

Close Combat

inside moves

Winning Tips and
Strategies Straight
from the Source



THE PERSONAL COMPUTING PRESS

Microsoft® Press

William R. Trotter

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**inside
moves**

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William R. Trotter

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Dedication

To the memory of all the brave men, on both sides,
who fought in the Normandy Campaign.

William R. Trotter

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Robert C. Lock
President and Editor-In-Chief, The PC Press, Inc.

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Preface



IN THE HEDGEROWS OF HELL

There exists today an erroneous perception—created in part by the movie *The Longest Day* and the countless “fifty-years-after” documentaries of 1994—that the Allied victory on D-Day automatically assured victory in Europe. We are persuaded that only on one of the five landing beaches was the issue ever really in doubt, and that by D-plus-one it was imminently clear that the invasion itself had not only been successful, but also less costly than Allied commanders had estimated.

In reality, the Battle of Normandy had just begun. The German defenders were masters of improvised defense. What nature made difficult for an attacking army, the *Wehrmacht* made nearly impregnable. Despite the Allies’ total air superiority, numerical advantage, and firepower, their advance quickly ground to a halt. What had been envisioned as a swift breakout turned into a bitter, grinding campaign of attrition.

How did the decimated German defenders manage to hold their lines in Normandy for so long?

The answer lies, as it so often does in military history, in the terrain. Once past the beaches, with the relatively open sandy terrain just behind them, the attackers ran headlong into country that could not have been more ill-suited for tank warfare. Called the *bocage* by the French, this wide, deep belt of country comprised a vast number of small farm plots, many dating back to Norman times. From the air, the region resembled a giant checkerboard. Each plot of cultivated land was bounded on all sides by thick, tall hedgerows and knotted clumps of trees, their root systems embedded in massive earthen embankments, which were in turn bounded by deep drainage ditches.

There were small villages dotted throughout the *bocage* country, of course, but their dwellings were usually built with thick stone walls, which made them easy to convert into defensive strongholds. The road network connecting the villages was composed of narrow one-lane tracks, which meant armored vehicles could move only in single file; indeed, some roads were so narrow that a tank could not turn around.

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In such close, overgrown terrain, squads of German infantry would dig in to farmhouse cellars and hedgerows. Armed with *Panzerfaust* antitank rockets, a couple of MG 42 machine guns, and an antitank gun or two, these determined squads could and often did repel attack after attack by superior American forces. It was hard to see the enemy, harder still to get at him.

At best, combat is a squalid, brutal, degrading business, but the hedgerow fighting was infantry warfare of the ghastliest sort—a series of endless and seemingly pointless assaults against a skilled and usually invisible enemy, often launched in cold rain and knee-deep mud. Under these conditions, American attacks were considered successful if they gained a football-field's worth of ground after ten hours of fighting.

After a few days, the mathematics of the campaign became clear and grisly: to capture one small field required the all-out efforts of a full infantry company, supported by all of the firepower and armor it could bring to bear. At day's end, that company could count itself lucky if it had sustained less than 20 percent casualties.

Imagine the scene: at daybreak, you woke up to rain or clouds so thick you knew immediately that there would be no air support, just like yesterday and the day before. You would start at first light, in fog and drizzle, jumping off behind an artillery barrage that looked inadequate (and usually was), and spend the next ten hours climbing muddy dikes and chopping through dense vegetation, all the while under constant fire from snipers, machine guns, self-propelled artillery, and the dreaded *Nebelwerfer* rocket-launchers.

If you survived that particular day, you could figure you'd used up 20 percent of your luck. If you got through the next four days unharmed, you became a statistical anomaly, and people began to look at you strangely. After ten days, your entire nervous system had likely turned into one naked, quivering set of adrenalized ganglia.

Men went mad in the hedgerows. Dozens shot themselves in the foot, figuring a limp and a dishonorable discharge were better than being torn apart by a German mortar shell. Burned-out company commanders, unable to order their men into battle one more time, were relieved by the dozen. So were several battalion commanders and at least one general.

No, the Battle for Normandy was not as one-sided as the movie-makers would have us believe. And in *Close Combat*, you'll learn why this is true.

William R. Trotter

Introduction



WHY CLOSE COMBAT IS UNIQUE

Nobody likes to be shot at. Combat is the most abnormal, stressful, dangerous, and chaotic situation a human being can experience. For a green, untested soldier, the shock of battle marks a transition into a mode of existence that even the most thorough training regimen cannot fully prepare him for. As von Clausewitz expressed it in *On War*: “In war, the novice is only met by pitch black night.”

Before actually experiencing combat, the average soldier cannot help but imagine himself as the focal point of the coming action. He expects to feel fear, but he also expects to feel powerfully stimulated and supported—as though he were embroiled in a tough, dangerous team sport—by the collective strength of his unit.

After all, in training, the soldier becomes accustomed to the presence of big formations of comrades and powerful displays of armor and artillery. On parades and maneuvers he observes the might of his side’s army; he does not feel alone and helpless.

