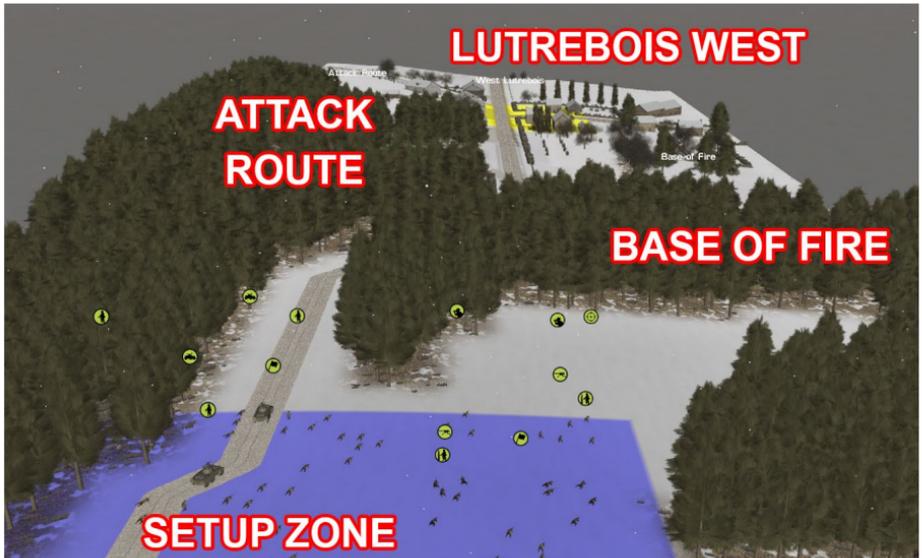
Before moving your troops, be sure to thoroughly read the briefing. Briefings will give you valuable information that will help you complete your mission, such as information on what reinforcements may be arriving, disposition of enemy forces, and what your objectives are.

After you read your briefing and enter the mission, you will be greeted with a view of your forces on the map: two scout teams, a platoon of infantry, two machinegun squads, a company HQ, and two M8 scout cars. In ten minutes, you will receive three Sherman tanks as reinforcements. In the meantime, you will use your starting force to scout ahead and then begin the attack. When your tanks arrive, you will be able to commit them where they are needed most, based on the information gathered prior to their arrival.

### ■ Setup Phase

Setup Phase is a special phase that occurs at the beginning of every scenario. You will notice that the ground underneath your troops is tinged blue. During this time the battle is paused and you may arrange your forces around the setup zone instantly. There can be up to three different setup zones present per side in any battle. A unit placed within a setup zone must start the battle somewhere within that same setup zone. A unit that is not in any setup zone is locked in place until the battle begins. During Setup Phase, you can give all units starting orders for the first turn, which they will immediately execute when the battle begins.

For this mission you don't need to move your units in the setup zone, but you can rearrange them if you wish.



## ■ Reconnaissance

The terrain ahead of you is open ground interspersed with wooded areas. Although it is certain that the main defenses are on the West Lutrebois objective, the enemy likely has defenses established elsewhere on the map. You will have to find out where the enemy is, or you may get ambushed! The first step is to send your scout teams forward to conduct some reconnaissance and get an idea of where the enemy is. The ideal observation post contains concealment, such as foliage or buildings, to hide you from enemy eyes. A tall building or hill works best, but woods will do in a pinch.

Select the scout teams (their floating icon looks like a silhouette of a man peering through binoculars) and give them a Hunt movement command to the objective named Base of Fire. The Hunt movement Command will tell them to advance at a cautious pace, with weapons at the ready. If any enemy is spotted or they are fired upon, the units will stop moving immediately and await further orders. Hunt is a useful command when you don't want a unit to overextend itself and run into trouble.



*Note: the woods here can be dense, making it hard to see the ground.  
You can temporarily toggle off the appearance of foliage by*

*pressing Alt-T. By cycling through Alt-T you can either make foliage completely invisible to you or make only foliage near your camera invisible.*

You should also give the scout teams a Cover Arc command so that they do not fire on distant enemy troops and give their positions away: for now, their job is to find the enemy, not kill him. Holding the Shift key while placing the arc will allow you to place a full circle Cover Arc. Set the circle at about 50 meters or so, so that your men will defend themselves against nearby enemies, but won't start shooting at distant targets. It will take a few turns for the two scout teams to reach their destination, depending on the route you ordered them to take.

Leave the rest of your units in place; the job of your scouts is find out where the enemy is (or isn't!) so that you will have a better idea of where to send the rest of your forces.

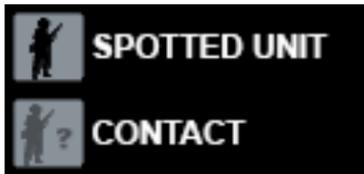
Once your scout teams arrive at their objective, leave them in place for a couple turns to let them take a look around. Depending on where exactly you send them, they may get shot at. If this happens, they will stop moving and go to ground, since they are using the Hunt command. As long as your scout teams stay in the woods and stop moving, the enemy will hopefully lose sight of them quickly and stop shooting.

## ■ Spotting and Contacts

Once your scouts are in position, you will start to see some enemy (grey-colored) floating icons appear. The act of your units seeing enemy units is known as spotting.

Spotting is a rather complicated affair in Combat Mission, but basically consists of seeing confirmed enemy units, which are signified by a floating icon that can be selected, and contacts, which appear as floating icons with question marks. A confirmed enemy unit is straightforward: at least one of your units can see it, and confirm its basic type, such as a soldier, an anti-tank gun, or a vehicle. Your units will automatically fire upon these units as they see fit.

Contacts, on the other hand, are merely possible enemy units: your units think there might be something there. Your units will not automatically fire at contacts. The opacity of a contact will tell you how confident your troops are that something is there: a very translucent contact is less certain than one that is fully opaque. Contacts can be upgraded to confirmed units over time, by moving closer to the contact, or if the enemy moves or fires at your units. Units that move or fire are much easier to spot. Contacts can also be the last known location of confirmed units.



Unlike the "Borg" spotting seen in most games, where once spotted a unit is automatically seen by every enemy, units do not automatically share their spotting with all friendly units: this is known as relative spotting. For example, if one of your units spots an enemy anti-tank gun, a nearby unit might not see the same anti-tank gun at all! The unit will have to spot the anti-tank gun on its own, or have the information passed to it through the C2 network. You can

tell which of your units can spot an enemy unit by clicking on the enemy unit icon. Your units that have currently spotted and confirmed it will have highlighted icons.

You may have noticed that right at the start of the scenario some contacts were visible: this is known as pre-battle intelligence, and tells you the location of some enemy units at the beginning of the scenario. You, or your opponent, may receive this bonus. Whether a side receives pre-battle intelligence and how much will vary based on the scenario.

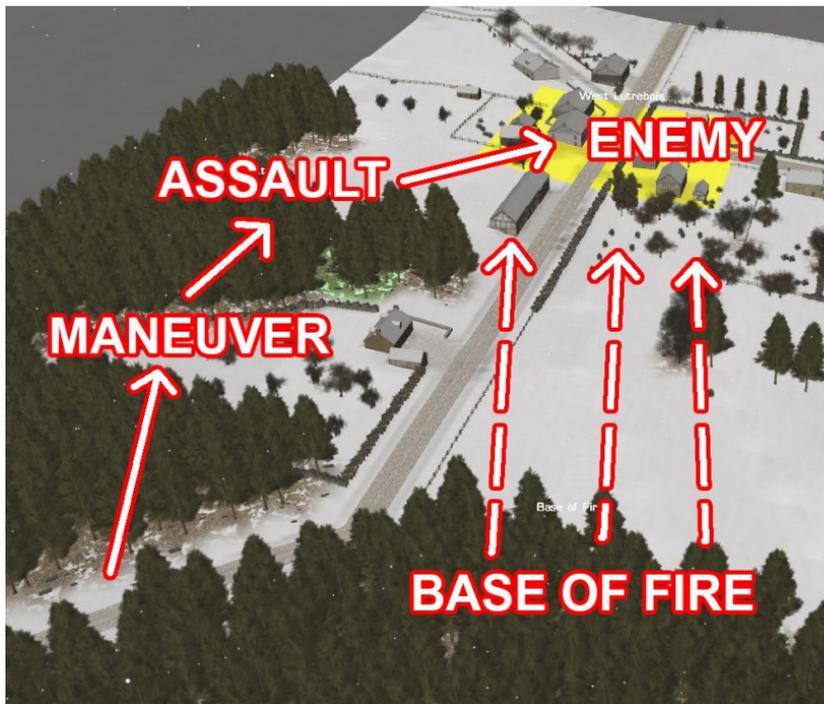
### ■ Armored Cars

Once that you have determined that there is not, in fact, a battalion of Tiger tanks around the next bend, you can move your armored cars up. Move the two M8 Grey armored cars forward along or near the road using the Hunt command so that they will stop moving forward if fired upon. Scout cars are fragile and easily destroyed or damaged, so you do not want to let them get close to the enemy. If you detect that a heavy weapon is firing on your vehicles, use the Reverse movement Command to get them out of trouble. You may lose a vehicle to a distant anti-tank gun. With luck, however, you may get an idea of where that gun is located.

### ■ Fire and Maneuver - Base of Fire

The opposing force occupies a dominating position in the village, protected by stone walls and open ground around them. In order for your infantry platoon to most effectively assault the enemy defenses, you will need to suppress and destroy the defenders as much as possible before your infantry try to attack the position. To do this you will split your forces into two groups: a base of fire group and a maneuver group.

The base of fire group usually consists of heavy weapons such as machine guns and mortars. As luck would have it, your force has two M1919A4 medium machineguns. Their job is to fire constantly on the enemy positions and keep them ducking. Once the enemy is suppressed by your base of fire, the maneuver group moves in and attacks at close range. You will use this basic tactic or some variation of it in almost every Combat Mission battle.



You will begin by moving the machine gun teams and the Company HQ up to join your scouts at the objective Base of Fire. You can tell which HQ is theirs by selecting one of the machinegun teams and looking for the flag-shaped floating icon that is highlighted.



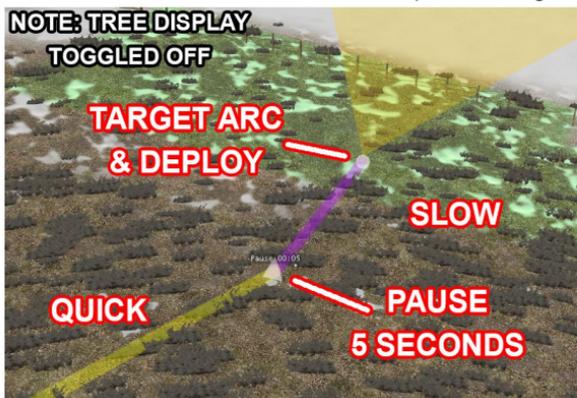
## ■ Advanced Commands

We will use this movement as an opportunity to learn some advanced commands.

Select one of your machinegun teams. Open the Movement command tab (hotkey F5), select Quick, and place a waypoint towards the Base of Fire. The destination should be at the wood line; use the next picture as a guide.

Select the Quick movement waypoint by left-clicking on the colored line. The line will highlight, indicating that any orders you give will edit the waypoint. Open the Special commands tab (hotkey F7), and select Pause. A five second counter will appear above the waypoint. Once the unit reaches the waypoint, it will wait five seconds before moving on to the next waypoint. Left-clicking the Pause order repeatedly will increase the length of the pause and eventually remove it. Set Pause to 5 seconds (00:05) and left click anywhere on the screen to deselect the waypoint.

What you have just done is stack commands. A waypoint can contain one command each from the Movement, Combat, and Special command tabs. Stacking commands allows you to dictate very sophisticated orders to your units. The next waypoint you plot will contain a Movement and Combat order stacked on it. Refer to the picture as a guide.



Ensure that your machinegun team is still selected and that the first waypoint is not highlighted.

Open the Movement command tab and select Slow. Slow orders your units to crawl on the ground. This movement command is very slow and tiring, but allows for maximum protection and concealment. Left-click anywhere inside the Base of Fire objective to order them to crawl to it. Next, select the Slow waypoint by left-clicking on its line, open the Combat command tab (F6), and give the unit a Cover Arc that covers West Lutrebois. Notice that the orange arc comes out of the waypoint, and not the current position of the unit. The unit will adopt this covered arc as soon as it reaches the waypoint.

While you still have the last waypoint selected, open the Special commands tab (hotkey F7) and click Deploy Weapon to order them to deploy (set up) their machinegun at the end of the movement. Many machineguns will not be able to operate at maximum effectiveness unless they are deployed!

To summarize your units' orders, they will Quick move up to the wood line, pause for five seconds, Slow move (crawl) to the Base of Fire, then Deploy their machinegun and adopt a Covered Arc covering West Lutrebois. Whew!

Repeat these instructions (or mix it up with your own commands) for the other machine gun team and their HQ team. You should also move the sniper and ammo bearer teams to the Base of Fire objective as well.



It will take a few turns for your machineguns to get into position. Once in position, your units on Base of Fire will spot and shoot at enemy targets. German machine guns and other heavy weapons such as anti-tank guns are high priority targets and should be destroyed or driven away. You will definitely not want them operational by the time your assault closes!

## ■ Fire and Maneuver - Maneuver

With your base of fire set up, it's time to move your assault force into position. They will have the unenviable task of assaulting the West Lutrebois objective. The objective is surrounded by a lot of open ground, except for the wooded area by objective Attack Route. This wooded

area should give your soldiers the cover and concealment they need to get as close as possible to the objective without incurring devastating enemy fire.



Move your  
(the

sitting at your setup zone) to the Attack Route objective. Avoid exposing them to too much observation/attack from Lutrebois by travelling behind or through trees. Once you reach the wood line, use Assault movement commands to travel to the Attack Route objective. When using the Assault command, squads will move alternately in small groups of men and engage the enemy on the move, making this order time consuming but very useful when closing with the enemy to destroy them. Remember, if you have trouble seeing around the trees in this area, you can temporarily toggle them off visually by pressing Alt-T.

rifle platoon  
infantry still

*Note: The Assault movement command is only available to squads which have multiple teams. Individual teams will not be able to use Assault.*

## ■ Cover and Concealment

Understanding the distinction between cover and concealment is very important. Cover comprises obstacles or terrain that will physically stop enemy fire. A bunker, a trench line, or being behind a hill are good examples of cover. A unit inside/behind cover will be harder to hit for the enemy. Concealment only prevents a unit or soldier from being spotted by the

enemy; concealment provides no or very little protection from projectiles. Laying prone in a wheat field or hiding in bushes are good examples of concealment.



Most terrain provides some degree of both cover and concealment. The wooded area around the Attack Route objective provides excellent concealment and fairly good cover, which is why your soldiers are using it to approach Lutrebois. The enemy trench line position on Lutrebois has good cover due to the trench line, but not much in the way of concealment due to a lack of dense foliage. In general, you should try to occupy terrain that offers both excellent cover and concealment, but circumstances may dictate that you only take one or the other.

Continue to send your assault towards the Attack Route objective. When they arrive, you should position your rifle platoon along the edge of it, facing the West Lutrebois objective.

### ■ Suppression and Morale

As your troops exchange fire with the enemy, you will notice that some of them will curl into a fetal position and not do much of anything that is useful other than trying to survive. You are witnessing the effects of suppression. People quite reasonably do not like being shot at or blown up and, if pushed hard enough, will begin to value conserving their lives over following your orders.



Each unit's morale status can be seen in the Unit Info Panel. A colored indicator (the colored fan) tells you how suppressed the unit is. The more intense or accurate the enemy fire, the higher the level of suppression will be, and the more likely the unit will sustain unfavorable penalties. Taking casualties will cause even higher amounts of suppression. Moving a unit away from enemy fire (or stopping the enemy from shooting at it) will allow the suppression to wear off and the morale state to eventually improve.

Always monitor your troops' suppression levels throughout the battle and try not to push them too hard. If a unit receives a large amount of accurate enemy fire, it may become "Pinned", where it is still in relatively good order but will ignore your movement commands. You can lose control of your units even further if their morale continues to drop. If the unit's morale state is enclosed by a red box then the unit is so demoralized that it will not respond to your commands at all. The unit may even run away or surrender to the enemy! If a unit's morale becomes seriously degraded, it may become "brittle", incurring a significant morale penalty for the rest of the battle. If a unit becomes brittle, the light next to the suppression meter will light up.

How much suppression a soldier or vehicle can take depends on its Motivation. A unit with high Motivation will be able to receive more enemy fire before becoming suppressed than a unit with poor Motivation. A unit with high Motivation will also rally faster after being suppressed.

## ■ Headquarter Units and Leadership

By now you have probably begun to wonder just what the HQ units with flag icons are good for. These units contain your leaders. Usually, every section, platoon, company, and battalion possesses an HQ unit. Leaders fulfill two very important functions: they exert a leadership modifier on their subordinate units, and link units to the Command and Control (C2) network.

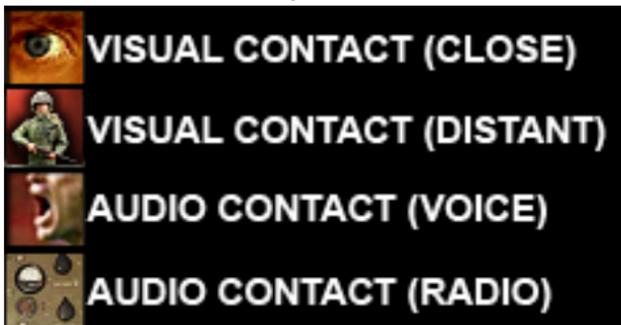


If you select your platoon leader, you will notice a "+1" next to his name in the unit information panel (1). This means that he exerts a positive leadership bonus on all units under his command. The details of what this bonus entails are intentionally murky, but the gist is that units under his command will perform their jobs better than units under the command of a leader without a bonus. Leaders may have a -2, -1, 0, +1, or +2 leadership bonus; yes, that means that you can even get bad leaders! But that doesn't mean you should hide your less

than stellar leaders in a corner somewhere, because HQs are always vital in maintaining C2 links.

In the lower left corner (2) of the Unit Info Panel you will see what organizational C2 levels the unit is linked to, and whether they are currently connected to them. A green dot means that they are connected, and a red dot means that they are not. If they are connected, then information and leadership bonuses can be shared. How efficiently this sharing happens depends on the type of C2 established (3).

In order for a leader to exert his influence over his subordinate units, he must have command of them. In the World War 2 setting, radios were relatively rare below the platoon or company level. In the game, this usually means that a leader must be within visual signaling or shouting distance of the unit he is seeking to influence. This is usually about 50 meters but will vary dramatically with the terrain; the more dense the terrain, the closer your HQ unit must be to have command of his troops. Note that most armored fighting vehicles use radios to stay in command and don't need to stay within a short distance of each other.



