

WAR DEPARTMENT

AIRBORNE OPERATIONS  
FIELD MANUAL



CMBN — "MARKET GARDEN"

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## ■ INTRODUCTION

Combat Mission: Market Garden depicts allied Field Marshall Bernard Montgomery's September 1944 dash across Holland, a daring gambit to leap the Rhine river and enter the heartland of Germany itself. Involving U.S., British, and Polish forces, Operation Market Garden was meant to be the lightning stroke which would end the war before 1945.

"Market" was the airborne arm of the operation. First Allied Airborne Army units, including the U.S. 101st Airborne Division and 82nd Airborne Divisions, the British 1st Airborne Division, and the Polish 1st Independent Parachute Brigade, were to be dropped behind enemy lines to seize key bridges and terrain. This was the largest airborne operation in history, moving over 34,000 men by air, and was prepared in one week. The airborne forces were expected to capture important bridges at locations such as Eindhoven, Arnhem and Nijmegen, and then hold them for up to four days until relieved by the ground forces.

The ground portion of the operation was labeled "Garden", and consisted of the British XXX Corps moving up Highway 69 in what was supposed to be a rapid sprint, relieving each pocket of airborne forces as they proceeded north to Arnhem and beyond. If successful, the German industrial heartland in the Ruhr would be open to rapid attack, potentially ending the war within months.

The Germans, however, had different plans in mind. Following the Allied breakout from Normandy and the subsequent disastrous Falaise Pocket, Army Group B had been in full retreat towards the German border. Despite these recent defeats, the Wehrmacht once again improvised brilliantly in reaction to Market Garden, forming an eclectic force to stop the Allied advance, which consisted of units from SS Panzer divisions, Heer grenadiers, Luftwaffe Fallschirmjäger, and even improvised combat units from training schools and the Kriegsmarine.

You are the tactical commander on the ground. Recreate Monty's bold operation to reach and cross the Rhine in Holland, or take command of the German forces and defend your heartland at any cost. It is up to you whether the Allies will end the war before 1945, or will, in the famous words of Lt. General Fredrick Browning, be going "a bridge too far".

## ■ WHAT'S NEW

Combat Mission: Market Garden focuses exclusively on the battles of Operation Market Garden in September 1944, depicting the forces, equipment, and terrain in painstaking tactical detail.

## ■ NEW COMBAT FORMATIONS

The combat formations included in the Market Garden module focus on the those units that took place in Operation Market Garden, and include such specialized and unique formations as British glider pilot companies, who functioned as dismounted infantry after landing, and improvised German combat units such as Ersatz, Sicherungs, Schule, and Marine Schützen battalions.

**Note: All new formations can be viewed in detail by entering the Editor and setting the date and region to September 1944, Holland.**

- British infantry, armoured infantry and armoured formations.
- British parachute and air landing infantry formations, including glider pilot companies and pack howitzer batteries.
- Polish parachute battalions and air landing anti-tank batteries.
- German Heer Sicherungs battalions, Ersatz battalions, Panzer Brigade Panzer and Panzergrenadier battalions.
- German Waffen SS infantry, armored infantry, and armored formations, including ad hoc Panzer companies, Panzergrenadier Kampfgruppe, and Schule battalions.
- German Luftwaffe Fallschirmjäger and Fliegerhorst formations.
- German Kriegsmarine Schiffstamm and Marine Schützen battalions.

## ■ NEW EQUIPMENT

**Note: For a full list of new equipment included in the Market Garden module, refer to the Encyclopedia chapter.**

- A wide range of British equipment, including Cromwell and Challenger tanks, the Dingo scout car, and the Staghound armoured car.
- A host of new German vehicles such as the Panzer III tank, the Jagdpanzer IV/70 tank hunter, PSW 233 and 234/3 armored cars, and the King Tiger with Henschel turret!
- Special gear for the elite Fallschirmjäger, including the FG-42 battle rifle, LG 40 75 mm recoilless gun, PaK 36 37 mm anti-tank gun, and the "kurz" KzGrW 42 81 mm mortar.
- The M18 GMC "Hellcat" and 75 mm pack howitzers for the American forces.
- Anti-aircraft guns, both ground and vehicle-mounted for all nations, including the Bofors, Flakvierling, M16 MGMC, Möbelwagen, Wirbelwind, and Crusader AA.

## ■ HISTORICAL TERRAIN

- Accurate models of the famous (and very large!) bridges from Operation Market Garden have been recreated, including the Arnhem bridges, the Nijmegen bridges, and the Eindhoven bridge. In addition, a few generic large bridges have been included for use in fictional battles.
- New buildings in Dutch architectural styles have been included to enhance urban environments.
- A new "Ditch Lock" elevation tool and dirt paths.

**Note: See the Terrain Features chapter for more details.**

## ■ MASTER MAPS

Seven "master maps" have been provided with the Market Garden module to ease the creation of your own historical battles. These maps are large and historically accurate recreations of the terrain surrounding famous battle sites of Market Garden, made available to you for use in making your own scenarios and campaigns. Locations include: Oosterbeek, Johana Hoeve, Arnhem bridge, Ooserhout, Nijmegen, West Nijmegen, and Elst.

## ■ URBAN COMBAT ENHANCEMENTS

The Market Garden module introduces a host of changes to urban combat. The purpose of these changes is to make tanks and other armored vehicles more vulnerable to infantry in cramped urban environments.

**NOTE: The urban combat changes are not exclusive to the Market Garden module and will be included in future patches for other Combat Mission games.**

- Rocket propelled anti-tank weapons such as Bazookas, Panzerfaust, and Panzerschreck may now be fired from within buildings. However, the potentially lethal hot gases released by these weapons may wound or demoralize any soldiers in the immediate area!
- When a vehicle attempts to fire on a target that is beyond its maximum elevation angle (for example, a tank trying to shoot at the upper floors of an adjacent building), the aiming time for the shot is increased dramatically.
- Buttoned up armored vehicles suffer the same penalty if they attempt to attack point-blank range targets, such as infantry swarming around the vehicle.
- Tank periscopes and vision ports have had their spotting capabilities further reduced, making it more difficult for buttoned tanks to spot enemy units.

## ■ INSTALLATION & LICENSING

### ■ INSTALLATION FROM DISC

In order to install the Module, insert the game disc into the CD 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, open the disc icon and launch the game installer application. The installer application will copy all the necessary files for you into your existing game folder. This is required in order to have the Module correctly communicate with the base game (which is required).

### ■ INSTALLATION FOR DOWNLOAD VERSION

After you have successfully downloaded the Combat Mission: Battle for Normandy - Market Garden 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 you should still keep the downloaded installer file and backup/copy it somewhere safe (e.g. burn to disc, USB stick or external hard-drive) so you can reinstall the game later on.

### ■ LICENSE OVERVIEW

Combat Mission: Battle for Normandy - Market Garden 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 and download&mail versions**, it 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 from 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 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. You will NOT find the key for a mail delivery version in your online account! So please do not lose your license key label!

## ■ ACTIVATION / LICENSING

In order to play CM:BN Market Garden, you must first activate it. You can do this by clicking on the “Launch” button right after the installation, or by launching a special shortcut/alias called “Activate CMBN Market Garden”, which is saved on your desktop (PC) and/or within your game installation folder (PC/Mac). You only need to do this once. After completing the activation steps below, you then launch the game normally.

After launching the special activation shortcut, 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 online connection to the internet*
- b) *click “Play Now” in the product activation dialog window*
- b) *enter your license key into the correct field.*
- c) *hit the “Activate” button and wait a few seconds while your license authorizes.*

If you wish to install the game on a computer without 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/helpdesk>*
- d) *enter your License Key and the Authorization Request Code in the appropriate place*
- e) *once you receive it, 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 a firewall, router or proxy settings and cannot establish an internet connection to the activation servers.

## ■ ADDITIONAL ACTIVATIONS

Our End User License Agreement allows you to have the game activated on one computer and one backup computer. 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 there.

**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 above 4 activations, you can add *one extra activation* to your key every 365 days.

(PC/Mac) Please go to [www.battlefront.com/helpdesk](http://www.battlefront.com/helpdesk) and request an additional activation for your key by clicking "Submit Ticket". Do not forget to tell us what your key is!