To a certain extent, he forms a similar idea of the enemy. From training films and indoctrination lectures, he sees the opposing army in terms of organized mass and strength. There is the enemy! There are my targets! Yes, they look strong and fit and well-equipped, but they are flesh and blood. They are mortal: hit one of them with a bullet, and he’ll go down!

This illusion continues when the green soldier moves into the line, for as he traverses the rear areas on his way to the front, he sees innumerable friendly troops, vehicles, and artillery.

As he draws closer to the line, though, he begins to lose sight of the dispersing and maneuvering friendly units to his left and right. His confidence becomes a bit strained.

Soon, he is left with only his own company or platoon or squad. He draws strength from the presence of his own outfit: together, they will give each other the will to fight; together, they will help each other overcome the growing fear he feels.

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And then the enemy opens fire. The soldier looks wildly for a target, but he probably sees nothing at first. His comrades scatter for cover or hug the ground. The new soldier is overwhelmed by the mystery of his new situation: he feels more utterly alone than ever before in his life. Where are the marching enemy legions in the training films? At what should he fire? The moment is one of such profound shock and isolation that one wonders how anything could have prepared him for its impact.

But the moment is in fact normal, and its spell is quickly broken when the soldier hears a firm, commanding voice issuing an order. At that point, all of the positive aspects of his training kick in, and he and his comrades will rally and act according to the tactical concepts they have been taught. They will move, they will return fire, and he will become a link in fighting a battle. But whether he and his comrades will be victorious depends on many variable and complex factors.

It is the detail and realism with which Close Combat depicts and treats those factors—and their tangible, observable results on your battlefield—that

set it dramatically apart from other computer wargames.

Most computer wargames do factor in morale when resolving a battle or updating the condition of a unit, but Close Combat is the first battle simulation to utilize a two-tiered artificial intelligence (AI) program that tracks not only the overall morale of a team, a squad, or a platoon, but also the physical and psychological state of every soldier participating in the battle, on both sides.

Built into the game's artificial

intelligence is a complex psychological model of the behavioral effects of battlefield stress on individual soldiers, developed by Atomic Games in close consultation with Dr. Steven Silver of Temple University. Himself a combat veteran, Dr. Silver is an internationally recognized expert on the subject of combat psychology.

Since Close Combat puts you in command of anything from a platoon-sized force to a reinforced company, your input interacts with the psychological profile program to reproduce battlefield behavior more realistically than any other wargame has ever done.

Rifle		Anti-Pers: [Progress Bar]
Waiting		Anti-Tank: [Progress Bar]
Ott	Leader	Healthy Stable Rested
Holding Fire	Carbine	AP 120
Murray	G.I.	Healthy Stable Rested
Holding Fire	Thompson	AP 240
Sears	G.I.	Healthy Stable Rested
Holding Fire	Garand	AP 104
Van Dyke	G.I.	Healthy Stable Rested
Holding Fire	Garand	AP 136
Cone	G.I.	Healthy Stable Rested

Profile of a Rifle Team before battle.

INTRODUCTION: WHY CLOSE COMBAT IS UNIQUE



If you order a squad to advance across an open road from the shelter of a stone wall, for example, the squad might respond boldly and swiftly, or hesitantly and grudgingly...or not at all. Some men might hide and cower, some might panic and become detached from their units (you might observe some men break to the extent that they actually run away), and some might perform seemingly berserk acts of heroism.

If you lead your troops well, giving them effective tactical orders and not exposing them to undue danger, they'll perform accordingly. Should your orders result in heavy casualties or an enemy ambush, you can expect your troops' performance to deteriorate quickly.

Fatigue, heavy volumes of suppressive enemy fire, the sudden death of a leader—any or all of these things can cause your soldiers to lose their will to engage, to shoot less often and with less accuracy, or to seek cover and stay where they are instead of advancing on their assigned objectives.

In short, you're about to play a wargame like none ever created. You won't be playing with abstract unit "counters" or symbols, whose "morale factors" are just coldly calculated numbers. You'll be leading individual soldiers who appear to think, act, and respond in a variety of ways to the situations they find themselves in, just as real human beings would.

And if you're playing a Campaign game (where successive battles are linked together, rather than treated as discrete events), you'll soon find yourself attaching imaginary faces to the names in your roster of soldiers. You'll feel pride when one of them performs an act of heroism and disappointed (and maybe even a bit ashamed of yourself) when one of them panics and turns coward; you might even experience a pang of loss, right in the gut, when one of your veterans "buys the farm."

That's what makes Close Combat so involving, so intense, and so unique: there will be times when it won't feel like a game at all.

Unit	Name	Anti-Pers.	Anti-Tank
Redeploying		2-4-8-16-32-64	
Gray	Leader	Incap.	Stable Rested
		Carbine	AP 117
▲	Curtis	G.I.	Healthy Stable Rested
	Moving	Garand	AP 130
▲	Enmons	G.I.	Healthy Stable Rested
	Moving	Garand	AP 133
▲	Chandler	G.I.	Incap. Stable Rested
		Thompson	AP 240
	Blankwell	G.I.	---

Profile of a Rifle Team during battle.

