CLOSE COMBAT
WACHT AM RHEIN™

BASTOGNE

Atomic Games Inc

matrix games

STRATEGY 3 TACTICS

EPILEPSY WARNING

PLEASE READ THIS NOTICE BEFORE PLAYING THIS GAME OR BEFORE ALLOWING YOUR CHILDREN TO PLAY.

Certain individuals may experience epileptic seizures or loss of consciousness when subjected to strong, flashing lights for long periods of time. Such individuals may therefore experience a seizure while operating computer or video games. This can also affect individuals who have no prior medical record of epilepsy or have never previously experienced a seizure.

If you or any family member has ever experienced epilepsy symptoms (seizures or loss of consciousness) after exposure to flashing lights, please consult your doctor before playing this game.

Parental guidance is always suggested when children are using a computer and video games. Should you or your child experience dizziness, poor eyesight, eye or muscle twitching, loss of consciousness, feelings of disorientation or any type of involuntary movements or cramps while playing this game, turn it off immediately and consult your doctor before playing again.

PRECAUTIONS DURING USE:

- Do not sit too close to the monitor. Sit as far as comfortably possible.
- Use as small a monitor as possible.
- Do not play when tired or short on sleep.
- Take care that there is sufficient lighting in the room.
- Be sure to take a break of 10-15 minutes every hour.

THE RETURN OF CLASSIC CLOSE COMBAT...
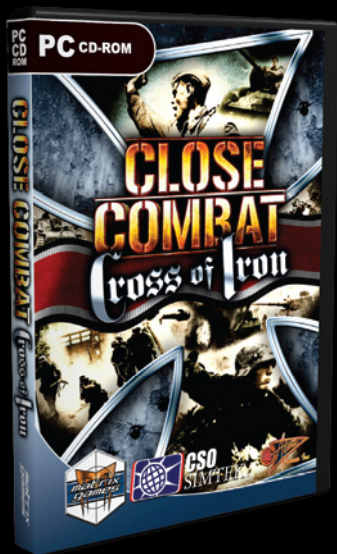
Based on the Atomic Games award winning Close Combat™ series of games. Close Combat™: Cross of Iron, brings back the award-winning classic in new epic battles of the Eastern Front of World War II.

Immerse yourself in the ultimate Close Combat™ release: Close Combat™: Cross of Iron for the PC. Take command of German or Soviet Battle Groups during WWII as you face the strength of the enemy war machine in a Grand Campaign giving you both the original and all new battles and operations that will test your tactical mettle.

improvements have been made to the AI to reduce some of the more inadequate performance issues, in particular with respect to vehicle pathing, the 'crawl of death', and Team and Unit morale and response in general. For example, it is much more risky to try and use Teams in isolation as the influence of Command Teams is more significant. You should find that you will need to play more cohesively than in the original release.

Crush the enemy and gain the respect of your troops as you lead them to ultimate victory in Close Combat™: Cross of Iron!

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CLOSE COMBAT WACHT AM RHEIN™

Thank you for Purchasing Close Combat Wacht am Rhein™!

1.0 INSTALLING THE GAME

Please ensure your system meets the minimum requirements listed below. To install the game, insert the Close Combat Wacht am Rhein™ CD into your CD-ROM drive. If you have disabled the autorun function on your CD-ROM or if you are installing from a digital download, double-click on the installation archive file, then double click on the file that is shown inside the archive. Follow all on-screen prompts to complete installation.

1.1 MINIMUM SYSTEM REQUIREMENTS

OS:	Windows 98/ME/2000/XP/Vista
Processor:	300Mhz processor or faster
RAM:	256mb
Video Card:	Video Card capable 1024 x 768 w/ 16 bpp or greater
Sound Card:	16-Bit DirectX 9 compatible sound Card
CD-ROM:	Yes
Hard Drive:	1.5GB Free
DirectX Version:	9.0c

1.2 RECOMMENDED SYSTEM REQUIREMENTS

OS:	Windows XP/Vista
Processor:	1.5Ghz or greater
RAM:	512mb (1GB for Windows Vista)
Video Card:	Video Card capable 1024 x 768 w/ 16 bpp or greater
Sound Card:	16-Bit DirectX 9 compatible sound Card
CD-ROM:	Yes
Hard Drive:	1.5GB Free
DirectX Version:	9.0c

1.3 UNINSTALLING THE GAME

Please use the Add/Remove Programs option from the Windows Control Panel or the uninstall shortcut in the games Windows START menu folder to uninstall the game.

1.4 PRODUCT UPDATES

In order to maintain our product excellence, Matrix Games releases updates containing new features, enhancements, and corrections to any known issues. Keeping up with these updates is made easy and is free by signing up for a Matrix Games Member account. When you're

signed up, you can then register your Matrix Games products in order to receive access to these important game-related materials. Doing so is a simple two step process:

Sign Up for a Matrix Games Member account – THIS IS A ONE TIME PROCEDURE; once you have signed up for a Matrix account, you are in the system and will not need to sign up again. Go to www.matrixgames.com and click the Members hyperlink at the top. In the new window, select Register NOW and follow the on-screen instructions. When you're finished, click the Please Create My New Account button, and a confirmation e-mail will be sent to your specified e-mail account.

Register a New Game Purchase – Once you have signed up for a Matrix Games Member account, you can then register any Matrix Games title you own in your new account. To do so, log in to your account on the Matrix Games website (www.matrixgames.com). Click Register Game near the top to register your new Matrix Games purchase.

Once you've registered your game, when you log in to the Members section you can view your list of registered titles by clicking My Games. Each game title is a hyperlink that will take you to an information page on the game (including all the latest news on that title). Also on this list is a Downloads hyperlink that takes you to a page that has all the latest downloads, including patches, for that particular title.

You can also access patches and updates via our "Games Section" (http://www.matrixgames.com/games/), once there select the game you wish to check updates for, then check the "downloads" link. Certain value content and additional downloads will be restricted to "Members Area" members. so it is always worth to sign up there.

Remember, once you have signed up for a Matrix Games Member account, you do not have to sign up again – at that point you are free to register for any Matrix Games product you purchase. Thank you and enjoy your game!

1.5 GAME FORUMS

Our forums are one of the best things about Matrix Games. Every game has its own forum with our designers, developers and the gamers playing the game. If you are experiencing a problem, have a question or just an idea on how to make the game better, post a message there. Go to http://www.matrixgames.com and click on the Forums hyperlink.

2.0 WELCOME

Immerse yourself in the Latest Close Combat release: Close Combat: Wacht am Rhein™ for the PC. Developed from Close Combat IV Battle of the Bulge this latest release takes you back the dense Belgian forests of the Ardennes. You take command of United States or German Forces' Battle Groups and engage in Head to Head Battle in Hitler's final gamble in the west. You face all the enemy can throw at you in a series of intense engagements that will test your tactical

and strategic abilities! Air and artillery support are on-call but the objective can only be secured by Close Combat. You are in Command. You are in Control!

Good luck and thank you for purchasing Close Combat Wacht am Rhein™

2.1 INTRODUCTION

On December 15, 1944, the 75,000 Allied soldiers stationed in the Ardennes region of Belgium and Luxemburg slumbered, stood guard or just tried to keep warm on a cold winter night. The Ardennes had been a quiet sector of the front line with the German Army and it is where Allied troops had been positioned to both rest and recuperate from hard fighting or to transition fresh and as yet untested units into the line. The Allied troops thought the rumours were true….. the war would be over by Christmas! Crushing German losses along the eastern and western fronts had reduced the powerful German war machine to a shadow of its former self. Europe had been largely liberated and Germany was fighting on its own soil. The Ardennes forest was thickly wooded, making large-scale military manoeuvres difficult. The Allied headquarters staff was convinced that Germany couldn't muster the forces for another offensive.

The Germans thought differently!

At 0530 hours on December 16th, the German Army and Luftwaffe launched a massive attack that caught the Allied Armies completely by surprise. Over 250,000 German troops, well supported by armor and artillery, poured into the Ardennes. Front line American troops, unprepared and vastly outnumbered, were pushed back forming what would come to be called 'The Bulge.' The monumental struggle would become known as The Battle of the Bulge.

You now take control of one side of the Battle of the Bulge to try to change history. As the Germans, you must push forward and break through the Allied defences. As the Allies, your job is to contain the Germans and hold out for the eventual reinforcements that will allow you to strike back. Either way, the Battle of the Bulge will be fought your way

3.0 GAME PLAY

Close Combat: Wacht am Rhein™ is a real time strategy game that puts the emphasis on REAL. During a battle you command up to 15 units ranging from squads of infantry to heavy tanks. The soldiers under your command act like real soldiers. If you order them to exert themselves they get tired, if the enemy shoots at them they keep their heads down, and when in danger they get scared. If a soldier becomes too scared he may stop listening to orders; he may even surrender or desert.

Your units have the same strengths and weaknesses that they do in real life. So in planning your strategy you need to think about what would work in the real world. Historically, real world tanks had a hard time detecting enemy infantry, and enemy infantry could easily sneak up on a tank and use explosives to disable or destroy it. Real world tanks used infantry to scout ahead of them; you are well advised to do the same.

Your goal during each battle is to do more than just kill the enemy. The Bulge was a battle about ground….taking it and defending it. Each map has a certain number of important strategic spots called "Victory Locations", and success or failure is determined by who holds them when a battle ends.

During Campaigns and Operations you have both strategic command of the war and tactical control of every engagement. At the strategic level, you direct your Battle Groups along the network of roads that connects the towns and villages of the Ardennes region. You must deal with issues of supply, allocate sparse resources, and control your overall battle strategy.

4.0 WHAT'S NEW

Close Combat: Wacht Am Rhein has had a comprehensive over haul to make it compatible with today's modern computer systems. Enhancements have been made to the original game's AI performance and graphics, and the ability for mod makers to modify the game has been streamlined. Along with these improvements the game has been expanded in scope beyond any previous release in the Close Combat Series.

4.1 GENERAL IMPROVEMENTS

- The game's AI in battle performance and vehicle pathing has been improved.
- Battle Groups (Armored, Armored Infantry, and Recon)
  can no longer move when out of fuel.
- Battle Groups can retreat when routed instead of just being disbanded.
- The game now provides a sound volume control
  (instead of having to go outside of the game).
- There are point values for all selected and individual squads displayed
  to assist in balancing head to head (H2H) single player battles.

- The strategic level has been expand ed to 64 maps.
- There are now 54 Battle Groups (up to 64 available to modders)

5.0 QUICK START

Double click on the desktop icon to start the game.

5.1 MAIN SCREEN

Once the game starts, you are on the Main Screen and you have a few choices. You can select Play a Game, go to the Boot Camp, Create a Scenario, configure Multiplayer, select game Options or read the production Credits. If this is your first time playing, you should consider playing the Boot Camp tutorial first.

5.2 COMMAND SCREEN

Once on the Command screen if you want to jump in quickly, choose a Battle listed in the window on the upper left hand side rather than a Campaign or Operation. Once you have decided which battle you want to play, double click on it or select it and click on Next.

5.3 BATTLEGROUP SCREEN

This brings you to the Battle Group screen where you can look at the units you'll be fighting the Battle with. You can rename the individual units (squads and vehicles) if you want by first clicking on the unit and then using the Rename button on the bottom of the screen. You can also look at a unit's Experience Level and Morale and the weapons and equipment they carry by clicking on it.

To remove a unit and add a different one double click on the unit to remove from a platoon and then double click on a unit name in the Battle Group forcepool list on the left of the screen to add a unit.

When you're ready to fight, select Next from the lower right hand corner to display the Battle screen.

5.4 BATTLE SCREEN

When the Battle screen first appears, the action is frozen. This represents the pre-battle phase where you can place your troops. The darkened portion of the map represents where the enemy starts, while the lightly shaded portion is a no man's land between your unshaded portion and the enemy.

Place your troops to your best advantage; left click on a unit and drag it to move it. You may also give orders to units during this stage. Right click on a unit to give it an order. When placing AT guns, which usually cannot move, it is useful to give them a Fire order and move the cursor around to check their fields of fire (press **Esc** to not give a fire order). You can cancel the fire order by ordering the gun to Defend or Ambush. Infantry should usually start in cover either in buildings, woods, ditches or

prepared entrenchments/bunkers. Command teams improve the performance of other teams within their circle of influence. To see the area over which a command team has influence, press the **Space** bar. The green circle displayed represents the extent of the team's command and control.

When you are satisfied with your troop placement press the Begin button on the tool bar on the bottom of the screen.

Keep in mind while playing that Function keys **F5** - **F7** control your optional monitor displays and that you can issue orders to a unit by right-clicking on it. Air strikes, mortar and heavier artillery can each be used only once per Battle, when they are available.

6.0 MAIN SCREEN

6.1 PLAY A GAME

Left-clicking on the Play a Game option selects the Command screen. From the Command screen you may load a saved game or select any of the single player Battles, Operations, or Campaigns.

6.2 BOOT CAMP (TRAINING)

The Boot Camp option selects the boot camp screen where you may choose to play any of the five training scenarios. The tutorials include pop up windows directing your actions and

are designed to teach basic unit commands and how to monitor the status of your teams and soldiers. It is highly recommended that all players play through all five boot camps.

6.3 CREATE A SCENARIO

While Close Combat: Wacht am Rhein™ comes with a large number of pre-made battles, operations, and campaigns, a scenario editor (Battlemaker) has been provided for creating your own battles, operations, and campaigns.

6.4 MULTIPLAYER

While the AI in a single player game does present a worthy opponent, there is something uniquely satisfying about out thinking a human being. Close Combat: Wacht am Rhein™ presents a number of options allowing two human players to square off.

6.5 OPTIONS

The Options screens allow the player to configure certain aspects of the game. There are three screens; Game Play, General, and About.

7.0 BOOT CAMP

Boot Camp is a tutorial that teaches basic unit commands and fundamental tactics. There are five boot camps; it is recommended that new players complete them in order from top

to bottom. During the boot camps you can always repeat the previous instruction by pressing **Ctrl+H**. You may exit boot camp at any time by pressing the **ESC** key.

7.1 QUICK TOUR

This explains how to give orders to a unit as well as basic targeting. Remember that right-clicking on a unit selects the unit and opens the orders menu. Orders may be cancelled by right-clicking again, or by left-clicking off of the menu.