## ■ LICENSE ACTIVATION SUPPORT

Battlefront.com prides itself on customer service, and this continues with the implementation of the online licensing system. Please check out our Knowledgebase section which explains how online activation works in detail:

<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 the retail version of the game, which does NOT use our Online Activation System.

## ■ MODULES

Modules like CM:BN Market Garden are not standalone games! They require the base game (in this case, Combat Mission: Battle for Normandy) to play. It is therefore VERY IMPORTANT to install the Module in the correct location, i.e. inside the previously installed CMBN base game directory.

Note: if you purchased the module as part of a bundle together with the base game, then this is taken care of automatically during installation of course!

The installer will try to determine where the base game is installed automatically and suggest the correct location, but this may not always work 100% correctly, especially if you didn't use the default installation paths, or if you have a non-Battlefront localised version of CMBN. Therefore, please double check where your installation folder is BEFORE installing the Module (the Installer Menu will remind you of this).

If you have a non-Battlefront version of the base game which requires the CD in the drive in order to play, then by installing Market Garden this will no longer be required.

**IMPORTANT!** After you have Market Garden installed, you will never need to patch the base game of CMBN, or any other modules, separately. All future Market Garden patches will also include the corresponding patch to the base game of CMBN, and all other modules.

### ■ MULTIPLE MODULES: REINSTALLING / PATCHING

The important thing to keep in mind (and probably the biggest potential source of confusion) is this:

**If you have a CMBN module, then you do not need your base game key (ever again), and you do not have to patch/activate your base game separately (ever again)!**

When you activate a module with a module key, or patch a module, the base game is activated/ patched automatically as well, including any installed modules. There is no need to license/ patch the base game, or other modules, separately, PROVIDED that you activate/patch the latest available version. Below is the correct way to (re-)install CMBN and modules. If you do not have a module listed below, simply skip that step:

- 1- install the base game, Combat Mission: Battle for Normandy. This will typically be v1.00 or v1.01.
- 2- (if available) install the Commonwealth Module. This will update your game to v1.10.
- 3- install the CMBN v1.11 patch. You can find it at [www.battlefront.com/patches](http://www.battlefront.com/patches).
- 4- install the CMBN 2.0 Upgrade, or the 2.0 Market Garden Bundle.
- 5- use your 2.0 Upgrade license key, or the 2.0 & Market Garden Bundle license key to activate. This will activate the base game and Commonwealth (if available), and Market Garden (if you installed the bundle).
- 5b- install the Market Garden module, unless you have installed the bundle already in step 3.
- 5c- use the Market Garden license key to activate the Market Garden module, unless you have activated it already in step 5.
- 6- if available, install the next Module.
- 6b- use your next module license key to activate.
- 7- Repeat 6 and 6b for all available modules.
- 8- if available, install the latest patch for CMBN. Usually, only one patch is required to update all game components, including the base game and modules.

**Note:** It's important to follow these steps and patch as the last step! This will ensure that your game and all modules are up

to date; otherwise you may unintentionally downgrade your game to an older version by installing an older module.

## ■ 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.

### ■ ACTIVATE 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.

## ■ ENCYCLOPEDIA

### ■ UNITED STATES

#### ■ TANK DESTROYERS

##### ■ M18 GMC (GUN MOTOR CARRIAGE)

Nicknamed the "Hellcat", the M18 GMC was a tank destroyer in service with the US 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 and an innovative torsion bar suspension, allowing it to out-maneuver enemy tanks for shots on weaker side armor.

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.

Armor..... 5 - 25 mm

Available beginning ..... July 1944

Formations equipped ..... Tank destroyer battalions



#### ■ ANTI-AIRCRAFT VEHICLES

##### ■ M15A1 CGMC

The M15 CGMC (Combination Gun Motor Carriage) was a M3 Halftrack modified to mount anti-aircraft guns. A production version of the highly successful T28E1 prototype, Autocar began production of the M15 CGMC in February 1943. The vehicle had a crew of seven and featured a M1A3 37 mm autocannon flanked by two .50 caliber M2HB heavy machineguns. The gun mount and crew were protected by an armored superstructure which traversed with the combined gun mount. The M15A1 CGMC was a later production model of the M15, featuring a new gun mount.

**Note:** In CM:BN, halftrack AA guns cannot fire directly to the front of the vehicle, over the cab.

Armor..... 6 - 12.7 mm

Available beginning ..... June 1944

Formations equipped ..... The first and second platoons of self-propelled anti-aircraft batteries



## ■ M16 MGMC

Also known as the "Meat Chopper", the M16 MGMC (Multiple Gun Motor Carriage) was an anti-aircraft halftrack built by White Motor Company. The M16 MGMC carried a Maxson M45D Quadmount bristling with four .50 caliber M2TTHB heavy machineguns. Based on the M3 Halftrack, the M16 MGMC started as the T58 prototype, which was essentially a M13 MGMC with a new gun mount and four machine guns instead of two.

**Note:** In CM:BN, halftrack AA guns cannot fire directly to the front of the vehicle, over the cab.

Armor..... 6 - 12.7 mm

Available beginning ..... June 1944

Formations equipped ..... The third and fourth platoons of self-propelled anti-aircraft batteries



## ■ U.S. HEAVY WEAPONS

### ■ 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 found amongst airborne troops, where its small size allowed it to accompany them on airborne drops to provide light indirect assistance, and with HEAT rounds, a limited anti-tank capability.

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

Available beginning ..... June 1944

Formations equipped ..... Parachute and glider pack howitzer batteries



### ■ 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 2 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 as of 2013.

**Note: Anti-aircraft guns in CM:BN are static and cannot be moved, limbered, or towed after setup phase.**

Available beginning ..... June 1944

Formations equipped ..... Anti-aircraft batteries



### ■ M51 QUAD .50 CAL

The M51 was a quad .50 caliber machinegun 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: up to 2,200 rounds per minute to an effective range of 2,200 meters.

**Note: Anti-aircraft guns in CM:BN are static and cannot be moved, limbered, or towed after setup phase.**

Available beginning ..... June 1944

Formations equipped ..... Anti-aircraft batteries



## ■ COMMONWEALTH FORCES

### ■ THE SHERMAN TANK

The Commonwealth forces use several variants of the US M4 Sherman Medium Tank. During the war, the British received roughly 17,000 tanks (more than a third of all M4s produced). Some variants of the Sherman, notably the M4A4, were designed especially for export use. A noteworthy characteristic is that most Commonwealth Shermans did not have a .50 caliber machinegun in the commander's hatch. In the British naming system, the M4 is called "Sherman I", the M4A1 "Sherman II", the M4A2 "Sherman III", and the M4A4 "Sherman V".

### ■ SHERMAN I

This is the M4 with 75 mm M3 L/40 gun. It has basically the same specifications as the US variant.

Available beginning .....June 1944

Formations equipped .....Armoured regiments



### ■ SHERMAN IC (FIREFLY)

Same as the Sherman I, but with the QF 17 pounder (76.2 mm) gun as its main weapon. This is also known as the "Firefly" conversion. Another noteworthy difference is the additional hatch above the gunner's position, and the elimination of the hull gunner to make room for more 17 pounder ammunition. The mantlet is also approx. 13mm thicker than the standard US Sherman tank.

Available beginning .....June 1944

Formations equipped .....Armoured regiments



### ■ SHERMAN II

The Sherman II has the same specifications as the US M4A1.

Available beginning .....June 1944

Formations equipped .....Armoured regiments



### ■ SHERMAN III

The Sherman III has the same specifications as the US M4A2.

Available beginning .....June 1944

Formations equipped .....Armoured regiments



### ■ SHERMAN V

The Sherman V has the same specifications as the US M4A4.

Available beginning .....June 1944

Formations equipped .....Armoured regiments



### ■ SHERMAN VC (FIREFLY)

The Sherman VC has the same specifications as the Sherman V, but with the "Firefly" conversion.

Available beginning .....June 1944

Formations equipped .....Armoured regiments



### ■ THE CROMWELL TANK

The Cromwell is classified as a "Cruiser" tank and used in the armored reconnaissance regiments of the Commonwealth forces. The Cromwell was the first British tank with a dual-purpose gun, a high speed engine, and good armor, all in a single well-balanced vehicle featuring great maneuverability and impressive speed.