*Note: The third empty C2 space is for communication technologies only available in modern warfare games such as Combat Mission: Black Sea, so in Final Blitzkrieg this square will always be blank.*

What does this mean for you in the current scenario? Keep your platoon HQ unit near your squads as they assault Lutrebois. The leader will confer his leadership bonus to them, and they will most likely need it.

### ■ Vehicles

By the time your rifle platoon has reached the Attack Route objective, you should have received reinforcements: a group of three Sherman tanks. Now you have some real firepower! These tanks are heavily armored, making them impenetrable to normal firearms and machineguns, and very well protected against light cannons. However, German infantry possess Panzerfausts and Panzerschrecks, hand-held rocket weapons that can destroy any American tank. For this reason you should be cautious about moving tanks too close to enemy infantry.

Vehicles have some special commands unavailable to soldiers. Open the Special command tab (hotkey F7). The Bail Out commands orders a vehicle crew to exit the vehicle. There aren't many circumstances in which you will use this command. A more commonly used command is Open Up, which tells the vehicle crews to open their hatches and poke their heads out. For tanks, this means just the vehicle commander sticks his head out of the vehicle. Open Up dramatically improves the spotting ability of tanks, but the tank commander will become a priority target to enemy infantry. Although the tank commander will button up if shot at enough, it's a risky proposition to get within rifle range with an opened up tank.

When a vehicle is selected, you will also notice that the Team Info Panel in the center of the UI strip has been replaced with a new panel that provides detailed information on the selected tank.



From left to right:

1. Shows the status of the vehicle crew.
2. Describes the vehicle type and main weapon, as well as passenger capacity. Blue dots are crew members, and grey dots are open passenger "seats". Green dots are passengers.
3. Provides some basic comparisons on vehicle mobility
4. This section has three sub-tabs. The first sub-tab with the bullets icon shows how much ammunition the vehicle carries, and what type. The middle sub-tab with the wrench icons shows the status of vehicle subsystems. Individual vehicle subsystems, such as the gun, tracks, engine, radio, etc can be damaged or destroyed individually. A green square means that the subsystem is in optimal condition, a yellow or orange circle means that the subsystem is damaged, and a red "X" means that the subsystem has been destroyed. The last sub-tab with the shield icon lists general protection levels against various projectiles. The list is in order top-down from most dangerous to least dangerous, with the top line being HEAT projectiles, and the bottom line being small arms such as rifle bullets. From left to right the icons represent protection from the front, left and right sides, and rear.

## ■ Close with and Destroy

Before your rifle platoon leaves the Attack Route objective, you should move your tanks into a position where they can provide fire support. Move them into a position where they can fire on buildings within the West Lutrebois objective, but keep them at least 150 meters away so that a lucky German rocket does not disable them.

Since your tanks are not as good as spotting enemy infantry as your soldiers are, you can give them Area Target commands to make them fire on targets such as buildings where you know the enemy is located. Next, select your rifle platoon units at the Attack Route objective and give them Assault move commands towards the West Lutrebois objective. Your rifle platoon will then assault into the objective and engage the Germans at close range. For maximum effect, try to get your soldiers to attack a position that the tanks have shelled only moments after the tanks stop firing: this will maximize the suppressive effects of the tank fire. Be sure to tell your tankers to stop shooting before your infantry reach the target, however, otherwise you may harm your own troops!

### ■ Close Assault

As your troops near and enter the objective they will stop to shoot at Germans and engage them with grenades. Continue your attack through the town and clear the Germans from the colored objective ground. You will take casualties, but you should press on. Move your tanks and other units to support the attack as you see fit.

### ■ Victory!

At some time during the fight for West Lutrebois, the Germans may surrender, and you will be shown the results of the battle. If you were defeated, you may wish to replay this mission before continuing. Regardless, the campaign will progress to the next mission. Note that in other campaigns, a loss can prematurely exit you from the campaign or inflict some disadvantage in future missions.

### ■ After Action Report Screen

Once the enemy has surrendered, the After Action Report (AAR) screen will appear. This screen lists a summary of the scenario results and outcomes. Most importantly it will tell you who won the battle. The AAR screen always shows the Victory Points (VP) breakdown in detail, organized by objective types.

There are three objective types in Final Blitzkrieg: Ground, Targets and Parameters. Ground objectives are the touch objectives you have seen before and the Occupy objective on West Lutrebois. Target objectives are units themselves. Depending on the scenario, a side can get points for destroying enemy units or even just spotting them. Parameter objectives deal with simple percentage- based statistics, such as being awarded 200 points for sustaining less than 25 percent casualties.

When you are done reviewing the AAR, continue on to the next mission. Remember to save your campaign!

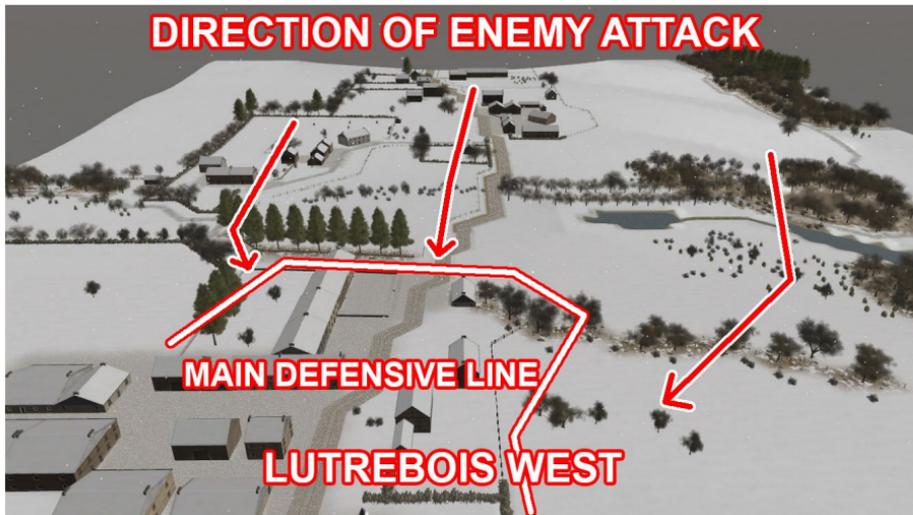
*Reminder: Combat Mission DOES NOT MAKE AUTOSAVES.  
Always save between missions or before exiting a mission in progress!*

## ■ Mission 3: Panzers on the Move!

### ■ Setting up Defenses

Your force starts situated on the western side of Lutrebois. The default setup is decent, with units in cover and protecting their objectives. In all missions you will receive a default setup that is usually good enough to begin playing with immediately, but you can fine tune your forces within the setup zone to your liking.

Your primary mission is to control the West Lutrebois objective. To this end your force should be arrayed to stop the German forces from moving onto the green ground that signifies the objective. A good defense will ideally keep the Germans from ever getting close to them. Your current setup is designed to interdict the Germans as they cross the open ground in front of you.



In some scenarios you will also see some friendly units set up outside of the blue setup zones. These units are outside of a setup zone and thus cannot be moved during Setup Phase. You can give them movement orders and move them normally after the battle begins, but they are locked in place until then.

### ■ Emplaced Weapons: Guns

You have an antitank gun in the southeast corner of the map! This unit is often referred to in Combat Mission as a "Gun". Guns are heavy crew-served weapons that pack heavier firepower than small arms can provide, while offering better concealment than vehicles. This comes at two disadvantages however. The first flaw is that guns will usually stay in place over an entire battle, because they can move only very slowly unless being towed, and they sometimes require lengthy setup periods before being able to fire again after moving. The other disadvantage is that once discovered, guns are very vulnerable to enemy counter fire and are at high risk of being knocked out.



Because of these characteristics, it is absolutely vital that guns are carefully placed during the setup phase, taking into consideration how protected the gun is and where it will be able to fire (and be fired upon from). Setting up an antitank gun in an exposed area such as open ground is usually asking for it to suffer a quick and fiery death. Consider setting up your

antitank gun to taking advantage of some cover to hide itself better, giving it a better chance of surviving longer because it is not as exposed.

## ■ Campaign Resupply and Refitting

If you inspect the units defending Lutrebois, you will notice that some of them already have casualties. These are the same soldiers that you commanded in the previous mission! In campaigns, core units will carry over casualties, vehicle damage, ammunition expenditures, and sometimes morale from mission to mission. This should encourage you to handle your troops with care in future campaigns: you may not know when they will next be reinforced or resupplied! Troops, vehicles, and ammunition can be replaced between battles in campaigns, but by how much will vary by campaign and even mission to mission. As you fight you will have to remember that you need to conserve manpower and ammunition for the next mission, or your force may be caught weakened in the future.

## ■ Support Missions

Begin the mission and let one turn elapse. You should notice Germans approaching your hill from the woods on the right flank. Let's even the odds a little and call in some fire support on them! Combat Mission has on-map mortars and off-map artillery which are capable of indirect fire; these weapons can shoot at targets that they cannot see via a spotter who directs their fire. To start, we're going to use your on-map mortars to disrupt the German attack.

## ■ Deploy Weapon

Before your mortars can be fired, they must be set up. Most crew-served weapons such as mortars, antitank guns, and heavy machine guns must be Deployed before they can be fired. Select one of your mortar teams in the southwest corner of the map (their floating icons looks like a mortar) and open the Special commands tab (hotkey F7). Click Deploy Weapon to order them to deploy their mortar. Repeat this for the other mortar teams.



Advance the turn. The mortar teams will be busy deploying the weapons for a period of time. This duration varies with the specific weapon; for the mortars it will take about fifty seconds.

## ■ Call for Fire

Now that your mortars are deployed, it's time to blow things up! To fire indirectly onto a target, your mortars will need a spotter. HQ teams and Forward Observers (FOs) can usually act as spotters; most other units cannot. The mortar team must also be able to communicate with the spotter. Communication occurs in one of two ways; either the mortar team is close enough to be within visual or shouting distance of the spotter (about 50 meters), or the mortar team has radio contact with the spotter.

In this case the mortars are in radio contact with the FO team in Lutrebois: the FO is "linked" to the mortars by the radios that the FO and Mortar Platoon HQ possess, allowing the HQ to pass on the FOs commands to the mortars.

Select an FO team (their floating icon resembles a pair of binoculars). FO teams are extremely valuable assets that are specialized at calling in support missions more quickly than HQ teams. They may also have access to more powerful artillery that HQ teams cannot contact. Guard them carefully! It is usually prudent to give them a short Cover Arc Command, so that they will not fire at enemy soldiers and attract attention to themselves.

Follow these steps to call the support mission:

1. Click on the artillery icon (located just above the special equipment panel). The support mission interface will now appear. Select a M1 81mm mortar box from the panel that pops up. Shift-left-click to select multiple mortars. If you failed to correctly Deploy the mortars, their boxes will be unselectable and they will display "Not Positioned". Deploy them and this will go away. The support mission has parameters that must be defined. The parameters will determine the characteristics of the support mission.



- For Target Type, select Point Target. The cursor will turn orange and you will now pick the target. Left-click somewhere in the woods where you see the Germans moving. You will also notice that glowing green lines connect both the spotter and the mortar team to the target you selected.
- For Mission, select Medium. This defines how intensively the mortar will fire. A Heavy mission will cause the mortar to fire as fast as possible, while a Harass mission will order it to fire rounds only occasionally, conserving ammunition. Emergency missions shorten the length of the call for fire at the risk of greater inaccuracy; only use these missions in true emergencies!
- For Duration, select Medium. This tells the mortar how long to fire. Quick fire missions last only a very short time, while Maximum fire missions will last until the mortar has expended all of its ammunition.
- Confirm the fire mission. If you mess anything up or change your mind, you can cancel here and re-start the call for fire without penalty. The window also tells you approximately how long it will take for the fire mission to begin.



If you open the Support panel again (the artillery icon) with the FO selected, you'll notice that other assets have a "Spotter Busy" text over them. A FO team can only direct one fire mission at a time. Once the current mission has been cancelled or entered "fire for effect", they can create a new support mission.

You can assign multiple support assets to a single support mission by shift-left-clicking on both multiple assets.

You have a second FO team in Lutrebois. Select this team and create another support mission using another M1 81mm mortar. You can switch up the fire mission parameters if you wish to see the differences in execution.

Within a few turns, the support mission should begin. After receiving the fire mission and preparing, the spotter and support asset will enter "spotting" phase. During this time, a single round will be shot every now and then. It may be very inaccurate, but the spotter will adjust the shots until the target area is hit. Once the spotting rounds hit the target area, the asset will "fire for effect" and begin firing full-speed on the target.

*Note: On-map mortars can also fire directly on battlefield targets without using an FO if they can see the target from their position. Although this means that they can bring rounds on target much faster, it also makes them vulnerable to enemy counter-fire. The*

*enemy will usually make spotted mortar teams a priority target!*

### ■ Infantry Anti-Tank Weapons

Within a few turns, you will notice that German armored cars are closing on your forces. These armored vehicles will resist small arms fire from most of your infantry. Fortunately, in addition to the antitank gun stationed nearby, your infantry possess Bazookas! Although by 1944 bazookas were underpowered against most German tanks, they are still deadly against armored cars, halftracks, and other lightly armored vehicles.

In truly desperate circumstances, your infantry can close assault tanks and other vehicles with improvised antitank weapons, hand grenades, and antitank grenades. To do so is simple: move your infantry within hand grenade range (twenty meters is best) and then hope for the best. Needless to say, this tactic should only be attempted as a last resort when absolutely needed, because the risk of severe casualties is very high.

German infantry possess two powerful hand-held antitank weapons: the Panzerfaust and Panzerschreck.

These short range anti-tank weapons are capable of destroying most tanks with ease. The Panzerschreck has a maximum effective range of about 200 meters, and the Panzerfaust about 30 meters. Using them can be risky, because the soldier must get close to a vehicle in order to hit it. Open-topped vehicles are also extremely vulnerable to mortar shells dropping in from above.



### ■ Reinforcements and Counterattack

Defend your hill until you receive reinforcements. Fresh infantry and Sherman tanks have arrived to the southwest. You've also received new artillery support in the support panel.

At this point, as the battlefield commander you have a decision to make: do you send these forces to reinforce your Lutrebois defenses, or do you counterattack and take the German Command Post objective? Or do you try to do both? The decision is yours to make, commander! At this point you should be able to complete the mission on your own. You need to repel the German attack from Lutrebois, and seize the German Command Post objective. The following is some general advice that will help you in your mission.

### ■ Transporting Troops in Vehicles

Your new infantry are riding on top of tanks. Any vehicle that can carry passengers will have grey dots in its info panel. Each grey dot represents an empty passenger seat, while a green dot is an occupied seat. You can order troops into a vehicle by simply selecting any movement command and clicking on either the vehicle or its floating icon as the movement destination. The troops will move to the vehicle and mount it. Dismounting is just as easy: select the passenger unit and give it a movement order anywhere. Once the vehicle has finished its own movement commands, if any, the passengers will dismount. If the passenger unit is also the driver of the vehicle, you'll have to use the Dismount command, found in the Special command tab.



You should be careful driving troops riding a vehicle too close to the enemy: one lucky shot from an antitank gun or tank could destroy a whole squad along with the vehicle! While armored halftracks provide some degree of protection from small arms, passengers riding on tanks or in trucks are extremely vulnerable to enemy fire.

### ■ Target Reference Points (TRPs)

Along with your new tanks and infantry, you've also received 105mm artillery fire support. These are more powerful support assets than your mortars. Artillery fire is always called from off-map, and is usually only accessible to FOs. Artillery is a higher-level asset than your mortars, and the "red tape" that it entails means that once requested, it takes longer for the fire-for-effect to arrive. The heavier the artillery, the higher level it is, and thus the longer the delay.

Fortunately, you have a special fortification "unit" called a Target Reference Point (TRP). You can find it, denoted by an orange symbol on the ground, placed on top of the German Command Post objective.



TRPs are sites where your artillery has "dialed in" and crunched the math necessary to fire on the site quickly and accurately, without the need for spotting adjustments. Ordering a mission near these points results in a shorter delay until delivery, greater accuracy, and zero warning to your opponent that a barrage is incoming. Furthermore, your spotter does not need to have a visual LOS on the TRP to order the fire mission. Needless to say, this is a huge advantage, especially if you possess heavy artillery.

Unlike all other units, TRPs are not restricted to set up zones and may be placed anywhere on the map during the Setup Phase. However, once the game has begun, TRPs can never be moved. TRPs are also secret: your opponent will not know where they are, although he will probably find out the hard way!

Before you attack the German Command Post objective, you should barrage it with your new artillery support to soften up the defenses. Remember, your FO team does not need to see the location as long as you select the immediate area around the TRP! For maximum effect, your troops should assault the objective just after your artillery barrage has ended and while the surviving enemy troops are still reeling from the strike. The suppression and demoralization from artillery is just as powerful as the lethal effects.

This time, the TRP has already placed for you. In future scenarios, you should place TRPs on objectives that are likely to be heavily defended, obvious enemy routes of advance, and in "dead space" that your units cannot see but you suspect that the enemy will try to move through.

## ■ Victory!

You should be able to fend off the German attack and then counterattack to take the Command Post, although some of your units may sustain considerable casualties. Since you have controlled ground on a defensive mission, you should easily win the scenario. However, you haven't seen the last of the Germans. It is now time to take the village.

*Reminder: Remember to save your campaign progress between missions!*



*Note: Smoke ammunition, being a high speed projectile, is still dangerous! Although not nearly as dangerous as exploding HE rounds, you should not call in Smoke missions on top of your own troops.*

### ■ Squad Splitting

Squads can be split into their component teams using the Split commands in the Admin commands tab. Select a squad, and go the Admin orders tab and select the Split Teams command. Your squad will split into three distinct team units, each with their own floating icon and ability to be given commands separately. There are a variety of other Split Team commands which can be very useful in the right situations. To merge a squad that has been split, move the teams to the same spot and let them stay there for a moment. They will automatically merge into a whole squad. Only teams originally from the same squad can merge.