7.2 MONITORS/TOOLBARS

This segment shows how to call in Air Strikes, Mortar and Artillery Support, as well as monitoring team abilities and status. The prime things to remember from this boot camp are that the **F5** key toggles the Team Monitor, **F6** toggles the Map Monitor, and **F7** toggles the Soldier Monitor

7.3 VIEWING THE TERRAIN

This explains moving your view around the map and the effects of terrain. The important things to remember are that you can left-click in the popup menu to shift your view. Zoom in and out with the Zoom buttons on the toolar at the bottom of the screen. The properties of the various terrain types are also discussed. Buildings provide great cover for infantry. Buildings greater then 1 story have a number on them. For purposes of determining line of sight all, units in a building are assumed to be on the top floor. A building roof becomes invisible when you have men inside so you can see what's going on.

7.4 INFANTRY TACTICS

This is a demonstration of basic infantry strategy including the use of two or more teams to lay down suppression fire, and how to use smoke to cover advancing infantry. Basic mortar use is also covered.

7.5 ARMOR TACTICS

This segment is short, but teaches a vital lesson. Tanks are extremely vulnerable to infantry at close range and bad at detecting them. To protect against these two failings, armor works best when supported by infantry.

8.0 THE COMMAND SCREEN

The Command Screen has three panels.

8.1 BATTLES, OPERATIONS AND CAMPAIGNS

The top left panel allows you to select from any of the pre-made battles, operations, and campaigns. A Battle is a single engagement between predetermined German and American battle groups. It takes place on a single map but each sides entry location is random for enhanced replay ability. An Operation is a fight between two or more Battle Groups on the strategic screen. Operations usually involve multiple engagements over a selection of linked maps on the strategic screen. A Campaign also uses the Strategic Screen and has several or all Battle Groups for each side engaged in conflict over, generally, a larger area and a longer time span.

8.2 SAVED GAME AND USER CREATED SCENARIO

To load a saved game or to play a custom scenario, select it from the list in the lower left hand panel. Saved games and scenarios may also be deleted by selecting them and clicking the delete button.

8.3 GAME SETTINGS

The right hand panel controls the parameters for new single and multiplayer games. At the top of the window you may select between playing either as the Axis (Germans) or the Allies (Americans).

Below that are two sliders indicating the Difficulty Level for each side: Recruit, Green, line, Veteran, and Elite. Recruit level difficulty provides better forces with higher morale, whereas Line setting plays at normal levels of force strength. At Elite difficulty the particular side starts with weakened forces.

8.3.1 REALISM SETTINGS

Below the Difficulty Level indicators are the **Realism Settings**. You can change the indicators by clicking in the adjacent check-boxes.

Always See Enemy: Does exactly what it sounds like it should do. A side with this option chosen knows where the enemy is at all times. This can be an extremely useful option for new players as they learn the game.

Never Act On Own Initiative: Your soldiers never do anything unless they are ordered to.

Always Have Full Enemy Info: The player always has access to the tool-bar info of enemy units with this selected. This does not extend to Soldier Monitor information.

Always Obey Orders: Your units always obey orders with this selected. This is for when you tire of your soldiers' senses of self-preservation. They will also not act their own initiative.

8.3.2 BATTLE ENDS CONDITIONS

Below the **Realism Rating** settings are the **Battle Ends** conditions. The player can change these conditions by clicking in the adjacent check box.

Those conditions are:

- When Force Morale Gets Too Low

The default settings are Force Morale enabled for Operations and Campaigns, and disabled for individual Battles.

- When Time Expires In …. (the drop-down menu gives you a choice of times)
- After Taking All Victory Locations
- Two-Minute Warning (for battle to end)

The two-minute warning option allows a player who controls no victory location two minutes to capture one before the game ends.

> **Note**
>
> *"Be advised that disabling the Force Morale option will severely alter play balance when playing Operations and Campaigns."*
>
> *"It is recommended that you play with the timer set to 15 minutes for optimum play against the AI (the game's artificial intelligence)."*

The **View Map** tab along the bottom of the screen allows you to view the map used in a particular battle.

9.0 THE BATTLE GROUP SCREEN

Once you have selected your fight you gain access to the Battle Group Screen; this shows all the forces available for a particular battle.

9.1 ACTIVE ROSTER

The main area of the Battle Group screen is filled with the 15 units in the active roster. Left-clicking on any of the units listed selects the unit, showing its Experience Level, Morale, Points value and armament in the bottom panel, as well as giving you a chance to rename the unit.

9.2 FORCEPOOL

The Battle Group Screen allows you to choose your forces from the Force Pool Listed down the left of the screen To change your forces, you must double-click on a unit to remove it from the Active Roster and return it to the Force

Note

"Removing a squad from your active roster will erase its history, including any experience bonuses or medals it has earned."

Pool. Next, you must select a new unit from the list of units in the Force Pool on the left hand side of the screen by double-clicking on the unit in the Force Pool list. Single-clicking on the unit in the force pool list will show the unit's quality and point strength at the bottom of the screen.

9.3 REINFORCE BUTTON

The button marked **Reinforce** is only present when you are playing an Operation or Campaign and there are reinforcements available for the Battle Group. This button refills the force pool for the Battle Group once it has been depleted. Reinforce can be selected only one time per Battle Group. Once it is used, it will not appear on the Battle Group Screen again.

> **Note**
>
> *"The reinforce button will only work if the Battle Group is able to access a friendly major supply depot through the road net. If you try to Reinforce without such access, you will get a dialog box explaining that you are out of supply."*

9.4 RENAME BUTTON

The button marked **Rename** allows you to rename the selected team.

9.5 REMOVE BUTTON

The button marked **Remove** allows you to remove the selected team. When the selected team is removed, the next team in order of platoon precedence is selected. It may then be removed by clicking Remove again. This can be repeated until all teams are removed.

9.6 ADD BUTTON

When a team is selected in the Force Pool and there is an open slot in the Battle Group screen the **Add** button appears in place of the Remove button. Clicking the Add button will fill an empty slot in the Battle Group with the selected team. To change the type of team to fill empty slots, simply select a different team by left-clicking on it in the Force Pool list.

9.7 REVERT BUTTON

The **Revert** button resets the Battle Group force to the computer-selected default force mix of the Battle Group.

9.8 EDIT OPPONENT

The button marked **Edit Opponent** allows you to set the opposing side's Battle Group's team strength and composition. It is only selectable when playing in single player mode.

9.9 VIEW MAP

The **View Map** button lets you preview the map with your area of deployment highlighted. The enemy deployment area is shown in a darker shade.

10.0 SOLDIER SCREEN

The button marked **Soldier** takes you to the Soldier Screen. The Soldier Screen shows the Health, Morale, Leadership, Intelligence, Strength, and Experience for each soldier in the unit, as well as accumulated achievements such as kills, medals, acts of bravery, or acts of cowardice.

10.1 HEALTH

Health represents the physical status of the soldier.

10.2 MORALE

Morale indicates the willingness of a soldier to fight on. Soldiers with high morale are braver and are more willing to face danger than men with poor morale. Leadership represents the ability of a man to improve the morale of the men around him and to keep his team together.

However, when a unit leader with a high leadership level dies, it can have a devastating effect on unit morale.

10.3 INTELLIGENCE

Intelligence reflects how likely the soldier is to go berserk or panic in a fire fight. Intelligent men are less likely to make such fatal errors.

10.4 STRENGTH

Strength determines how quickly the soldier becomes fatigued when moving, and affects how severe his wounds are if he is shot. The stronger the man, the longer he can keep going.

10.5 EXPERIENCE

Experience is vital for a soldier and can affect a wide range of his abilities, ranging from how good a shot he is, to how well he can hide himself in Ambush, or how well he conserves ammo. More experienced soldiers do just about everything better than green troops.

Each soldier also has his kills and achievements listed as a cumulative total in Operations and Campaigns.

The button marked **Previous** takes you back to the command Screen so you can select another Battle or exit the game.

11.0 BATTLEFIELD AND OTHER CONTROLS

11.1 BASIC UNIT ORDERS

Right-clicking on any unit brings up a popup menu listing possible orders for that unit. These orders are: **Move**, **Move Fast**, **Sneak**, **Fire**, **Smoke**, **Defend**, and **Ambush**. Order options that a unit cannot perform are marked. For example, a tank that has blown a tread can not Move, Move Fast nor Sneak. An order may then be selected by left-clicking on the order option. If you change your mind and do not wish to issue an order, either right or left-clicking on the map removes the popup menu. Orders may also be given by hot key commands once the unit is selected.

MOVE
MOVE FAST
SNEAK
FIRE
SMOKE
DEFEND
AMBUSH

11.1.1 HOT KEY ORDERS

All orders can also be given by hot key commands. To give an order by hot key left click on the unit, then press the appropriate key.

Z .... Move
X .... Move Fast
C .... Sneak
V .... Fire
B .... Smoke
N .... Defend
M .... Ambush

11.2 MOVEMENT ORDERS

Units have three movement commands: Move, Move Fast and Sneak. When the movement order is selected, place the cursor where you want the selected unit to go and left click. If you wish to cancel the movement order during this phase hit **Backspace** on your keyboard. A colored dot appears on the map marking the unit's destination. The unit attempts to reach its destination by whatever movement type you have selected. The color of the dot corresponds with the type of movement order given.

Move .... Blue
Move Fast..................... Purple
Sneak........................... Yellow

Once created, the destination dot can be dragged to another location by left-clicking and holding the left mouse button on it.

Move – The MOVE order is represented by a blue line stretching from the selected team being issued the order, to an invisible cursor. The white numbers at the end of the Move line measure the distance in meters from the team to that point on the map. Scroll the mouse and left click to place a blue Move dot on the map location intended as the team's destination.

When the Move dot is placed the team will advance toward that point in a tactical manner. The team's rate of movement is affected by the terrain it crosses en route. Moving teams may initiate combat and assault if the opportunity presents. Moving teams are much more vulnerable to enemy fire than stationary teams or teams moving covertly.

A Team carrying out a Move order will most likely stop and seek cover if it comes under effective fire.

When a moving team reaches its destination, the Move dot disappears and a voice cue and text message announce the completed movement. After carrying out the Move order the team assumes Defend status in the direction of its movement.

Move Fast – The MOVE FAST order is represented by a purple line stretching from the selected team being issued the order, to an invisible cursor. The white numbers at the end of the Move Fast line measure the distance in meters from the team to that point on the map. Scroll the mouse and left click to place a purple Move Fast dot on the map location intended as the team's destination.

When the Move Fast dot is placed the team will advance toward that point as rapidly as possible. The team's rate of movement is affected by the terrain it crosses en route. Moving teams may initiate combat and assault if the opportunity presents. Teams moving fast are more vulnerable to enemy fire than moving teams.

A Team carrying out a Move FAST order will most likely continue to it's destination if it is relatively close otherwise it will stop and seek cover if it comes under effective fire. This is the most reliable way to get teams to move if under fire.

When a team moving fast reaches its destination, the Move Fast dot disappears and a voice cue and text message announce the completed movement. After carrying out the Move Fast order the team assumes Defend status in the direction of its movement

Sneak – The SNEAK order is represented by a yellow line stretching from the selected team being issued the order, to an invisible cursor. The white numbers at the end of the SNEAK order line measure the distance in meters from the team to that point on the map. Scroll the mouse and left click to place a yellow SNEAK dot on the map location intended as the team's destination.

When the Sneak dot is placed the team will advance toward that point as cautiously as possible. The team's rate of movement, literally a crawl, is affected by the terrain it crosses enroute. Teams sneaking do not initiate combat or assault if the opportunity presents. Teams Sneaking are more vulnerable to enemy fire than stationary teams.

A Team carrying out a Sneak order will most likely stop and seek cover if it comes under effective fire.

When a team Sneaking reaches its destination, the Sneak dot disappears and a voice cue and text message announce the completed movement. After carrying out the Sneak order the team assumes Ambush status in the direction of its movement.

11.3 VEHICLES

Vehicles are not stealthy, particularly tanks. However, a sneaking tank is at maximum watchfulness and at its slowest speed. Vehicles, unlike infantry teams, will initiate combat in Sneak mode. A tank on the move is somewhat faster and slightly less observant. A tank that is sneaking or moving attempts to maintain its original armor arc as much as possible. For example, a tank that is facing the enemy could be ordered to back up using the Sneak or Move command.

Tanks ordered to Move Fast turn to face their destination and then move there at maximum possible speed. Tanks can fire while following any movement order, although their rate of fire decreases.

11.4 INDIRECT PATHS/WAYPOINTS

Rather than move in a straight line, it is possible to order infantry and vehicles to follow an indirect route. Routes are determined by setting waypoints. To set waypoints, right click on a unit as normal and determine which type of movement, then press and hold the shift key and plot the path you wish the unit to take. Each number represents a point the unit passes through on its way to its destination. When you have completed your path, release the shift key and the unit proceeds as ordered. You can place a total of 20 waypoints. Set waypoints can also be selected and dragged to alter a unit's path.
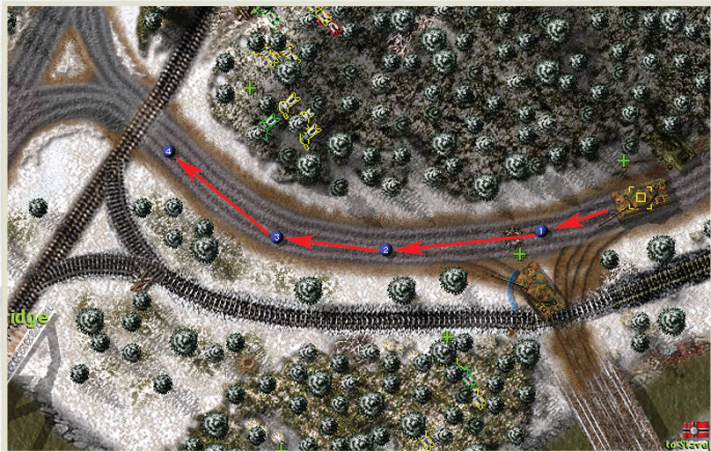
11.5 FIRE

While your soldiers are capable of firing on their own initiative, it is often useful to direct their fire. The Fire option brings up a targeting circle. The targeting circle is connected to the firing unit by a colored line.
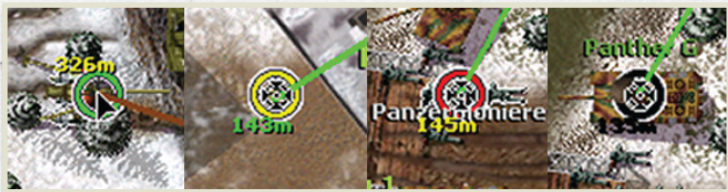
When the circle is not sitting above an enemy unit, it appears as a thin white circle. When placed on an enemy unit the circle either turns green, yellow, red, or black. This color corresponds with the chance that a shot will kill the enemy unit.