Named after Oliver Cromwell, the English Civil War leader, the Cromwell tank was one of the most successful series of cruiser tanks fielded by Britain in WW2. Produced by Nuffield Organisation, with a powerful and reliable Rolls-Royce Meteor V12 petrol engine (540hp at 2,250rpm), based on engines used in aircraft such as the Spitfire.

Originally, the Cromwell had a 6 pdr gun (Mks I-III). Marks IV and later were equipped with OQF 75mm guns, or 95 mm howitzers in the close support versions.

### ■ CROMWELL VII

Among other improvements, this model received additional welded front armor and wider tracks. Speed:

32 miles/hour. Its main armament was the OQF 75mm gun and it was powered by a 600hp engine.

Armor..... 8 - 101 mm

Available beginning ..... September 1944

Formations equipped ..... Armoured recce regiments



### ■ CROMWELL VIII

This is the Cromwell VII, with all its improvements and the 95mm gun-howitzer.

Armor..... 8 - 101 mm

Available beginning ..... September 1944

Formations equipped ..... Armoured recce regiments



### ■ THE CHALLENGER TANK

The Tank, Cruiser, Challenger (A30) was a British tank developed alongside the Cromwell. The Challenger was based on the Cromwell chassis, with a 17 pounder gun housed in a new turret. The Challenger combined the hard-hitting firepower of the Firefly with the Rolls-Royce Meteor V12 engine's speed from the Cromwell. The heavy weight of the 17 pounder gun forced some compromises in order to preserve the vehicle's mobility, resulting in thinner turret armor than the Cromwell. Only 200 Challengers were built before production was discontinued in favor of the Comet.

Armor..... 20 - 102 mm

Available beginning ..... August 1944

Formations equipped ..... Armoured recce regiments



### ■ THE STUART TANK

The M3 Stuart, formally known as Light Tank M3, was an American tank named after the American Civil War Confederate General J.E.B. Stuart. In the British service, it also had the unofficial nickname of HONEY. These tanks were supplied to British and Commonwealth forces under the Lend Lease program prior to the entry of the U.S. into the war, and after that used by the U.S. and Allied forces

until the end of the war.

### ■ STUART III

Also known as the M3A1. This model had a power traverse turret, with a turret basket and no cupola. A vertical gun stabilizer was installed and the Sponson machine guns removed. Fast and reliable, weighing 14.5 tons, it was well suited for the reconnaissance role.

Armor..... 10 - 43 mm

Available beginning ..... June 1944

Formations equipped ..... Armoured regiment, armoured recon regiments



### ■ STUART V

Also known as the M3A3. This model had a welded hull and the position of the driver was moved forward and higher. The enlarged turret allowed more ammunition to be stored in the turret, freeing up space in the hull for additional fuel capacity.

Armor..... 10 - 43 mm

Available beginning ..... June 1944

Formations equipped ..... Armoured regiment, armoured recon regiments



## ■ SELF-PROPELLED GUNS

### ■ AUTOCAR SP 75MM

The British name for the American-built M3 GMC. As US forces began equipping their tank destroyers with M10 GMCs after the North African Campaign, they handed their M3 GMC tank destroyers over to British forces, who used them as close support vehicles. The Autocar often served in the heavy troops of armoured car squadrons.

Armor..... 6 - 12.7 mm

Available beginning ..... June 1944 - August 1944

Formations equipped ..... Armoured car squadrons



## ■ ANTI-AIRCRAFT VEHICLES

### ■ CRUSADER III AA Mk II

Long after the usefulness of the Crusader as a cruiser tank had expired, the Crusader chassis continued to serve as the basis for multiple specialized vehicle roles. Many Crusaders were converted into an anti-aircraft vehicle assigned to armoured regiments. The AA Mk II conversion was armed with twin Orlikon 20 mm guns in a partially open-topped turret.

Armor..... 7 - 51 mm

Available beginning ..... June 1944

Formations equipped ..... Armoured regiments, armoured recce regiments



## ■ HALFTRACKS

### ■ M5 HALFTRACK

Externally almost identical to the M3 Halftrack, but with a 7,400 cc engine. The M5 is heavier than the M3, due in part to heavier armor. Its rear frame sides were manufactured in one piece, rather than bolted. The M5 was primarily manufactured for Lend-Lease.

Armor..... 8 - 16 mm

Available beginning ..... June 1944

Formations equipped ..... Motor battalions, recce regiments, anti-tank batteries, armoured car squadrons



### ■ M5A1 HALFTRACK

This is the M5 with a M49 machine gun mount. It could fit one .50-caliber (12.7 mm) and two .30-caliber (30.06) machine guns. The models produced by International Harvester Corporation (IHC) had a slightly lower top speed and lower range as well.

Armor..... 8 - 16 mm

Available beginning ..... June 1944

Formations equipped ..... Motor battalions, recon regiments, armored car squadrons



### ■ M9A1 HALFTRACK

Same as the M5, but with stowage arranged as in the M2 halftrack, with access to radios from inside (as opposed to outside) and rear doors, plus a pedestal MG mount. It also has a ring mount and three MG pintles.

Armor..... 8 - 16 mm

Available beginning ..... June 1944

Formations equipped ..... Motor battalions, recon regiments



## ■ CARRIERS

### ■ UNIVERSAL CARRIER

The Universal Carrier is a common name used to describe a family of light armored tracked vehicles built by Vickers-Armstrong. These vehicles were widely operated by British Commonwealth forces during World War II. They were usually used for transporting of personnel, equipment and support weapons as well as machine gun platforms. Originally designed for a 2 man crew, the Universal weighed 3.7 tons and had an operational range of 241 kilometers, and a maximum speed of 48 kph.

Armor..... 7 - 10 mm



### ■ UNIVERSAL CARRIER MMG

This version has a special mount at the rear with a Vickers Medium Machinegun.

Armor..... 7 - 10 mm

Note: MMG teams dismounting from a Universal Carrier MMG are able to take the Vickers MMG with them.



### ■ UNIVERSAL CARRIER BREN

As the name states, it carries a Bren LMG. The gunner manning the Bren was sitting in front next to the driver. Bren Carriers were especially used for carrying ammunition, as infantry support weapons and for towing anti-tank guns and trailers.

Armor..... 7 - 10 mm



### ■ LOYD CARRIER

The Loyd Carrier was one of a number of small tracked vehicles used by the British and Commonwealth forces in the Second World War to transport equipment and men about the battlefield. It was built upon the engine, gearbox and transmission of a Fordson 7V Truck, with mild steel bodywork to which armor plate was bolted depending on application. The upper hull of the Loyd Carrier was covered to the front and sides but was open to the rear and above.

The Loyd carrier is the typical tractor for the 6pdr anti-tank gun.

Armor..... 0 - 7 mm



## ARMORED CARS

### HUMBER Mk IV AC

The Humber Armoured Car was one of the most widely produced British armored cars of WW2. The vehicle entered service in late 1941 in the North African Campaign and remained in service several years after the end of the war.

This variant is fitted with a 37 mm gun as its main weapon.

Armor..... 14.5 - 30 mm

Available beginning ..... June 1944

Formations equipped ..... Recce regiments



### DAIMLER Mk II AC

The Daimler Armoured Car was a Birmingham Small Arms design. It is a larger version designed upon the same layout as the Dingo fitted with a turret similar to that of the Mark VII Light Tank and a more powerful engine. It features some advanced concepts for the time and is considered one of the best British armored fighting vehicles of the Second World War.

It entered service in mid-1941, and more than two thousand vehicles were built by Daimler.

Armor..... 7 - 16 mm

Available beginning ..... June 1944

Formations equipped ..... Recce regiments, armoured car squadrons



## ■ DAIMLER Mk II (LITTLEJOHN)

To improve the 40 mm gun performance, some Daimler armoured cars were fitted with the Littlejohn adapter, which used squeeze bore operation to increase their penetration.