### ■ Reinforcements

In fifteen minutes you will receive reinforcements of new unit types:

#### ■ Engineers

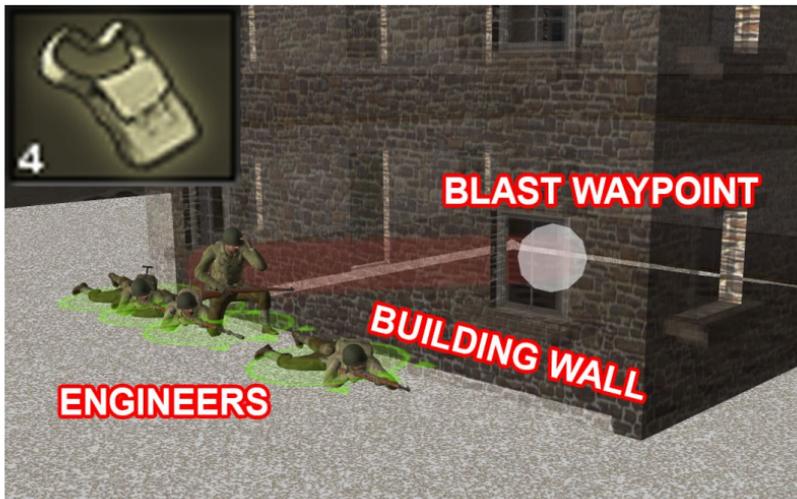
Riding on your new vehicles is a platoon of combat engineers, also called sappers. Engineers are specialized combat units that are equipped with demo satchels, which are essentially packs stuffed with explosives. If the engineers can get within about 16-20 meters, satchels are extremely devastating to enemy vehicles, bunkers, or infantry. You do not need to give them a special order to use the satchels offensively against enemy units; if within hand grenade range, engineers will use their demo satchels automatically.



#### ■ Blast

Satchel charges also grant the unit possessing them a special movement command, called Blast. Blast allows a unit to expend a satchel charge to blow through a tall wall or the side of a building. Additionally, enemy units on the other side will be heavily suppressed.

To give a Blast command, position a unit carrying satchel charges next to a wall or building. Open the Movement command tab and select the Blast command. Place the destination on the other side of the wall, or inside the building. The unit will go prone for a period of time (up to 20-30 seconds) before blasting its way through the wall.



### ■ Flamethrowers

Your engineer platoon has three manpacked flamethrowers with them. Flamethrowers are terrifying weapons that can obliterate enemy infantry. They are especially useful against enemies in heavy cover such as buildings or bunkers. Flamethrowers are also powerful against light vehicles and armored vehicles which are unbuttoned. They have a critical weakness however, because their range is extremely short, typically around 30-40 meters, meaning they must close to point-blank range before they can fire.

If at all possible, avoid exposing your flamethrowers to the enemy until they are within range, because once spotted they will become a priority target. In addition, the heavy manpacks will tire out the teams quickly, so their fatigue levels should be monitored closely. It can be very difficult to get a flamethrower team into a position where it can be used, but the payoff can be considerable.



### ■ Heavy Tanks

Some Sherman Jumbo tanks have arrived with your reinforcements. You will also find out, possibly the hard way, that the Germans have a Tiger tank as part of their defenses. Heavy tanks have thick frontal armor that can be impervious or highly resistant to small caliber weapons, as well as a large weapon capable of killing any vehicle on the battlefield.

Heavy tanks are dangerous opponents. If you find an enemy heavy tank, you should avoid taking it head-on with smaller tanks such as your Shermans, unless you dramatically outnumber it and think you can overwhelm it. Instead you can try flanking the tank, because even heavy tanks are vulnerable to the side or rear. You can also try hitting the heavy tank with artillery, or take it head-on with another heavy tank or a heavily-armed vehicle (such as one of your M36 tank destroyers that are equipped with a 90mm gun).



As for your heavy tanks, keep them at a distance to provide fire support. Heavy tanks tend to trade mobility for heavier armor, so keeping them further away helps ensure they will not be outflanked and subsequently shot in their thinner sides.

### ■ Ammo Sharing

Infantry units and heavy weapons teams, such as your mortars, can share ammunition with adjacent units. Infantry units can also mount some vehicles (such as halftracks) and use the Acquire command from the Special command tab to grab stocked ammo or other special items like anti-tank rockets. This way they will carry the items themselves without having to be near the vehicle to resupply. Ammo Bearer Teams for heavy weapons such anti-tank guns, machineguns, and medium mortars will also carry more ammunition for the weapons team. Always keep these teams close to their weapons team, preferably directly adjacent to them.

### ■ Campaign End

If you finished the last mission successfully, congratulations on completing the training campaign! If you failed, you should probably attempt the mission again before moving on.

Although the tutorial is over, the learning will never end, as there are a near-endless number of tactical situations to experience. With a game as richly detailed and complex as Combat Mission, you will never stop learning and becoming a better tactical commander. With three campaigns, dozens of scenarios, an endless Quick Battle system, online opponents, and a thriving internet community creating new campaigns and scenarios, you have years of combat ahead of you.

## ■ EQUIPMENT ENCYCLOPEDIA

The following section is a quick reference for the vehicles and weapon systems available in Final Blitzkrieg. 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

#### ■ United States Tanks

#### ■ M5A1 Light Tank

The M5 light tank was a derivative of the M3 light tank, introducing twin Cadillac engines and a Hydra-Matic automatic transmission. The M5 also featured a redesigned welded hull with sloped glacis, vertical sides, and a raised engine deck. The M5A1 variant was then quickly introduced to incorporate the design improvements introduced in the M3A3. This included a new turret with an overhang for radio equipment and various other improvements.

The M5A1 was the standard light tank in U.S. Army service by 1943, and continued to be until completely replaced by the M24 light tank after the war. The British called this tank the "Stuart".

*Formations equipped..... Medium tank battalion (mixed), light tank battalion, cavalry squadron*

	<p>Light Tank 37mm L/54 M5</p>			
<p>Weight 15.7 tons</p> <p>Speed </p> <p>Power </p> <p>Off-Road </p> <p>Turning </p>	<p><b>AMMO</b></p> <p>37mm HE 88</p> <p>37mm AP 44</p> <p>37mm CAN 15</p> <p>.30cal M2 &gt;6k</p>	<p><b>DAMAGE</b></p> <p>37mm Main </p> <p>7.62mm Coax </p> <p>7.62mm MG </p> <p>7.62mm MG </p> <p>Gyrostab. </p> <p>Radio </p> <p>Engine </p> <p>Wpn Controls </p> <p>Optics </p>	<p><b>DEFENSES</b></p> <p></p>	

#### ■ 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.

Available beginning..... December 1944

Formations equipped..... Medium tank battalion (mixed), light tank battalion, cavalry squadron



## ■ M4 Medium Tank (late)

The M4 Sherman, formally "Medium Tank, M4", was the primary tank used by the United States Army during World War II. The design stressed mechanical reliability, ease of production and maintenance, durability, standardization of parts and ammunition, and moderate size and weight. The M4 Sherman used the same chassis developed for the M3 medium tank. With a vertical volute suspension system and a 400 hp Continental R-975 engine, the initial versions of the Sherman could reach speeds up to 38 km/h.

The Sherman used a three-man turret with power turret traverse. Basic models were equipped with a 75 mm M3 gun and 97 rounds, as well as a gyrostabilizer. The Sherman was also armed with a .50 caliber anti-aircraft machine gun, a .30 caliber coaxial machine gun, and a hull-mounted .30 caliber machine gun. For protection the turret was equipped with a roof-mounted smoke mortar and 12 smoke bombs.

The Sherman's protection was adequate in the early years of its service, with maximum front turret armor thickness of 76 mm, and maximum hull armor thickness of 50.8 mm angled at 56 degrees. The M4 Sherman used a welded hull with a rounded three-piece bolted nose. In later M4 models, this nose was replaced with a one-piece cast nose. Protection was further increased with the addition of a rectangular slab of armor on each side of the hull to shield ammunition storage.

The Sherman's reliability benefited from many features first developed in U.S. light tanks during the 1930s, including vertical drive sprockets in front. Designated goals were to produce a fast, dependable medium tank able to support infantry, provide breakthrough striking capacity, and defeat any tank then in use by Axis nations, though basic models would later fall short in combat against heavy tanks eventually deployed by Germany. Nevertheless, the Sherman mostly found itself fighting enemy infantry instead of enemy tanks.

Roughly 50,000 Sherman tanks were produced during World War II, in a number of variants which were then modified further during production or even in the field. The main variants do not necessarily indicate linear improvement - the M4A1 is not necessarily better than the M4. These sub-types indicate standardized production variations, with the main difference being the engine type or hull construction.

Formations equipped..... Medium tank battalion, medium tank battalion (mixed)



### ■ M4(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.

*Formations equipped..... Medium tank battalion, medium tank battalion (mixed)*



### ■ M4(105) Medium Tank (late)

Late in the war, M4 Sherman models began to be equipped with new wider tracks and a Horizontal Volute Spring System (HVSS) with twin road wheels on each axle. This improved suspension system distributed weight more evenly, resulting in a smoother ride and better off-road mobility, leading such vehicles to be nicknamed "Easy Eights". The vehicle was also known as the M4E8(105), where "E8" signified the use of HVSS.

*Available beginning..... January 1945*

*Formations equipped..... Medium tank battalion, medium tank battalion (mixed)*



## ■ M4A1 Medium Tank (late)

The first Sherman model put into serial production, the M4A1 is like the M4 but with a rounded cast hull. The M4A1 also stored slightly less main gun ammunition (90 rounds).

Later production models of the M4A1 Sherman replaced the three-piece bolted nose with a one-piece cast nose.

*Formations equipped..... Medium tank battalion, medium tank battalion (mixed)*



## ■ M4A1(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.

*Formations equipped..... Medium tank battalion, medium tank battalion (mixed)*

Commander		Medium Tank		AMMO		DAMAGE		DEFENSES	
Gunner		76mm L/52 M1A2		76mm HE	39	76mm Main	●	+++	+++
Loader	●●●●	Weight 32.0 tons		76mm AP	28	12.7mm MG	●	●●●●	●●●●
Driver	●●●●	Speed		76mm Smoke	4	7.62mm Coax	●	●●●●	●●●●
		Power		.50cal AP	600	7.62mm MG	●	●●●●	●●●●
		Off-Road		.30cal M2	>6k	Gyrostab.	●	●●●●	●●●●
		Turning				Smoke Mortar	●	●●●●	●●●●
						Radio	●	●●●●	●●●●
						Engine	●	●●●●	●●●●
						Wpn Controls	●	●●●●	●●●●

### ■ M4A3 Medium Tank

The M4A3 Sherman's primary difference between it and the M4 and M4A1 is the presence of a different engine, the 500 hp Ford GAA V-8 gasoline engine. The M4A3 was the preferred production model for the U.S. Army, and future Sherman developments were based on it.

*Formations equipped..... Medium tank battalion, medium tank battalion (mixed)*

Commander		Medium Tank		AMMO		DAMAGE		DEFENSES	
Gunner		75mm L/40 M3		75mm HE	51	75mm Main	●	+++	+++
Loader	●●●●	Weight 30.3 tons		75mm AP	40	12.7mm MG	●	●●●●	●●●●
Driver	●●●●	Speed		75mm Smoke	6	7.62mm Coax	●	●●●●	●●●●
		Power		.50cal AP	300	7.62mm MG	●	●●●●	●●●●
		Off-Road		.30cal M2	>4k	Gyrostab.	●	●●●●	●●●●
		Turning				Smoke Mortar	●	●●●●	●●●●
						Radio	●	●●●●	●●●●
						Engine	●	●●●●	●●●●
						Wpn Controls	●	●●●●	●●●●

### ■ M4A3(75)W Medium Tank (early)

An improved development of the M4A3, this variant incorporated wet ammo storage with increased ammo capacity (104 rounds), additional deployable smoke bombs, and improved armor manufacturing. A loader's hatch was also installed along with redesigned driver and radio operator hatches.

*Formations equipped..... Medium tank battalion, medium tank battalion (mixed)*



## ■ M4A3(76)W Medium Tank (early)

This is the M4A3 Sherman fitted with wet ammo storage, a 76 mm cannon, and turret designed to accommodate the larger cannon.

*Formations equipped..... Medium tank battalion, medium tank battalion (mixed)*

Commander	 Medium Tank 76mm L/52 M1A2	<b>AMMO</b>		<b>DAMAGE</b>		<b>DEFENSES</b>	
Gunner		76mm HE	39	76mm Main	●	+++++	
Loader		76mm AP	28	12.7mm MG	●	XXXXX	
Driver		76mm Smoke	4	7.62mm Coax	●	●●●●●	
		Weight	33.7 tons	7.62mm MG	●	●●●●●	
	Speed		Gyrostab.	●	●●●●●		
	Power		Smoke Mortar	●	●●●●●		
	Off-Road		Radio	●	●●●●●		
	Turning		Engine	●	●●●●●		
			.50cal AP	600	Wpn Controls	●	
			.30cal M2	>6k			

## ■ M4A3(105) Medium Tank (mid)

This version 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.

*Formations equipped..... Medium tank battalion, medium tank battalion (mixed)*

Commander	 Assault Gun 105mm L/23 M4	<b>AMMO</b>		<b>DAMAGE</b>		<b>DEFENSES</b>	
Gunner		105mm HE	53	105mm Main	●	+++++	
Loader		105mm HEAT	5	12.7mm MG	●	XXXXX	
Driver		105mm Smoke	8	7.62mm Coax	●	●●●●●	
		Weight	33.1 tons	7.62mm MG	●	●●●●●	
	Speed		Gyrostab.	●	●●●●●		
	Power		Smoke Mortar	●	●●●●●		
	Off-Road		Radio	●	●●●●●		
	Turning		Engine	●	●●●●●		
			.50cal AP	600	Wpn Controls	●	
			.30cal M2	>4k			

## ■ M4A3(105) Medium Tank (late)

Late in the war, M4A3 Sherman models began to be equipped with new wider tracks and a Horizontal Volute Spring System (HVSS) with twin road wheels on each axle. This improved suspension system distributed weight more evenly, resulting in a smoother ride and better off-road mobility, leading such vehicles to be nicknamed "Easy Eights". The vehicle was also known as the M4A3E8(105)W, where "E8" signified the use of HVSS.

*Available beginning..... January 1945*

*Formations equipped..... Medium tank battalion, medium tank battalion (mixed)*



### ■ M4A3E2(75) Assault Tank

Referred to after the war as the "Jumbo", the E2 was a heavily armored Sherman variant which was designed as a stopgap due to delays in the development of true heavy tanks. All hull surfaces received additional armor, up to 100 mm thick on the front. A new heavy turret was fitted that provided frontal armor up to 150 mm thick. With the same armor angle as late-model Shermans, the Jumbo had frontal armor more effective than the Panther.

This extra protection increased the weight of the tank to 42 tons and reduced its speed to about 35 km/h. Grousers were added to the tracks to widen them and compensate for the additional weight. 254 Sherman Jumbos were constructed in mid 1944 and sent to the European front during autumn 1944.

*Formations equipped..... Medium tank battalion, medium tank battalion (mixed)*



### ■ M4A3E2(76) Assault Tank

Although the Sherman Jumbo was constructed with a 75 mm gun, some units replaced it with a 76 mm gun to boost the anti-tank capability of the vehicle.

*Available beginning..... January 1945*

*Formations equipped..... Medium tank battalion, medium tank battalion (mixed)*



## ■ M4A3E2(75) Sherman Jumbo (flame)

A small number of Sherman Jumbos in the European theater were fitted with flamethrowers to augment their capability against infantry and fortified targets. The M3-4-3 bow flamethrower was installed in the hull, replacing the bow machine gun. These flamethrowers proved less than satisfactory, as they had a fuel capacity of 50 gallons and a range of about 30 meters.

*Formations equipped..... Flamethrower platoon*



## ■ M4A3E8(76)W Medium Tank

Nicknamed the "Easy Eight" for its characteristic smooth ride, this advanced variant of the late production M4A3 Shermans was the first version to be equipped with new wider tracks and a Horizontal Volute Spring System (HVSS). This improved suspension system had twin road wheels on each axle and distributed weight more evenly, resulting in a smoother ride and better off-road mobility. The first Easy Eights entered combat during the Battle of the Bulge in December 1944, and would become the standard U.S. Sherman model after the end of the war.

The Easy Eight was armed with a 76 mm cannon, which also had a muzzle brake attached. In Combat Mission, Easy Eights also stock 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.

*Available beginning..... December 1944*

Formations equipped..... Medium tank battalion, medium tank battalion (mixed)



## ■ 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.

Formations equipped..... Flail company



## ■ United States Tank Destroyers

### ■ M10 GMC (Gun Motor Carriage)

The M10 GMC is a United States tank destroyer based on the M4A2 or M4A3 Sherman tank chassis and a modified version of the T1 Heavy Tank turret. The M10 was designed for the U.S. Army's tank destroyer doctrine, which required tank destroyers such as the M10 to be held in a mobile reserve and committed to counter German tank attacks, where they would destroy German tanks through aggressive maneuvering. As a result the M10 and other tank destroyers emphasized speed, mobility, and situational awareness over armor protection

and anti-infantry capability. In practice, however, the relative lack of German tanks to fight meant that the M10 was often pressed into service as a substitute tank.

M10s were armed with the 76 mm M7 gun, a variant of the towed M5 anti-tank gun. 54 rounds, a mix of AP and HE, were stocked. The only secondary weapon was a .50 caliber AAMG mounted on the rear edge of the turret. The M10 turret only had a partial roof over its front third. This allowed better visibility and easier servicing of the weapon at the cost of increased vulnerability. The M10 was equipped with VVSS suspension and a General Motors 6046 375 hp diesel engine or a Ford GAAV8 gasoline engine, depending on the model of Sherman chassis used. The M10 could reach speeds of up to 48-52 km/h.

The M10 GMC was standardized in 1942 and first saw action in North Africa. Despite the introduction of more powerful replacements, it remained in widespread service until the end of the war. The British called it the "Wolverine."

*Formations equipped..... Tank destroyer battalion*



## ■ 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.

*Formations equipped..... Tank destroyer battalion*



## ■ 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.

*Formations equipped..... Tank destroyer battalion*

Commander		Gunner		Loader		Driver		AMMO			DAMAGE			DEFENSES								
 <p>Tank Destroyer 76mm L / 52 M1A2</p> <p>Weight 18.1 tons Speed  Power  Off-Road  Turning </p>								76mm HE	11	76mm Main												
								76mm AP	30	12.7mm MG												
								76mm APCR	2	Smoke												
								76mm Smoke	2	Radio												
								.50cal AP	800	Engine												
										Wpn Controls												
										Optics												
										Tracks												

## ■ M36 GMC (Gun Motor Carriage)

The M36 GMC was a U.S. Army tank destroyer designed to use a 90 mm gun and was developed to counter heavy German tanks. Development on the M36 began in late 1942, and the vehicle was standardized in June 1944. M36s first entered the European front in September 1944. The M36 racked up an excellent track record, being able to kill Panther and Tiger tanks at long range. Over a thousand of these vehicles were eventually produced.

The M36 was based on the chassis of the M10A1 tank destroyer which used the same Ford GAA gasoline engine as the M4A3 Sherman. A new turret was designed to mount a 90 mm M3 gun. Like other U.S. tank destroyers, the turret was open-topped, while secondary armament consisted of a single .50 caliber AAMG.