Green 100-60%
Yellow 9-30%
Red 29-10%
Black............................ 9-0%

When deciding whether or not to order a unit to Fire, it is important to consider the situation. If a unit is laying down suppression fire, it doesn't have to actually kill the enemy to have the desired effect. On the other hand, a small Bazooka team waiting in ambush while an armored column approaches had better wait for a killing shot.

11.6 LINE OF SIGHT AND RANGE

The color of the line connecting the targeting circle to the firing unit indicates line of sight.

For direct fire weapons, the line is light green for clear lines of sight, dark green for lines of sight obscured by foliage or smoke, and red for lines of sight that are blocked. Infantry line of sight is determined for each soldier individually, so enemies visible to one soldier might not be seen by another.

For indirect firing weapons, the connecting line is orange for targets in line of sight and brown for targets beyond line of sight. Teams that fire indirect weapons, such as mortar squads, do not need line of sight to fire at their targets. However, having line of sight greatly increases the accuracy of indirect fire.

The number by the targeting circle represents the distance from the firing unit. This distance is particularly important for infantry who's anti-tank weapons and flamethrowers have short effective ranges. The distance number by the targeting circle also indicates range effects.

Green .... Within effective range.
Yellow .... The distance is too close or too far away;
the weapon has reduced effectiveness.
Black............................ The distance is too close or too far away
for the weapon to fire at all.

If a line of sight is obstructed, a white number appears along the targeting line indicating the range to the obstruction. If a line of sight is partly obstructed by foliage, and then completely blocked further along, both ranges are indicated. Partial obstruction by foliage or smoke prevents the attacker from specifically targeting enemies, but the firing unit can lay down fire in the hopes of suppressing the enemy or getting lucky.

11.7 SMOKE

There are times in battle when the ability to conceal yourself from the enemy, even partly, can be the difference between victory and death. Vehicles and infantry on both sides are often equipped with smoke grenades. Units hiding behind smoke are harder to detect, and if they are detected it is impossible to target them specifically. Smoke has roughly the same effect as partial obstruction by foliage; units may still Fire in a general area behind smoke in the hopes of suppressing the enemy.

The Smoke command brings up a targeting circle for firing smoke grenades. Mortar teams can lay down smoke virtually anywhere on the map, a standing soldier can throw smoke grenades 30 meters, and a prone infantryman can throw 15 meters.

Some vehicles and artillery have the ability to fire smoke rounds, which can reach out to the weapon's maximum range. If a unit has smoke rounds, the Smoke command is available on the unit menu. Some vehicles have smoke dischargers and/or smoke mortars. These work in the same way as smoke rounds.

Units, both tanks and infantry, often use smoke on their own when they come under sudden attack in an attempt to screen themselves from enemy fire.

11.8 DEFEND

Units that have been ordered to Defend stop, seek whatever cover is available, and engage any target of opportunity. When ordered to Defend a blue arc appears above the unit; this indicates the direction of facing. To change the direction of defensive facing, left click the highlighted arc; a blue circle appears above the unit. Move the cursor to the arc, drag the arc to the point on the circle that you wish the unit to face, and left click again. AT guns and tanks rotate to face that direction and infantry seeks cover defending from that direction. Defending units engage enemies not in the blue arc, but only if those enemies are very close. Units that are defending will fire on targets of opportunity that they have at least a reasonable chance of killing. That's equivalent to a yellow or green targeting circle.

Defend is the default setting for tanks. When not under specific orders, tanks Defend the area in front of them.

11.9 AMBUSH

Ordering a unit to Ambush is similar to the order to Defend. As in Defend the units stop in place and seek cover, but ambushing units only attack when an enemy comes within very close range. When a unit is ordered to Ambush a green arc appears above the unit. This works in the same way as the blue arc in the Defend order. To change the direction that the unit is ordered to ambush, left click on the green arc, move the arc to the proper facing, and left click again to release.

It is vital for any successful commander to understand the importance of the Ambush order. Infantry are generally far more effective at close range, and many anti-tank weapons are more effective from the side or rear. Keeping bazooka and concealed AT guns hidden until the right moment can be critical to success.

11.10 GROUP ORDERS

Orders may be issued to multiple units at the same time. To select the units to be given orders, left click on the screen and drag the cursor. This creates a darkened area on the map; release the left mouse button when all the units you wish to order are inside the darkened area. A second way for a group to be formed is to hold down the shift key and then left click on each unit you wish to give an order.
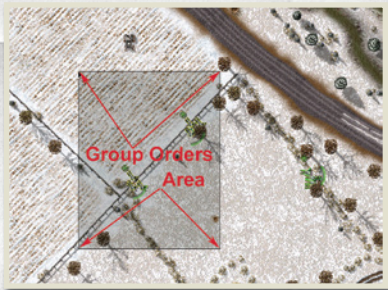
Any order given to one unit is given to all selected units. If ordered to move, they attempt to maintain their current relative positions when they reach their destinations. Remember that if you give the order to Fire, line of sight is individually determined for each unit, and for each soldier in each unit.

Once created, up to 9 groups can be saved into memory by pressing **CTRL (1-9)** while the group is selected. To later recall the group press the corresponding number **(1-9)** without pressing **CTRL**. If the number is pressed a second time it centers the map on the group.

To end giving orders to multiple units, simply create a darkened selector box around a single unit.

12.0 OTHER CONTROLS

12.1 ARTILLERY, MORTAR AND AIR STRIKES

If available, Artillery, Mortar and Air Strike support can be selected from the icons on the tool bar on the lower left side of the screen. A new targeting crosshair appears; left click on where you want the air strike or mortar/artillery barrage to occur. It is important to remember that once an Artillery, Mortar or Air Strike is used, it is not available for the rest of that engagement.

Note

"During the battle and when the air support becomes available, the type air support is stated on a text line in the Combat Messages."

Air Strikes are carried out by a single plane making one pass over the target area. The type of plane is randomly determined from a list of available aircraft for each side.

The plane comes from a randomly determined direction and strafes and/or drops bombs in the target area. Air Strikes are not available at the start of the battle, but become available 5 - 12 minutes into the battle for the Americans and 8 - 12 minutes for the Germans.

GERMAN PLANES

Bf-109........................... Two types of machine guns
Ar-234........................... 8 large bombs
Me-262.......................... 3.7cm cannon, and 1 large bomb
FW-190.......................... Machine guns, 2cm cannon, 3.7 cm
                                      cannon, and 1 large bomb

AMERICAN PLANES

P-38............................. 50 cal machine guns, and one large bomb
P-47............................. 50 cal machine guns, and rockets
P-51............................. 50 cal machine guns
A-26............................. 10 large bombs

Artillery and Mortar barrages are called in the same way Air Strikes are. Mortar barrages consist of four 80mm mortars, all firing at once. This battery of mortars fire between 40 and 60 rounds. Like a Battle Groups' on-map mortar fire, mortar barrage fire is not always accurate, so be careful not to call in mortar file that would endanger your own troops. If it is available during a battle, a mortar barrage appears after 0 - 2 minutes for both sides.

Artillery barrages are called in the same way as mortar barrages and consist of four howitzer guns all firing at once, indirectly, from an off-map firing position. This battery of guns fires between 10 and 20 rounds. Like a Mortar Barrage, an Artillery Barrage is not always accurate. So, similar precautions need to be taken.

12.2 TRUCE OPTION

The Truce command offers the enemy a chance to call it a draw. If the enemy offers a truce you may accept by clicking the Truce button. If one side offers a truce and the other does not accept the offer, fighting continues. If a truce is agreed to, both sides may recover their wounded. The battlefield remains contested and in mixed control.

12.3 COMBAT MESSAGES

The Combat Messages window (lower right-hand corner of tool bar) informs you of the situation on the battlefield. If the message regards a unit, you may center the view on that unit by clicking on the message.

12.4 TEAM MONITOR

Team Monitor defaults as 'on' and displays all the teams on your side of the battle on the bottom of the screen and shows their current status. You may also select a team by clicking on it from this window. Team Monitor can be toggled 'on' and 'off' with the **F5** key.

12.5 MAP MONITOR

This is a miniature map of the battlefield that appears on the screen. This map may be repositioned on the screen by right-clicking and dragging it. Left-clicking on a portion of the Map monitor centers the screen in that location. The highlighted rectangle on the Map monitor represents the current screen. All of a player's viable units in their Battle Group and the spotted

opposing army's units are shown with small blue and red squares. The Map monitor can be toggled on and off with the **F6** key.

12.6 SOLDIER MONITOR

This gives detailed reports on whatever unit is currently selected, showing the weapon type, ammunition level, and state of morale for every man in the unit. If a soldier has low morale or comes under fire, his current action can be very different from what you order him to do. The Soldier Monitor can be toggled on and off with the **F7** key. The Soldier Monitor may be repositioned on the screen by right-clicking and dragging it.

POSSIBLE MORALE STATES

Healthy........................ Soldier is in good health and good spirits.
Injured .... Soldier is hurt.
Incapacitated .... Seriously injured.
Dead .... Someone back home is getting a telegram.
Winded........................ Soldier is tired but able to recover with a short break.
Fatigued....................... Soldier is completely exhausted and cannot act.
Panicked .... The soldier is losing it. His combat efficiency
is dramatically diminished. He may calm
down given time, but you might want to keep
the squad around him until he relaxes.
Broken .... The soldier has stopped obeying orders and
is thinking about making a run for it. As with
panicked soldiers, he may calm down given time,
and the presence of a battlefield commander
and his unit may help bring him around.
Routed......................... This soldier has decided to make a run
for it; he cannot be recovered.
Suppressed .... The soldier is taking cover from
enemy fire while firing back.
Pinned......................... The soldier is taking heavy fire and is
spending more time hiding than firing.
Cowering...................... The soldier is staying put, keeping his head
down, and will only fire occasionally.
Stunned........................ An explosion has temporarily knocked the soldier out.
Heroic .... Soldier is feeling confident and is at an
increased level of performance.
Fanatic........................ More than confident, the soldier takes
chances and is gunning for a medal.
Berserk .... The soldier feels invulnerable and attacks
the enemy without fear. Such displays of
fearlessness inspire those around him.

12.7 UNIT STATUS

Unit status takes up the bottom center of the screen. It shows the type of unit, what it is doing, the health of its men, and how effective it is against infantry and tanks at various ranges. The ranges denoted are 20, 40, 80,160, 320, and 640 meters. The top graph marked AP represents effectiveness against infantry and the lower AT against tanks. The graph below demonstrates how an infantry squad can be highly effective against a tank, but only if they can get in at close range.

The Color of the faces indicates the status of the men in the Unit.

Green	Healthy
Yellow	Injured
Orange	Incapacitated
Black.............................	Panicked
White	Surrendered
Red	Dead

12.8 OPTIONS

The Options button appears in the lower left hand corner of the map. Options is made up of three panels, Game Play, General, and About. These can be selected using the tabs on the top of the screen.

The top two options on the Game Play Options control battlefield graphics. Remove Killed Soldiers removes the corpses of the dead so that you can concentrate on the living, and Remove Trees makes the foliage on trees invisible, although it still affects line of sight.

In the center of the Game Play screen, the Status Indicators control the highlighted bar
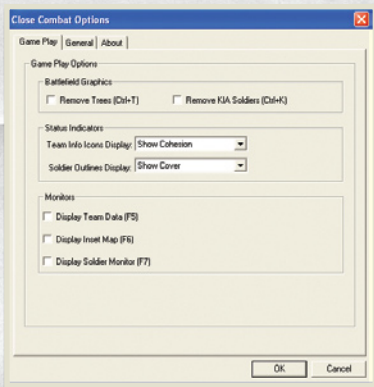
and colored outlines of friendly units. These can be set to reflect any number of conditions, ranging from morale, to ammunition supply, to unit health. Set these to whatever you feel you need to know about your men.

Below the Status Indicators are toggles for:

Team Monitor F5
Map Monitor F6
Soldier Monitor.............. F7

The General screen contains controls for performance options, media options and language options. A new feature in the Media Options allows a player to adjust the volume level of the game's sound effects without having to leave the game to do it. The About screen shows game credits and version information.

12.9 ZOOM CONTROL

Zoom control is in the lower left hand corner of the map beside the Options button. Aside from the default zoom option, the map can be zoomed out, at which point all units are represented by colored boxes. While it is generally easier to control the game from the default zoom level, the zoomed out map is often useful for planning initial unit placement or to get a brief glimpse of how the battle is progressing. One of the best uses for the maximum zoom out level is to check the areas affected by your command teams. The **Space Bar** shows the command radius of each command unit, making it easy to see which unit is benefiting from officers and who is not.
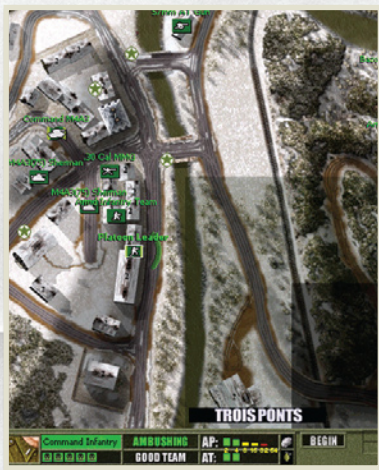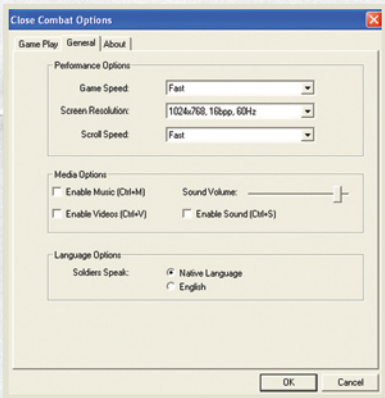
13.0 COMMAND AND MORALE

While each unit has some kind of officer or non-com who leads the troops into battle, each unit's fighting effectiveness and morale is improved by being close to a higher ranking commander, who can direct the efforts of those men under his command. Keeping battlefield commanders near units on the front improves performance and morale dramatically. The higher ranking a commander the larger the area of battlefield he is able to administer. Pressing the **Space Bar** on the Battlefield Screen shows the command radius of command units. The color of the circle indicates the quality of the commander.

Green .... High
Yellow .... Medium
Red .... Low
Black........................... Very Low

During the Deployment phase and during battle, it is often useful to zoom the map out and make sure that your commanders are positioned to provide leadership to the troops.

As a battle progresses, some soldier may lose morale. Receiving enemy fire, having their officers die, being flanked or ambushed, or being around too many dead bodies, can all sap a soldier's will to fight. Eventually a soldier may panic, run from the fight, or even surrender to the enemy. Convincing enemy troops to surrender by breaking their morale can be a very efficient way to win battles.