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How This Book Is Organized

We'll start with the basics: a tour of the interface, an explanation of the data tables that form the "brains" of the program, and an explanation of the game's unique Artificial Intelligence system. The majority of the data tables are presented in the appendixes for easy reference during game play.

Then it's on to Basic Training, where you'll learn the techniques of giving orders to your troops and the essentials of good tactics.

The heart of this guide is the group of chapters devoted to the battles. We'll tell you what to expect and give you intensively tested suggestions for how to achieve victory.

After dealing with the individual battles, we'll discuss how to fight a Campaign—there are crucial differences between Campaign play and single-battle games. In Chapter Eleven we'll tell you a bit about the real divisions of the campaign. Chapter Twelve features Dr. Steve Silver, the combat psychologist who helped develop the artificial intelligence model for the game. Chapter Thirteen takes you through the features of head-to-head combat in two player games, and Chapter Fourteen gives some basic advice on optimizing your system performance to get the most out of Close Combat.

Throughout this book, you'll see Tips (highlighted by a soldier icon) that describe specific tactics and Warnings (highlighted by a grenade icon) that tell you of hidden dangers that might otherwise come as nasty surprises.

We hope you enjoy reading this book as much as we enjoyed writing it!



Chapter One

THE MECHANICS OF GAME PLAY

If you've already purchased a copy of *Close Combat* (and we assume you have; why else would you be reading this strategy guide?), you know that the manual explains the game's interface in a clear, detailed fashion.

In this section, therefore, we'll just hit the high spots, giving special emphasis to elements of the interface that we, as veterans of many hours of game play, have found to be the most useful or the most frequently consulted.

The battles in *Close Combat* take place in real time, and during the excitement of a developing firefight, it's quite easy to forget to check potentially vital information that the game displays for you. In fact, learning to navigate the interface in harmony with the game's basic tempo is crucial to getting the best performance from your troops and heavy weapons.

Which Side to Play?

The answer to that question isn't quite as obvious as it might seem, because the challenges and pleasures of *Close Combat* are very different when you switch from one side to the other, and when you switch from individual battles to the Campaign mode.

Choose to control the German forces, and you'll find yourself usually on the defensive and almost always outnumbered. On the other hand, German weapons were generally superior to their Allied equivalents (especially with regard to tanks), and the terrain in Normandy definitely favored the defender. If you feel like defying the odds, try playing the German side.

Perhaps the greatest challenge facing you as the Americans is that of changing history: can you implement tactics good enough to overcome the obstacles of the *bocage* country and capture St. Lo earlier than July 18th? Can you develop tank or infantry maneuvers that cancel out the Germans' superiority in automatic weapons? Historically, the rule of thumb was that it took three Shermans to knock out one Panther tank: can you improve on those odds?



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Our advice? Play both sides. Play battles and campaigns. Play at the Normal (default) difficulty setting until you've honed your tactics, and then ratchet up the challenge by playing on Hard. Fiddle with the Custom settings. Play against the computer. Play against a friend. The game offers you many, many options, so why not try them all?

The Command Screen

This is the first screen you'll see (after the opening screens, videos, and logos, of course), and it's here that you define the type of game you wish to play, pick an individual battle to play, choose the features you do or do not want to make use of, and fine-tune the balance between the opposing sides. The default settings are highlighted—these are the settings the game automatically uses unless you change them.



Figure 1-1. The Command screen.

CHAPTER ONE: THE MECHANICS OF GAME PLAY



The top line of buttons on the Command screen shows the various types of games you can play.

Boot Camp: A series of elementary tutorial exercises designed to familiarize you with the basic features of the game, the interface, and the terminology used for various elements of play.

Maneuvers: All the individual battles are listed in the main viewing area of the Command screen (you'll have to use the scroll bar at the right of the screen to see them all). The battles are grouped by Operation. To select a battle, double-click the battle name, or highlight it with a single-click and then click Begin.

Campaign: Click here if you want to fight the entire Normandy campaign from D-Day to the capture of St. Lo. (For a detailed description of Campaign play and how it differs from Maneuver games, see Chapter Ten.)

Replays: Clicking this button brings up a list of the games you've saved for review. You can simply view the entire battle (as a means of studying the tactics that brought you victory or defeat or just to show off your martial prowess to a friend), or you can watch events unfold until you think you see where you made a wrong decision. At that point, you can jump back into the action—all you need to do is click a unit and issue a single order—and try out any new ideas that might have come to you upon reflection.

From the moment you issue that first command, you have the same control over events as you did the first time you fought that battle. So the Replay feature serves two purposes: it forms an archival record of any games you felt were worth saving, and it gives you a second chance (or as many chances as you want) to improve on your earlier performance.

The next line of buttons on the Command screen lets you define the parameters of the game you wish to play. From left to right, they are:

American or German: The icons on the first pair of buttons are a white star and a black cross—the conventional American and German insignias that appeared on vehicles, ammo crates, and virtually everything else that wasn't organic. Click one of these to select which side you'll play as—the default is American.