*Formations equipped..... Tank destroyer battalion*

Commander		Gunner		Loader		Driver		AMMO			DAMAGE			DEFENSES							
 <p>Tank Destroyer 90mm L / 43 M3</p> <p>Weight 28.6 tons Speed  Power  Off-Road  Turning </p>								90mm HE	11	90mm Main											
								90mm AP	33	12.7mm MG											
								90mm AP	3	12.7mm MG											
								.50cal AP	>1k	Smoke											
										Radio											
										Engine											
										Wpn Controls											
										Optics											
										Tracks											

## ■ M36B1 GMC (Gun Motor Carriage)

The M36B1 GMC was an expedient variant constructed because 90 mm-armed tank destroyers were not being built fast enough to keep up with demand. 187 M36s were built using the M4A3 Sherman tank chassis and hull in late 1944. These versions were designated the M36B1. The vehicles were otherwise the same.

Available beginning..... January 1945

Formations equipped..... Tank destroyer battalion



## ■ United States Self-Propelled Guns

### ■ M7B1 HMC (Howitzer Motor Carriage)

The 105 mm Howitzer Motor Carriage M7 was an American self-propelled artillery vehicle with the official service name 105 mm Self-Propelled Gun. The British Army called it the "Priest" due to the pulpit-like machine gun ring. The M7B1 HMC was the standard artillery piece of the armored field artillery battalions that served in armor divisions.

The first M7s produced were modified M3 Lee medium tanks, but went through a fairly rapid shift from being based on the M3 to having more commonality with the M4 Sherman. The first major example was an adoption of the M4's three piece housing, single piece casting and suspension. Later, the M7B1 was fully based on the M4A3 Sherman chassis. It was standardized in September 1943.

Formations equipped..... Self-propelled howitzer battery



## ■ M8 HMC (Howitzer Motor Carriage)

The Howitzer Motor Carriage M8 was a self-propelled howitzer based on the chassis of the M5 light tank, and used as mobile fire support for armored infantry and cavalry formations. Its armament consisted of a new open topped turret armed with a 75 mm M2 howitzer (later 75 mm M3 howitzers, which were reworks of the M1A1 pack howitzer).

*Formations equipped..... Cavalry units, armored infantry battalions*

Commander		Gunner		Driver		AMMO		DAMAGE		DEFENSES	
SPA		75mm L /12 M3		Weight 15.7 tons		75mm HE	38	75mm Main	●	+ + + + +	
Speed		Power		Off-Road		75mm HEAT	4	12.7mm MG	●	X X X X X	
Turning		Off-Road		Turning		75mm WP	4	Radio	●	O O O O O	
						.50cal AP	400	Engine	●	■ ■ ■ ■ ■	
								Wpn Controls	●		
								Optics	●		
								Tracks	●		

## ■ M12 GMC (Gun Motor Carriage)

Normally an off-map support asset, the 155 mm M12 GMC was sometimes called up to the front lines to deal with stubborn German fortified defenses. Fully tracked, the M12 had good mobility but the lack of an armored superstructure gave it terrible crew protection.

*Formations equipped..... Cannon battery (heavy)*

Commander		Gunner		Loader		AMMO		DAMAGE		DEFENSES	
SPA		155mm L /36 M1916M1		Weight 26.8 tons		155mm HE	6	155mm Main	●	+ + + + +	
Speed		Power		Off-Road		155mm AP	3	Radio	●	X X X X X	
Turning		Off-Road		Turning		155mm WP	1	Engine	●	O O O O O	
								Wpn Controls	●	■ ■ ■ ■ ■	
								Optics	●		
								Tracks	●		

## ■ United States Armored Cars

### ■ M8 Light Armored Car (early)

The M8 Light Armored Car was a 6x6 armored car produced by the Ford Motor Company during the Second World War. Dubbed the "Greyhound" by the British, the M8 entered service in 1943. It was designed to serve as the primary basic command and communication combat vehicle of the U.S. Cavalry Reconnaissance Troops. The M8 is armed with a 37 mm cannon (with canister shot available) and a .30 caliber coaxial machine gun.

*Formations equipped..... Cavalry units, tank destroyer battalion*



## ■ M8 Light Armored Car (mid)

The later model of the M8 Light Armored Car is equipped with a modified suspension and a M2HB .50 caliber heavy machine gun mounted above the turret.

*Formations equipped..... Cavalry units, tank destroyer battalion*



## ■ M20 Armored Utility Car

The M20 Armored Utility Car, also known as the M20 Scout Car, was an M8 Light Armored Car with the turret replaced by an open-topped superstructure. The M20 was primarily used as a command and recon vehicle, but many also served as cargo carriers. It offered excellent speed and mobility along with a degree of protection against small arms fire and shrapnel.

*Formations equipped..... Cavalry units, tank destroyer battalion*



## ■ United States Halftracks

### ■ M2A1 Halftrack

The White Motor Company developed this halftrack by modifying the M3 Scout Car. The M2A1 was primarily intended as an artillery prime mover halftrack, outfitted with seating for a gun crew and lockers for artillery ammunition. A later production model of the M2, the M2A1, replaced the M2 halftrack in production. The M2A1 eliminated the skate rail and moved the .50 caliber machine gun to a new M49 machine gun ring mount and "pulpit".

*Formations equipped..... Various mechanized and armored units*

Driver		Halftrack		AMMO		DAMAGE		DEFENSES	
12.7mm M2HB		12.7mm M2HB		.50cal AP	100	12.7mm MG	■	+++++	
Weight	8.9 tons	.30cal M2	250	60mm HEAT	4	7.62mm MG	■	XXXXX	
Speed	■■■■	.50cal AP	600	.30cal M1car	500	Radio	■	XXXXX	
Power	■■■■	.30cal M2	>7k	.30cal M2	>7k	Engine	■	XXXXX	
Off-Road	■■■■					Tracks	■	○○○○	
Turning	■■■■								

### ■ M3 Halftrack

The M3 halftrack was designed and produced in parallel with the M2 halftrack series. Although designed as a personnel carrier and about one foot longer than the M2, the M2 and M3 were very similar in design and most of their major parts were interchangeable. A pedestal mount in the rear was armed with a .50 caliber machine gun.

*Formations equipped..... Various mechanized and armored units*

Driver		Halftrack		AMMO		DAMAGE		DEFENSES	
12.7mm M2HB		12.7mm M2HB		.50cal AP	100	12.7mm MG	■	+++++	
Weight	9.1 tons	60mm HEAT	4	.50cal AP	600	Radio	■	XXXXX	
Speed	■■■■	.30cal M1car	500	.30cal M2	>4k	Engine	■	XXXXX	
Power	■■■■					Tracks	■	○○○○	
Off-Road	■■■■								
Turning	■■■■								

### ■ M3A1 Halftrack

Like the M2A1, the M3A1 halftrack was a later production model of the M3 Halftrack with the M49 mount and "pulpit" installed. The rear of the vehicle could also mount an additional .30 caliber machine gun.

*Formations equipped..... Various mechanized and armored units*



## ■ M4A1 MMC Mortar Halftrack

The M4A1 was an M2 halftrack based Motor Mortar Carriage (MMC) equipped with the 81 mm M1 mortar. Unlike the initial M4 model, the M4A1 was optimized for on-board mortar fire, able to fire over the rear across an arc of 33.75 degrees. For self-defense the vehicle was also armed with an M2HB .50 caliber machine gun mounted on a front skate rail. The M4A1 stocked 100 81 mm mortar rounds and was crewed by six men.

*Formations equipped..... Armored infantry battalions*



## ■ M21 MMC Mortar Halftrack

Because of the basic dissatisfaction with the M4 series of Mortar Motor Carriage, the Ordnance Department issued a requirement in 1943 to mate the M1 81 mm Mortar to the M3 series halftracks. Additionally the mortar could now be fired facing forward from the interior of the vehicle. The mortar mount also had a 30 degree traverse to each side. A pedestal mounted .50 caliber M2HB heavy machine gun was located in the rear.

*Formations equipped..... Armored infantry battalions*





## ■ United States Unarmored Vehicles

### ■ 2.5 Tons 6x6 Cargo Truck

This vehicle represents the typical 2.5 ton 6x6 U.S. Army cargo truck that saw service in World War II. The "Deuce and a Half" was a term applied to all 2.5 ton cargo trucks during the war.



### ■ 1/4 Ton 4x4 Truck "Jeep"

The Willys MB US Army Jeep (formally the Truck, 1/4 Ton, 4x4) and the Ford GPW were manufactured from 1941 to 1945. The small four-wheel drive utility vehicles are considered the iconic World War II Jeep, and inspired many similar light utility vehicles.

A number of Jeep variants are present, including Jeeps with radios and machine guns.



## ■ United States Small Arms

### ■ M1911A1

The Automatic Pistol, Caliber .45, M1911A1 is a single-action, semi-automatic, magazine-fed, and recoil-operated handgun chambered for the .45 ACP cartridge. John M. Browning designed the firearm, which was the standard-issue side arm for the United States armed forces for almost a century, and remains a popular handgun to this day. The M1911A1 features a few modest changes from the original M1911 model that began service in World War I.



<i>Cartridge</i> .....	<i>45 ACP</i>
<i>Action</i> .....	<i>Short recoil operation</i>
<i>Feed system</i> .....	<i>7-round box magazine</i>
<i>Rate of fire</i> .....	<i>Semi-automatic</i>
<i>Effective range</i> .....	<i>50 meters</i>

### ■ M1 Carbine

The United States Carbine, Caliber .30, M1 was a lightweight semi-automatic carbine. The carbine was widely issued to infantry officers, heavy weapon and vehicle crewmembers, and other personnel that needed a lightweight alternative to heavier battle rifles such as the M1 Garand, but a heavier weapon than a pistol. Over 6.5 million M1 carbines were produced by 1945, making it the most produced firearm by the United States in World War II.



<i>Cartridge</i> .....	<i>30 Carbine</i>
<i>Action</i> .....	<i>Gas-operated, rotating bolt</i>
<i>Feed system</i> .....	<i>15-round box magazine</i>
<i>Rate of fire</i> .....	<i>Semi-automatic</i>
<i>Effective range</i> .....	<i>300 meters</i>

### ■ M1A1 Carbine

The paratrooper model of the M1 carbine with a metal skeletal folding stock to save weight and space.



### ■ M1 Garand

The M1 Garand, or "Rifle, Caliber .30, M1", was the first semi-automatic rifle to be generally issued to infantry of any nation. The M1 Garand was the standard issue rifle for U.S. infantrymen during World War II, replacing the M1903 Springfield in most frontline units. The M1's semi-automatic operation gave equipped infantry an edge over enemy infantry that were still equipped with bolt-action rifles.



<i>Cartridge</i> .....	<i>30-06 Springfield</i>
<i>Action</i> .....	<i>Gas-operated, rotating bolt</i>
<i>Feed system</i> .....	<i>8-round "en bloc" clip internal magazine</i>
<i>Rate of fire</i> .....	<i>Semi-automatic</i>
<i>Effective range</i> .....	<i>400 meters</i>

### ■ M1 Garand (w/ M7 Rifle Grenade Launcher)

The Rifle Grenade Launcher, M7 was a 22 mm rifle grenade launcher attachment for the M1 Garand rifle. The M7 was a tube-shaped device, with one end slotting over the barrel of the rifle and the other end holding the grenade in place. Blank cartridges were loaded into the rifle prior to firing. When fired, the expanding gases generated by the cartridges propelled the grenade forward with considerable force. The M7 could fire grenades up to 375 meters.



### ■ M1903A4 Springfield

The Springfield 1903 rifle was officially adopted as a United States military bolt-action rifle in 1905, and saw service in World War II as the modified M1903A3 and M1903A4. In 1937, the M1 Garand replaced the Springfield as the standard U.S. infantry rifle; however, due to limited supplies of the M1, the Springfield remained in service throughout World War II as a standard issue rifle and specialized sniper rifle with a telescopic Weaver sight and new stock.



*Cartridge.....30-06 Springfield*  
*Action.....Bolt-action*  
*Feed system.....5-round stripper clip*  
*Rate of fire.....Bolt-action*  
*Effective range.....1,000 meters*

### ■ M1A1 Thompson

The Thompson is an American submachine gun invented by John T. Thompson. The Thompson was also known informally as the "Tommy Gun". The Thompson was favored by soldiers, criminals and police alike for its ergonomics, compactness, large .45 ACP cartridge, reliability, and high volume of automatic fire.



In 1938, the U.S. military adopted the Thompson submachine gun. The M1A1 could be produced in half the time of the earlier models, and at a much lower cost.

*Cartridge.....45 ACP*  
*Action.....Blowback, Blish Lock*  
*Feed system.....20 or 30-round box magazine*  
*Rate of fire.....700 rounds/minute*  
*Effective range.....100 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 more cost effective alternative to the Thompson, 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*

### ■ M1918 BAR

The Browning Automatic Rifle (BAR) was a family of US automatic rifles (or machine rifles) and light machine guns used by the United States and numerous other countries during the 20th century. The primary variant of the BAR series was the M1918, chambered for the .30-06 Springfield rifle cartridge and designed by John Browning in 1917 for the United States military.



The BAR was designed to be carried by advancing infantrymen, slung over the shoulder and fired from the hip, a concept called "walking fire", thought to be necessary for the individual soldier during trench warfare. In practice, soldiers typically used the BAR as a light machine gun and fired from a bipod which was introduced in later models, though the limited capacity of its standard 20-round magazine tended to hamper its utility in that role. The original M1918 version remains the lightest machine gun to fire the .30-06 Springfield cartridge.

<i>Cartridge</i> .....	<i>30-06 Springfield</i>
<i>Action</i> .....	<i>Gas-operated, rising bolt lock</i>
<i>Feed system</i> .....	<i>20-round box magazine</i>
<i>Rate of fire</i> .....	<i>500-650 rounds/minute</i>
<i>Effective range</i> .....	<i>1,500 meters</i>

### ■ M1919A6 LMG

The M1919A6 was an attempt to make the M1919A4 machine gun into a light machine gun by attaching a bipod, butt stock, and lighter barrel. The A6 version could also be fitted with a tripod, although the bipod made for faster deployment and enabled the machine gun team to dispense with one man (the tripod bearer).



<i>Cartridge</i> .....	<i>30-06 Springfield</i>
<i>Action</i> .....	<i>Recoil-operated, short-recoil operation</i>
<i>Feed system</i> .....	<i>250-round belt fed</i>
<i>Rate of fire</i> .....	<i>400-600 rounds/minute</i>
<i>Effective range</i> .....	<i>1,500 meters</i>

## ■ United States Heavy Weapons

### ■ M1A1 Bazooka

Known informally as the "Bazooka", the M1 rocket launcher series was among the first recoilless rocket anti-tank weapons to be fielded in combat. The Bazooka consisted of a shoulder-mounted tube that housed a shaped charge High Explosive Anti-Tank (HEAT) warhead propelled by a solid rocket motor. The bazooka allowed foot infantry to attack armored vehicles, bunkers, and infantry from a safer distance than possible with mines or grenades. Captured examples of the Bazooka quickly inspired a German version of the weapon, called the "Panzerschreck".

Based on feedback from the Bazooka's introduction in North Africa and the Russian front, the original M1 model was quickly replaced in production with the improved M1A1 model in mid 1943. The M1A1 featured an improved electrical system and simplified design over the original M1. The forward hand grip was deleted and more reliable M6A1 rocket ammunition was introduced.

The Bazooka proved to be a revolutionary advancement in infantry weaponry, although it was quickly eclipsed by newer recoilless designs. Although the 60 mm HEAT warheads had great trouble penetrating the frontal armor of newer German tanks such as the Panther or Tiger, it

could still be a deadly threat if allowed a shot at the side or rear armor of most armored vehicles.

Note: Rocket propelled anti-tank weapons may now be fired from within buildings. However, potentially lethal hot gases released by these weapons may wound or suppress any soldiers in the immediate area!

*Effective range..... 175 meters*



## ■ 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*



## ■ M1919A4 Medium Machine Gun

The M1919 Browning was a .30 caliber medium machine gun that was used as an infantry, coaxial, mounted, aircraft, and anti-aircraft machine gun by the United States and many other countries. Over 5 million M1919s were produced and the weapon remained in service with the United States military until the 1970s

Essentially a smaller caliber cousin of the M2HB .50 caliber machine gun, the M1919A4 was used by infantry as a company and battalion level support weapon, and M1919 variants were also mounted on myriad vehicles as a secondary weapon. In the ground support role, the M1919A4 was mounted on a lightweight tripod.

*Cartridge.....30-06 Springfield*  
*Action.....Recoil-operation, short-recoil*  
*Feed system.....250-round belt*  
*Rate of fire.....400-600 rounds/minute*  
*Effective range.....1,000 meters*



## ■ M1917A1 Heavy Machine Gun

The M1917 Browning heavy machine gun was a belt-fed, water-cooled machine gun that served alongside the Browning M1919 at the battalion level. The M1917 began service in the final months of World War I and continued service into the 1960s. Being water cooled, the M1917 was heavier on average than its air cooled counterparts, but also capable of a higher rate of sustained fire.

The M1917A1 model was designed in the 1930s. This new version featured updates and modernizations to the bottom plate, rear sights, feed arm, and water jacket. The weight of the M1917 meant that it was typically used in fixed defenses and as a high level support weapon.

*Cartridge.....30-06 Springfield*  
*Action.....Recoil-operated automatic*  
*Feed system..... 250-round belt fed*  
*Rate of fire.....600 rounds/minute*  
*Effective range.....2,000 meters*



## ■ M2HB Heavy Machine Gun

The M2 Machine Gun, or "Ma Deuce" as it is sometimes called by troops, is a heavy machine gun that began service in 1933. Firing the powerful .50 caliber BMG round, the M2 Browning was accurate, reliable, long ranged, and effective against all but the most heavily armored targets. The M2 Browning was used in a wide variety of roles, including infantry support, anti-tank, anti-material, anti-aircraft, as well as being mounted on vehicles, airplanes, and ships of every kind. The M2 Browning is still in service today around the world, both in its original and modernized forms.

*Cartridge......50 BMG*  
*Action.....Short recoil-operated*  
*Feed system..... Belt fed*  
*Rate of fire.....485-635 rounds/minute*  
*Effective range.....2,000 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. Propellant forced the fuel through the hose and out of the pipe through a nozzle. As the fuel exited the nozzle towards the target, 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 or small arms fire.

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

Rate of fire.....0.5 gallons per second  
Effective range.....44 meters



## ■ 57 mm L/50 M1 Anti-tank Gun

The United States Army adopted the British Ordnance QF 6-pounder anti-tank gun during the middle of World War II. The U.S. version, designated as the 57 mm Gun M1, was based on the 6-pounder Mk. 2 but used the longer L/50 barrel. Production started in early 1942.