Aside from competent command, you can improve soldiers' morale by successfully ambushing the enemy. Infantry that manage to destroy enemy tanks also get a large morale boost.

13.1 RALLYING AND SEPARATION

Soldiers that are routed will rally after a time. If they are within the command radius of a command team, this time period will be shorter. If the broken soldier is not within the command radius of a leader, the time needed to rally the soldier will be longer. Also, occasionally a soldier may get separated from his unit. This can happen from either panic or simple fortunes of war. If this happens, the soldier attempts to find his way back to his unit. This process can be hastened by moving the unit closer to their lost man. The presence of a commander can also assist in keeping groups together and bringing in separated men.

14.0 THE BATTLEFIELD

In many cases, the terrain of a battlefield can be the best resource a commander has. A clump of trees, an abandoned house, a gully, or a drainage ditch can all be powerful tools if used in the right way. By right clicking and holding down the mouse button with the cursor over a terrain feature, a player can assess the relative ground elevation and quality of the terrain for defense. These details are displayed along the bottom of the Battlefield screen.

14.1 HILLS

Holding the high ground is an old military maxim and it does have its benefits. Units on top of hills can see over obstacles, giving them a good view and line of sight. Also moving uphill slows units down and moving downhill is generally faster. This is useful if you don't want enemies to reach you, or to make a quick get away. However, perhaps the most useful trait of hills is that hills block line of sight. Units can hide behind hills to avoid detection and to protect their flanks. Defensive units on the reverse slope of hills can engage

detection and to protect their flanks. Defensive units on the reverse slope of hills can engage
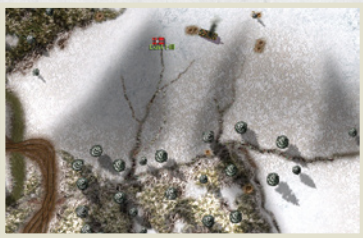
attacking enemy units as they come over the hill while being protected from the enemy's direct supporting fire.

14.2 GULLIES, TRENCHES, AND GUN PITS

While units cannot cross deep water, shallow water can generally be crossed. Depressions in the earth left by running water can also serve as excellent natural protection. Gullies and trenches conceal soldiers and make them harder to hit, but they can become death traps if the enemy can flank the position and fire down the trench. Gun pits are circular trenches dug for small calibre artillery and AT guns. In Campaigns or Operations, if a Battle Group does not move for a turn they are considered to be "Dug in". If a "Dug in" Battle Group is attacked, any artillery or AT gun along with infantry placed in the open automatically starts in either a trench or a gun pit.

14.3 FORESTS

Forests provide something of a mixed blessing. Troops moving through forests have a great deal of cover. Tree trunks block fire, and the foliage of the trees prevents units from being specifically targeted. This cover works both ways, so units have a hard time firing out of forests.

This unusual nature makes forests a natural place for flamethrowers, which can use the cover to approach the enemy. The ability for infantry to hide in forests make them dangerous place for tanks, and tanks should avoid forests unless absolutely necessary. Vehicles also risk damage from moving through forests or trees. Remember that the **CTRL+T** command can be used to hide the foliage of forests. The foliage is still there and affects the game, but it makes it much easier for the player to see units.

14.4 BUILDINGS

The key to understanding how to use and deal with buildings is to remember that buildings are incredibly useful to units inside them, particularly infantry. Building roofs provide cover from mortar fire, building walls provide good concealment and hard cover from enemy fire, and tall buildings allow clear fields of fire over low-level obstructions. This makes them extremely valuable for infantry and AT gun units, and a menace to tanks. A tank on its own generally cannot detect infantry in a building until it is within Ambush range. A wise commander will go to great lengths to avoid putting a tank anywhere near a building that has not been checked out by friendly infantry first. When approaching, a building it is often useful to deploy smoke to allow units to advance without fear of detection. It is also good practice to Fire machine guns at buildings as your infantry approach to suppress any units that might be in the building.

Because AT guns have limited mobility and are vulnerable to mortar fire, buildings are generally a good choice for placement. Unfortunately, placing an AT gun in a building also tends to limit its field of fire. The size of an AT gun that may be placed in a building can be limited by the size of the building

While all buildings conceal troops from the enemy, the stronger the building the more cover it offers from enemy fire. Wooden buildings provide no protection from cannon fire and only limited protection from other kinds of attacks. Stone buildings provide greater protection, and protect against small caliber cannon attacks. The few purpose-built military structures found in the Ardennes provide shelter from all but the most punishing attacks.

14.5 RUBBLE AND ROADS

Rubble can be treated like buildings in most cases, but in the absence of a roof, mortar fire becomes a factor. Roads provide a simple trade off. Moving along a road is generally faster then slogging through snow or mud, but roads are, by their very nature, flat open places without obstacles to hide behind.

14.6 SCRUB AND BRUSH

Not every plant is a tree, and sometimes a bush is all that a soldier has to hide behind as he lies in wait for the enemy. However, once he is discovered, that soldier may find that a bush

cannot stop a bullet. Brush covered areas also easily conceal infantry sneaking through these areas, and are also good positions from which an ambush can be sprung.

14.7 MINE FIELDS

Mine fields are used to defend areas and slow the enemy without using valuable and vulnerable manpower. You do not place mine fields, they are automatically deployed if available in a battle. Mine fields can be detected by expanding out to maximum zoom level where mine fields are shown as red dots. Vehicle units crossing mines can be damaged or even destroyed. Infantry units moving through a minefield at any speed other than a crawl will likely suffer casualties by activating mines.

There are several ways to deal with mine fields. The fastest way is with a tank equipped with mine rolling equipment (giant devices pushed in front of the tank to detonate mines before the tank passes over them). Mine rollers are unusual pieces of equipment and their rolling equipment only detonates mines directly in front of the tank, making turning or backing up dangerous manoeuvres.

Engineer/Pioneer units are also skilled at removing mines. Engineers passing through a minefield, while ordered to Sneak, disarm any mines they come across. While they won't disarm the mines, other infantry types can Sneak across mine fields with only a small chance of detonating the mines.

Finally, if all else fails, concentrated mortar or artillery fire can be used to detonate mine fields, but this is not a very efficient solution and some mines may be missed.

15.0 ENDING A BATTLE

Battles can end in a number of different ways. In single battle games, many of these possible endings can be deselected in the lower right hand corner of the Command Screen.

15.1 VICTORY LOCATIONS

On each map there are a number of victory locations. Each victory location is marked with the flag of the controlling army and represent either important strategic locations (a map road exit is an example) or other points of political interest. If one side controls all victory locations on a map,

the opposing force is given two minutes to recapture at least one location or be forced to

retreat off the map (if the Two-Minute option is selected on the Command Screen). Victory locations controlled by neither side are represented by a split flag. To capture a victory location, move any unit (other than a sniper) to the location. Victory locations are also used to score a battle. Each victory location is worth between 1-3 points depending on its position and font size. Victory locations with larger fonts are worth more points. Victory locations along map borders are generally worth only one point.

15.2 TRUCE

A battle may be ended (before time has elapsed) if both sides agree to end it. To propose a truce, click the Truce button on the tool bar in the lower right hand corner. Only when both players agree to a truce is the fighting stopped. Once a truce is offered, you may accept by pressing the Truce button.

15.3 TIME

In battles with a time limit, the engagement ends when the clock runs out. It is recommended to set the timer to 15 minutes for best (single player) game play against the AI.

154 MORALE FAILURE

When you play an Operation or Campaign, either historical or one you have made with the scenario editor, the Force Morale end-of-battle option is always enabled. You may disable this function by checking the box on the command screen. For individual battles, either historical or self-made, the default setting for Force Morale is off.

The Operations and Campaigns that are included in the game have been designed to be played with Force Morale enabled.

If a battle ends because of a truce or time-out, the battlefield is still split between the forces. In Campaigns or Operations, the deployments for the following cycle are based on how far each side pushed during the previous battle. If a battle ends because of a morale failure, the Battle Group that flees loses 1-3 victory locations depending on the ratio of the winner's Force Morale to the loser's Force Morale. In addition, the Battle Group will lose two teams chosen at random from its force mix as a rearguard/breakout force loss penalty. If the victor has 33% more force morale than the loser, the winner will gain one victory location. If the ratio is between 33% and 66% the victor

> ### NOTE
> *"Be advised that disabling Force Morale will severely alter play balance when playing Operations and Campaigns."*

will gain two victory locations. If the ratio is greater than 66% the victor will gain three victory locations. If the fleeing side still has any victory locations left, the field continues to be split based on previous positions; otherwise, the losing side is pushed off the map.

If a Battle Group is pushed off of a map, and there is an unoccupied, friendly map that it can move to, the Battle Group will retreat to the available map. If the Battle Group is able to retreat

it is unable to move next turn as it regroups. If it cannot retreat, it is disbanded. If the Battle Group was still in supply when it was disbanded, there is a 75% chance that each team makes it back to be added to the Battle Group's force pool.

If one side destroys all enemy units, they hold the field, and the enemy Battle Group is disbanded. This very rarely happens because the losing side generally flees from morale failure first.

15.5 DEBRIEFING SCREEN

When a battle ends the Debriefing Screen appears. The Debriefing Screen indicates which side won, why they won, and what areas they controlled on the map at the end of the battle. The non-shaded portions of the map indicate areas that ended under your control.

The Details button on the lower left hand side of the screen changes the debriefing screen to show specific casualty figures for both sides.

The Text button returns to the original screen.

SOLDIER TAB

The Soldier tab at the bottom of the screen allows you to see how your individual soldiers performed in the just completed battle. Use the Next Team button in the lower left hand corner of the screen to cycle through your units.

CAMPAIGN DEBRIEF

The Campaign Debrief tab at the top of the screen brings up a map of the Campaign area showing the regions each side controls, and listing the current Campaign score. The Details button on the Campaign Debrief screen lists the total losses incurred for each side during the entire campaign.

When you are done viewing the battle results, the Next button advances you to the next battle or strategic turn.

16.0 TACTICS

16.1 SUPPRESSION

Suppression is the term used to describe the fact that people keep their heads down while they are being shot at. A soldier desperately seeking cover is not shooting at the enemy.

Typical suppression strategy is to have one or two units Fire on the enemy while another unit advances closer. When the advancing unit has reached its position, a unit further back moves up. With their rapid fire and large ammunition supplies, machine guns are excellent at suppressing enemy troops, and mortar attacks can force advancing infantry to hit the dirt without exposing your troops at all.

Take this example: You want to attack an enemy building that contains a force of enemy troops and you have a machine gun team and two infantry teams to attack with. After setting up in a suitable location, the machine gun can open fire on the building. Both infantry units would want to fire as well. This large volume of fire would keep the enemy away from doors and windows. After a few seconds, one of the firing infantry units would move up then resume firing, allowing the second infantry unit to also move up. By switching off, both infantry units can approach the building in relative safety.

When suppressing the enemy, be careful not to walk your own troops into the line of fire. Soldiers can be accidentally killed by friendly units.

16.2 FLANKING

Flanking describes any attack made from a direction that the enemy is not facing. Units that are being shot at from more then one direction have a hard time finding cover and quickly lose morale. Units being flanked also have a difficult time returning fire when attacked from multiple directions.

Take the previous example: A flanking attack would begin with suppression fire as previously described, but instead of the leap frog movement of the infantry units, one infantry unit would move to the side of the building. Once in position it would open fire.

Flanking is not only a powerful tool against infantry, but in many cases can be the only way to deal with the thick frontal armor of enemy tanks.

17.0 STRATEGIC LEVEL

The Strategic screen controls the movements of Battle Groups for Operation and Campaign play. At this level, you determine the battle plan, not for squads of men on the battlefield, but for "The Bulge" itself. Each of the Battle Groups represents the much larger military units that fought at "The Bulge". The result of a Battle Group in combat represents the success or failure of the entire formation.

17.1 THE STRATEGIC MAP

Pictured below is the Wacht am Rhein operational area with map connections. A larger printable version of this image is available in your support folder.

Note

Will you achieve what Germany historically could not? Or, will you allow the Germans to advance in the hopes of then cutting their supply lines? "Lets have the guts to let the Krauts go all the way to Paris. Then we'll really cut them off and chew them up."….. General George Patton was reported to say at one strategic level meeting. You get to decide.

The Strategic Map shows the general region that most of the Battle of the Bulge was fought over. During a particular Campaign or Operation, some or all of the Strategic Map may be available. Each available map has a colored hexagon in its center. The configuration of this hexagon denotes who controls the map or if that map is currently contested. It also shows where supply depots are. Maps are connected by roads. A Battle Group cannot move to another map, unless a road connects them and they control the victory location connected with the road they are leaving from.

A complete and detailed Strategic Map Connection overview can be found via the Windows START Menu folder for Close Combat: Wacht am Rhein™

American Control........... White Star on Green
German Control .... Black Cross
Mixed Control................ 1/2 White star 1/2 Black Cross.
American Supply Depot . Green Barrels
German Supply Depot .... Red Barrels

Detected enemy and friendly Battle Groups are visible on the Strategic screen. You can look at any Battle Group by left-clicking on it. This displays the units that make up the Battle Group on the task bar at the bottom of the screen. Click on any unit in the Battle Group to examine the Soldier screen for that unit.

American and German Battle Groups also show a star or cross above them. The color of this icon displays the approximate relative firepower of each Battle Group.

Green	Strong anti tank (AT) and anti personnel (AP)
Yellow	Moderate AT and strong AP
Orange	Moderate AT and AP
Red	Weak AT and moderate AP
Black	Very weak AT and weak AP

Units with low firepower are best used defensively, to prevent enemy advance, while your stronger units attack. Even the heaviest armored column can be held at bay by a properly led infantry group.

17.2 WEATHER AND GROUND CONDITION INDICATOR

At the top left hand corner of the Strategic Map is the weather indicator showing the current weather for the strategic turn being played. Below the weather indicator is the current ground condition for the strategic turn being played.

During a storm muddy ground will freeze and be more passable but many open fields will be covered with deep snow, making them more difficult to cross. The worse the weather, the less air support and air re-supply available.

17.3 STRATEGIC TURN INDICATORS

Below the Ground Condition Indicator are the Strategic Turn Indicators showing the beginning and ending day for the operation or campaign, the current day, and the turn number for the day. Clicking on the arrow next to the current day indicator shows reinforcement Battle Groups and where they may arrive on the date shown. The dates run from the first day the Germans launched the attack (December 16, 1944) through the number of days set for the operation or campaign (25 days maximum).