Armor..... 7 - 16 mm

Available beginning ..... June 1944

Formations equipped ..... Armoured car squadrons



## ■ STAGHOUND Mk I

The T17E1 was an American armored car produced in WW2 that did not see service with frontline US forces, since they moved to the M8 Greyhound vehicle instead. It was, however, supplied to Commonwealth forces during the war and received the service name of "Staghound". Around four thousand units were produced. Poland, New Zealand, and later Canada made extensive use of the Staghound, equipping many armoured car units exclusively with it.

Armor..... 9 - 44 mm

Available beginning ..... June 1944

Formations equipped ..... Armoured car squadrons



## ■ SCOUT CARS / RECON CARS

### ■ WHITE SCOUT CAR

The M3 Scout Car was an armored car also known as the White Scout Car. It was used in various roles including patrol, scouting, command vehicle, ambulance and gun tractor. Production of the vehicle started in 1940 and lasted until 1944, with more than two thousand units built. The M3 was supplied via lend-lease to Britain.

Armor..... 6 - 13 mm

Available beginning ..... June 1944

Formations equipped ..... Motor battalions, recon regiments, armoured car squadrons



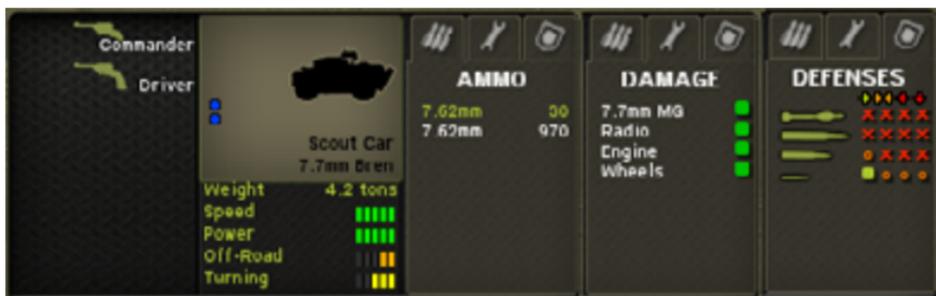
### ■ DAIMLER DINGO SCOUT CAR

The Daimler Dingo was a highly successful scout car built by Daimler beginning in 1939. Designed as a reconnaissance vehicle, the Dingo had four-wheel drive, a transmission with five speeds in both directions, run-flat tires, independent coil suspension, and a low silhouette. The 55 hp engine could reach speeds of up to 89 km/h with a range of 320 kilometers. The two man crew was well protected behind 30 mm of frontal armour.

Armor... 12 - 30 mm

Available beginning... June 1944

Formations equipped... Motor battalions, recon regiments, armoured car squadrons, engineer squadron



### ■ UNARMORED VEHICLES

#### ■ WILLYS MB JEEP

The Willys MB Jeep was manufactured in the US from 1941 to 1945. It was also used by allied forces and in this module by the Commonwealth forces. It has the same specifications as the US version from the base game. British Airborne units also use Jeeps with Vicker K or Bren machineguns mounted on them.



#### ■ BEDFORD QLD - GS

The Bedford QLD was the General Service cargo truck version of the QL series of trucks manufactured by Bedford Vehicles. It saw service with the British and Polish forces in World War II.

The Bedford QL was in production from 1941 to 1945. More than fifty thousand units were produced in total, the QLD being the most numerous version.



### ■ BEDFORD QLT - TROOP TRANSPORT

Troop transport variant. Although the QLD can also carry troops, this specialized version of the truck is longer and has a much larger seating capacity, being able to carry up to 29 soldiers, plus driver and a soldier in the cabin.



## COMMONWEALTH AIR ASSETS

### SPITFIRE IX FIGHTER

The Supermarine Spitfire was the main British fighter aircraft used by the Royal Air Force and other Allied forces in WW2. It was used in several roles such as interceptor, photo-reconnaissance, fighter-bomber, carrier-based fighter, and trainer.

It is armed with 2 × 20 mm Hispano Mk II cannon with 120 rpg in the outer bays, and 2 × .50 cal Browning M2 machine guns with 250 rpg in the inner bays.

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

	
Spitfire IX Fighter Bomber	Spitfire IX Fighter Bomber
.50cal AP-1	500.50cal AP-1
20mm AP	24020mm AP
	227kg bomb

### TYPHOON MK IB FIGHTER-BOMBER

The Hawker Typhoon was UK's single-seat fighter-bomber, produced by Hawker Aircraft. While its predecessor, the Ia used Browning guns, the Ib was cannon-armed. Equipped with bombs and ground attack rockets, the Typhoon became one of the Second World War's most successful ground-attack aircraft.

Armed with 4 × 20 mm Hispano Mk II cannon.

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

			
Typhoon IB Fighter Bomber	Typhoon IB Fighter Bomber	Typhoon IB Fighter Bomber	Typhoon IB Fighter Bomber
20mm AP	56020mm AP	56020mm AP	56020mm AP
	RP-3 rocket HE	8227kg bomb	2463kg bomb

## COMMONWEALTH ARTILLERY ASSETS

Note: the 2 inch mortar is explained under "Heavy Weapons"

### 3 INCH MORTAR (81 MM)

The 3-inch mortar was UK's standard mortar used by the British Army during WW2. It is a conventional Stokes-type mortar, which is muzzle-loaded and drop-fired.

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



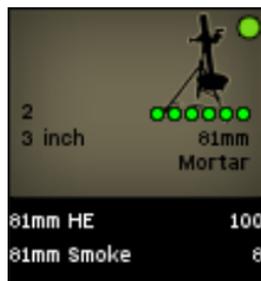
### 4.2 INCH MORTAR (107MM)

The Ordnance ML 4.2 inch Mortar was a heavy mortar used by the British, and entered service in 1942.

Rate of fire ..... 20 rounds for 1 minute

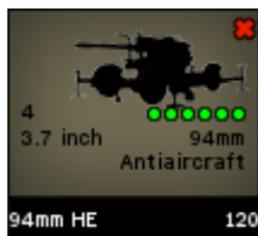
..... 15 for 3 minutes

..... 10 for sustained fire



the major British field gun/howitzer. Probably the best field artillery piece of the war with high rates of fire and a reasonably lethal shell in a highly mobile base.

Rate of fire ..... 1-5 rounds per minute



### 3.7 INCH ANTI-AIRCRAFT GUN (94MM)

The 3.7-Inch QF AA was UK's primary heavy anti-aircraft gun during World War II. It was roughly the equivalent of the German 88 mm FlaK but with a slightly larger calibre of 94 mm and superior performance.

Rate of fire ..... 10/20 rpm



### 4.5 INCH MEDIUM GUN (114MM)

The BL 4.5 inch Medium Gun was a British gun used by field artillery units in WW2. It was designed as a replacement for the 60-pounder and equipped a significant proportion of medium artillery regiments, including half the Canadian formations.

Rate of fire ..... intense - 2 rpm, normal 1 rpm, sustained 2/3 rpm



### 5.5 INCH MEDIUM GUN (140MM)

The BL 5.5 inch Gun was British artillery gun that entered service in the middle of WW2. It also equipped Canadian, Australian, South African, Polish and Indian regiments, and was also used by New Zealand after the war. During the Second World War, the standard organization was a regiment of 16 guns organized into two batteries.

Rate of fire ..... 2 rpm



### 155MM GUN (M1A1 LONG TOM)

The 155 mm Gun M1A1 was a towed gun used by the United States Army and supplied to the United Kingdom by Lend-Lease. Production of this heavy artillery piece was standardized in 1941.



Rate of fire.....burst: 2 rounds per minute  
 .....sustained: 30 rounds per hour

## 7.2 INCH HOWITZER Mk I (183MM)

The BL 7.2 inch Howitzer Mk.I was a series of heavy artillery guns designed by the UK at the beginning of WW2. The 7.2 inch (183 mm) was not a new design, but instead a re-lined version of the 8 inch (203 mm) howitzers dating from World War I. The carriage was a modernized version of that used on both the 8 inch howitzer and World



War I, 6 inch gun.

Rate of fire ..... 1/3 rpm

## COMMONWEALTH WEAPONS

### WEBLEY REVOLVER

The Webley was the standard issue service pistol for the armed forces of the Commonwealth for over 70 years. It is a top-break revolver with automatic extraction. That is, breaking the revolver open for reloading also operates the extractor. This removes the spent cartridges from the cylinder.