The M1 was the standard anti-tank gun for US line infantry battalions throughout the European campaign. Although effective against light armored vehicles and Pz IV tanks, the 57 mm gun was found to be severely lacking when used against Panther and Tiger tanks. The M1 quickly began to be replaced by the more capable M7 76 mm anti-tank gun in towed tank destroyer battalions.

American shell designs and production lagged behind introduction of the gun, so HE shells were usually unavailable.



## ■ 57 mm L/50 M1 Anti-tank Gun (Mk III Carriage)

Airborne units were issued a special variant of the 6-pounder. This light weight variant had a narrow Mk III carriage and folding legs designed for glider use.



## ■ 76 mm L/50 M5 Anti-Tank Gun

The 3-inch Gun M5 combined the 3-inch barrel of the T9 anti-aircraft gun and breech, recoil, and carriage of the 105 mm howitzer M2. The M5 was issued to towed tank destroyer battalions and the first unit equipped with the M5 saw combat in Italy in October 1943.

While the M5 outperformed earlier U.S. anti-tank gun designs, it was universally criticized as being too large and heavy. These weaknesses became especially apparent during the Battle of the Bulge, when fast-moving enemies and rugged terrain made employment of the weapon difficult.



### ■ 60 mm M2 Mortar

The M2 mortar was a smoothbore light mortar used by U.S. forces in World War II. Like other typical mortars, the M2 was muzzle loading with a high angle of fire. The M2 was developed as a company and platoon-level fire support alternative to the heavier 81 mm M1 mortar found at the battalion level.

The M2 consisted of a metal tube with a fixed firing pin at the bottom, which connected to a square baseplate, and was supported by a bipod that was adjustable with elevation and traverse controls.

With a maximum range of 1,815 meters, the M2 had a longer range compared to most light mortars fielded by other nations.

*Rate of fire.....18 rounds per minute*

*Effective range.....1,816 meters*



### ■ 81 mm M1 Mortar

The M1 was the standard medium mortar of the United States Army during World War II. The design of the M1, like so many 81 mm mortars of the era, was based on the French Brandt mortar. The M1 was most commonly encountered at the battalion fire support level in

The complete system weighed 61 kg and was typically equipped with HE and White Phosphorus (WP) rounds.

*Rate of fire.....18 rounds per minute*

*Effective range.....3,007 meters*



### ■ 75 mm M1A1 Pack Howitzer

The 75 mm Pack Howitzer M1 was designed in the United States in the 1920s to meet a need for an artillery piece that could be moved across difficult terrain. The gun and carriage was designed so that it could be broken down into several pieces to be carried by pack animals or flown in with air drops.

The pack howitzer was commonly used by airborne troops, where its small size allowed it to accompany them on airborne drops to provide them with direct or indirect fire support, and with HEAT shells, limited anti-tank capability.

*Rate of fire.....6 rounds per minute*



### ■ 40 mm Bofors Anti-Aircraft Gun

The Bofors gun is a Swedish-designed 40 mm autocannon designed in the early 1930s. In US service it was known as the 40 mm Automatic Gun M1. The Bofors gun can fire up to 120 shells a minute with a muzzle velocity of 881 meters per second, in both high explosive and armor piercing.

During World War II the Bofors was used by most Allied forces as an anti-aircraft gun; the design proved to be extremely popular and the Bofors is still seeing service in various militaries to this day.

*Rate of fire.....120 rounds per minute*



### ■ M51 Quad .50 caliber

The M51 was a quad .50 caliber machine gun mount on a trailer. The M51 was located in anti-aircraft batteries alongside 40 mm and 90 mm guns, providing defensive firepower and increased coverage. Although the M51 suffered from subpar mobility, it made up for it with a blistering rate of fire.

*Rate of fire.....2,200 rounds per minute*  
*Effective range.....2,000 meters*



### ■ United States Artillery Support

The 60 mm M2 mortar, 81 mm M1 mortar, and M1A1 pack howitzer are described under "United States Heavy Weapons".

Beginning in December 1944, U.S. Artillery formations can be optionally purchased equipped with VT (also known as POZIT) radar proximity fuzes. These fuzes allow the selection of "Personnel" fire missions, where the artillery shells will detonate above the ground instead of detonating on impact with the ground. Proximity detonated artillery proved to be even more deadly to infantry, and although use of it was tightly controlled in December, the VT / POZIT fuze became more increasingly more common as the war progressed through 1945. The following artillery calibers can be purchased with VT fuzes beginning in December 1944: 105 mm, 155 mm, and 8 inch.

### ■ M2 4.2 Inch Mortar

The M2 was a 4.2 inch (107 mm) heavy mortar that was in United States service beginning in 1943. The M2 was a development of the British 4-inch Mk.1 mortar. 4.2 inch mortars were equipped by special chemical mortar battalions, which were so named for their ability to deploy chemical, gas, incendiary, or smoke shells in addition to HE.

The mortar had originally been designed solely for the use of chemical rounds, but after the popularity of chemical weapons waned the mortar was used for deploying smoke rounds. Later, HE rounds were also developed for the weapon system.

*Rate of fire ... 5 rounds per minute maximum, 1 sustained*

### ■ M2A1 105 mm Howitzer

The M2A1 howitzer was the United States military's standard light howitzer during World War II. The M2A1 quickly garnered an excellent reputation after its introduction in 1941, and was widely used across the world after the war, even to the present day. The M2A1 had a maximum range of 11,269 meters.

*Rate of fire ... 10 rounds per minute maximum, 3 sustained*

### ■ M1 155 mm Howitzer

The 155 mm Howitzer M1 was the standard medium towed howitzer used by the United States. Like the M2A1 light field howitzer, the M1 was an effective weapon system that was widely used and is still in service to this day. The M1 howitzer used the same carriage as the M1 4.5 inch gun,

*Rate of fire ... 40 rounds per minute maximum, 4 sustained*



### ■ M1 240 mm Howitzer

Nicknamed the "Black Dragon", the M1 was a heavy towed howitzer that began service in 1944. The Black Dragon was the most powerful and largest field piece used by the United States Army during World War II. The piece was designed to attack heavy fortified targets such as large concrete bunkers, and also proved useful against concentrations of enemy troops and tanks. The Black Dragon fired a 163 kg projectile up to 23,065 meters away.

*Rate of fire ... 30 rounds per hour*



### ■ M1 8 Inch Howitzer

Originally designated the 8 inch Howitzer M1, the M1 203 mm howitzer was a towed heavy howitzer used by the United States Army.

*Rate of fire ... 1 round per minute maximum, 0.67 per minute sustained*



### ■ M1 4.5 Inch Gun

The M1 4.5 inch gun continued the United States military's grand tradition of naming every piece of equipment "M1". The M1 began production in 1942, and was equipped by corps-level field artillery battalion in Europe. The shared a carriage with the M1 155 mm howitzer, and used the same ammunition as the British BL 4.5 inch medium field gun.

*Rate of fire ... 4 rounds per minute maximum, 1 round sustained*



### ■ M1 8 Inch Gun

Developed in parallel with the M1 240 mm "Black Dragon" howitzer, the M1 was a towed 8 inch (203 mm) heavy gun that began service in 1944. Designed during the buildup to World War II as a counterpart to the German K18 gun, the system shared a carriage with the Black Dragon and had a maximum effective firing range of 32,585 meters.

*Rate of fire ... 2 rounds per minute*



### ■ M1A1 155 mm Gun

Known as the "Long Tom" in service, the M1A1 was a heavy field weapon developed to replace the interim French Canon de 155 mm GPF used by the United States military. The Long Tom first saw action in North Africa in 1942. The M1A1 (1941) variant featured a modified breech ring, and had a maximum effective range of 22 km.

*Rate of fire ... 40 rounds per hour sustained*



## ■ T27 Xylophone Rocket Launcher

Nicknamed the "Xylophone", the T27 was the first multiple rocket launcher used in combat by the United States Army. The system consisted of eight launching tubes for 4.5 inch (114 mm) M8 rockets, assembled side by side.



## ■ 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.

*Note: Air support cannot be directed to attack specific targets. Aircraft will roam the battlefield and attack targets of their choosing.*

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

P-47D Thunderbolt	Fighter Bomber	P-47D Thunderbolt	Fighter Bomber	P-47D Thunderbolt	Fighter Bomber	P-47D Thunderbolt	Fighter Bomber	P-47D Thunderbolt	Fighter Bomber	P-47D Thunderbolt	Fighter Bomber
50cal AP	3400	50cal AP	2400	50cal AP	3400	50cal AP	2400	50cal AP	2400	50cal AP	2400
	ANM-64 236kg bomb		2 4.5 in. rocket M8 HE		6 ANM-44 439kg bomb		2 5 in. rocket HVAR		10 ANM-64 236kg bomb		1 ANM-44 439kg bomb

## ■ P-51B Mustang Fighter Bomber

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

*Configurations: ..... Strafe, Light*

	
P-51B Mustang	P-51B Mustang
Fighter Bomber	Fighter Bomber
.50cal AP	1260 .50cal AP
	ANM-64 238kg bomb 2

## ■ 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*

			
P-51D Mustang	P-51D Mustang	P-51D Mustang	P-51D Mustang
Fighter Bomber	Fighter Bomber	Fighter Bomber	Fighter Bomber
.50cal AP	1880 .50cal AP	1880 .50cal AP	1880 .50cal AP
	ANM-64 238kg bomb	2 ANM-44 439kg bomb	2 5 in. rocket HVAR
			10

## ■ German Wehrmacht

### ■ German Tanks

#### ■ Panzer III

The official German designation for the Panzer II family was Panzerkampfwagen II (abbreviated Pz.Kpfw. II). It was usually known as the Luchs (Lynx). The Ausf. L was a light reconnaissance tank and is easily recognizable by its overlapping/interleaved road wheels and "slack track" configuration. Production started in September 1943. The Lynx was larger than the Ausf. G and was equipped with a six speed transmission, able to reach speeds up to 60 km/h.

*Formations equipped..... Panzer Aufklärung battalion*



#### ■ Panzer IVH (Early)

The Panzerkampfwagen IV (Pz.Kpfw. IV), commonly known as the Panzer IV or Pz IV, was a medium tank developed by Germany in the 1930s. The Panzer IV was used extensively in World War II, and used on all fronts. Originally designed as an infantry support tank, the Panzer IV was soon pressed into service as a general use medium tank due to its increasingly obsolescent cousin, the Panzer III, especially after the Panzer III was found wanting in the presence of the Soviet T-34. Over 8,500 Panzer IVs were built during the war, and its hull and chassis were used as the basis for a wide variety of specialized fighting vehicles, such as tank destroyers, self-propelled guns, and SPAA platforms.

The Panzer IV underwent continual upgrades to all major subsystems throughout its service life, improving protection and armament to keep pace with enemy tank developments. The Panzer IV is the only German tank to remain in production throughout the entire war, although by the end of the war the tank had become outdated as the chassis reached the limits of its potential upgrades. Beginning in 1943, the Panzer began to be replaced by the new Panther medium tank in frontline Panzer battalions, but this process was not completed by the end of the war.

Many variants of the Panzer IV tank existed, each model successively improving the armament and/or armor. The Ausf. H began production in April 1943 and received the designation Sd.Kfz. 161/2. This variant saw the integrity of the glacis armor improved by manufacturing it as a single 85 mm plate. To prevent adhesion of magnetic anti-tank mines, which the Germans feared would be used in large numbers by the Allies, Zimmerit paste was added

to all the vertical surfaces of the tank's armor. The vehicle's side and turret were further protected by the addition of 5 mm side-skirts and 8 mm turret skirts. The top turret armor was strengthened to 16 mm.

*Formations equipped..... Panzer battalion*

Commander Gunner Loader Driver	 Medium Tank 75mm L/48 KwK40 Weight 25.0 tons Speed Power Off-Road Turning	 <b>AMMO</b> 75mm HE 42 75mm AP 42 75mm Smoke 3 7.92mm >3k	<b>DAMAGE</b> 75mm Main 7.92mm Coax 7.92mm MG Radio Engine Wpn Controls Optics Tracks	<b>DEFENSES</b> 
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### ■ Panzer IVH (Late)

The Pz IVH (late) is like the Pz IVH (early) except that the hull front was interlocked with the hull sides, correcting earlier flaws in the hull armor.

*Formations equipped..... Panzer battalion*

Commander Gunner Loader Driver	 Medium Tank 75mm L/48 KwK40 Weight 25.0 tons Speed Power Off-Road Turning	 <b>AMMO</b> 75mm HE 42 75mm AP 42 75mm Smoke 3 7.92mm >3k	<b>DAMAGE</b> 75mm Main 7.92mm Coax 7.92mm MG Radio Engine Wpn Controls Optics Tracks	<b>DEFENSES</b> 
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## ■ 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.

*Formations equipped..... Panzer battalion*

Commander		Gunner		Loader		Driver	
							
Medium Tank							
75mm L/48 KwK40							
Weight	25.0 tons						
Speed							
Power							
Off-Road							
Turning							
AMMO				DAMAGE			
75mm HE 42				75mm Main			
75mm AP 42				7.92mm Coax			
75mm Smoke 3				7.92mm MG			
7.92mm >3k				Radio			
				Engine			
				Wpn Controls			
				Optics			
				Tracks			
DEFENSES							
							

## ■ 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.

*Formations equipped..... Panzer battalion*

Commander		Gunner		Loader		Driver	
							
Medium Tank							
75mm L/48 KwK40							
Weight	25.0 tons						
Speed							
Power							
Off-Road							
Turning							
AMMO				DAMAGE			
75mm HE 42				75mm Main			
75mm AP 42				7.92mm Coax			
75mm Smoke 3				7.92mm MG			
7.92mm >3k				Nahverteidigung			
				Radio			
				Engine			
				Wpn Controls			
				Optics			
				Tracks			
DEFENSES							
							

## ■ Panzer VA Panther (Mid)

The Panther was a medium tank fielded by Germany in World War II that served from mid-1943 to the end of the war. The Panther's excellent combination of firepower, mobility, and protection served as a benchmark for other nations' late war and immediate post-war tank designs, and it is frequently regarded as one of the best tank designs of World War II. The Panther was also far cheaper to produce than the Tiger, and only slightly more expensive than the Panzer IV. Armed with the powerful 75 mm KwK 42 L/70 gun and thick, well sloped frontal armor, the Panther was a deadly and well-protected threat to most Sherman models.

The Panther tank was a compromise of various requirements. While sharing essentially the same engine as the Tiger I tank, it had better frontal armor, better gun penetration, was lighter overall and thus faster, and could handle rough terrain better than the Tiger. The tradeoff was weaker side armor; the Panther proved to be deadly in open country and shooting from long range, but vulnerable to close quarters combat. The 75 mm gun also provided less high explosive firepower against infantry. Panthers suffered from mechanical reliability problems, although in later models these problems were somewhat rectified.

The Panther VA, or Ausf. A, was the second series of Panther production. A new cupola for the commander was installed, as well as strengthened running gear and more steel-rimmed wheels for better reliability. A ball-mounted MG mount replaced the hull letter-box MG port.

*Formations equipped..... Panzer battalion*



## ■ Panzer VA Panther (Late)

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

*Formations equipped..... Panzer battalion*



## ■ Panzer VG Panther (Early)

The third iteration of the Panther, the VG's main feature was a redesigned hull. Upper hull side, nose, and hull top armor were increased, although late war production difficulties meant that the armor could possess manufacturing defects. The driver's vision port was replaced with a rotating periscope, while the pivoting hull hatches over the driver and radio operator were replaced with hinged versions. Ammunition capacity was slightly increased at 82 rounds maximum.

*Formations equipped..... Panzer battalion*



## ■ Panzer VG Panther (Mid)

This production variant featured a more reliable drive-train and armored ammunition bins, and a heating system for the fighting compartment were also introduced. A limited number of these vehicles were also manufactured mounting Tiger steel road wheels.

*Formations equipped..... Panzer battalion*





## ■ Panzer VIE Tiger (Late)

The late production model added the Nahverteidigungswaffe close-defense system and increased top armor protection; however, many armor plates had a lower standard of "hardness" due to production shortcuts.

*Formations equipped..... Heavy Panzer battalion*



## ■ 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.

*Formations equipped..... Heavy Panzer battalion*



## ■ Panzer VIB Königstiger (Henschel turret)

Panzerkampfwagen Tiger Ausf. B was the official German designation of this heavy tank, also known as the Tiger II or Königstiger, usually translated as King Tiger. The design followed the same concept as the Tiger I, but meant to be bigger and more powerful. It used the same concept of sloped armor that was first used on the Panther tank, but combined with the armor thickness of the Tiger I. The King Tiger weighed almost seventy tons and boasted 100 to 185 mm of front armor. The main gun was a long barreled 88 mm KwK 43 L/71 gun. The chassis was also the basis for the Jagdtiger tank destroyer.

The first fifty Tiger IIs were produced with a Porsche turret. Afterwards, the Tiger II was produced mounting the new Henschel turret. This turret had a flat front face with much thicker armor, which also eliminated the shot trap created by the Porsche turret's rounded frontal armor.

*Formations equipped..... Heavy Panzer battalion*

Commander		Gunner		Loader		Driver		AMMO		DAMAGE		DEFENSES	
Heavy Tank		88mm L/71 KwK43		Weight 69.8 tons		Speed		88mm HE 35		88mm Main		+++++	
Power		Off-Road		Turning		88mm AP 35		7.92mm >5k		7.92mm Coax		○○○○	
Nahverteidigung		Radio		Engine		Wpn Controls		Optics		Tracks		○○○○	

## ■ 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.

*Formations equipped..... Panzerjäger battalion*

Commander		Gunner		Loader		Driver		AMMO		DAMAGE		DEFENSES			
Tank Destroyer		75mm L/48 PaK39		Weight 15.8 tons		Speed		75mm HE 19		75mm Main		+++++			
Power		Off-Road		Turning		75mm AP 20		75mm Smoke 2		7.92mm >1k		7.92mm MG		○○○○	
Radio		Engine		Wpn Controls		Optics		Tracks				○○○○			

### ■ Jagdpanzer 38(t) (late)

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

*Formations equipped..... Panzerjäger battalion*

Crew		Tank Destroyer		AMMO		DAMAGE		DEFENSES	
Commander		75mm L/48 PaK39		75mm HE	19	75mm Main	■	+	+
Gunner		Weight	15.8 tons	75mm AP	20	7.92mm MG	■	+	+
Loader	●●	Speed	■■■	75mm Smoke	2	Radio	■	+	+
Driver	●●	Power	■■■	7.92mm	>1k	Engine	■	+	+
		Off-Road	■■■			Wpn Controls	■	+	+
		Turning	■■■			Optics	■	+	+
						Tracks	■	+	+

### ■ Flammpanzer 38(t)

Flamethrower variants of the Hetzer replaced the main gun with a Keobe flamethrower. The flamethrower had 700 liters of fuel and a range of about 60 meters. Very few of these vehicles were built, and they were primarily used during the Battle of the Bulge.