17.4 BATTLE GROUPS

Battle Groups represent a force roughly the size of the lead element in a regimental combat group. These Battle Groups are composed of various forces; infantry, tanks, and other vehicles, and support teams. A full strength Battle Group has 15 active units and additional inactive units shown on the left of the Battlegroup screen. As combat occurs, Battle Groups take losses, and these are replaced from the inactive units in the forcepool. Under certain circumstances you may be able to gain reinforcements by clicking on the "Reinforce" button on the Battlegroup screen if it is available.

17.5 REPAIR AND REPLACEMENT

Tanks that have been damaged and infantry units that have taken losses are able to make some repairs in the field and find replacements, respectively. All damaged tanks are assigned for field repair after each battle. 40% of damaged tanks can be made functional, but the rest are either too damaged for repair and/or scrapped for parts to repair the 40% that survive.

Any infantry unit that has 60% or more of its soldiers killed or seriously wounded is disbanded, and its survivors are either sent to other units or rotated to the rear. Infantry units that take less than the 60% losses are assumed to find replacement men from disbanded infantry units or from new men brought up from the rear.

Scrapped tanks and disbanded infantry units must be replaced from the unit's reserve force pool.

Replacements do not strictly come forward from "rear" areas. They are also supplied from the larger organization which your Battle Group belongs to. Even when surrounded, your Battle Group can receive replacements because it is assumed they are being sent over from company or division HQ, which has been surrounded along with your Battle Group.

Battle Groups out of supply have reduced chance of repairing damaged vehicles or replacing infantry losses.

17.6 RETREAT

Battle Groups will retreat when routed from a map (due to morale failure) only under the following circumstances:

- The battle ends because of a force morale failure;
- The losing Battle Group holds at least one exit Victory Location when the battle ended;
- The exit Victory Location(s) held by the losing Battle Group is connected to an empty map controlled by friendly forces; and
- The losing Battle Group has lost all its Victory Locations because of the force morale differential (the difference between force morale of the winning and losing Battle Groups).

If all these criteria are met, the losing Battle Group will randomly retreat by one of the available exit Victory Locations to an adjacent map. If not, it is forced to disband. Battle Groups that retreat, can't move on the following strategic turn.

17.7 DISBANDING

Battle Groups are disbanded whenever the player chooses or whenever they are forced to leave a map, and can't retreat, either through loss of victory locations or from morale failure. If a Battle Group that disbands is in supply when it disbands, all of its units are returned to its reinforcement pool. If you have only one Battle Group remaining you may not willingly disband it.

Disbanding a weakened Battle Group that is in supply can be an excellent way of clearing a road for better-equipped Battle Groups moving up. This allows the weakened Battle Group to reform in the rear and it doesn't lose any of its infantry or vehicles.

If a **supplied** Battle Group is **forced** to disband it loses 25% of its active roster.

If a Battle Group **voluntarily** disbands while it is **out of supply**, it loses all of its active vehicles, and 25% of its remaining infantry units are captured before they return to the group's supply pool.

If an **unsupplied** Battle Group is **forced** to disband involuntarily, because it is forced off a map, it loses all of its vehicles, and 50% of its infantry units are captured. This can be a crippling loss.

17.8 REFORMING AND REINFORCEMENTS

Reinforcement Battle Groups are Battle Groups that arrive on the second or later day of a campaign or operation. In pre-generated or user created Campaigns and Operations, the Battle Group arrives on a pre-designated map.

If the Battle Group is trying to arrive on a designated map, but cannot because there was another friendly

> **Note**
> *"If that supply depot is enemy controlled, the Battle Group attacks onto the map."*

Battle Group on the map, it finds the closest open "friendly" supply depot to it's initial deploy map and deploys there.

When a Battle Group disbands, it tries to reform on a friendly map with a supply depot on the first strategic turn of the next day

17.9 SUPPLY

There are two types of supply depots, major and minor. On the strategic map a major supply depot has a 3-barrel icon, whereas a minor supply depot has a 2-barrel icon.

Battle Groups receive fuel and ammunition from friendly supply dumps. A Battle Group can receive supplies from any friendly dump that it can trace a path back to that dump by passing through only friendly, uncontested territory. This is the line of supply. If you can cut it, you can drastically reduce the combat effectiveness of the Battle Group you have cut off. A Battle Group that has been cut off is described as "out of supply." For each turn that an unsupplied unit engages in combat, it drops one supply level in ammunition and fuel. Loss of ammunition supply reduces ammunition starting levels during battles. Loss of fuel won't affect tanks immediately. However, once fuel supplies reach **Low**, there is an increasing chance that each vehicle begins each battle out of fuel and thus immobile.

Supply State	Fuel Level Effect	Ammunition Level Effect
High (green)	Normal	100% Optimum
Normal (green)	Normal	80% Optimum
Low (yellow)	30% Chance for vehicle immobility	60% Optimum
None (red)	60% Chance for vehicle immobility	30% Optimum

A Battle Group can start with 1, 2 or 3 fuel and ammunition levels based on the supply setting for each side for an operation or campaign (Full = 3, Limited = 2 and Low = 1). As the Battle Group moves and fights, fuel and ammunition expenditure and resupply per strategic turn is as follows:

- If a Battle Group fights, it uses 1 ammo level.
- If a Battle Group moves or fights, it uses 1 fuel level.
- If a Battle Group can trace supply to a major depot, then it regains 2 fuel and 2 ammo level (to the maximum level allowed)

- If a Battle Group can trace supply to a minor depot, then it regains 1 fuel and 1 ammo level (to a maximum level of 2 for each).

- If a Battle Group gains uncontested control of an enemy major depot, its fuel level goes to the maximum; however, its ammo level is not affected.

- A Battle Group's re-supply by air-drop allows it to regain 3 fuel and ammo levels.

A Battle Group that is out of supply and low on fuel, can capture fuel from enemy major supply dumps. To use enemy fuel, the Battle Group must occupy the dump; once it leaves the dump, the fuel supply starts to diminish as normal. Enemy supply dumps only provide fuel on site; no supply line is created. Enemy supply dumps do not provide ammunition.

In addition to loss of supplies, Battle Groups that are out of supply have a more difficult time replacing infantry losses and repairing/replacing tanks and vehicles. Battle Groups whose ammunition supply reaches **None** only replace infantry or repair damaged vehicles 75% of the time.

17.10 STRATEGIC TURNS

Each strategic turn represents several hours of fighting. There are normally two strategic turns over the course of a day.

> **Note**
> *"Armored, armored infantry, and recon Battle Groups cannot move to another map at the strategic level if they have run out of fuel."*

> **Note**
> *"The game is capable of being modified to have as many as four strategic turns per day."*

During each strategic turn, you may move each Battle Group you control, and assign air strike, artillery and mortar support, or air re-supplies available to you. If you feel it necessary, you may also disband any Battle Groups. When you have finished your strategic moves and assignment of support, hit **Execute**…this brings up the Strategic Results screen. The game is automatically saved at this point. After reviewing the results of your decision, you play out any resulting battles in an order set by the game.

17.11 MOVING BATTLE GROUPS

To move a Battle Group, left-click on the Battle Group. When the Battle Group is selected, a yellow border will appear around all adjacent maps, the yellow border is thicker for those maps that the Battle Group may move to. When you have decided where you want to move your Battle Group, you drag it to that map. Movement arrows will then appear to remind you of where you have ordered the Battle Group to move to.

Battle Groups on uncontested maps may move along any connecting road. On maps that are of mixed control, you may only move along roads for which you hold the victory locations.

You may move a Battle Group onto a map that you already occupy. However, if the unit currently on the map does not move off of it, the other unit will not advance. If you order two Battle Groups onto the same map, the orders issued to the second unit cancel out the orders given to the first. It is possible for more than one unit to use a road, so units may switch maps.

> **Note**
>
> *"Each side is only allowed to have one Battle Group on each map at a time. "*

All movement on each turn happens simultaneously. If two adjacent enemy forces move at each other, the battle occurs on the map of the slower Battle Group. Armor groups are faster than mechanized groups, and mechanized groups are faster than infantry. If the German and American Battle Groups are the same speed, the tie goes to the Germans, and the battle is fought on the American map.

When you are done making your moves and have assigned any support options, you may finalize your orders with the **Execute** command which takes you to the strategic results screen so you can see the result of your movement orders.

The Strategic Results screen indicates the outcome of the moves for the turn and if any battles are to occur. To fight the battles listed, or to advance to the next strategic turn, left-click on **Next**. The order in which the battles are fought is from north to south and from west to east.

In Operations and Campaigns that start on the 16th, the Americans cannot move during the first strategic turn….this is the result of the total German surprise at the start of The Bulge. Furthermore, from the 16th through the 19th, each American battle group has a chance of being randomly redirected by the German saboteurs of Operation Greif according to the following:

Day 1 (Dec. 16) .... 15% chance
Day 2 (Dec. 17) .... 15% chance
Day 3 (Dec. 18) .... 10% chance
Day 4 (Dec. 19) .... 5% chance
Day 5 – 25 .... 0% chance

17.12 RESTING AND DIGGING IN

A Battle Group that does not move during a strategic turn is considered to have rested. Battle Groups that have rested recover lost morale and have time to dig in.

If a resting Battle Group is attacked, it defends its map from prepared positions. When an infantry or support unit is placed on an open stretch of ground, a trench or gun pit is placed under them that provides cover where none existed previously. These fortifications are permanent, and appear on the battlefield in future battles. Enemy troops are unaware of field fortifications until they have a line of sight. So what may appear to an attacker as an open field on a map could actually be a vast network of enemy trenches.

Infantry trenches are dug based on the unit's facing, so it is important to establish facing before clicking Begin.

17.13 AIR STRIKES AND ARTILLERY/MORTAR SUPPORT

Air Strikes, and Artillery and Mortar support are available from buttons on the right hand side of the strategic map screen. The number by the support option indicates the number of support missions available each day. It is important to remember that there are multiple strategic turns in a day. If Artillery or Mortar support or an Air Strike is assigned, but not used during a battle, the unused support mission is available for use later that (strategic) day. To assign support, click

> **NOTE**
>
> *"Artillery support is only available on certain maps. For the Germans this is generally the maps near the Eastern side of the strategic map. For the Americans artillery is available on all maps. The maps where artillery is available will highlight when you select artillery support icon."*

on the appropriate symbol and drag it to the Battle Group you wish to support. The Battle Group icon will indicate the support assigned to it. Artillery, Mortar and Air Strike support is assigned to Battle Groups, not to maps. A Battle Group may have all three support types available for a battle, but never more than one of each. To remove a support mission from a Battle Group and place it back in the available pool, left click on the tab that appears above the unit on the strategic map.

17.14 AIR SUPPLY

Fuel and ammunition levels drop quickly for Battle Groups that are out of supply. However, these cut-off Battle Groups can still be supplied via air drop. Air Supply support is assigned and removed in exactly the same way that Air Strike, Artillery and Mortar support is assigned… by left-clicking and dragging from the pool of available missions each day. Battle Groups that receive Air Supply have their ammunition and fuel levels set to high. It should be noted that when using the historical weather option, Air Supply drops are intermittently available. The Germans have no air resupply throughout the campaign. The Americans can make one drop per day on the 23rd – 26th December (Days 8 -11 of the campaign Timeline).

17.15 INTELLIGENCE

When on the Strategic Map Screen, you are usually unable to see the enemy. On a clear day, American forces can see which German Battle Groups occupy maps within the Bulge. Otherwise, the only enemy Battle Groups you can detect on the strategic map are ones that

you have fought with during the previous turn. German spies have a 5% chance per strategic turn of detecting American units, regardless of where they are on the map.

17.16 WEATHER

Weather affects the availability of Air Strikes and Air supply. Generally, the clearer the weather, the more support that is available. Pre-generated scenarios use the historic weather conditions of The Bulge, User created scenarios can opt for historic, random, or clear weather effects.

17.17 WINNING CAMPAIGNS AND OPERATIONS

User created Campaigns and Operations continue until the pre-determined ending date, or until one side has complete control of all usable maps. If a strategic layer game ends because of time out, then each side totals points for every victory location on every map in the scenario and the army with the most points wins.

Remember, each victory location is worth between 1-3 points. The only exception in scoring is during the Grand Campaign in the Campaign section. When playing the Grand Campaign against the AI, your score is based not on total victory location points, but on how your army does compared to how each side performed historically. In a Grand Campaign contest with a human player, your campaign victory is determined by your score

17.18 STRATEGY TIPS

If an enemy advances, attempt to cut off his route of supply. Units with diminished ammunition supplies are far easier to deal with, and a battle group forced to disband while cut off takes heavy losses. In the same light, avoid allowing your troops to be cut off if at all possible.

Remember, on the battle map, that if the fight ends in a truce or time out, the army who controls the Victory Locations associated with the a road exit from the map can use that road to move to another map. If you assign Artillery and Mortar support or Air Strikes to a unit early in the day, and you appear to be winning the battle without calling on the support, keep them in reserve. Unused Air Strikes, Mortar and Artillery support missions are returned to you for use later during the same day.

One of the reasons that the Allies did not believe that Germany would attack in the Ardennes was the fact that the region was heavily forested, and that the few narrow roads would not support a large scale invasion. They were almost correct. During much of The Bulge, the roads were frozen not only in ice, but in bumper to bumper traffic. You will quickly learn that to command in The Bulge, it is almost as important to be a good traffic planner as it is to be a good tactician.

18.0 SCENARIO EDITOR

18.1 THE MAP

The Scenario Editor is a very easy to use feature that allows you to design your own Campaigns and Operations. It is strongly suggested that you become familiar with the strategic screen and play a few pre-made Campaigns before designing your own. The Map Screen shows the entire Bulge strategic map, but all of the map location boxes are blank. Left click on a location to rotate through all its possible control and supply states.
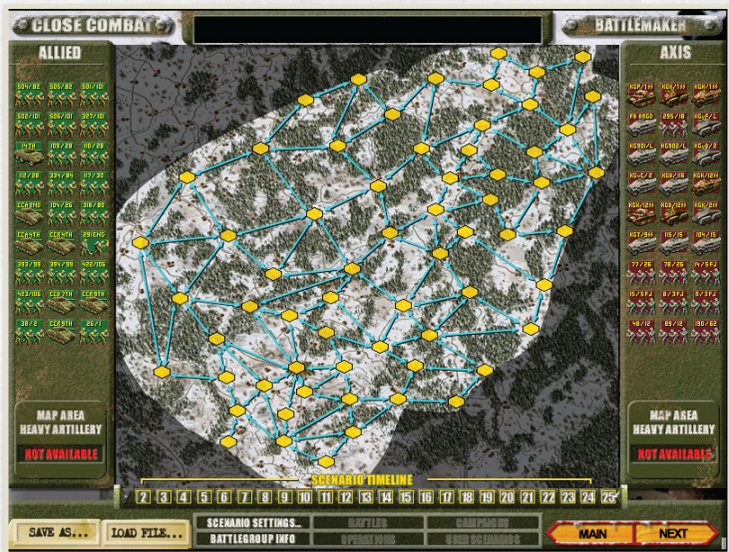
The possible starting states are:

American control........... (no supply depot)
German control.............. (no supply depot)
Split control .... (no supply depot)
American control........... (American major supply depot)
German control.............. (American major supply depot)
Split control .... (American major supply depot)
American control........... (German major supply depot)

German control.............. (German major supply depot)
Split control .... (German major supply depot)
American control........... (German minor supply depot)
German control.............. (German minor supply depot)
Split control .... (German minor supply depot)
American control........... (American minor supply depot)
German control.............. (American minor supply depot)
Split control .... (American minor supply depot)

Every map that will be played on must be contiguous to each other. There must be a possible path from every map to every other map. Avoid unconnected islands. For Campaigns and Operations each side must also have at least one supply depot.