The .38/200 Webley Mk IV variant, used in WW2, is still in use as a police sidearm in a number of countries.

*Cartridge* .....380" Revolver Mk IIz

*Effective range* .....46 m

*Feed system* .....6-round cylinder



### BROWNING HI-POWER PISTOL

The Browning is a single-action, 9 mm semi-automatic handgun with a 13-round magazine capacity. It is also known as P-35 alluding to its year of introduction.

It is based on a design by John Browning, and completed by FN of Belgium. It is one of the most widely used military pistols of all time and adopted by the forces of dozens of countries.

*Cartridge* .....9x19mm Parabellum

*Effective range* .....50 m (164 ft)

*Feed system* .....13-round magazine



### LEE ENFIELD RIFLE NO. 4 Mk1

The Lee-Enfield is a bolt-action, magazine-fed rifle that was the main firearm used by the Commonwealth forces. It was in service for more than sixty years from 1895 onwards. It was the standard issue weapon to rifle companies of the Commonwealth nations in both the WW1 and WW2.

The No. 4 Mk 1 was officially adopted in 1941. Although it was lighter, stronger, and easier to produce than previous models, during the course of WW2 this model was even further simplified to help production.

It was produced mainly in the UK but also in Canada and the US.

*Cartridge* .....303 British (0.311 in/ 7.9 mm)

*Effective range* .....550 yd (503 m)

*Feed system* .....10-round magazine with 5-round charger clips



### LEE ENFIELD RIFLE W/ SCOPE

Standard No. 4 rifles with telescopic sight mounts designed to accept telescopic sight. In 1944, the sights were Mk.3s. Same specs as the standard No 4 Mk1, but with a much longer effective range.



### STEN MkII

The Sten gun was a family of British 9 mm submachine guns used by Commonwealth forces throughout World War II. Low cost and simple design made it also very efficient for use by resistance groups. It is a typical submachine gun, i.e. a full-automatic firearm that fires pistol rounds.

The Mark II was the most common variant, with two million units produced. It has a very characteristic design with its metal loop for a stock.

*Cartridge* .....9x19mm Parabellum

*Effective range* .....100 m

*Feed system* .....32-round detachable clip.



### STEN MkV

This model was introduced in 1944 and is a better-quality version of the Mk II. Changes included a wooden pistol grip, a wooden stock and a bayonet mount. Curiously, the wooden stock models were typically assigned to Airborne troops.



### BREN MkII LIGHT MACHINEGUN

The Bren was the primary infantry light machine gun (LMG) of the Commonwealth forces in WW2. It is a modified version of Czechoslovak-designed light machine guns, the ZB vz. 26 and its descendants. The name Bren is a mixture of the words Brno and Enfield. The former was the city where it was originally



designed, and the latter the site of the Small Arms factory in the UK.

It was adopted by the British forces in the 1930s and saw service throughout the latter half of the 20th century up until the Gulf War in 1991. It is fitted with a bipod but can also be mounted on a tripod or vehicle-mounted.

*Cartridge* .....303 British (0.311 in/ 7.9 mm)

*Effective range* .....600 yd (550 m)

*Feed system* .....30-round detachable box magazine

## COMMONWEALTH HEAVY WEAPONS

### VICKERS MACHINEGUN

The Vickers machine gun is a water-cooled machine gun that bears the name of its maker, Vickers Limited. It served from before the First World War until the 1960s. Its design was based on the successful Maxim gun of the late 19th century. It was used on a tripod or mounted on vehicles. The Vickers had a reputation for being extremely solid and reliable.

*Cartridge* .....303 British (0.311 in/ 7.9 mm)

*Effective range* .....2,187 yd (2,000 m)

*Feed system* .....250-round canvas belt



### PIAT

PIAT stands for "Projector, Infantry, Anti Tank". The PIAT was a British anti-tank weapon developed during the Second World War. The PIAT entered service in 1943 and remained in use with Commonwealth forces until the early 1950s. It was designed in 1942 to fulfill the UK's need for a better infantry anti-tank weapon.

The PIAT launches a 2.5 pound (1.1 kg) bomb using a powerful spring and a cartridge on the tail of the projectile.

*Effective range* .....110 m



### ■ 6 PDR ANTI-TANK GUN Mk 2

The “6 pounder” is the British 57 mm gun. This was the UK’s main anti-tank gun during the middle of World War II.

The United States Army also adopted the 6 pdr as their primary anti-tank gun under the designation 57 mm Gun M1.



### ■ 6 PDR ANTI-TANK GUN Mk 4

The Mk 4 uses a longer barrel for increased muzzle velocity.



### ■ 6 PDR ANTI-TANK GUN (AIRBORNE)

This is the airborne variant of the weapon. It is the same gun but on a Mk3 carriage, with foldable arms, for use by airborne troops. It also has some small differences in the shield.

### ■ 17PDR ANTI-TANK GUN

The 17 pounder is a 76.2 mm gun developed by the UK during World War II. It was used as an anti-tank gun and also built into several British tanks. It was also used to upgun the Sherman in its Firefly variant, and the M10 Tank Destroyer in its Achilles variant. Armed with APDS rounds, it was capable of defeating all but the thickest armor on German tanks.



### ■ M1A1 PACK HOWITZER

The 75mm 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 found amongst airborne troops, where its small size allowed it to accompany them on airborne drops to provide light indirect assistance, and with HEAT rounds, a limited anti-tank capability.

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



### ■ 40MM 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 2 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 as of 2013.

**Note:** Anti-aircraft guns in CM:BN are static and cannot be moved, limbered, or towed after setup phase.



## ■ 2 INCH MORTAR

The 2-inch mortar, officially known as "Ordnance SBML 2-inch mortar" is a British mortar that was used by the Commonwealth during WW2 and later.

One of the advantages of this kind of mortar is its light weight, so it does not need vehicles to be carried around the battlefield. Although small, it has a greater range and more firepower than rifle grenades.

**Note:** The full-size 2-inch mortar can be used like an on-map mortar, but for direct lay only (cannot be accessed by spotters for fire missions). The airborne 2-inch mortar (located only in the parachute rifle sections) can be used for direct fire only (i.e. cannot fire into defilade), similar to rifle grenades. However, the airborne mortar has only smoke shells.

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



## ■ GERMAN WEHRMACHT

### ■ TANKS

#### ■ PANZER III

The Panzerkampfwagen III, commonly known as the Panzer III, began service in 1939 after a 1935 order was placed for a 15-ton medium tank. The first Panzer IIIs underwent a rapid evolution, changing the suspension numerous times. Initially armed with the KwK L/46.5 37 mm gun and up to 30 mm of armor, the Panzer III was the primary battle tank of the German Panzer forces in the early years of World War II. Available only in small numbers, the Panzer III was an excellent tank for its, easily able to defeat Polish and most French tanks. However, the tank was found to be woefully inadequate against many Russian tanks such as the T-34 and KV in 1941, prompting significant upgrades. The 37 mm cannon was replaced by a better penetrating KwK L/42 50mm cannon in the Panzer III Ausf. G.

Even after its status as a primary battle tank had passed, the chassis of the Panzer III lived on by being converted into StuG assault guns and StuH assault howitzers.

Armor..... 10 - 37 mm

Available beginning ..... September 1944

Formations equipped ..... Reserve Panzer platoons (Heer only)



#### ■ PANZER IVJ (LATE)

The Pz IVJ (Late) is like the Pz IVJ (Early) except that the Nahverteidigungswaffe close-defense system has been installed.

Armor..... 10 - 80 mm

Available beginning ..... September 1944

Formations equipped ..... Panzer battalions (Heer and Waffen SS only)



#### ■ 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. It weighed almost seventy tons and boasted 100 to 180 mm of front armor. The main gun was a long barreled 8.8 cm Kampfwagenkanone 43 L/71 gun. Its 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.

Armor..... 100 - 180 mm

Available beginning ..... September 1944

Formations equipped ..... Heavy Panzer battalions (Heer and Waffen SS only)



## ■ TANK DESTROYERS

### ■ 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. The German word "Marder" means "Marten" (an agile, slender forest animal) in English. Two primary variants of the Marder II existed, in the form of the Sd.Kfz.132, which carried a captured Soviet 76.2mm gun rechambered for German ammunition, and the Sd.Kfz. 131 which carried the PaK 40 anti-tank gun.