*Formations equipped..... Flammpanzer company*

Crew		Flamethrower Tank		AMMO		DAMAGE		DEFENSES	
Commander		Flamethrower		Flame	>17k	Flamethrower	■	+	+
Gunner		Weight	15.8 tons	7.92mm	>1k	7.92mm MG	■	+	+
Loader	●●	Speed	■■■			Radio	■	+	+
Driver	●●	Power	■■■			Engine	■	+	+
		Off-Road	■■■			Wpn Controls	■	+	+
		Turning	■■■			Optics	■	+	+
						Tracks	■	+	+

### ■ Jagdpanzer IV (Early)

The Jagdpanzer IV was a tank destroyer based on the Panzer IV chassis. Minor modifications and improvements were made throughout the production runs of all variants, as well as several field improvements, the most common being the addition of armor sideskirts. The early production version features 60 mm upper front hull armor, and 30 mm upper side hull armor. The bow MG42 was operated by the loader (or an extra crewman in the "HQ" version).

*Formations equipped..... Panzerjäger battalion, Heavy Panzerjäger battalion, Jagdpanzer company, Panzer Brigade Panzer battalion, Panzer battalion (mixed)*



### ■ Jagdpanzer IV (Mid)

In the mid production version of the Jpz IV, the firing port for the driver's MP44 was removed.

Formations equipped..... Panzerjäger battalion, Heavy Panzerjäger battalion, Panzer Brigade Panzer battalion, Panzer battalion (mixed)



### ■ Jagdpanzer IV (Late)

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

Formations equipped..... Panzerjäger battalion, Heavy Panzerjäger battalion, Panzer Brigade Panzer battalion, Panzer battalion (mixed)



### ■ Jagdpanzer IV/70(V)

Produced by Vomag, the IV/70(V) was an up gunned version of the Jagdpanzer IV (late), being armed with a more powerful PaK 42 L/70 cannon. The IV/70(V) eventually completely replaced older variants of the Jagdpanzer IV by the end of 1944.

*Formations equipped..... Panzerjäger battalion, Heavy Panzerjäger battalion, Panzer Brigade Panzer battalion, Panzer battalion (mixed)*

Commander		Gunner		Loader		Driver		AMMO		DAMAGE		DEFENSES	
Tank Destroyer		75mm L/70 KwK42		Weight 25.8 tons		Speed		75mm HE	27	75mm Main	✓	+++++	
Power		Off-Road		Turning		75mm AP	27	7.92mm MG	✓	Nahverteidigung		+X+X+	
Off-Road		Turning		Weight		75mm Smoke	1	Radio	✓	Engine		+X+X+	
Turning		Weight		Speed		7.92mm	600	Wpn Controls	✓	Optics		+X+X+	
Speed		Power		Off-Road		Turning		Tracks	✓	Tracks		+X+X+	

### ■ Jagdpanzer IV/70(V) (late)

Later versions of the IV/70(V) were based on the Panzer IVJ chassis, reducing the number of return rollers to three. The first two wheels were also steel rimmed to combat the heavier front weight from the heavier cannon and frontal armor.

*Formations equipped..... Panzerjäger battalion, Heavy Panzerjäger battalion, Panzer Brigade Panzer battalion, Panzer battalion (mixed)*

Commander		Gunner		Loader		Driver		AMMO		DAMAGE		DEFENSES	
Tank Destroyer		75mm L/70 KwK42		Weight 25.8 tons		Speed		75mm HE	27	75mm Main	✓	+++++	
Power		Off-Road		Turning		75mm AP	27	7.92mm MG	✓	Nahverteidigung		+X+X+	
Off-Road		Turning		Weight		75mm Smoke	1	Radio	✓	Engine		+X+X+	
Turning		Weight		Speed		7.92mm	600	Wpn Controls	✓	Optics		+X+X+	
Speed		Power		Off-Road		Turning		Tracks	✓	Tracks		+X+X+	

### ■ Jagdpanzer IV/70(A)

The Jagdpanzer IV/70(A) was an interim variant of the longer and more potent PaK 42 L/70-equipped Jpz IV. The "A" stood for "Alkett", the manufacturer of the vehicle. The chassis was not changed from the Panzer IV, and it had a different superstructure compared to the "(V)" version, giving it a higher profile.

*Formations equipped..... Panzerjäger battalion, Heavy Panzerjäger battalion, Panzer Brigade Panzer battalion, Panzer battalion (mixed)*



## ■ Marder I

The Marder I (SdKfz 135) was a German World War II tank destroyer armed with a 75 mm anti-tank gun. Germany acquired more than three hundred Tracteur Blindé 37L, a French artillery tractor/armored personnel carrier, from France in 1940 after its fall. Most Marder I's were built on the base of this vehicle. Between July and August 1942, 170 Marder I's were built on the Lorraine chassis. The German word "Marder" means "Marten" (an agile, slender forest animal) in English.

*Formations equipped..... Panzerjäger battalion*



## ■ Marder II

The Marder II is the name for a series of World War II German tank destroyers built on the chassis of the Panzer II. 575 Sd.Kfz. 131 Marder IIs were produced by FAMO, MAN, and Daimler-Benz between June 1942 and June 1943. The hull and superstructure of the Panzer II remained, with an open fighting compartment added to the top of the vehicle, but the armor was thin and the crew was exposed from above and to the rear. Marder IIs served in Panzerjäger detachments on all fronts until the end of the war.

*Formations equipped..... Panzerjäger battalion*



## ■ Marder IIIM

The Marder III was built on the chassis of the Panzer 38(t). The last variant, Marder III Ausf.M, Sd.Kfz. 138, was based on the Panzer 38(t) Ausf. M and armed with the 75 mm PaK 40 anti-tank gun. In this variant, the engine was moved from the rear to the middle between the driver and the rest of the crew. Because there was no engine in the rear, the gun and the crew did not have to sit on top of the engine deck as in previous models, decreasing crew exposure and visibility.

*Formations equipped..... Panzerjäger battalion*



## ■ Nashorn (Late)

The Nashorn (sometimes referred to as the Hornisse) was an expedient tank destroyer fielded by the Wehrmacht beginning in 1943. The Nashorn was created by marrying a Pak 43 88 mm gun with a Hummel chassis. The resulting vehicle was mobile and able to penetrate any Allied tank at long range, although it was very lightly armored and had a high profile.

Development of the Nashorn began in 1942 when the need for a self-propelled 88 mm PaK43 was realized. 100 vehicles were built in time for the Kursk offensive in 1943, and through the course of the war 494 were built in total.

*Formations equipped..... Heavy Panzerjäger battalion*



## ■ Jagdpanther

The Jagdpanther was a tank destroyer built during World War II, based on the chassis of the Panther tank. Production started in January 1944, and it entered service in the same year, both on the Eastern and Western fronts. The Jagdpanther combined the very powerful 88 mm PaK 43/3 cannon with the excellent armor of the Panther chassis.

*Formations equipped..... Heavy Panzerjäger battalion*



## ■ Jagdtiger

The Jagdtiger, officially designated the "Panzerjäger Tiger Ausf. B", was a heavy tank destroyer that holds the distinction of being the heaviest armored fighting vehicle to ever reach production status. The Jagdtiger was based on the Tiger II hull and was armed with a 128 mm PaK 44 L/55 cannon. The Tiger II hull was lengthened and a large casemate superstructure added to it, which sported armor up to 250 mm thick at the front. The 128 mm cannon was powerful enough to destroy any vehicle fielded in the war. However, the extreme weight caused severe reliability issues that limited its effectiveness.

*Formations equipped..... Heavy Panzerjäger battalion*



## ■ German Assault Guns

### ■ StuG III G (Early)

The Sturmgeschütz III (StuG III) assault gun was built on the Panzer III chassis and was Germany's most produced armored fighting vehicle during World War II. Initially intended as a mobile armored light gun for infantry support, the StuG was continually modified and widely employed as a tank destroyer. The Ausf. G was the final and by far the most common of the StuG series. The Ausf. G used the hull of the Pz.Kpfw. III Ausf. M with a new superstructure design. The early production versions featured a "box" shaped gun mantlet of varying thickness (between 45 and 50 mm), a commander's cupola with periscopes, and a shielded top-mounted MG34 operated by the loader.

*Formations equipped..... Sturmgeschütz battalion, Sturmgeschütz brigade, Panzerjäger battalion, Panzer battalion (mixed)*



### ■ StuG III G (Mid)

Later G versions from November 1943 were fitted with the Topfblende (pot mantlet) (often called a Saukopf (pig's head)) gun mantlet without coaxial mount. This cast mantlet with a curved organic shape was more effective at deflecting shots than the "box" mantlet.

*Formations equipped..... Sturmgeschütz battalion, Sturmgeschütz brigade, Panzerjäger battalion, Panzer battalion (mixed)*



### ■ Stug III G (Late)

The late production 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, and the overall armor manufacturing quality was fair.

*Formations equipped..... Sturmgeschütz battalion, Sturmgeschütz brigade, Panzerjäger battalion, Panzer battalion (mixed)*



### ■ Stug III G (Latest)

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

*Formations equipped..... Sturmgeschütz battalion, Sturmgeschütz brigade, Panzerjäger battalion, Panzer battalion (mixed)*



### ■ StuH 42 (Early)

In 1942, a variant of the StuG III Ausf. F was designed with a 105 mm howitzer instead of the 75 mm StuK 40 L/43 cannon. These new vehicles, designated StuH 42 (Sturmhaubitze 42, Sd.Kfz 142/2), were designed to provide infantry support since an increasing number of StuG III were being used in an anti-tank role. The StuH 42 mounted a variant of the 105 mm leFH 18 howitzer, modified to be electrically fired and fitted with a muzzle brake.

The early model is equivalent to the StuG III (Early) and uses a "box" mantlet.

*Formations equipped..... Sturmgeschütz battalion, Sturmgeschütz brigade*



### ■ StuH 42 (Mid)

The StuH 42 (Mid) is equivalent to the StuG III (Mid) and uses the rounded "Saukopf" mantlet.

*Formations equipped..... Sturmgeschütz battalion, Sturmgeschütz brigade*



## ■ 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.

*Formations equipped..... Sturmgeschütz battalion, Sturmgeschütz brigade*

Commander		Gunner		Loader		Driver	
Assault Howitzer		105mm L/28 leFH18M		Weight 23.9 tons		Speed	
Power		Off-Road		Turning		AMMO	
105mm HE 31		105mm HEAT 2		105mm Smoke 3		7.92mm >2k	
DAMAGE		DEFENSES		105mm Main		7.92mm Coax	
7.92mm MG		Radio		Engine		Wpn Controls	
Optics		Tracks		Nahverteidigung		Radio	
Engine		Wpn Controls		Optics		Tracks	

## ■ StuH 42 (Latest)

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

*Formations equipped..... Sturmgeschütz battalion, Sturmgeschütz brigade*

Commander		Gunner		Loader		Driver	
Assault Howitzer		105mm L/28 leFH18M		Weight 23.9 tons		Speed	
Power		Off-Road		Turning		AMMO	
105mm HE 31		105mm HEAT 2		105mm Smoke 3		7.92mm >2k	
DAMAGE		DEFENSES		105mm Main		7.92mm Coax	
7.92mm MG		Radio		Engine		Wpn Controls	
Optics		Tracks		Nahverteidigung		Radio	
Engine		Wpn Controls		Optics		Tracks	

## ■ Sturmpanzer IV (Mid)

The Sturmpanzer IV, often referred to as the Brummbär, was a heavy assault gun first used at the battle of Kursk. The Sturmpanzer IV was a Panzer IV chassis with a casemate-style armored superstructure added. The vehicle carried a 150 mm StuH 43 L/12 gun, ideally suited for close infantry support. The front superstructure had 100 mm of armor, while the front hull had 80 mm of armor.

The (mid) variant of the Sturmpanzer IV represents the second series production line based on the Pz IV Ausf. H chassis. A driver periscope replaced the sliding-shutter visor.

*Formations equipped... Sturmpanzer company*



### ■ 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.

*Formations equipped... Sturmpanzer company*



### ■ Sturmtiger

The Sturm mortarwagen 606/4 mit 38 cm RW 61, also known as the Sturmtiger, was a heavy assault gun employed as an infantry support vehicle. The Sturmtiger used an unchanged Tiger I chassis, with the superstructure replaced by a large heavily armored box superstructure. Due its intended use in close quarters urban environments, the Sturmtiger was well armored, with the superstructure front being 150 mm thick and angled at 47 degrees.

The Sturmtiger's primary weapon was a 380 mm mortar that fired rocket-assisted ammunition. The ammunition was almost 5 feet long and could weigh up to 376 kg, with both high explosive and shaped charge (HEAT) rounds being available. A loading crane was necessary to help with loading ammunition into the breech, and often the entire crew had to assist in loading. Hot exhaust fumes from fired rounds had to be channeled forward away from the crew compartment with ventilation shafts built into the gun tube wall.

*Formations equipped... Sturmmörser company*



## ■ German Self-Propelled Artillery

### ■ Grille H

The Sd.Kfz. 138/1 Ausf. H, or Grille, was a self-propelled artillery vehicle based on the Panzer 38(t) Ausf. H. The Grille was a Panzer 38(t) Ausf. H chassis with the turret removed and an armored superstructure added. A 150 mm sIG 33 heavy infantry gun and ammunition compartments were added within the superstructure. The Grille was typically used in Panzer and Panzergrenadier divisions as a regimental fire support weapon.

*Formations equipped..... Regimental cannon company ( PzG armored)*



### ■ Wespe

The Sd.Kfz. 124 Wespe (German for "Wasp"), also known as Leichte Feldhaubitze 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.

*Formations equipped..... Self-propelled howitzer platoon*

Commander		Gunner		Loader		Loader		Driver		AMMO		DAMAGE		DEFENSES																	
SP Howitzer		105mm L/28 leFH18M		Weight 11.0 tons		Speed		Power		Off-Road		Turning		105mm HE 27		105mm HEAT 2		105mm Smoke 3		105mm Main		Radio		Engine		Wpn Controls		Optics		Tracks	
+ + + + +		+ + + + +		+ + + + +		+ + + + +		+ + + + +		+ + + + +		+ + + + +		+ + + + +		+ + + + +		+ + + + +		+ + + + +		+ + + + +		+ + + + +		+ + + + +		+ + + + +			

## ■ 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.

*Formations equipped..... Self-propelled artillery battery (heavy)*

Commander		Gunner		Loader		Loader		Driver		AMMO		DAMAGE		DEFENSES															
SP Howitzer		150mm L/30 sFH18		Weight 24.0 tons		Speed		Power		Off-Road		Turning		150mm HE 16		150mm HEAT 2		150mm Main		Radio		Engine		Wpn Controls		Optics		Tracks	
+ + + + +		+ + + + +		+ + + + +		+ + + + +		+ + + + +		+ + + + +		+ + + + +		+ + + + +		+ + + + +		+ + + + +		+ + + + +		+ + + + +		+ + + + +		+ + + + +		+ + + + +	

## ■ German Armored Cars

### ■ PSW 222

The Leichter Panzerspähwagen (PSW) light armored reconnaissance vehicles were a series of light four-wheel drive armored cars produced from 1935 to 1944. They used the standard sPkw I Horch 801 (heavy car) chassis with an angled armored body and turret. The Sd.Kfz. 222 variant was armed with a 20 mm KwK 30 L/55 autocannon and a MG34 machine gun. The third crew member was the gunner.

*Formations equipped..... Aufklärung battalion, Panzer Aufklärung battalion*



## ■ PSW 223

The Sd.Kfz. 223 Panzerfunkwagen was a radio car version of the PSW 222, armed with a MG34 machine gun. It included additional radio equipment and a large "bed-frame" antenna over the vehicle.

*Formations equipped..... Aufklärung battalion, Panzer Aufklärung battalion*



## ■ PSW 231

The label Schwerer Panzerspähwagen (heavy armored reconnaissance vehicle) covers the 6 and 8-wheeled armored cars Germany used during the Second World War. The Sd.Kfz. 231 was an eight-wheeled armored car, of which 607 were produced beginning in 1936 until September 1943. The Sd.Kfz. 231 featured double steering, a rear engine, eight-wheel all-wheel drive, and a 20 mm KwK 38 L/55 gun.

*Formations equipped..... Aufklärung battalion, Panzer Aufklärung battalion*



### ■ PSW 233

This armored car was armed with a 75 mm StuK 37 L/24 and was intended to provide Aufklärungs formations with heavier firepower against enemy tanks and infantry. The vehicle was basically a Sd.Kfz. 231 with the turret removed and superstructure altered to mount the 75 mm cannon. Just over 100 vehicles were built and used on all fronts until 1945.

*Formations equipped..... Panzer Aufklärung battalion*



### ■ PSW 234/1

The Sd.Kfz. 234 (Sonderkraftfahrzeug 234, or special purpose vehicle 234) was an eight-wheeled armored car and the successor to the PSW 231 and PSW 232. It had an open-topped turret containing a 20 mm KwK 30 L/55 autocannon and an MG34 machine gun.

*Formations equipped..... Aufklärung battalion, Panzer Aufklärung battalion*



### ■ PSW 234/2 Puma





### ■ Sd.Kfz. 7/2

Also known as the 3.7 cm Flak 36 auf Zugkraftwagen 8t, the Sd.Kfz. 7/2 was like the Sd.Kfz. 7/1, except that it had a 37 mm Flak 36 gun mounted instead of a Flakvierling.

*Formations equipped..... Self-propelled Flak battery (medium)*



### ■ 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.

*Formations equipped..... Self-propelled Flak battery*



## ■ Flakpanzer 38(t)

A small number of Czech 38(t) chassis were used to mount a 20 mm Flak 38 anti-aircraft gun. These were issued mostly to rebuilding Panzer Divisions in France as the first fully tracked anti-air vehicle used by the Germans; it was not a success as the single 20 mm gun was by this time not an effective weapon for combating fast flying fighter bomber aircraft.

*Formations equipped..... Antiaircraft platoon (light)*



## ■ Möbelwagen

Based on a Pz IV hull, the Möbelwagen ("Furniture Van") (also referred to as a Flakpanzer IV) was an improvised armored anti-aircraft vehicle designed to accompany Panzer regiments in battle and provide them with close AA support. An armored open-top superstructure was placed on a Pz IV hull, and in the middle a FlaK 43 37 mm gun was mounted. The superstructure could be folded down to allow the flak cannon to engage ground targets.

First entering service on the Western Front in 1944, the Möbelwagen proved to be highly successful and led to the development of further armored AA platforms such as the Wirbelwind and Ostwind.