Once you have set all of the initial starting states on the map, you should turn your attention to the desired number of days in your Operation or Campaign. The date bar starts with two sliding markers, one at each end of the 25-day time scale. These represent the starting and ending days of your campaign or operation. To change the starting and ending dates, click and drag the bars to the days that you would like. If you click on a day, a small green arrow appears over it. This arrow represents the day that Battle Groups appear on the map. Changing the day allows you to have reinforcements arrive during different days of the campaign. Days that you have set reinforcements to arrive are marked with an **R** over the position of the day's number.

When looking at the Scenario Editor map, you will only see the units that first appear on the day that is currently selected.

To place a Battle Group, left click on it, and then drag it to the map you wish it to start on. Remember that each side can have only one Battle Group on a map. Each side must have at least one Battle Group appear at some time during the campaign or operation.

Once you have selected the Battle Groups you wish to appear, you can set the levels of available supplies for each side. This affects ammunition and fuel levels for each side, and at **Low** supply there is a chance for tanks and vehicles to be out of fuel during each battle.

You can also set the availability of mortar, artillery and air support, as well as the weather and initial supply conditions, from the buttons on the pop-up screen. When you are done, you may save the scenario you have created.

Scenarios that consist of just one map are Battles. Scenarios which contain both multiple maps and/or multiple Battle Groups are Operations or Campaigns. In all cases, multi-map battles require all maps included in the scenario to be contiguous, in other words, you must be able to trace along a road from any map in the scenario to any other map in the scenario. Any map left unclaimed is inaccessible to the user once the game has started.
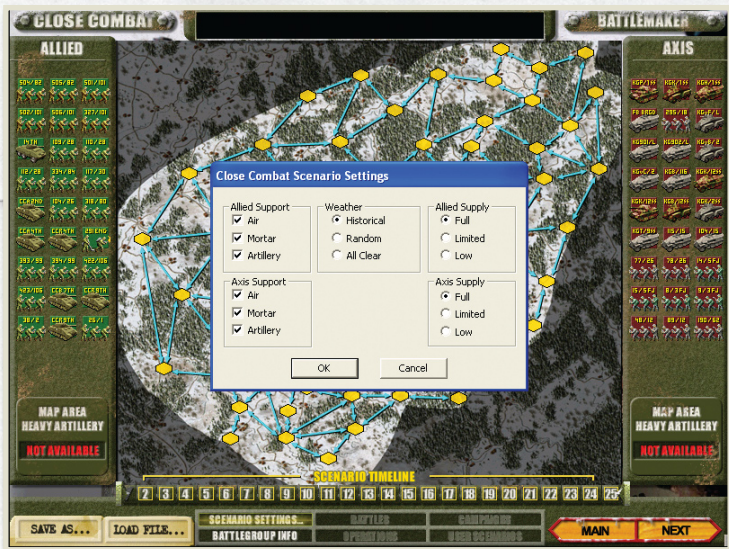
18.2 EXAMPLE BATTLE

Suppose you want to create a Battle with the Americans defending St. Vith on December 17th. Click on the St. Vith map once, turning it into an American map and move the two date bars so that the 17th is lit. Then click on an American Battle Group you wish to have defend from this list of available units, and choose a German attacking Battle Group and drag that unit to the map. If you want the defenders of St Vith to be short on supplies you can lower their supply level.

Now all you need to do is save the game. A pop-up window appears asking for the name of the battle, as well as a short description. Once you've named and saved it, this battle is available on the command screen under the User Scenarios listing.

To create Operations and Campaigns, all you need to do is add more maps, giving each side at least one supply depot, and more Battle Groups. Remember that you can have Battle Groups appear on the strategic map after the first day by clicking on the date you want them to appear and then dragging them to a map. There is a green arrow partially obscuring the date the units are appearing.

19.0 MULTIPLAYER

19.1 CONNECTION

To help coordinate Internet connections you can use use Instant Messaging, Email, Websites, Fax, VOIP or Telephone to arrange online multiplayer Close Combat Wacht am Rhein sessions. Two players can connect over the internet, or by LAN, to play Close Combat Wacht am Rhein. One player must act as HOST and communicate his IP address to the CLIENT player. It

is recommended that the player with the fastest upload connection speed act as HOST. In general, cable modem internet service has faster upload speed than DSL which is faster than dial-up internet connections.

19.2 IP ADDRESS

19.2.1 EXTERNAL IP ADDRESS

There are web sites such as whatismyip.com and checkip.org that will display the user's current external IP address. Additionally, there are freeware applications such as Get My IP Address and IP Address Monster that will display the user's external IP address.

- One of the easiest ways for the HOST player to determine his current external IP address is to start Close Combat Wacht am Rhein, click the Multiplayer button on the Command Screen, then click the HOST button on the Multiplayer Screen. The Host's IP address will then be displayed in the lower left of the screen, to the right of the Search button.

- It is important for a HOST player who accesses the Internet via a LAN, from behind a router or through a proxy server, to provide the JOINER players with his external gateway IP address. In such cases, when the HOST uses the Close Combat Wacht am Rhein Multiplayer Screen to determine his IP address there will often be two IP addresses shown, the local IP address followed by the external or gateway IP address. It is the HOST external gateway IP address that must be provided to JOINER players.

19.2.2 INTERNAL IP ADDRESS

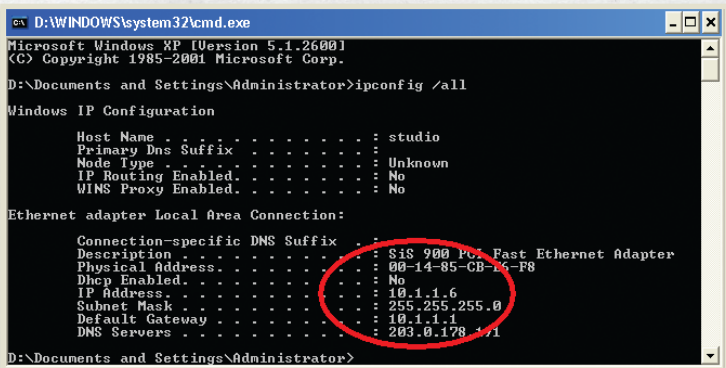The HOST player can determine his internal IP address by several methods.

One of the easiest ways for the HOST player to determine his current internal IP address is to start Close Combat Wacht am Rhein, click the Multiplayer button on the Command Screen, then click the HOST button on the Multiplayer Screen. The Host's IP address will then be displayed in the lower left of the screen, to the right of the Search button

Vista users Go to the **start menu** and type **command** in the box. Then right-click on **Command Prompt** and click **Run as administrator**. If a **User Account Control** window pops up, click **Continue**.

At the C:\> prompt type **ipconfig**. Then press **Enter**. Your IP address, subnet mask and default gateway will be returned to you. If your IP address is 192.168.x.x, 10.x.x.x, or 172.16.x.x, then you are receiving an internal IP address from a router or other device.

Windows 2000/XP users can click the **START** button, click **RUN**, type -- **cmd** – in the RUN window and click OK. Then in the command line [DOS] window type – ipconfig – and press the Enter key.

Windows 98/ME users click Start, type – **winipcfg** – in the Run window, and then click OK.

19.3 FIREWALLS

Firewalls, Routers, Proxy Servers and Virtual Private Networks can interfere with multiplayer Close Combat Wacht am Rhein internet connections. Refer to the corresponding user manuals for these types of hardware and software if you are experiencing difficulty establishing multiplayer Close Combat Wacht am Rhein internet connections. Websites such as portforward. com and HomeNetHelp.com offer further guidance in understanding and configuring Firewalls, Routers, Proxy Servers, Virtual Private Networks as well as solutions such as port forwarding and DMZ that may be required to enable multiplayer Close Combat Wacht am Rhein internet connections.

Close Combat Wacht am Rhein uses the following PORTS

UDP 6073 and the range UDP 2302 - 2400

Multiplayer games operate by having one player, called the Host, start a game. The second player joins the game that the host creates. To play a multiplayer game, the computer that hosts the game and the joining computer must both have a copy of Close Combat Wacht am Rhein installed.

- Internet TCP: Using this type of connection, you can play the game with another player over a LAN (Local Area Network), or over the Internet.
- Internet UDP: Faster though slightly less stable then TCP, players may elect to connect over the Internet or a LAN using the UDP protocol.
- Modem: Two computers with modems can connect over phone lines.
- Serial Connection: You can also link to another player over a null-modem cable.

19.4 USING A TCP CONNECTION

After both players have connected through their ISPs, both should select Multiplayer from the Main Screen. From the Multiplayer screen, select Internet TCP option.

If you are playing over a LAN, you can join any game listed. To join a game, left click on it, then left click on Join, or simply double click on the game you want to join. To get a current list of available games click the Search for Games button.

JOIN A GAME

If you want to join an Internet game, select the **Host IP** button and enter the host's IP address. The host's IP address appears on the bottom of their screen. You need to find out from the host player what their IP address is. When you have entered the IP address and hit OK, you must then click on "Search for Games. Wacht am Rhein will search the IP address for hosted games and display them under 'Games:' on the lower left of the screen. When you are done, select ready and wait for the host to start the game.

HOST A GAME

If you want to host the game, click on the **Host A Game** button. Your IP address appears on the bottom of the screen. You must inform the second player of your IP address so that they can join. The Next button is shaded out until both players select ready.

After electing to host a game the **Select A Battle** button takes you to the Command Screen where you can select the battle, operation, or campaign. If you are starting an operation or campaign be sure to decide on the Realism Rating settings.

When you have made your selections, select Next to return to the Multiplayer screen and Select Ready. When the second player has joined and selected Ready you can select Next to start the game.

19.5 USING A UDP CONNECTION

Other than selecting the different protocol, connecting with UDP is the same procedure as using TCP.

19.6 USING A SERIAL CONNECTION

Power down both machines and connect their serial ports with a null-modem cable. Start the game, select Multiplayer, then Serial Connection. A box appears requesting port, baud rate, stop bits, parity, and flow control. Other than the port, these settings need to be the same for both machines. Once this is done, players may Host and Join as in TCP games.

19.7 COMMUNICATING WITH YOUR OPPONENT

You can send messages to other players at any time. To send a message during play, click the **CHAT** button or press **ENTER**. Type in your message and then press **ENTER**. The message appears briefly on the other player's screen.

20.0 UNITS

The fighting along the Ardennes was conducted by hundreds of thousands of men using a wide array of weapons and vehicles.

20.1 INFANTRY

Light infantry are armed with rifles and grenades. Because they are less encumbered, light infantry can travel good distances without becoming tired. This makes them well suited for attacking flanks and probing open territory.

Medium infantry have rifles, grenades, and light automatic weapons like the BAR. Medium infantry are well rounded, in terms of both mobility and fire power.

Heavy infantry have even more firepower, such as flamethrowers and demolition charges. Well suited to close combat, heavy infantry can also be quite effective against tanks if they can get close enough. Because of the heavy weight of their gear, heavy infantry are slow and can quickly become winded.

Snipers are deadly long range shooters who work alone. They are more accurate at long range, are more likely to target enemy leaders, and are more likely to kill, but they have a low rate of fire. Snipers are easily suppressed once they are discovered and should switch positions regularly. Remember that the talent of a sniper is not in the amount of enemies he kills directly; by targeting officers and suppressing enemy troops at long range, he can sap enemy morale and reduce their efficiency. Snipers cannot capture victory locations.

Scouts are used for infiltrating enemy lines to check deployments and set ambushes. They are quick and stealthy. They are faster and less likely to be discovered than average infantry. They are very effective at close range but not effective at long range. Scouts are particularly valuable in urban combat.

Infantry anti-tank teams are armed with weapons like the Panzerschreck and the Bazooka. Infantry AT weapons generally have a low rate of fire, and limited ammunition. They are often only effective against the sides or rear of enemy armor. AT teams must use concealment and surprise to be effective.

BASIC INFANTRY TACTICS

During the Battle of the Bulge the ratio between infantry and tanks was hundreds to one. Infantry being the principal component of the battle, it is vital that you use them properly. Infantry are extremely vulnerable to virtually every other unit when in the open. They should always be kept under some kind of cover: buildings, trenches, forest, or smoke if necessary. When facing armor, infantry should assume Ambush positions and attack from the side or rear.

SECONDARY WEAPONS

In addition to their primary weapons, many soldiers carry secondary specialist weapons like explosive grenades, and demolition charges. The number of these weapons available for each unit is listed on the Battle Group screen. When the opportunity arises to use these weapons your soldiers do so automatically.

20.2 MORTARS

Mortar crews engage the enemy with indirect fire, lobbing powerful explosive shells great distances. While a mortar team is more accurate while firing at targets they can see, they are often best positioned well away from the front line where they can hammer enemy guns, infantry and light vehicles from safety. Avoid setting mortars up directly under trees where branches might detonate a round right over the firing team.

The heavier a mortar is, the slower the rate of fire, but the more powerful the shell. Heavy and medium mortars are powerful enough to be used against buildings. Mortars can also lend vital support to friendly units by dropping smoke at great distance.

Remember if targeting light vehicles, that they are particularly effective against open topped vehicles such as half-tracks.

MORTAR TACTICS

A mortar is more of a tool than a weapon. It is important to understand that in most cases, the inaccurate nature of mortars make them only marginally useful at killing. Mortars are useless against any tank with an armored top and only kill an infantryman if the shell it launches lands very close. Aside from its immense power to suppress infantry, where the mortar shines is in destroying AT guns in the open, and for dropping smoke anywhere on the map.

Nothing lessens the blow of enemy ambush like the power to shower your units in smoke while they pull a hasty retreat.