576 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.

The Marder II variant present in the Arnhem module is the Sd.Kfz.131, mounting the 75 mm PaK 40.

Armor..... 4 - 35 mm

Available beginning ..... June 1944

Formations equipped ..... Fallschirmjäger Panzerjäger battalions (Luftwaffe only)



### ■ JAGDPANZER IV/70

The Jagdpanzer IV/70 was a Jagdpanzer IV armed with the longer and more powerful PaK 42 L/70 gun.

The Jagdpanzer IV had been originally designed with this heavier gun in mind, but shortages meant that earlier versions were made with the shorter PaK 39 L/48.

Armor..... 10 - 80 mm

Available beginning ..... September 1944

Formations equipped ..... Jagdpanzer companies, Panzer Brigade battalions (Heer only)



## SELF-PROPELLED ASSAULT GUNS

### STUH 42 (LATE)

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

Armor..... 16 - 80 mm

Available beginning ..... September 1944

Formations equipped ..... Sturmgeschütz brigades and battalions (Heer and Luftwaffe only)



## ARMORED CARS

### 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 Sdfkz 231 was an eight-wheeled armored car, of which 607 were produced beginning in 1936 until September 1943. The Sdfkz 231 featured double steering, a rear engine, eight-wheel all-wheel drive, and a 20mm KwK38 L/55 gun.

Armor..... 8 - 30 mm

Available beginning ..... June 1944

Formations equipped ..... Panzer Aufklärung battalions (Heer and Waffen SS only)



## ■ PSW 233

This armored car, based on the Sd.Kfz. 231, was armed with a 75 mm StuK37 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 75mm cannon. Just over 100 vehicles were built and used on all fronts until 1945.

Armor..... 8 - 30 mm

Available beginning ..... June 1944

Formations equipped ..... Panzer Aufklärung battalions (Heer and Waffen SS only)



## ■ PSW 234/3

The PSW 234/3 was a fire support variant of the Sd.Kfz. 234, using the same hull with the turret replaced by an open-topped superstructure mounting a KwK51 75 mm gun. Like the PSW 233, these vehicles were issued to Aufklärung formations in order to provide heavier firepower against infantry and vehicle targets.

Armor..... 8 - 30 mm

Available beginning ..... July 1944

Formations equipped ..... Panzer Aufklärung battalions (Heer and Waffen SS only)



## ■ HALFTRACKS

### ■ SPW 250 "NEU"

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. Example: SPW 250/1 = "Neu", SPW 250/1 (Alt) = "Alt"

Armor..... 5.5 - 14.5 mm

Variants present ..... SPW 250/1, 250/3, 250/7, 250/9, 250/10

Available beginning ..... June 1944

Formations equipped ..... Panzer Aufklärung battalions



Formations equipped ..... Panzergrenadier (Panzer brigade) battalions (Heer only)



### ■ Sd.Kfz. 7/1

Also known as the 2 cm Flakvierling 38 auf Zugkraftwagen 8t, the Sd.Kfz. 7/1 was a halftrack prime mover converted into a self-propelled Flak gun. The back of the vehicle past the cab was converted into a flat AA platform with a 2 cm Flakvierling 38 gun mounted, and sides that could fold down to allow 360 degree traverse.

**Note: In CM:BN, halftrack AA guns cannot fire directly to the front of the vehicle, over the cab.**

Available beginning ..... June 1944

Formations equipped ..... Self-propelled Flak batteries, Panzer battalions



### ■ 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 3.7 cm Flak 36 gun mounted instead of a Flakvierling.

**Note: In CM:BN, halftrack AA guns cannot fire directly to the front of the vehicle, over the cab.**

Available beginning ..... June 1944

Formations equipped ..... Self-propelled Flak batteries



### ■ 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 2 cm gun on a rotating platform.

Note: In CM:BN, halftrack AA guns cannot fire directly to the front of the vehicle, over the cab.

Available beginning ..... June 1944

Formations equipped ..... Self-propelled Flak batteries



### ■ 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 FlaK43 3.7 cm 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.

Armor ..... 10 - 80 mm

Available beginning ..... June 1944

Formations equipped ..... Anti-aircraft platoons (Heer and Waffen SS only)



### ■ 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 2 cm quad AA guns instead of the single 3.7 cm 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 2 cm Flakvierling lacked the range necessary to provide adequate protection against aircraft, leading to the development of the Ostwind in late 1944.

Armor..... 10 - 80 mm

Available beginning ..... August 1944

Formations equipped ..... Anti-aircraft platoons (Heer and Waffen SS only)



## UNARMORED VEHICLES

### 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.



## GERMAN WEAPONS

### FG 42



The Fallschirmjärgewehr 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 Arnhem 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 ..... 7.92x57mm Mauser

Effective range ..... 500 m

Feed system ..... 10 or 20-round detachable box magazine

Available beginning ..... June 1944

Formations equipped ..... Fallschirmjäger units (Luftwaffe only)

## ■ GERMAN HEAVY WEAPONS

### ■ LEGrW 36 5 CM MORTAR

A light German mortar developed in the 1930s, the leGrW 36 was designed to provide rifle platoons and companies with organic mortar support. The mortar weighed 14 kg and lobbed a 0.9 kg shell up to 510 m away. By mid-war the leGrW 36 had been relegated to light infantry units and second line formations as the mortar system was overly complex coupled with inferior firepower.

Rate of fire ..... 15-25 rpm

Available beginning ..... June 1944

Formations equipped ..... Sicherungs battalions, Grenadier Ersatz battalions, Fliegerhorst battalions, Schiffstam battalions, Marine Schützen battalions



### ■ KZGrW 42 8 CM MORTAR

The kurzer ("short") 8 cm Granatwerfer 42, also called the "Stummelwerfer", was a modified version of the standard medium mortar, the 8 cm GrW 34. The Stummelwerfer was lightened with a shorter barrel, reducing its range and weight significantly. The Stummelwerfer was used by German Fallschirmjägers, replacing the unsuccessful 5 cm leGrW 36 light mortar as a platoon fire support weapon.

Rate of fire ..... 15-25 rpm

Available beginning ..... June 1944

Formations equipped ..... Fallschirmjäger units (Luftwaffe only)



### ■ 7.5 CM LG 40

The 7.5 cm 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 to 6,800 m. It first saw combat during the battle of Crete.

Available beginning ..... June 1944

Formations equipped ..... Fallschirmjäger units (Luftwaffe only)



### ■ 3.7 CM PAK 36

The PaK 36 was the primary German infantry anti-tank weapon until it was replaced by the 50 mm PaK 38 in 1942. Afterwards, the PaK 36 found use as a fire support gun mounted to halftracks. Fallschirmjäger continued to use the PaK 36 as a primary anti-tank weapon for some time, appreciating its light weight and lack of dependence on by then extremely rare squeeze bore tungsten projectiles that many other anti-tank weapons of its size relied on.

With the introduction in 1943 of the 160 mm shaped charge Stielgranate 41 which was placed over the barrel and fired with a special blank cartridge, the PaK 36 was once again able to defeat modern enemy tanks, penetrating up to 180 mm of armor at an effective range of about 300 meters.

Available beginning ..... June 1944

Formations equipped ..... Heer and SS Grenadier Ersatz battalions, Luftwaffe Fallschirmjäger Panzerjäger battalions



### ■ 2 CM FLAK 38

The 2 cm 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 at 220 rounds per minute at a muzzle velocity of 900 m/s with an effective range of 2,200 meters. The mount had 360 degree traverse and a maximum gun depression of -12 degrees, allowing it to engage ground targets.

**Note: Anti-aircraft guns in CM:BN are static and cannot be moved, limbered, or towed after setup phase.**

Available beginning ..... June 1944

Formations equipped ..... Flak batteries



### ■ 2 CM 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.

**Note: Anti-aircraft guns in CM:BN are static and cannot be moved, limbered, or towed after setup phase.**

Available beginning ..... June 1944

Formations equipped ..... Flak batteries



### ■ 3.7 CM FLAK 36

The 3.7 cm 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.