*Formations equipped..... Antiaircraft platoon (medium)*



## ■ Wirbelwind

The Wirbelwind ("Whirlwind") (also referred to as a Flakpanzer IV) was the successor to the Möbelwagen. Like its predecessor, the Wirbelwind was based on a Pz IV hull. However, the Wirbelwind sported Flakvierling 20 mm quad AA guns instead of the single 37 mm gun,

housed in a specially designed open-topped turret. This setup gave the crew vastly improved protection against small arms fire and shrapnel, as the sides did not need to be folded down before engaging ground targets.

Although highly effective against ground targets, the 20 mm Flakvierling lacked the range necessary to provide adequate protection against aircraft, leading to the development of the Ostwind in late 1944.

*Formations equipped..... Antiaircraft platoon (light)*



## ■ German Halftracks

### ■ SPW 250/1 (Alt and Neu)

The Sd.Kfz. 250 was a light armored halftrack built by DEMAG. Compared to U.S. halftracks, the Sd.Kfz. 250 series was less mobile, with unpowered front wheels. However, its tracks made it far more mobile off-road than the armored cars it replaced, and it was a popular vehicle. Most variants were open-topped and had a single access door in the rear. The Sd.Kfz. 250/1 leichter Schützenpanzerwagen (SPW) was the standard troop carrier.

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.

Note: In-game, the older variant with angled plates will be noted with (Alt) after its name, while the newer variant is designated "Neu".

*Formations equipped..... Panzer Aufklärung battalion*







### ■ SPW 250/10 (Alt and Neu)

The Sd.Kfz. 250/10 leichter Schützenpanzerwagen (3.7 cm PaK) was the recon platoon leader's variant with a 3.7 cm PaK 35/36. This was the same antitank gun used in a towed mode early in the war.

*Formations equipped..... Panzer Aufklärung battalion*



### ■ SPW 251/1 (Ausf. C and Ausf. D)

The Sd.Kfz. 251 (Sonderkraftfahrzeug 251) half-track was an armored fighting vehicle designed and first built by Hanomag. The largest, most common, and best armored of the German wartime halftracks, the Sd.Kfz. 251 was designed to transport the panzergrenadiers of the mechanized infantry corps. Widely known simply as "Hanomags" by both German and Allied forces, they were widely produced throughout the war, with over 15,252 vehicles and variants produced in total by various manufacturers.

Beginning in 1943, the Ausf. D version of the SPW 251 replaced the Ausf. C in production. The Ausf. D had simplified armor plates in order to speed production.

The Sd.Kfz. 251/1 - Schützenpanzerwagen is the standard personnel carrier.

*Formations equipped..... Armored Panzergrenadier battalion*



### ■ SPW 251/2 (Ausf. C and Ausf. D)

The Sd.Kfz. 251/2 Schützenpanzerwagen (Granatwerfer) was a mortar vehicle assigned to Panzergrenadier heavy platoons.

*Formations equipped..... Armored Panzergrenadier battalion*



### ■ SPW 251/3 (Ausf. C and Ausf. D)

The Sd.Kfz. 251/3 Kommandopanzerwagen (Funkpanzerwagen) was a communications vehicle for headquarters and command use, and was fitted with extra radio equipment.

*Formations equipped..... Armored Panzergrenadier battalion*



### ■ SPW 251/7 (Ausf. C and Ausf. D)

The Sd.Kfz. 251/7-I Pionierpanzerwagen was an assault engineer vehicle with fittings to carry assault bridge ramps on the sides.

*Formations equipped..... Armored Panzergrenadier battalion*



### ■ SPW 251/9 (Ausf. C and Ausf. D)

The Sd.Kfz. 251/9 Schützenpanzerwagen (7.5 cm) was equipped with a 75 mm L/24 low velocity gun, The "Stummel" ("stump") provided organic mobile close fire support to Panzergrenadier companies and battalions.

*Formations equipped..... Armored Panzergrenadier battalion*



### ■ SPW 251/10 (Ausf. C and Ausf. D)

The Sd.Kfz. 251/10 Schützenpanzerwagen was equipped with a 37 mm PaK 36 anti-tank gun. As the PaK 36 quickly became obsolete for anti-tank use, the gun was mounted on a variety of vehicles, including the platoon commander's vehicle in many Panzergrenadier platoons, in order to boost firepower.

*Formations equipped..... Armored Panzergrenadier battalion*



### ■ 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.

*Formations equipped..... Armored Regimental Pioneer company*



### ■ 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 provide additional firepower.

*Formations equipped..... Armored Panzergrenadier battalion*



## ■ SPW 251/21 Ausf. D

Another fire support variant of the Sd.Kfz. 251 equipped with triple 15 mm MG151 autocannons, a weapon normally found only on aircraft.

*Formations equipped... Panzergrenadier (Panzer brigade) battalion*



## ■ German Unarmored Vehicles

### ■ Kübelwagen Utility Vehicle

The Volkswagen Kübelwagen (short for Kübelsitzwagen, meaning "bucket seat car") was a military vehicle built by Volkswagen for use by the German military. Based heavily on the Volkswagen Beetle, the Kübelwagen was for the Germans what the Jeep was for the Allies.



### ■ Kfz.70 "Krupp-Protze"

The "Krupp-Protze" was a German truck of advanced design. The truck was widely used during the war in a variety of roles, but its primary uses were as an artillery tractor and to carry motorized infantry. 7,000 trucks were built between 1933 and 1941.



## ■ Opel Blitz Truck

Opel Blitz was the name given to various German light and middle-weight trucks built by Opel from 1930 on. During the years preceding the Second World War, Opel was Germany's largest truck producer. The Blitz name was first applied to an Opel truck in 1930 and by 1934 there were four base versions offered of the one-ton model along with fourteen versions of the larger 2/2U ton trucks. A three-ton version was introduced in 1939 and used throughout the war.



## ■ German Small Arms

### ■ P38

The Walther P38 was a 9 mm pistol that was developed by Walther as the service pistol of the Wehrmacht at the beginning of World War II. It was intended to replace the costly Luger P08.



Cartridge.....9x19 mm Parabellum  
 Action.....Short recoil, locked breech  
 Feed system.....8-round detachable single-stack magazine  
 Rate of fire.....Semi-automatic  
 Effective range.....50 meters

### ■ Karabiner 98K

The Karabiner 98 Kurz (often abbreviated Kar98k, K98, or K98k) was adopted as the standard service rifle in 1935 by the German Wehrmacht. Although supplemented by semi- and fully automatic rifles during World War II, it remained the German service rifle until the end of the war.



*Cartridge*..... 7.92x57 mm Mauser  
*Action*..... Bolt-action  
*Feed system*..... 5-round stripper clip, internal magazine  
*Rate of fire*..... Bolt-action  
*Effective range*..... 500 meters (with iron sights)

### ■ Kar98K Schiessbecher

In 1942, the 30 mm Schiessbecher cup-type rifle grenade launcher was introduced. It could be mounted on any Karabiner 98k. The rifle grenade launcher could be used against infantry, fortifications and light armored vehicles up to a range of 280 meters. For these differing tasks several specialized grenades with accompanying special propelling cartridges were developed for the 1,450,113 produced Schiessbecher rifle grenade launchers. The rifle grenade propelling cartridges fired a wooden projectile through the barrel to the rifle grenade that upon impact automatically primed the rifle grenade.



### ■ Kar98K Zf/4

For snipers, Karabiner 98k rifles selected for being exceptionally accurate during factory tests were fitted with a telescopic sight as sniper rifles. Karabiner 98k sniper rifles had an effective range up to 1000 meters when used by a skilled sniper. The German Zeiss Zielvier 4x (ZF39) telescopic sight had bullet drop compensation in 50 meter increments for ranges from 100 meters up to 800 meters or in some variations from 100 meters up to 1000 meters.



*Effective range*..... 800+ meters (with optics)

### ■ Gewehr 43

The Gewehr 43 or Karabiner 43 (G43, K43, Gew 43, Kar 43) was a rifle designed by Germany after the need for a semi-automatic rifle for infantry became apparent. It was never mass produced and never saw general issue. Despite being a more effective combat rifle than slower bolt action rifles, the Gewehr 43 was never as reliable or as robust and simple as Allied rifles such as the American M1 Garand or SVT-40.



*Cartridge*..... 7.92x57 mm Mauser  
*Action*..... Gas-operated  
*Feed system*..... 10-round detachable box magazine  
*Rate of fire*..... Semi-automatic

*Effective range .....500 meters (with iron sights)*

### ■ Gewehr 43 ZF/4

The Gewehr 43 was often used as a designated marksman/sniper weapon, fitted with the Zielfernrohr 43 (ZF 4) telescopic sight with 4x magnification.



*Effective range .....800 meters (with optics)*

### ■ FG 42

The Fallschirmjärgergewehr 42, or FG 42, was a battle rifle fielded by the Luftwaffe. Specially designed for paratrooper use, the FG 42 was a highly advanced design that combined the hitting power of a full rifle cartridge with light weight, semi and fully automatic firing modes, a pistol grip, and an integrated bipod. The result was a highly versatile and ground-breaking weapon design that could fill the roles of a rifle, SMG, or LMG reasonably well.



The FG 42 was a relatively rare weapon on the battlefield, being issued only to Fallschirmjäger units in small numbers. The early production variant, sometimes unofficially referred to as the Model I, had a distinctive slanted pistol grip. The version present in this game represents the later production models which 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 to 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*

### ■ MP40

The MP40 was a submachine gun used extensively by tank crews, paratroopers, platoon and squad leaders, and other troops during World War II. The MP40 was often called the "Schmeisser" by the Allies, after weapons designer Hugo Schmeisser.



<i>Cartridge</i> .....	<i>9x19 mm Parabellum</i>
<i>Action</i> .....	<i>Straight blowback open-bolt</i>
<i>Feed system</i> .....	<i>32-round detachable box magazine</i>
<i>Rate of fire</i> .....	<i>500 rounds/minute</i>
<i>Effective range</i> .....	<i>100 meters</i>

### ■ MG34

The Maschinengewehr 34, or MG34, was a German machine gun first produced and accepted into service in 1934. It was an air-cooled machine gun firing the 7.92x57 mm Mauser cartridge. In the light-machine gun role, it was intended to be equipped with a bipod and 50-round ammunition belt contained in a drum-shaped magazine attached to the receiver.



<i>Cartridge</i> .....	<i>7.92x57 mm Mauser</i>
<i>Action</i> .....	<i>Open bolt, recoil-operated, rotating bolt</i>
<i>Feed system</i> .....	<i>50-round belt or 50-round drum</i>
<i>Rate of fire</i> .....	<i>800-900 rounds/min</i>
<i>Effective range</i> .....	<i>1,000 meters</i>

### ■ MG42

The MG42 weighed 11.6 kilograms when configured for the light role with the bipod, lighter than the MG34 and more easily portable. The bipod, the same one used on the MG34, could be mounted to the front or the center of the gun depending on where it was being used.



<i>Cartridge</i> .....	<i>7.92x57 mm Mauser</i>
<i>Action</i> .....	<i>Recoil-operated, roller-locked</i>
<i>Feed system</i> .....	<i>50 or 250-round belt fed</i>
<i>Rate of fire</i> .....	<i>1,200-1,500 rounds/min</i>
<i>Effective range</i> .....	<i>1,000 meters</i>

### ■ Panzerfaust 30K

The Panzerfaust (literally "armor fist" or "tank fist") was an inexpensive, recoilless German anti-tank weapon. It consisted of a small, disposable preloaded launch tube firing a High Explosive Anti-Tank (HEAT) warhead, operated by a single soldier.



The Panzerfaust 30 Klein ("small") or Faustpatrone was the original version first delivered in August 1943. The "30" was indicative of the nominal maximum range of 30 meters. It had a 33 mm diameter tube containing 54 grams of black powder propellant launching a warhead carrying 400 grams of explosive. The projectile traveled at just 30 meters per second and could penetrate 140 mm of armor.

*Effective range* .....30 meters

### ■ Panzerfaust 30

An improved version appeared in August 1943, with a larger warhead for improved armor penetration, 200 mm, but the same range of 30 meters.



*Effective range* .....30 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

### ■ MG34 Heavy Machine Gun

The Maschinengewehr 34 (MG34) was first produced and accepted into service in 1934. It was an air-cooled machine gun firing the 7.92x57 mm Mauser cartridge. It was also designed to perform both as a light machine gun and in heavier roles. In the latter, it was mounted on a larger tripod and was belt-fed.

In the medium-machine gun role, it could be mounted on one of two tripods, a smaller one weighing 6.75 kilograms, the larger 23.6 kilograms. The larger MG34 Laffette tripod mount included a number of features, such as a telescopic sight and special sighting equipment for indirect fire.

*Note: In the game, the MG34 and MG42 can be fired in "deployed" and "semi-deployed" configurations.*

Cartridge.....7.92x57 mm Mauser  
 Action.....Open rotating bolt, recoil-operated  
 Feed system.....250-round belt  
 .....or 50-round drum  
 Rate of fire.....800-900 rounds/min  
 Effective range.....2,000 meters



### ■ MG42 Heavy Machine Gun

The Maschinengewehr 42 (MG42) entered service with the Wehrmacht in 1942. It supplemented and in some instances, replaced the MG34 general purpose machine gun in the German Armed Forces, though both weapons were manufactured and used until the end of the war. The MG42 has a proven record of reliability, durability, simplicity, and ease of operation, but is most notable for being able to produce a stunning volume of suppressive fire with one of the highest average rates of fire of any single-barreled man-portable machine gun, between 1,200 and 1,500 rpm, resulting in a distinctive muzzle report. The MG42's belt-feed and quick-change barrel system also allowed for more prolonged firing in comparison to similar weapons of other nations.

For sustained fire use, it was matched to the newly-developed Lafette 42 tripod, which weighed 20.5 kilograms on its own. The optimum operating crew of an MG42 for sustained fire operation was six men: the gun commander, the No.1 who fired the gun, the No.2 who carried the tripod, and Nos.3, 4, and 5 who carried ammunition, spare barrels, entrenching tools, and other items.

*Cartridge*.....7.92x57 mm Mauser  
*Action*.....Recoil-operated, roller-locked  
*Feed system*.....250-round belt  
*Rate of fire*.....1,200-1,500 rounds/min  
*Effective range*.....2,000 meters



## ■ 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!



## ■ Panzerschreck RPzB 54

Panzerschreck ("tank terror") was the popular name for the Raketenpanzerbüchse (abbreviated to RPzB), an 88 mm reusable anti-tank rocket launcher. Another popular nickname was Ofenrohr ("stove pipe"). The Panzerschreck was designed as a lightweight infantry anti-tank weapon. The weapon was shoulder-launched and fired a rocket-propelled, fin-stabilized grenade with a shaped charge warhead that could penetrate over 200 mm of armor.

The Panzerschreck was conceived in response to the Soviet armor encountered on the eastern front, and after capturing examples of the American M1 Bazooka. The Panzerschreck design was enlarged compared to the Bazooka, greatly increasing penetration performance of the round but also resulting in a heavy and unwieldy weapon.

The first Panzerschreck, the RPzB 43, required the operator to wear a poncho and gas mask in order to protect him from the effects of the backblast. In 1943 the RPzB 54 was designed with a blast shield to protect the operator.

*Effective range* .....150 meters  
*Maximum range*.....200 meters



## ■ 81 mm sGrW34 Mortar

The 81 mm Granatwerfer 34 (8 cm GrW 34) was the standard German medium mortar throughout World War II. It gained a reputation for extreme accuracy and rapid rate of fire, although much of the credit should go to the training of the crews. The design of the weapon was conventional and it broke down into three loads (barrel, bipod, baseplate) for transport. The barrel was smooth bore. A panoramic sight was mounted on the traversing mechanism yoke for fine adjustments. A line on the tube could be used for rough laying.

*Rate of fire..... 15-25 rounds per minute*

*Maximum range..... 2,400 meters*



## ■ 81 mm kzGrW 42 Mortar

The kurzer ("short") 8 cm Granatwerfer 42, also called the "Stummelwerfer", was a modified version of the standard medium mortar, the 81 mm GrW 34. The Stummelwerfer was lightened with a shorter barrel, reducing its range and weight significantly.

The Stummelwerfer was used by German Fallschirmjäger, replacing the subpar 50 mm leGrW 36 light mortar as a platoon fire support weapon.

*Rate of fire..... 15-25 rounds per minute*

*Maximum range..... 1,100 meters*



## ■ 75 mm leIG 18

The 75 mm leichtes Infanteriegeschütz 18 (7.5 cm le.IG 18) was an infantry support gun of the German Wehrmacht. Mountain infantry and airborne infantry versions existed as well, which could be broken down quickly into easy to transport parts.

*Rate of fire..... 8-12 rounds per minute*

*Maximum range..... 3,375 meters*



## ■ 75 mm leIG 37

The 75 mm leichtes Infanteriegeschütz 37 (7.5 cm le.IG 137) was an infantry support gun. The leIG 37 used carriages from the 37 mm PaK 36 and the Soviet M1930, mated to a new gun design by Krupp. The leIG 37 had a somewhat semi-automatic breech, where upon firing the breech block would open and eject the spent shell casing, allowing for a faster rate of fire.

### ■ 150 mm sIG 33

The 150 mm schweres Infanterie Geschütz 33 (15 cm sIG 33) was the standard German heavy infantry gun used in WW2. It was the largest weapon ever classified as an infantry gun by any nation.

*Rate of fire.....2-3 rounds per minute*



### ■ 50 mm PaK 38

The 50 mm Panzerabwehrkanone 38 (L/60) was a German anti-tank gun. It was developed in 1938 by Rheinmetall-Borsig AG as a successor to the 37 mm PaK 36.

Although it was very outdated as an anti-tank gun by 1944, the PaK 38 could still be a threat to enemy tanks with the Stielgranate 42, a 150 mm over-barrel inserted HEAT bomb with an effective range of 150 meters.

### ■ 75 mm PaK 40

The 75 mm Panzerabwehrkanone 40 was a German 75 mm anti-tank gun developed in 1939-1941 by Rheinmetall. PaK 40s formed the backbone of German anti-tank guns for the latter part of World War II. The weapon was effective against almost every Allied tank until the end of the war.

The PaK 40 was much heavier than the PaK 38, decreasing its mobility to the point where it was difficult or impossible to move without an artillery tractor on boggy ground.

### ■ 76.2 mm PaK 36(r)



The 76.2 mm Panzerabwehrkanone 36(russisch) was a conversion of the Soviet 76 mm divisional gun M1936 (F-22). In the early stage of the war, Germans captured a large number of these. Developed with anti-aircraft abilities in mind, the Soviet gun had powerful ballistics.

In late 1941, German engineers modernized the gun, rechambering it for a more powerful round, and improving the recoil mechanism. The carriage was equipped with a new, lower shield, and many guns were fitted with muzzle brakes.