AT guns make good targets for mortars. AT guns are unarmored, generally immobile, and need line of sight to return fire. When an AT gun is detected in the open, it is often wise to pull your troops back and simply pound the gun until it is disabled. If the gun is defended by a building, dropping smoke in front of the building can temporarily disable it.

20.3 MACHINE GUNS

Machine guns are highly effective against infantry and light vehicles and are extremely effective at suppression. However, machine gun crews can only move their weapons slowly and require time to set up the weapon when they reach a new position. Because they are difficult to move and slow to set up, machine guns are often set up in buildings or other such cover locations to prevent them from being destroyed by mortar fire.

MACHINE GUN TACTICS

Machine guns are powerful weapons and are even more useful in that they generally do not require close supervision. Place machine guns in well protected areas, preferably with a roof and a wide field of fire, and they can work wonders against enemy infantry and light vehicles. Successful Ambush attack by machine guns can be devastating. If a machine gun draws the attention of enemy armor, it is definitely time to retreat.

204 FLAMETHROWER

These are very effective against both infantry and armor, but have a very short range and limited shots. They are heavy and slow moving, but don't require a setup period and can be fired on the run. As might be imagined, flame-throwers tend to set fires. Troops with flame-throwers are extremely vulnerable and can actually explode if hit.

FLAMETHROWER TACTICS

Flamethrower teams require a great deal of support from other friendly infantry. Their short range and vulnerability require either total surprise or that the enemy be well suppressed. When fighting armor, other infantry units can provide support to flame thrower teams by fixing the enemy's attention elsewhere.

20.5 ANTI TANK GUNS

Anti-tank guns are field pieces, modern cannons placed in the field to deal with enemy armor. AT guns are generally immobile, although smaller versions can be dragged about by their infantry crews. Inexpensive to produce but unarmored, AT guns require a mix of surprise and proper placement to be effective. AT guns can be highly effective against infantry, but are often better left hiding in wait for enemy armor that friendly infantry is unable to deal with.

AT GUN TACTICS

There are two schools of thought regarding AT gun tactics. The first school says that AT guns should be placed on hills and in other places with wide views and wide fields of fire. This ensures that the AT gun has a chance to target and hopefully destroy the enemy, but it also leaves the gun vulnerable to return fire or mortar bombardment.

The alternative school is to conceal AT guns in buildings. This provides both concealment for the gun and protection for the crew. The downside to this strategy is that the AT gun's field of fire is generally very restricted, and the building only offers limited protection against tank rounds.

20.6 CREWS

Vehicle Crews have little value outside the vehicle. When they abandon their vehicle they move a short distance away from the vehicle and seek cover. Gun crews are armed. If the gun runs out of ammo they will defend the gun; if the gun is destroyed they try to seek cover as vehicle crews do.

20.7 VEHICLES AND TANKS

Close Combat: Wacht Am Rhein™ contains a wide variety of Allied and German vehicles.

HALF-TRACKS AND LIGHT VEHICLES

Half-tracks and other light vehicles allow the rapid deployment of heavy anti-infantry support and occasional anti-armor weapons. However, vehicles like half-tracks and armored cars are only lightly armored and vulnerable not only to anti-tank weapons but to rifle fire as well.

LIGHT VEHICLE TACTICS

Light vehicles have traded off armor for speed. Use that speed to launch flanking attacks and to reinforce infantry and tanks from a distance. Never bring a light vehicle anywhere near an enemy tank. Remember to stay on the move as well or risk drawing enemy mortar fire, which can punch right through the top of an armored car or half-track.

TANKS

A tank is virtually invulnerable to small arms fire. Tanks can carry machine guns to use against infantry, high explosive charges (HE) for longer ranged attacks against infantry (like a hand grenade with a greater range), and armor piercing rounds (AP) that are effective against all but the heaviest tanks. While tanks may seem like the lords of the battlefield, a tank is vulnerable to properly armed infantry who can get close enough. Tanks are well placed behind advancing infantry, lending their considerable firepower while allowing the infantry to ferret out anti-tank teams and other infantry that might lie in wait.

When not in immediate danger, tank crews generally keep portholes and the top hatch open, this allows maximum visibility, although it does allow the possibility of surprise attacks while partly vulnerable, particularly from snipers. Once danger is recognized, such ports are closed, affording protection but limiting visibility.

As a general rule, tanks have much heavier armor on the front than they do on the sides or rear. Please refer to the section entitled Battlefield and Other Controls for an explanation of how movement affects facing.

HEAVY TANKS

These are bigger, slower, more powerful tanks. Heavy tanks have thick front armor that is usually sufficient to make them immune to lesser tanks. The front armor of a German King Tiger heavy tank could take a great many direct hits from an American Sherman tank without being damaged. Heavy tanks share the same vulnerability to infantry as do regular tanks.

MOBILE GUNS – TANK DESTROYERS AND SELF PROPELLED HOWITZERS

These weapons have large guns that can fire AP rounds like tanks, but they are not heavily armored. They have good firepower, but little defense, and cost less then tanks. Mobile guns generally have no turret, firing only forward over a limited arc. While not nearly as flexible as tanks, their powerful forward guns are often the only way of dealing with armor from the front.

FLAMETHROWER TANKS

These are very effective against both infantry and armor but have a very short range. Because of their severe range limitations and modest armor, FT Tanks need to stay away from

conventional tanks using buildings, foliage, smoke, and hills for cover until they can get close enough to strike.

BASIC ARMOR TACTICS

While great books have been written about the high art of tank vs. tank warfare, the basic principal is very simple. Whenever possible, be positioned in such a way so that you are shooting at an enemy's weak side or rear armor while he is shooting at your thick front armor.

Also remember that infantry cannot harm tanks at long range but can destroy them with a close range ambush on the sides or rear. To avoid this, tanks should act as support vehicles, using infantry to ferret out enemy infantry and concealed AT guns. Once the enemy is found, the tank can then blast away from range.

21.0 HISTORICAL OVERVIEW

By the fall of 1944, the outcome of the Second World War was obvious to most people. The Allies had made their landing at Normandy, and had liberated most of Europe. To the East, Russia had recovered from the shock of the German attack, and was using its vast industrial might and massive population to push forward. German losses were approaching four million men. Germany still had approximately 10 million men in uniform, but most lacked the training and experience of those who had already died. German industry was stronger than might be expected given the level of Allied strategic bombing, but it was on the decline. At home, an assassination plot by Hitler's own officers had almost succeeded in killing him.

 Faced with threats from all sides the German OKW (Oberkommando der Wermacht, the military general staff) decided that they had to go on the offensive to have any hope for victory. Due to the wide open geography, and the size of the Russian army, there was no way that Germany could launch a meaningful offensive to the east. Compared to the Russians, the Allied forces in Western Europe were much weaker, and the Allies were having serious problems getting supplies to the front. The OKW believed that they could use the same blitzkrieg tactics that had been used to open the war to retake the strategic city of Antwerp. Retaking Antwerp would cut off Allied units along the German border, and further confound the Allied supply problem. The Germans also hoped to convince America and England to accept a separate peace. This plan was called "Wacht am Rhein" (Watch on the Rhine), and was kept a closely guarded secret amongst a select few officers. Even the generals leading the attack were only briefed just prior to when the attack was to begin.

The Plan was simple. Three armies would break through the Ardennes front and Blitz towards Antwerp. The 7th Army led by General Brandenberger would advance along the south and protect the flank. North of Brandenberger, the Fifth Panzer Army under General Manteuffel would advance to capture the vital road junction of Bastogne. The newly created 6th SS Panzer

Army commanded by General Dietrich would spearhead the assault along the north. It was also hoped that by launching the attack in winter, bad weather would counter American air superiority. Some German leaders believed these forces could arrive in Antwerp in a week.

In preparation for Wacht am Rhein, the infamous commando Otto Skorzeny was ordered to infiltrate the American lines with English speaking German troops in an operation code named Greif.

The hundreds of thousands of men, thousands of tanks and trucks, and other assorted equipment that made up Wacht am Rhein were slowly moved up at night. Often the sound of advance was covered by the sound of airplanes.

Allied intelligence completely failed to detect the build up. The 75,000 men stationed

along the 80 some odd miles of the Ardennes had no idea what was coming. The Ardennes was considered a relatively safe posting. A total of six divisions were positioned along the front, half of those divisions were young men fresh out of training. The remaining divisions had seen hard fighting and were in the Ardennes to rest and to receive replacements for the men they had lost.

The German attack began at 5:30 A.M. on December 16th, 1944. Along the northern end of the front Sepp Dietrich began the battle with a massive artillery barrage followed by a rapid advance. Further south, Manteuffel simply slid across the line and infiltrated silently into the thinly held American lines.

Wacht am Rhein was a massive success on the first two days. The American forces were caught completely off guard. Outnumbered and ill-prepared American units were forced to retreat or were over-run. In places such as Clervaux, American forces fought desperate losing battles to delay the enemy so forces further back would have time to prepare.

The Germans sped forward, in one case the commander of the lead element of the 6th SS Panzer Army ordered his tanks over a known minefield simply because he was unwilling to take the time to go around or have it cleared. During this time, elements in the 6th SS Panzer Army reportedly shot American POWs rather then take the time to have them moved to the rear. News of the killings enraged U.S. troops.

Both sides were beginning to feel the effect of the limited road network in the Ardennes by the end of the second day. Traffic jams had formed as men and supplies filled the roads. The road network greatly aided American attempts to slow the Germans down. American forces managed to hold up far larger German units because the terrain prevented the Germans from bringing their numbers to bear. Meanwhile, Allied leadership was taking swift action. Armored divisions from the north and south, as well as reserve airborne units, were immediately dispatched to reinforce the Ardennes.

Between the 18th and the 21st the nature of the battle began to change. While the Americans were still largely in disarray, concerted efforts were being taken to hold strategic points including St. Vith and Bastogne. Increasing American resistance, traffic problems, and critical gasoline shortages began to bog down the Germans. Behind the American lines the existence of the German commando teams of Operation Greif had been discovered, and inspired paranoia and panic as far back as Paris.

Another advantage that the Germans had during the Ardennes offensive was their preparation for the cold weather. Having learned hard lessons about the power of cold on the Russian front, the Germans came prepared for the weather. American forces were not nearly as well equipped. American winter gear was not sufficient to keep out the cold, so many soldiers stuffed paper between layers of clothing to try and keep warm. Americans gathered sheets to cut into hastily made parkas for camouflage.

On December 21st St. Vith was finally overwhelmed by massive German numerical superiority. However, while the city was lost, in many ways St. Vith was an American victory. The Watch on the RHEIN plan had called for St. Vith to fall on the first day.

Bastogne almost suffered the same fate, but rapid reinforcements by the 101st Airborne Division helped to hold the town. The defense of Bastogne was so solid that the Germans chose simply to bypass it. By the 22nd Bastogne was surrounded on all sides, however the city's defenders refused to surrender.

Slowly what had started as a classic German Blitzkrieg had turned into a set battle as American reinforcements shored up the lines. With surprise and numerical superiority lost, the Germans could not push past the Allies. The situation was made worse for Germany as the weather started to improve. Allied combat air support took a heavy toll on German forces. Still, the Germans fought tenaciously.

By December 26th the Siege of Bastogne was lifted; it spelled the beginning of the end for Germany. By January 8th the high command realized the situation was hopeless and began issuing orders withdrawing the troops. The last great German offensive had failed.

Total losses for the Bulge are hard to calculate, but America suffered almost 82,000 wounded or dead. British forces suffered 1400 casualties. German losses totaled approximately 100,000. Over 700 U.S. armored fighting vehicles were lost. German armor losses are not known exactly but were almost as high.

21.1 FACTS AND FIGURES

German Initial Forces: 250,000 Infantry; 1900 Artillery Pieces; Just under 1000 armored vehicles.

American strength in the Ardennes at the start of the battle: 75,000 Infantry; 500 Artillery Pieces; Just over 400 armored vehicles.

By the time it was over, 600,000 Americans and 500,000 Germans had participated in The Battle of The Bulge.

The most common allied tank at the time of the battle of the Bulge was the M-4 Sherman Tank. While individually inferior in terms of fire power and armor compared to most German tanks, the M-4 was mass produced in numbers that Germany could never dream of matching. Over 40,000 Sherman tanks were produced.

The frozen ground of the Ardennes was almost impossible to dig through. To build foxholes, American troops often used TNT to blast open the ground. The G.I.'s then had to dig swiftly before the exposed ground froze over.

The German code name used when planning the Ardennes assault was "Wacht am Rhein." This rather defensive sounding name was selected in the hope of confusing any possible allied agents.

21.2 THE MALMEDY MASSACRE

On December 17th, 1944, an American truck convoy encountered elements of Battle Group Peiper at Baugnez, a crossroads south east of Malmedy. German tanks easily subdued the convoy, and the Americans surrendered.

Approximately 130 of the prisoners were herded into a field where they were ordered to stand in a tight formation. Tanks were moved in to cover the prisoners. The Germans then opened fire on the prisoners with pistols and machine guns. Some Americans escaped, but most fell dead or wounded. After the firing stopped, the Germans passed through the pile of bodies shooting anyone they thought might still be alive. By the time the killing was over 86 of the surrendered U.S. soldiers were dead. The Malmedy Massacre was the worst atrocity committed against U.S. troops in Europe during the war.

21.3 OPERATION GREIF

On October 20th, 1944, Adolf Hitler personally briefed Otto Skorzeny on his plans for "Watch on the Rhein". Hitler also briefed Skorzeny on his special role in the battle, as the commander of Operation Greif. (Greif translates to Griffon). Under Operation Greif, Germans fluent in English, wearing American uniforms, and driving American tanks and jeeps, would infiltrate American lines and secure bridges on the Meuse river. In addition, portions of this commando force would break off to sow fear and confusion by issuing false orders, and disrupting communications.

Given less then two months notice to prepare, Greif seemed doomed from the start. Only 10 men could fluently speak unaccented English, and only 2 tanks, and a spattering of other American vehicles could be found. What little time was available was used to teach the commandos to understand a few basic military commands in English, and how to say "Yes", "No" and "O.K." Other important lessons included, how to chew gum, and how to open cigarette packs like an American.

While the lack of armor effectively eliminated any chance of Greif being able to capture and hold bridges, a number of jeeps did manage to infiltrate American lines. These jeeps managed to cause a fair amount of chaos in the form of a destroyed ammunition dump, cut phone lines, exaggerated reports of German strength causing US troops to retreat in panic, removed road signs, and false minefield flags. Ironically, it was not the successful commando teams that truly caused the greatest disruption, but the unsuccessful ones.