**Note: Anti-aircraft guns in CM:BN are static and cannot be moved, limbered, or towed after setup phase.**

Available beginning ..... June 1944

Formations equipped ..... Flak batteries



## TERRAIN FEATURES

The Market Garden module adds new terrain features and distinctive Dutch architecture to the Battle for Normandy landscape.

**Note:** With the exception of the Ditch Lock function, placing these terrain features on the map will result in the scenario requiring the Market Garden module to play, exactly as if Market Garden units or equipment were used.

### DITCH LOCK

The Ditch Lock is a new editor function that allows slopes between two fixed elevation points to be much steeper than the default slope. Ditch Lock can be used to make narrow terrain features such as ditches and small berms.

To use Ditch Lock, switch to either the Adjust or Direct elevation tools and then left-click on a tile while holding CTRL. The elevation number on the tile will display a blue background instead of the usual black to indicate that its elevations will be steeper.





### ■ FOOT PATH

Foot Paths are small dirt trails, narrower than other road features in Combat Mission. They are ideal for simulating rural farmland paths and forest trails. The foot path can be found in the editor among the other Road terrain features, and is placed on the map in the same manner.



### ■ WINDMILL

The windmill is a new four-story building available in the Commercial category under Independent Buildings.



## ■ TOWN BUILDINGS

Designed to emulate authentic Dutch architecture near the Arnhem and Nijmegen bridges, these new independent buildings can be found in the Other category.



## ■ MODULAR BUILDING ROOFS

Modular buildings have received new roofs. In addition, the direction that the roof runs can now be rotated. To cycle through the various roof options available, CTRL-left-click on the modular building roof.



## ■ BRIDGES

The Market Garden module introduces massive new bridges to the Combat Mission engine. Painstakingly accurate recreations of the famous bridges from the Market Garden campaign are present alongside generic large bridges for use in fictional scenarios. The new bridges can be found in the Bridges #2 and Bridges #3 sections of the map editor.

Because the large size of many of the new bridges can make placement in smaller maps difficult, "stub" versions of the longer bridges are provided. Stub bridges are essentially divided in half, allowing a shorter segment of the bridge to appear on the map. These shorter bridges are marked with a "-" sign.

**Note:** Because the Arnhem road, Arnhem rail, and Nijmegen rail bridges are not symmetrical, halves of each end have been provided.

### ■ ARNHEM BRIDGE

Dimensions... length 600 m, height 32 m

**Note:** The height given is the maximum possible height from the ground to the bridge pavement, not the height of the entire bridge structure.



■ **ARNHEM RAIL BRIDGE**

Dimensions... length 880 m, height 34 m



■ **EINDHOVEN BRIDGE**

Dimensions... length 536 m, height 28 m



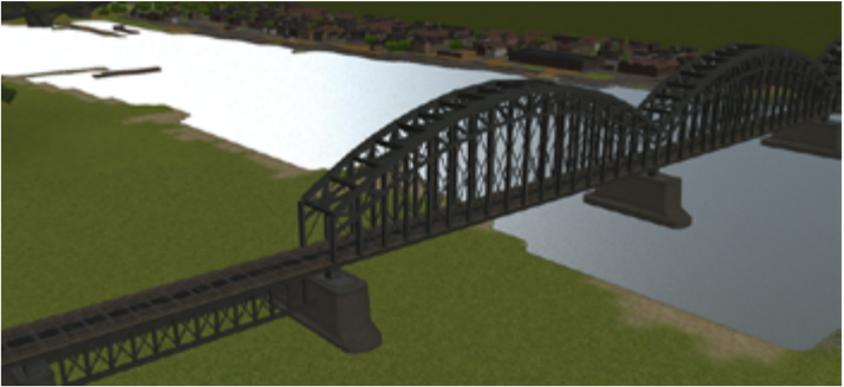
■ **NIJMEGEN BRIDGE**

Dimensions... length 712 m, height 24 m



■ **NIJMEGEN RAIL BRIDGE**

Dimensions... length 936 m, height 30 m



■ **CANAL BRIDGE**

Dimensions... length 40 m, height 19 m



■ **ANGLED 1 BRIDGE**

Dimensions... length 600 m, height 32 m



■ **ANGLED 2 BRIDGE**

Dimensions... length 600 m, height 32 m



■ **ROUND BRIDGE**

Dimensions... length 544 m, height 28 m



### ■ ARNHEM (-) BRIDGE

Dimensions... length 272 m, height 28 m

### ■ ARNHEM RAIL (-) BRIDGE

Dimensions... length 440 m, height 34 m

### ■ ANGLE 1 (-) BRIDGE

Dimensions... length 300 m, height 32 m

### ■ EINDHOVEN (-) BRIDGE

Dimensions... length 268 m, height 28 m

### ■ NIJMEGEN (-) BRIDGE

Dimensions... length 356 m, height 24 m

## ■ PLACING LARGE BRIDGES IN THE EDITOR

The large size of the new bridges can make their proper use in the editor a tricky proposition. Here are some tips for proper placement:

1. Make sure that the map is large enough to accommodate the bridge. Refer to the bridge dimensions listed above to plan your map dimensions ahead of time and avoid unpleasant surprises.
2. Half-sized bridge stubs are useful if you want to depict a famous historical bridge as "window dressing" on the periphery of the battlefield without increasing the map size to accommodate the entire bridge.
3. Bridges require an "anchor point" at the end, a 2x2 square of fixed elevation points that will determine how high the bridge stands from the ground. Full-length bridges require an anchor point at both ends. Bridge stubs require an anchor point only at one end. Refer to the below image as a guide.



4. Place the bridge on the map first, and set the elevations and anchor points after you are sure that you will not need to move the bridge.
5. You will probably need to adjust the height of the anchor points several times to achieve the best effect. Check your results in the 3D editor to ensure that no bridge structures (other than the supporting columns of course) are sinking into the ground. If they are, raise the elevation of the anchor points to make the bridge sit higher off of the ground.

## ■ ICONS

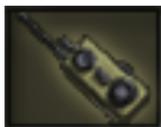
CM:BN makes extensive use of various icons to allow the player to spot vital information in the game user interface at a glance. Below is a list of the most important icons used in the game and their description.

### SPECIAL EQUIPMENT

Binoculars



Radio



Demolition charge



Anti-tank rifle grenade



Bazooka



Bazooka rocket



PIAT



PIAT projectile



Panzerschreck



Panzerschreck rocket



Panzerfaust 30k



Panzerfaust 30



Panzerfaust 60



### COMMONWEALTH BRANCHES

Infantry



Armoured Infantry



Armoured



Airborne Infantry



**WAFFEN SS  
BRANCHES**

Infantry



Armored Infantry



Armored



**LUFTWAFFE  
BRANCHES**

Infantry



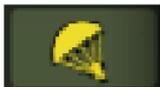
Armored Infantry



Armored



Airborne Infantry



**KRIEGSMARINE  
BRANCHES**

Infantry



**COMMONWEALTH  
RANKS**

Private



Lance Corporal



Corporal



Sergeant



Staff Sergeant



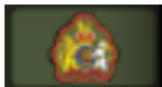
Warrant Officer 3rd Class



Warrant Officer 2nd Class



Warrant Officer 1st Class



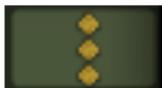
Second Lieutenant



Lieutenant



Captain



Major



Lieutenant Colonel

**WAFFEN SS RANKS**

Schütze



Oberschütze



Sturmmann



Rottenführer



Combat Mission: Battle for Normandy

Unterscharführer



Scharführer



Oberscharführer



Hauptscharführer



Sturmscharführer



Untersturmführer



Obersturmführer



Hauptsturmführer



Sturmbannführer



Obersturmbannführer



**LUFTWAFFE RANKS**

Schütze



Gefreiter



Obergefreiter



Unteroffizier



Unterwachtmeister



Feldwebel



Oberfeldwebel



Stabsfeldwebel



Leutnant



Oberleutnant



Hauptmann



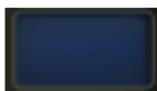
Major



Oberstleutnant

**KRIEGSMARINE RANKS**

Matrose



Matrosengefreiter



Matrosenobergefreiter



Matrosenhauptgefreiter



Matrosengefreiter UA



Matrosenoberstabsgefreiter



Bootsmannsmaat



Oberbootsmannsmaat



Steermannsmaat



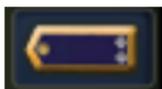
Obersteermannsmaat



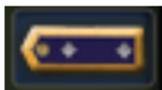
Bootsmann



Stabsbootsmann



Oberbootsmann



Stabsoberbootsmann



Leutnant zur See



Oberleutnant zur See



Kapitänleutnant



# ■ ERRATA AND MANUAL CHANGES

## ■ FOR ENGINE MANUAL 2.0

### ■ KEYBOARD AND MOUSE CONTROLS

Options (page 9): Added new toggle. Alt-M will toggle War Movie Mode.