One-Player or Two-Player Games: One-player or two-player games are represented (naturally enough) by one head and two heads. A one-player game (default) pits you in a solo game against the computer; a two-player game lets you fight against a human opponent over a local area network (LAN) or over any network using TCP/IP protocols (the Internet, for instance).

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Two-Player Tip: *All the detailed strategies found in this book assume that you're playing against the computer for the simple reason that the vast majority of games are played in that mode. We can give you good advice about how to beat the computer, and almost all of it applies to some degree when you're fighting a human opponent—but we can't make any guarantees as to how successful our strategies will be against another person. The variables in person-to-person games truly approach the infinite. For detailed information on network play, see Chapter Thirteen.*



Difficulty Settings: If you're new to the game and still somewhat unsure of things, try playing on the Easy setting. Be aware, however, that while this setting gives you more and stronger forces than your computerized foe, it doesn't mean you'll have victories handed to you on a plate. Bad deployment choices and poor leadership judgment can easily offset any advantage you have in numerical strength or firepower.

On the Normal setting (default), each battle will be fought with historically accurate forces and varying degrees of unit quality that reflect historical circumstances.

If you find yourself winning most battles so handily that you no longer feel challenged, try the Hard setting. It means that you'll be fighting as the underdog in terms of numbers and weaponry, regardless of which side you control.

Custom: Clicking the Custom button allows you to fine-tune the strength of each side. If you experience real frustration with a certain battle (Across the Aure, for example, can be a very tough row to hoe for the American player), you can give yourself an edge by setting the American Strength at Strong and leaving the

Germans on Normal Strength. This setting has other uses as well. If you want the maximum amount of “bang-bang”—lots of tanks and guns on both sides—you can set both sides on Very Strong and revel in the increased combat activity.

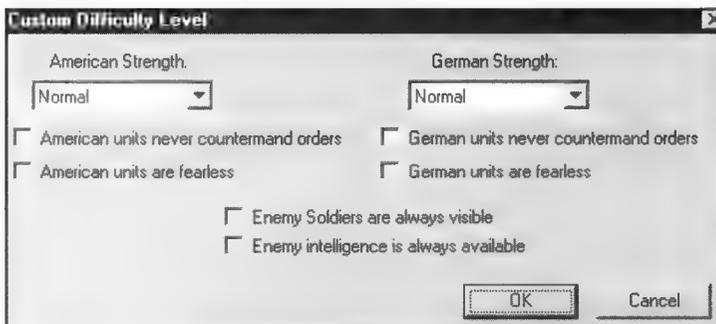


Figure 1-2. *Be careful when using custom settings—a fearless soldier is more likely to wind up a casualty than one who's concerned about his safety.*

Custom settings also permit you to change the rules that are normally in



effect in Close Combat. Regardless of which side you play as, you can set the game so that American or German soldiers always obey orders and have no fear. You can also choose to make all enemy troops visible, even if your troops can't see them, and you can choose to have access to all enemy intelligence. (You can see the condition of every soldier and vehicle.)

Be careful, though, about making your units fearless in a Campaign game. Because your men never cower, hesitate, or even bother very much about using cover, you'll probably lose most of your best, most experienced soldiers, and in the next battle in the campaign you'll find yourself leading green replacements instead of seasoned veterans. No point in winning the battle only to lose the war...

The Game Screen

Once you set up the type of game you want to play and click **Begin**, you're taken to a screen whose components are more or less similar regardless of the screen resolution at which you're running the game. The screen's main feature is an overhead map of the terrain on which the coming battle will be fought, known as the View Area. (For a complete rundown on the View Area, see "The Monitors" below.)

The Drop-Down Menus

Above the map, at the top edge of your monitor screen, you'll see three drop-down menu designations:

- Game
- Options
- Help

Game Menu

Clicking on **Game** brings up three options, all pretty self-explanatory save one.

Pause: This option freezes the action so you can answer the phone or just catch your breath.

Abort Battle: If the enemy is obviously getting the better of you and you don't want to watch the whole bloody shambles of defeat, you can end the fighting at any point by choosing **Abort Battle**. This option's especially valuable when

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you're playing a Campaign; when you Abort, the net effect is the same as if the battle never took place, giving you the chance to fight the battle again.

Exit: Leave the game immediately and return to the desktop. No record of an exited battle will be kept; just like when you choose to Abort, it's as though the battle had never started in the first place.

Options Menu

Most of the items on the Options menu merely affect the way the game looks and sounds—but a couple of the options can radically change the way you play the game.

Sound: Turns sounds on and off.

Music: Turns music on and off.

Videos: Turns video clips on and off.

Extend Game Area: Increases the size of the battlefield display so it fills the entire screen. There's a certain aesthetic pleasure in doing this, but you lose all the monitor displays and information that normally appear below the map. If you're certain your troops are winning or if you're watching a replay of a battle, this option gives you the best seat in the house. But if the outcome is in any doubt whatsoever, don't turn it on: it's well-nigh impossible to keep track of how soldiers and units are doing without the information from the Monitor displays. (For more information on the monitor displays, see "The Monitors" below.)