### ■ 88 mm PaK 43

The Panzerabwehrkanone 43 was a German 88 mm anti-tank gun developed by Krupp in competition to the Rheinmetall Flak 41 88 mm anti-aircraft gun. It was the most powerful anti-tank gun of the Wehrmacht to see service in significant numbers. The PaK 43 was an excellent weapon, able to penetrate the heaviest Allied tanks at combat ranges.

The main version of the PaK 43 was based on a highly efficient cruciform mount, which offered a full 360 degree traverse and a much lower profile than the anti-aircraft version of the 88 mm. However, the manufacture of this version was slow initially, and, to speed up production, some guns were mounted on a two-wheel, split-trail carriage from a conventional howitzer, resulting in a version known as the PaK 43/41.



### ■ 88 mm PaK 43/41

The 88 mm PaK 43/41 was mounted on a single axle split-trail field gun carriage and produced as a stop-gap measure due to scarcity of materials.



### ■ 75 mm LG 40

The 75 mm Leichtgeschütz was a recoilless gun developed and manufactured by Rheinmetall.

The LG 40 was developed in order to provide Fallschirmjäger with a lighter fire support weapon that could be easily dropped by parachute and broken down into small loads. The LG 40 weighed 145 kg and had a range of up 6,800 meters. It first saw combat during the battle of Crete.

*Rate of fire.....8 rounds per minute*



## ■ 20 mm Flak 38

The 20 mm Flak 38 was the primary German light anti-aircraft gun of World War 2. The Flak 38 fired 20 mm armor piercing and high explosive rounds. The mount had 360 degree traverse and a maximum gun depression of -12 degrees, allowing it to engage ground targets.

*Rate of fire.....220 rounds per minute*

*Maximum range.....3,000 meters*



## ■ 20 mm Flakvierling 38

A variant of the Flak 38, the Flakvierling featured quadruple 20 mm guns. Each gun had a 20 round magazine, limiting the rate of fire to about 800 rounds per minute.

*Rate of fire.....800 rounds per minute*

*Maximum range.....3,000 meters*



## ■ 37 mm Flak 36

The 37 mm Flak 36 was a common medium anti-aircraft gun in Wehrmacht service. The Flak 36 used 8 round clips, firing at about 150 rounds per minute out to an effective range of 4,800 meters (6,500 m for ground targets). The mount had full traverse and allowed firing at ground targets.

*Rate of fire.....150 rounds per minute*

*Maximum range.....6,500 meters*



## ■ 88 mm Flak 36

The 88 mm Flak gun is one of the most recognizable German weapons of the war. Flak is a German contraction of Flugzeugabwehr-Kanone, meaning anti-aircraft cannon, the original purpose of the eighty-eight. In informal German use, the guns were universally known as the Acht-acht (eight-eight), a contraction of Acht-komma-acht Zentimeter.



## ■ German Artillery Support

Note: the sGrW34 medium mortar, leIG18 gun, leIG37 gun, sIG33 gun, and Flak 36 gun are available on-map and off-map, and explained under "heavy weapons"

### ■ sGrW42 120 mm Mortar

The Granatwerfer 42 (literally, "grenade thrower Model 42"; official designation: 12cm GrW 42) was developed in 1941. It was an attempt to give German infantry units a close support weapon with a heavier performance than the mortars used in general service at the time. The weapon was a copy of the PM 38 mortar used by Soviet forces on the Eastern Front.



### ■ FK38 75 mm Howitzer

The 75 mm Feldkanone 38 was a field gun built by Krupp. Originally built for the Brazilian Army and only partially delivered before the war, the remaining guns were appropriated by the Heer for their own use. The FK38 used a semi-automatic breech mechanism and fixed ammunition, giving it a faster rate of fire.

*Rate of fire ... 8-10 rounds per minute*



### ■ leFH18M 105 mm Howitzer

The 105 mm leFH 18M (leichte Feldhaubitze, or "light field howitzer") replaced the 105 mm leFH 18 as the standard German divisional field howitzer used during the Second World War. The LeFH18M was designed and developed by Rheinmetall after the war broke out in an effort to get more range from the basic leFH 18 design. A muzzle brake was fitted and the recoil system adjusted to allow the use of a more powerful charge and new long-range shell.

*Rate of fire ... 4-6 rounds per minute*



### ■ sFH18 150 mm Howitzer

The 150 mm schwere Feldhaubitze 18 ("heavy field howitzer, model 18"), was the basic German division-level heavy howitzer during World War Two.

*Rate of fire ... 4 rounds per minute*



### ■ K18 170 mm Gun

The 170 mm Kanone 18 in Mörserlafette was a German heavy gun, intended to be employed at the Corps level in order to provide very long range counter-battery support. Although it was technically an excellent weapon, it was expensive, difficult to maneuver, very slow to set up and tear down; many were lost when their crew abandoned them to avoid capture by advancing Allied forces.



### ■ MRS18 210 mm Howitzer

The 210 mm Mörser 18 (heavy howitzer) was a German heavy howitzer used by independent artillery battalions and batteries. It was one of the first weapons that used a unique dual-recoil system. The barrel recoiled normally in its cradle, but, in addition, the whole top carriage, which carried the barrel and its cradle, recoiled across the main part of the carriage. This system damped out the recoil forces and made for a very steady firing platform.



### ■ 150 mm Nebelwerfer 41

The Nebelwerfer ("Smoke Mortar", literally "Fog thrower") were initially developed by and assigned to the Wehrmacht's so-called Chemical Troops (Nebeltruppen). The first weapon delivered to the troops was the 150 mm Nebelwerfer 41 in 1940, a purpose-designed rocket with gas, smoke and high-explosive warheads. It, like virtually all German rocket designs, was spin-stabilized to increase accuracy. It was fired from a six-tube launcher mounted on a towed carriage adapted from that used by the 37 mm PaK 36 to a range of 6,900 meters.



### ■ 210 mm Nebelwerfer 42

The 210 mm Nebelwerfer 42 rocket was introduced in 1942 with a longer range (7,850 meters) and a simpler design than the smaller 150 mm rocket. It only had a high-explosive warhead. It was fired from a five-tube launcher that used the same carriage as the smaller weapon.



### ■ 280 mm Nebelwerfer 41

The 280 mm Nebelwerfer 41 rockets were introduced in 1941. The maximum range of the rocket was only 2,200 meters, a severe tactical drawback. It could be fired from their wooden packing cases or special wooden or tubular metal frames. Later, a towed launcher was developed that could take six rockets.



## ■ 300 mm Nebelwerfer 42

The last German-designed rocket to be introduced was the 300 mm Nebelwerfer 42 in 1943. This was intended to replace the 280 mm and 320 mm rockets which proved to have too short a range. Advances in propellant chemistry also reduced its smoke signature. It could be fired from all of the same platforms as the older rockets and many of the older launchers were converted to be used by the newer rocket by installing adapter rails although it had its own purpose-designed launcher, the 300 mm Raketenwerfer 56, as well.



## ■ 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*

	
Fw 190A8 Focke-Wulf	Fw 190A8 Focke-Wulf
Fighter Bomber	Fighter Bomber
13mm AP-I 20mm AP	950 13mm AP-I 780 20mm AP
	950 780 SC250 249kg bomb 1

### ■ 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*

	
Fw 190D9 Dora	Fw 190D9 Dora
Fighter Bomber	Fighter Bomber
13mm AP-I 20mm AP	950 13mm AP-I 500 20mm AP
	950 500 SC250 249kg bomb 1

### ■ Focke-Wulf 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*

		
Fw 190F8 Focke-Wulf	Fw 190F8 Focke-Wulf	Fw 190F8 Focke-Wulf
Ground Attack	Ground Attack	Ground Attack
13mm AP-I 20mm AP	950 13mm AP-I 500 20mm AP	950 13mm AP-I 500 20mm AP
SC250 249kg bomb	1 SC50 55kg bomb SC250 249kg bomb	4 SC50 55kg bomb 1 SC500 500kg bomb
		4 1

## ■ Fortifications

## ■ Bunker

Bunkers in the game are available in two flavors: wooden bunkers made out of wooden logs, and reinforced concrete. The latter would be typically found around permanent defensive lines, while the former are semi-permanent field installations.

Moreover, when purchasing bunkers, players have the choice between unarmed shelters, or bunkers equipped with M1919A4, M2HB, MG34, or MG42 heavy machine gun positions. Bunkers also provide an ammunition cache that can be used by infantry units to replenish/acquire ammo.

Bunkers provide excellent cover against both direct and indirect fire. Some heavy weapons - such as machine guns - may be deployed within a bunker, and infantry units may enter and exit freely, but no vehicles are allowed in bunkers.

## ■ AT gun bunkers

A staple of some German fortified lines and networks, bunkers armed with anti-tank guns could pose a formidable challenge when properly tied into a defensive line with machine guns and mortars or artillery.

*Note: AT Gun bunkers are found in the Infantry and Armored Infantry branches for all nations and services, as opposed to the Fortifications branch for normal bunkers.*

## ■ Trench

Trenches are usually part of larger defensive works and semi-permanent defensive lines. They allow for covered movement for units and formations and provide good protection against most enemy fire, and fair protection against indirect fire. Trenches "snap" together to form a line automatically when placed close together in the editor or Setup Phase.

## ■ Foxhole

Foxholes are makeshift defensive improvements usually dug hastily by infantry units. Unlike trenches, a foxhole unit usually only provides enough cover for a team of infantry. Foxholes offer fair cover against enemy fire.

## ■ "Hedgehog" obstacles

Hedgehogs are anti-vehicle defenses, primarily intended to stop tanks and other vehicles as they cannot easily be crushed or pushed aside, and provide an extremely high risk of immobilization. In the game, hedgehogs are impassable.

## ■ Sandbag Wall

Sandbag walls are makeshift defensive fortifications to provide fair cover against enemy fire. Sandbag walls offer limited protection for both infantry and vehicles positioned behind them.

## ■ Barbed Wire

Barbed wire consists of a barbed wire fence on a wooden structure, and is meant to slow down (not stop) infantry units. Barbed wire "snaps" together to form a line automatically when placed in adjacent to each other in the editor or Setup Phase.

## ■ Mines

There are three "flavors" of minefields in the game: anti-personnel, anti-tank, and mixed (meaning: a mix of both anti-personnel and anti-tank mines in the same field). Obviously, anti-personnel mines are meant to harm infantry primarily, while anti-tank mines are usually bigger and pack more punch, and are intended to disable or at least immobilize vehicles and tanks.

*Note: Anti-tank mines cannot be set off by infantry on foot, but anti-personnel mines can be set off by vehicles.*

Troops moving through minefields have some ability to notice the mines without exploding them.

This is much more likely when:

- The soldiers are crawling or walking (and to a lesser extent, "hunting")
- The soldiers are engineers
- The soldiers are experienced
- The minefield has already been discovered (e.g. by setting off a mine)

Engineers have the ability to mark known minefields. After a minefield is marked by an engineer unit, other units may safely (but slowly) move through it without running the risk of setting off additional mines. See the Mark Mines command in the Command chapter of the engine manual for more details.

## ■ ICONS AND REFERENCE

Combat Mission: Final Blitzkrieg makes extensive use of various icons to allow the player to spot vital information in the game user interface at a glance. Below is a list of the most important icons used in the game and their description.

### ■ Vehicle Defenses Icons

HEAT warhead (e.g. Panzerschreck, Panzerfaust)

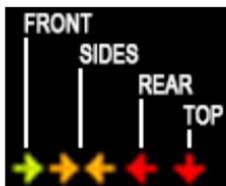
Large caliber (e.g. 88 mm tank shells)

Medium caliber (e.g. 37 mm cannon shells)

Small caliber (e.g. rifle, machinegun bullets)



-  Excellent Defense
-  Good Defense
-  Average Defense
-  Bad Defense
-  Poor Defense



### ■ Defensive Equipment Icons

#### ■ Smoke Launcher



Many armored vehicles are fitted with smoke launchers. When deployed, these launchers eject multiple smoke grenades to the front of the vehicle and form a defensive smoke screen so that the vehicle can retreat or reposition safely.

### ■ Instant Command Buttons



**Pause:** Selected unit temporarily halts all activities until the Pause button is pressed again.



**Halt:** All commands for the selected unit are instantly deleted.



**Evade:** All active commands for selected unit are deleted, and it takes immediate evasive action.

## ■ Communication Links



### Voice

Unit has verbal contact with its HQ, either face-to-face or shouting distance.



### Visual (Close)

Unit can see its HQ at close range. Can use hand signals to communicate.



### Visual (Distant)

Unit can see its HQ at long distance. Can use visual signals to communicate.



### Radio

Unit has radio contact with HQ.

## ■ Special Equipment

### Binoculars



Binoculars increase unit spotting ability at long range. Commonly carried by small unit leaders, weapon crew members, scouts, observers, and officers.

### Demolition charge



Demo charges are carried by engineer specialists (also called pioneers or sappers), as well as Breach teams. Demo charges can be used to attack vehicles or bunkers at hand grenade range, or can open entry points into buildings, walls, and fortifications with the Blast Command.

### Radio



Radios allow the unit that possesses them to maintain Radio C2 links. Units with a radio C2 link will have better C2 links to distant (beyond voice range) superior and subordinate units that also possess radios, and will be able to access fire support such as artillery much faster.

### Anti-Tank Rifle Grenade



**IMPORTANT:** Only AT rifle grenades are listed as an icon in the Special Equipment Panel. HE rifle grenades are listed with the small arms ammunition.

Bazooka



Bazooka Rocket



Panzerschreck



Panzerschreck Rocket



Panzerfaust 30k



Panzerfaust 30



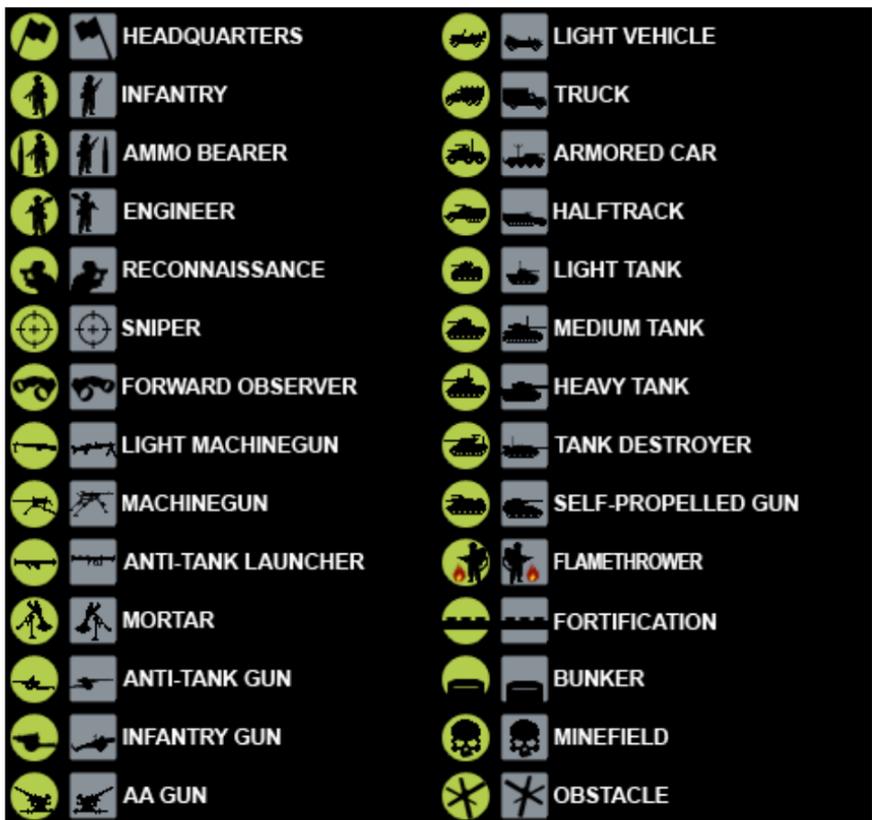
Panzerfaust 60



Panzerfaust 100



## ■ Floating Icons



## ■ Stock Mod Tags

Note: Ardennes region art is used by default for environmental art, if no mod tags are selected.

[germany] - German environmental art.

[france] - French environmental art.

[holland] - Holland and northern Belgium environmental art.

[autumn] - Autumn environmental art.

[winter] - Winter environmental art.

[snow] - Snow unit and environmental art.

[cold] - Cold environmental art.

[muddy] - Muddy unit and environmental art.

[whitewash] - Adds whitewash camo to vehicles. Whitewash tagged art is used automatically by the game when the date is January or later, and there is Light Snow or heavier on the ground.

[whitewash snow] - Combination of Whitewash and Snow mod tags.

[rubble] – Heavy Rocks terrain tiles will now resemble piles of urban brick rubble.

[rubble snow] – Same as the [rubble] tag above, but snow is mixed in with the rubble.

Mod tags are used by scenario designers to force selection of textures tagged with the appropriate label. For example, a scenario that has the "[whitewash]" mod tag will always attempt to use any textures with a file name containing "[whitewash]" (without the quotes) when the scenario is loaded. Mod tags are also used automatically by the game when certain conditions are met; for example, if the Region of a scenario is set to Germany, the game will automatically load textures with the "[germany]" mod tag in the file name.

## ■ United States Branches

Infantry



Armored Infantry



Armor



Airborne Infantry



## ■ Germany Branches

Infantry



Armored Infantry



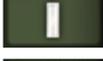
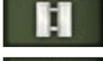
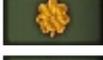
Armor



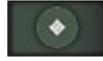
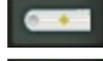
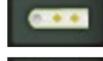
Airborne Infantry



## ■ United States Army Ranks

	Private
	Private First Class
	Corporal
	Sergeant
	Staff Sergeant
	Technical Sergeant
	Master Sergeant
	First Sergeant
	Sergeant Major
	Second Lieutenant
	First Lieutenant
	Captain
	Major
	Lieutenant Colonel

## ■ German Heer Ranks

	Soldat
	Obersoldat
	Gefreiter
	Obergefreiter
	Unteroffizier
	Unterfeldwebel
	Feldwebel
	Oberfeldwebel
	Stabsfeldwebel
	Leutnant
	Oberleutnant
	Hauptmann
	Major
	Oberstleutnant

## ■ German Waffen SS Ranks



Schütze



Oberschütze



Sturmmann



Rottenführer



Unterscharführer



Scharführer



Oberscharführer



Hauptscharführer



Sturmscharführer



Untersturmführer



Obersturmführer



Hauptsturmführer



Sturmbannführer



Obersturmbannführer

## ■ German Luftwaffe Ranks



Schütze



Gefreiter



Obergreifeiter



Unteroffizier



Unterwachtmeister



Feldwebel



Oberfeldwebel



Stabsfeldwebel



Leutnant



Oberleutnant



Hauptmann



Major



Oberstleutnant

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