Some of Skorzeny's jeep teams were stopped and captured. Their interrogations caused a panic. On an already confusing front Americans were now asking each other trivia questions to determine who was and wasn't really an American. Roads were clogged as checkpoints were

set up. Security around General Eisenhower became stifling after a commando "confessed" that teams had been assigned to assassinate him.

21.4 THE SIEGE OF BASTOGNE

On December 22, the situation at Bastogne was grim. The city was surrounded. Rifle ammunition and food were in short supply, and artillery ammunition stocks were so low that each gun was rationed only a few rounds per day.

Despite the seemingly dire situation, morale in the city was high. It was known that reinforcements from General Patton were en route to lift the siege, and the army had promised to airdrop supplies as soon as the weather cleared. Morale was also kept high by the presence of the 101st Airborne Division. As an Airborne unit, the men of the 101st were trained for operating behind enemy lines, and their confidence permeated the town.

The city was controlled by Brigadier General Anthony McAuliffe, acting commanding officer of the 101st. McAuliffe was in command only because the 101st's normal commander had been recalled to the states for a conference. Nobody had ever expected the 101st to be needed for combat.

Just before noon on the 22nd, Two German officers and two enlisted men delivered an ultimatum under flag of truce. It read in part:

> *To The U.S.A. Commander of the encircled town of Bastogne:*
>
> *The fortune of war is changing. This time strong German armored units have encircled the U.S.A. forces in and near Bastogne…*
>
> *There is only one possibility to save the encircled U.S.A. troops from total annihilation: that is honorable surrender of the encircled town…*

The message also included a two-hour time limit for a response after which:

> *If this proposal should be rejected one German Artillery Corps and six heavy A.A. Battalions are ready to annihilate the U.S.A. troops in and near Bastogne…*
>
> *All the serious civilian losses caused by this artillery fire would not correspond with the well-known American humanity… -The German Commander*

After reading the surrender demand McAuliffe said *"Ah Nuts!"* and dropped the surrender demand on the floor. Some time later McAuliffe was reminded that the German messengers were still waiting for a reply.

"What should I tell them?" McAulliffe asked his staff.

"That first remark of yours would be hard to beat General." Remarked an officer.

Later an amused American Colonel named Harper delivered General McAuliffe's official response.

> *To the German Commander: Nuts! -The American Commander*

Although fluent in English, the German officer who had delivered the message was unable to understand the reply. When asked if the response meant yes or no the Colonel Harper replied:

> *"If you don't understand what 'Nuts' means, in plain English it is the same as 'Go to hell'. And I will tell you something else, if you continue to attack we will kill every German that tries to break into this city.*
>
> *To this the German officer merely saluted and replied, "We will kill many Americans…"*

Without thinking at all, Colonel Harper responded *"On your way bud, and good luck to you!"* Harper could never explain what could possibly have possessed him to wish the Germans good luck…

Despite continued fighting Bastogne received its promised air drop the following day, December 23rd, and the siege of Bastogne was lifted on December 26th.

22.0 BIOGRAPHICAL MATERIAL

22.1 DWIGHT D. EISENHOWER

Future president of the United States, Dwight D Eisenhower held rank as Supreme Commander of Allied forces in Europe at the time of the Battle of the Bulge. Eisenhower was granted full authority by both United States and Great Britain to prosecute the war. Eisenhower's swift deployment of reinforcements at the beginning of the battle was decisive in holding the Germans back. Eisenhower viewed the German offensive as a chance for the Allies to weaken German forces without having to deal with the massive defenses Germany had constructed along its border.

22.2 GEORGE PATTON

One of the most eccentric figures of the Second World War. Nicknamed "Blood and Guts", Patton was known for his aggressive style. Patton became famous after his success in the war in Africa. However, an incident where he had struck an enlisted man badly damaged his reputation. At the start of The Bulge Patton believed that the German offensive was just a

diversion to draw troops away from his own planned offensive, and was reluctant to release the 10th armored division. However, after the full scale of the threat was realized, Patton saw the opportunities presented as clearly as Eisenhower did.

22.3 JOSEF DIETRICH

General Josef Dietrich commanded the 6th Panzer Army, tasked with spearheading the attack. Originally attached to Hitler's personal security detachment, Dietrich had no formal officer training, apparently achieving his rank because of their friendship. To make up for his lack of training Dietrich was supplied with a top rate command staff. Dietrich's 6th SS Panzer Army had only been formed a few months before the Ardennes offensive began. After the war, Dietrich was sentenced to life in prison for war crimes, however he was paroled in 1956.

22.4 BARON HASSO VON MANTEUFFEL

Hasso Von Manteuffel was given charge of the 5th Panzer Army in September on 1944. An experienced leader, having fought in both Russia and in Africa, Manteuffel openly argued against the grandiose plans for Watch on The RHEIN. Manteuffel advocated a smaller more achievable offensive. Manteuffel's resistance to the plan was very dangerous at the time, given Hitler's state of mind after the July assassination plot against him. Despite his best efforts, Manteuffel was only able to effect small changes to this plan.

22.5 JOCHEN PEIPER

Lieutenant Colonel Jochen Peiper was the commander of Battle Group Peiper, the spearhead of Dietrich's 6th Panzer Army. Commissioned in 1936 Peiper developed his reputation as a tank commander on the eastern front, having participated in such battles as Kharkov and Kursk. Peiper was an SS officer with a record for brutality against civilians. During the Battle of The Bulge there were numerous incidents of units under Peiper's command refusing to accept the surrender of American troops, and in many cases killing civilians and prisoners of war. Peiper survived the war, and in 1946 was tried and sentenced to death for war crimes. His sentence was later commuted in 1951, and he was eventually paroled in 1956.

22.6 OTTO SKORZENY

Skorzeny was an SS officer who became infamous for his daring and successful commando operations. The most famous of his operations were, the rescue of the deposed Italian dictator

Benito Mussolini in 1943, and the arrest of the Hungarian reagent Admiral Horthy after the admiral declared a separate peace with Russia. During the Battle of the Bulge Skorzeny was placed in charge of Operation Greif, a plan to put English-speaking commandos in American uniforms behind Allied lines. Skorzeny survived the war and was tried and acquitted for war crimes.

23.0 HARDWARE

23.1 NOTABLE ALLIED EQUIPMENT

23.1.1 M3 HALF-TRACK
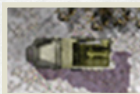
A half-track is a hybrid vehicle with two wheels in the front and tracks in the rear. The M3 HT usually mounted a machine gun in a ring turret. M3 were also effective as mortar carriers. While they do possess tank treads in the rear, half-tracks are very thinly armored and can even be damaged or destroyed by rifle fire.

23.1.2 M8 GREYHOUND

The M8 was a six wheeled armored car used often as a command vehicle. Well armed for such a light vehicle, the M8 mounts a 37mm gun along with two machine guns. The M8 is a wheeled vehicle, and thus lacks armor protection. The M8 must use its speed, as high as 55 MPH, to defend itself. A version of the M8 removed the turret and replaced it with a single ring mounted machine gun. This version called the M20 was used for both transport and as a command vehicle.

23.1.3 M5A1 STUART

The M5A1 was a fast light tank. Armed with a 37 mm gun and two machine guns the M5A1 is well suited for work against enemy light vehicles and infantry. However, its main gun is inadequate for anti-armor combat.

23.1.4 M4 SHERMAN

The workhorse American tank, there were almost 50,000 M4 produced. The M4 saw numerous variations as modifications and upgrades were made to the vehicle. The original M4 mounted a 75mm gun and three machine guns and had lighter armor then its German counterparts. The 75mm gun proved largely inadequate and most modifications centered around increasing firepower. Later M4 were upgraded with a long barreled, high velocity, 76mm gun; and some

were even modified to mount a 105mm howitzer. Other modified versions included a version designed to clear mine fields were also produced.

23.1.5 M10 WOLVERINE

Based on an M4 hull, the M10 mounts a 76.2 mm cannon in an open topped turret. It also carries a machine gun mounted on the rear of the turret. Aside from its open top, the M10 is reasonably well armored.

23.1.6 M18 HELL CAT

Although lightly armored, the American M18 Hell Cat mounts a high velocity 76mm gun. The M18 also boasts a powerful engine, and is one of the fastest armored vehicles of the Second World War.

23.1.7 M36 JACKSON

Similar to the M10, the M36 was an open topped armored vehicle intended for use against enemy armor. The M36 has a larger turret to support its 90mm cannon. The armor of the M36 is roughly similar to the M10.

23.2 NOTABLE GERMAN EQUIPMENT

23.2.1 SD KFZ 234 PUMA

The Sd Ffz 234 is a fast armored car that mounts eight wheels. Armed with a 50mm gun and a machine gun, the 234 is capable of damaging American tanks. However, like all light vehicles, the 234 is poorly armored. The Sd Ffz 232 armored car is similar to the 234, but mounts only a 20mm gun. The 232 is used as a communication vehicle.

23.2.2 SD KFZ 250/251 HALF-TRACKS

The German 250 and 251 Half Track series were commonly used as troop transports and support vehicles. Originally mounting a forward machine gun and a second removable MG on a rear mount, the Half-Tracks saw numerous versions mounting various AT guns, rockets, mortars and flame throwers.

23.2.3 HETZER

The Hetzer was a light tank destroyer mounting a 75mm gun in a fixed forward position and a roof machine gun. Unlike the Marder III, the Hetzer enjoyed good armor protection and an enclosed roof. An interesting innovation was that the Hetzer's machine gun could be remote operated from the safety of the compartment.

23.2.4 STUG IIIG / STUH 42

Designed as an infantry support vehicle and, if necessary, a tank killer. The StuG III mounts a 75mm cannon mounted in the chassis as well as a machine gun. The StuG III is somewhat under armored for a tank destroyer. A more powerful version was later introduced, the StuH 42 which was utilized more as mobile artillery since it mounted a 105mm howizter in place of the 75mm gun. The StuH 42 also mounted far better armor protection then the StuG III, 10cm in the front.

23.2.5 PANZERKAMPFWAGEN MK IV
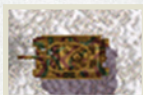
Armed with a 75mm gun and a pair of machine guns, the Mark IV tank mixed good firepower, speed, and armor protection. Although somewhat outclassed by the German Panther, the Mark IV was easily a match for any American tank in the Ardennes.

23.2.6 PANZERKAMPFWAGEN MK V - PANTHER
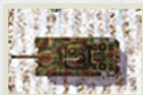
Built in response to improvements in Russian tank design, the Panther tank is considered by many to be the best tank design of the war. Faster and better armored then the Mark IV, the Panther makes maximum use of its long-barreled 75mm cannon.

23.2.7 PANZERKAMPFWAGEN MK VIB - TIGER II AND KING TIGER

Weighing in at a massive 70 tons, the Tiger II was the heaviest tank to see service in the Second World War. With 15cm of front armor the Tiger II can simply ignore most attackers, while its high-powered 88mm cannon and two machine guns flatten any opposition. Fortunately for the allies, Germany could only produce a few hundred Tiger II tanks before the end of the war.

23.2.8 JAGDPANZERIV

Many of Germanys most successful tanks also saw conversion into tank destroyers. The JagdPanzer IV mounts a powerful 88mm cannon and a machine gun for infantry defense. The JagdPanzer IV is reasonably well armored for its roll.

23.2.9 JAGDPANTHER

Another successful conversion of a German tank into a tank destroyer, the JagdPanther trades its turret for an 88mm gun and thick front armor. Reasonably fast, the JagdPanther is an extremely well rounded tank destroyer.

24.0 SELECTED FURTHER READING

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Battle of the Bulge 1944 (2), by Steven J. Zaloga, Osprey Publishing Ltd, 2004

Panzers in Winter, Hitler's Armey and the Battle of the Bulge,
by Samuel W. Mitcham, Jr., Stackpole Books, 2006

The Battle of the Bulge, by William Goolrick, Time-Life Books, 1979.

Tanks of World War Two, by Chris Ellis, 1981.

25.0 FOR THE MODDING COMMUNITY

The Close Combat Series has benefited greatly by an active and exciting modding community. Close Combat: Wacht am Rhein™ is a vastly improved game in comparison to the original Close Combat::Battle of the Bulge. Enhancements have been made to the original game's programming and graphics, and the ability for mod makers to modify the game has been streamlined. With this release we have attempted to aid the modder with changes to the game that will make mods a less onerous task. The following is a list of most of the improvements:

25.1 MOD MAKER IMPROVEMENTS

- Battle Group reinforcement can be set by the Battle Group and for variable number of times.
- The Data file format has been changed to text file format.
- A "Campaign.txt" file has been created to allow editing of previously hard coded campaign settings (for example: air, artillery, mortar, air supply and weather).
- A "Nations.txt" file has been created to allow for multiple nations to be used in the game.
- A "StratMap.txt" file has been created to allow easier editing of the strategic map.
- A "Uniforms.txt" file has been created to allow easier editing of soldier colors.
- The size of the Scenario Editor strategic map has been increased to display larger strategic maps.
- The maximum number of Battle Groups has been increased to 64.
- The strategic map has been expanded to a maximum of 64 individual maps with 128 possible road interconnections.
- The maximum number of Teams has been expanded to 196.
- The maximum number of Weapon icons has been expanded to 256.
- Map BTD files have been changed to a text file format.

See the downloadable Wacht am Rhein Workbook for detailed information

26.0 INDEX

27.0 CREDITS

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OUR STRENGTH
We thank God for giving us the
ability and strength to complete this
project and follow our dream.
We would also like to thank our families
and friends for giving us their non-stop
love and support during this project.

CAN YOU MASTER THE BATTLEFIELD?

The John Tiller's Campaign Series exemplifies tactical wargaming at its finest by bringing you the entire collection of TalonSoft's award-winning campaign series. Containing TalonSoft's West Front, East Front, and Rising Sun platoon-level combat series, as well as all of the official add-ons and expansion packs, the Matrix Edition allows players to dictate the events of World War II from the tumultuous beginning to its climatic conclusion

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* Complete Unit, Map, and Scenario editors allows users to create battles from scratch. Users can now use the Rising Sun and West Front map editors to create maps from all five major climate zones.
* New countries have been added.
* Hundreds of new unit types for almost every country to include Cossacks, operational trains, Chinese Junks and Sampans, river gunboats, captured equipment, siege mortars, river ferries, German landing barges, sea going warships (for the Baltic), amphibious tanks, mine clearing tanks, and dozens of pre-war models and prototypes.
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Hot key Orders

Z ....Move
X ....Move Fast
C ....Sneak
V ....Fire
B ....Smoke
N ....Defend
M....................Ambush