Remove Trees: This can be very useful if you're trying to locate a team or a vehicle that's taken cover in the woods and is hard to spot. Note that the opponent—computer-controlled or human—continues to have his vision obstructed by the trees, so you don't lose the advantages of cover just because it suddenly vanishes from the screen.

Remove KIAs: If you like your battlefields neat and tidy, select this option and all the dead will vanish. Frankly, we never encountered a situation where there were so many dead heaped in one place that this command actually served any practical purpose. But if your six-year-old suddenly wanders into the room and you want to prevent him or her from seeing the crumpled and bloody corpses, this is how to do it.

Preferences: Lets you choose the speed at which the action takes place, from Fastest (near real time) to Slow.



Help Menu

The final drop-down menu is Help. Here, you can access information on many game-related topics, such as weapons data. Clicking Contents lets you browse through the topics by category. You do this either by clicking the Index button at the top of the open window and scrolling through the items listed or by typing in the word you're looking for and pressing the Enter key.

If you want context-sensitive help during a battle, simply place the mouse cursor over the feature you're interested in and then right-click (if you're playing on a PC) or hold down the Option key and click (if you're running the game on a Macintosh). To close the box of text that appears, simply press the Escape key (on both PCs and Macs).

The Toolbar

In both the Deployment mode (where you set up your units) and the Game Play mode, you'll see a vertical toolbar on the right side of the battlefield display.

Begin: The Begin button appears only in Deployment mode. Click here when you've finished positioning your forces, and the battle will commence. (Not pictured; appears at bottom of toolbar only at game start.)

Zoom In (+) and Zoom Out (-): In both Deployment and Game Play modes, the plus and minus buttons control the zoom functions which determine the level of magnification in the View Area. There are three zoom levels: Closest (greatest magnification), Normal (the setting you'll use the most), and Farthest (showing the whole battlefield, with objectives and units displayed as red and blue dots and identified by unit

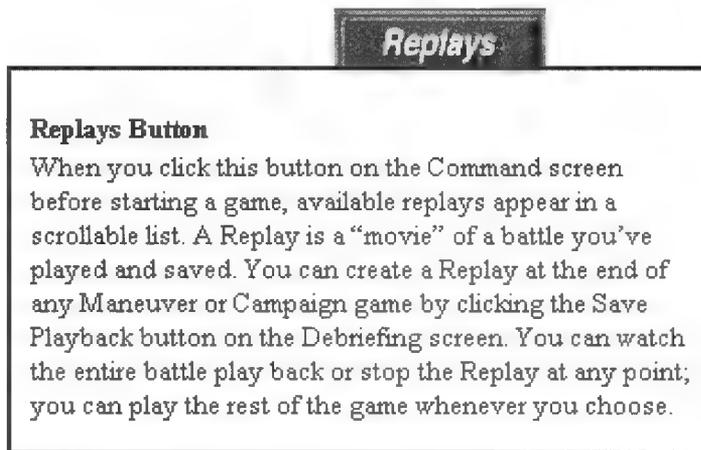


Figure 1-3. Example of Context-Sensitive Help information.



Figure 1-4. The Toolbar.

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type). Move Out, Defend, and Pull Back are “global” commands—clicking them issues the same order to all of your teams. Here’s what they do:

Move Out: Tells all friendly troops to begin a cautious advance toward their objectives, taking advantage of cover as they move forward.

Defend: Orders all friendly troops to assume a defensive posture with regard to the enemy and to take advantage of ambush opportunities. Even if you intend to advance, there may be times when you want to start the game in Defend mode, to prevent any AI-controlled forward movement that doesn’t fit with your plan.

Pull Back: Tells all friendly units to pull back from close contact with the enemy and to return to the part of the map they started from, where they’ll seek adequate cover.

End Battle: This does just what you’d expect: it halts the fighting and ends the engagement. If you choose End Battle, however, the outcome will be the same as if the battle had been arbitrarily ended because your Force Morale bar had gone into the red (see “Battle Over” later in this chapter). You still have the option of saving a replay of the battle and trying out new tactics at a later time, just as if you’d let the battle run its full course.

Force Morale: Force Morale bars appear in both Deployment and Game Play modes. They indicate the overall cohesion of each side’s forces. The color of the bars reflects morale and fatigue; the length of the bars represents the total war-making power of each side. Declining morale and growing fatigue cause the bars to change color, and losses cause the bars to shorten. Both bars are green at the start of a battle. If one side starts to lose, its color will turn brown (but it might go back to green if the troops rally or suddenly inflict heavy losses on their opponents). When one side’s bar becomes short and red, it has definitely lost, and the computer will end the game within two minutes.

The Monitors

The bottom third of the battle screens is where you’ll find one of the game’s most unique design features: the monitors. How many monitors you see depends on the graphic resolution setting you’re using:

If you play in 640 x 480, only the Team, Soldier, and Message monitors are available.

If you play in 800 x 600, the Overview monitor will be added to the display.