Options (page 9): The toggle for Shaders (Alt-R) will now stick between sessions. If toggled off, it will remain off the next time a map is loaded.

### ■ BATTLES AND CAMPAIGNS

Victory Conditions (pages 15-16): Victory Levels: The following victory levels are possible, in descending order of magnitude:

Total Victory / Defeat

Major Victory / Defeat

Tactical Victory / Defeat

Minor Victory / Defeat

Draw

In a campaign, the magnitude of your victory or defeat can influence the course of future battles. For information on how victory is calculated, see the Mission Editor section.

### ■ QUICK BATTLES

Victory Conditions (page 22): The Victory Points for terrain objectives and casualties in Quick Battles are adjusted dynamically based on the battle type (Assault, Attack, Probe, Meeting Engagement). A Meeting Engagement will offer more VP for inflicting casualties, and less VP for holding ground objectives. Assaults on the other hand will award far more VP for holding ground objectives and emphasize casualties much less. Attacks and Probes are somewhere between Meeting Engagement and Assault in emphasizing casualties over ground objectives.

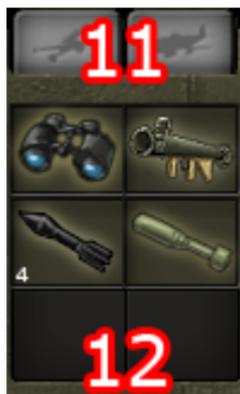
### ■ SAVED GAMES

Saved Games (page 22): You can now delete saved games within the Save Game menu by selecting the save that you wish to delete and left-clicking the "Delete" button. You will be prompted to confirm your decision.

### ■ BASIC SCREEN LAYOUT

Game User Interface (GUI) (pages 28-30): Updated images for special equipment panel (12).





## ■ COMMANDS

**Incapacitated Soldiers (pages 16, 31, 42, 56):** Incapacitated soldiers are those soldiers who have a red base. Incapacitated soldiers are eligible for Buddy Aid and count towards the Condition force wide objective. Incapacitated soldiers may also be referred to as Seriously Wounded. In contrast, KIA soldiers have a dark brown base, and Wounded (also known as Lightly Wounded) soldiers have a yellow base.

**Move Commands (page 40)** Move Command waypoints can now be adjusted by clicking and dragging the waypoint with the mouse. However, any Target commands associated with that waypoint will be deleted and will have to be re-given.

**Target (page 45):** Rocket propelled anti-tank weapons such as Bazookas, Panzerfausts, and Panzerschrecks may now be fired from within buildings. However, the potentially lethal hot gases released by these weapons may wound or demoralize any soldiers within the same building floor! These weapons may be fired from building balconies without any penalties.

**Target (page 45):** Support soldiers for heavy weapon and sniper teams will tend to withhold their fire unless enemies are very close to the team.

**Target (page 45):** When a vehicle attempts to fire on a target that is beyond its maximum elevation angle (for example, a tank trying to shoot at the upper floors of a building that it is very close to), the aiming time for the shot is increased dramatically. Buttoned up armored vehicles suffer the same penalty if they attempt to attack point-blank range targets, such as infantry swarming around the tank.

## ■ AUTOMATIC ACTIONS

**Ammo Sharing (page 56):** Heavy weapon teams will now draw ammunition from neighboring units first, before depleting their own ammunition. The order of precedence for drawing ammo is:

1. Organic ammo bearer team.
2. Non-organic ammo bearer team.

### 3. Internal ammo.

Rout (page 58): The routing mechanic has been removed from the game. Soldiers will no longer Rout, instead they will Surrender (page 57). All references to Routed soldiers now apply to Surrendered soldiers.

## ■ ARTILLERY & AIR SUPPORT

Adjusting or Canceling Support (page 67): If the Spotter is incapacitated during a Support Mission, the Asset will usually be unavailable for other Support Missions for a length of time. Depending on the circumstances, the Support Mission may either be eventually cancelled or continue to completion.

## ■ THE EDITOR

Mission Editor (pages 73-78): Victory Calculations: Combat Mission calculates the victory level in the following manner (Warning: Math incoming!):

Step 1: Determine V.

$$V = (A + 10) / (B + 10)$$

where V = Victory Level, A = earned Victory Points of the side with the higher score, and B = Victory Points of the side with the lower score.

In other words, take the Victory Points score of each side, add ten, and then divide the higher score by the lower score. The result is V.

Step 2: Determine Victory Level.

The ultimate Victory Level of the victor is determined by V and also by the percentage of potential Victory Points obtained.

Draw: V less than 1.25.

Minor Victory: V less than 1.75.

Tactical Victory: V less than 2.5 and 30% of potential VP earned.

Major Victory: V less than 4.0 and 55% of potential VP earned.

Total Victory: V equals 4.0 or more and 80% of potential VP earned.

The losing side will always receive the opposite Victory Level of the winning side. So if the winning side receives a Major Victory, the losing side will receive a Major Defeat.

**Example:** At the end of a mission, the US side receives 700 Victory Points out of 1,000 VP possible. The German side receives 150 VP out of 1,000 VP possible.

$$V = (A + 10) / (B + 10)$$

$$A = 700$$

$$B = 150$$

$$V = (700 + 10) / (150 + 10)$$

$$V = 710 / 160$$

$V = 4.44$

The US receives a Major Victory, and the Germans receive a Major Defeat. Although  $V$  was over the 4.0 requirement for a Total Victory, the US only achieved 70% of the potential total VP, while a Total Victory requires at least 80% of potential VP be earned.

## ■ MAP EDITOR OPTIONS

Elevation (page 79): The Ditch Lock is a new editor function that allows slopes between two fixed elevation points to be much steeper than the default slope. Ditch Lock can be used to make narrow terrain features such as ditches and small berms.

To use Ditch Lock, switch to either the Adjust or Direct elevation tools and then left-click on a tile while holding CTRL. The elevation number on the tile will display a blue background instead of the usual black to indicate that its elevations will be steeper.

## ■ ARTIFICIAL INTELLIGENCE EDITOR

Stance (page 93): Ambush Armor added - functions like Ambush, but unit will only open fire if armored vehicles come within a specific distance.

## ■ CREATING QUICK BATTLES:

Victory Conditions (page 103): Quick Battles consider only OCCUPY terrain objectives and unit casualties for determining victory conditions. All other objective types and parameters are ignored.

All terrain objectives are converted to OCCUPY objectives automatically, and all Units are part of a force-wide UNIT objective.

Quick Battle scores are determined differently than in Missions. The total point value is automatically set to 1,000 VP. Out of the 1,000 VP available, a portion will be allocated to the OCCUPY terrain objectives and the remainder of the VP will be assigned to the UNIT objective.

The ratio of VP awarded for terrain objectives versus casualties will vary based on the type of battle, with Meeting Engagements awarding the least VP for terrain objectives and the most VP for unit casualties, and Assaults awarding the most VP for terrain objectives while de-emphasizing unit casualties.

The relative VP values of the terrain objectives in a Quick Battle is determined by the relative VP values that the map designer assigns to each of the objectives. For example, if a designer creates three terrain objectives, and gives one of the objectives 500 VP while giving the other two 250 VP each, then in every Quick Battle on that map, the first terrain objective will be worth

twice as much VP as either of the other two. The ratios of the VPs values are important, not the actual VP values themselves!

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