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Figure 1-5a. At a resolution of 640 x 480 the Team, Soldier, and Message monitors appear.



Figure 1-5b. At 800 x 600, the Overview monitor is added on the right-hand side.



Figure 1-5c. At 1024 x 768 both Overview and Spyglass monitors are added.

If you play in 1024 x 768 (or greater), the Overview and Spyglass monitors will also be available. Regardless of which resolution you use, you'll always see the View Area—it takes up the largest part of the screen and displays battles in real time.

Let's examine each of these monitors in turn, starting with the most important monitor: the View Area.

The View Area

This is where the battles occur and where you interact with the game to issue orders to your troops. By zooming out (clicking the minus sign on the toolbar on the right side of the View Area), you can see the entire battlefield, all of your units, and the location of any enemy units visible at that moment. By



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zooming in (clicking the plus sign on the right-hand side of the toolbar), you can see smaller parts of the battlefield in greater detail.

In Deployment Mode, part of the map in the View Area is darkly shaded: it represents enemy-controlled territory. You can see roads, woods, gullies, streams, buildings, fields, and the names of your objectives in this area, but you can't see where the enemy units are until play actually begins and they open fire.

The unshaded section of the map represents terrain under your control, and on it you can see the default (computer-designated) deployment of your various teams and vehicles. When preparing to fight on a new and unfamiliar landscape, take some time to study the terrain closely and deploy units to take advantage of it. While the default deployment of your units is usually fairly logical, it's seldom optimal, and you'll probably want to change the location of some units in accordance with your overall plan—you might want to position an antitank gun, for instance, so that it has a wider field of fire than it would if you left it where the computer placed it.

When the map first appears, it defaults to the intermediate zoom level, or

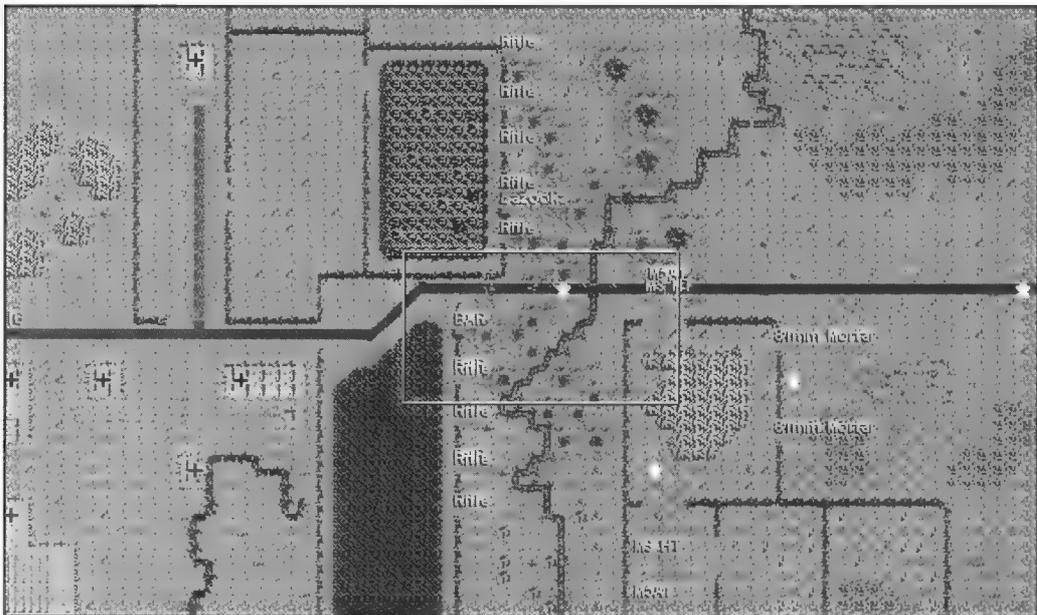


Figure 1-6a. *The View Area at maximum zoom out.*

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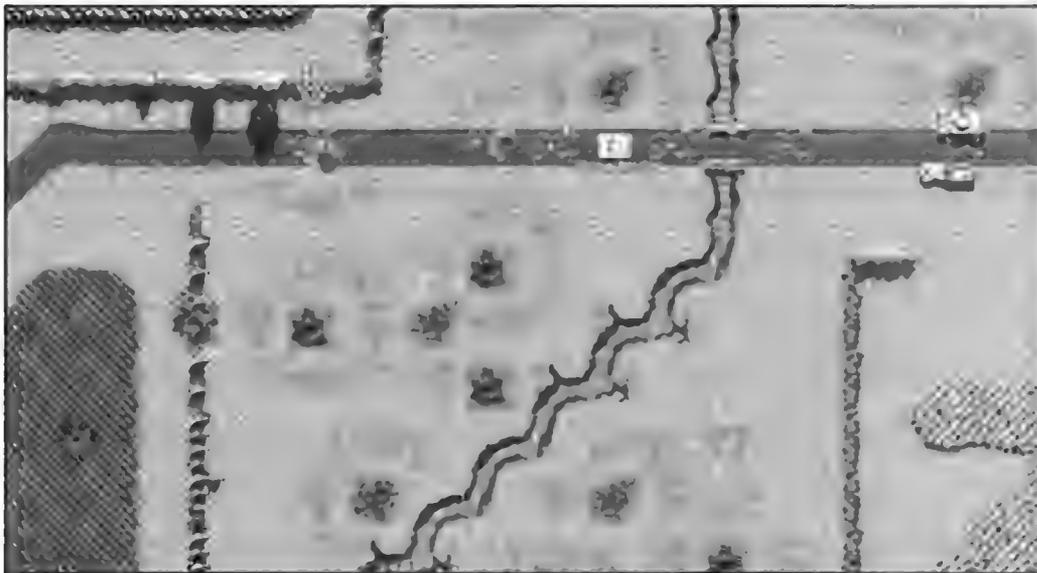


Figure 1-6b. At normal zoom. You'll probably use this level most of the time.

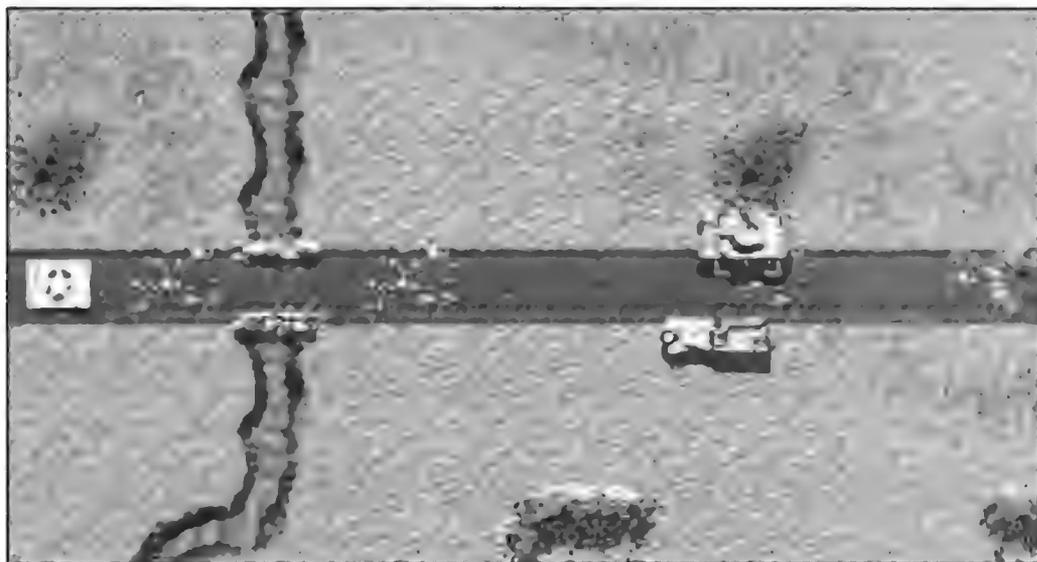


Figure 1-6c. The View Area fully zoomed in. This view is useful when you want to get a close up look at some particularly hot action.



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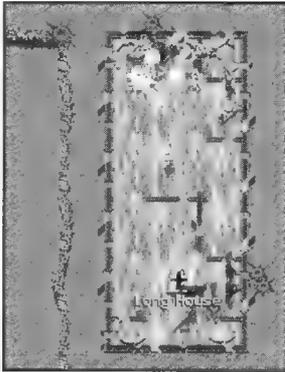


Figure 1-7a. Here's a wooden German-occupied building before an American attack. We targeted the building with four mortars.



Figure 1-7b. After ten minutes of heavy shelling, the American mortars have bracketed this wooden building. Rubble piles show that the roof has been extensively penetrated. Stone buildings are far less vulnerable.

Normal view—a good perspective for placing units in buildings, behind walls, and so forth, but not very useful in formulating overall tactics or swiftly repositioning units. The first thing you should do is click the Zoom Out button on the right side of the screen; this will show you the entire map, perfect for moving units to the approximate locations you want them to be in. Once you've placed your units in general areas, click the Zoom In button to switch back to the intermediate zoom level in order to fine-tune your deployments—making sure that an antitank gun is behind a hedgerow instead of in front of it, placing troops inside shelters instead of outside them, and so forth.

Between enemy and friendly territory is a lightly shaded area. This represents the traditional no man's land between any two contending armies and as such is not available for the deployment of troops by either side.

Regardless of what zoom mode you're in, you can click on any unit visible in the View Area to receive information about that team—and the individual soldiers on it—in the Team and Soldier monitors; you can also issue orders at any zoom level.

In addition to terrain features and combatant teams, the View Area also displays all the buildings on that particular battle map. The building graphics don't include roofs, (so you can view any teams that might be inside), but the program knows the roofs are there and factors them in as protection for the soldiers inside. Craters inside a building mean that a previous bombardment has pierced the roof—which in turn means that you have at least a small chance of dropping a mortar shell into the building without first having to blast your way through the roof. (See Figures 1-7a and 1-7b.)

To see different areas of the battlefield, simply move your mouse cursor in the direction you'd like to explore—when it reaches the edge of the View Area, the map will scroll, revealing more units and terrain. (You can also zip quickly to a new area of the battlefield using the Overview monitor or by repositioning the yellow rectangle that's superimposed on the map when you've zoomed out to Farthest view during a battle.)



When you see a team in the View Area while it's in Normal or Closest Zoom mode, you'll notice that one soldier is surrounded by a circle. That means he's the leader of that team, and the color of the circle corresponds to the color shown in the Team and Soldier monitors (more on color-coding in a minute).



Figure 1-8. *The team in the center of the screen has been selected to receive orders. The members of a selected team will appear in blue brackets.*

To give orders to any team, just click on a soldier. All the members of that team—that is, the total number of soldiers to whom you can issue an order — will display blue brackets, except for the team leader, who will be bracketed in yellow.

The last features of the View Area are Victory Locations (VL), which might be either buildings or terrain features (roads, bridges, Phase Lines, and such). A German or American flag emblem indicates a Victory Location. Capturing these locations brings you closer to victory, not only by giving your troops control of shelter and cover, but also by earning you Victory Points.

When you secure a Victory Location, the emblem changes to match the side you're commanding. If teams from both sides are actively fighting for possession, the flag will be half-German and half-American.

The Team Monitor

On the left of the bottom third of your screen is the Team monitor. In Close Combat, a team may be a rifle squad, a single vehicle and its crew, a mortar and its crew, a machine gun team, or even a single man (a Sniper). The Team monitor is packed with information that will prove crucial to you in deciding where to place your troops and how to use them once the fighting begins.

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Figure 1-9. *The Team monitor.*

On the left of each team's entry is a graphical representation of that team—a group of soldiers for Infantry, troops loading a mortar for a Mortar team, and so forth. In the upper right-hand corner of the graphic you'll see from one to four small gold bars that represent the team's overall effectiveness, regardless of what type of weapons are at the team's disposal. A single bar denotes inexperienced soldiers; four bars indicate seasoned veterans. This information is obviously useful when you're deploying units before a battle: you should assign the most vital sectors and the most dangerous missions to the teams with three or four gold bars, while giving teams with one or two bars less critical roles.

If you're playing a Campaign game, you'll notice that teams who perform well in battle will earn gold bars, indicating they've acquired veteran status. When assigning veteran teams to missions that place them in great danger, try to keep an eye on how they're doing and take steps to keep them from suffering too many casualties—casualties will be replaced with green troops, and the overall team effectiveness rating will decline.

In the column to the right of the Team icon the rank of the team leader is displayed. (A platoon leader is indicated by a lieutenant's bar, a tank crew leader by a sergeant's stripes, and so forth.)

To the right of the rank display are two horizontal slots. The top slot tells you what type of team you're looking at: Infantry, Scout, Antitank, Mortar, Machine Gun, Artillery, or Vehicle.

In the slot beneath the team-type information is the last order you issued to that team (Defending, Redeploying, and so forth). If the text is displayed in

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green, the team is following your orders; if it's red, it means the team either can't follow that order for some reason or that the team is intentionally not obeying your command due to battlefield circumstances in its vicinity. White text (usually "Waiting") means that you've yet to issue orders to that team. On the far right of each team listing is a round rosette. This is the Scan Arc, and it shows where a team is looking for cover and targets, as well as when a team feels pressure from the enemy (that is, they see the enemy or are receiving enemy fire) and where the enemy is located in relation to that team. When the team spots an enemy position, the arc changes to orange; if the team is being fired upon, the arc turns red. At the start of the game, each team automatically scans 180 degrees in the direction of the enemy, but the arc changes based on the commands you've given a particular team. Check the game manual for more detailed information on the Scan Arc.

To center a team on the View Area, double-click on the team's panel in the Team monitor or on any message from that team in the Message monitor.

The Soldier Monitor

This monitor provides you with important data about each soldier within a team. If you can't see all the soldiers on a team in the display, click the scroll bar to the right of the monitor to view the data.

The Rank Icon and Name are self-explanatory. There are 35 possible entries for Current Action, from Resting to Panicked to Unjamming (see the manual for a full list of these actions and descriptions of their meaning). Like the Current Command line in the Team monitor, these Current Action entries are color-coded: green means the soldier is acting in accordance with the last order you issued to his team; red means the soldier is performing an action that goes against your orders (Cowering, Routed, and so forth). White means that you have not yet issued an order affecting this soldier and he's acting on his own, under AI control, according to battlefield conditions in his vicinity.

Tip: *American Infantry teams are designated as either Infantry, Medium Infantry, or Heavy Infantry (Assault). These adjectives do not, of course, refer to the collective weight of the team members, but rather to their overall firepower: an Infantry team will be armed with Garand Rifles, while a Medium Infantry team will be augmented by a Browning Automatic Rifle. Assault teams carry satchel charges capable of disabling a tank. German Infantry teams are designated either Infantry or Heavy Infantry (Sturmgruppe). The Heavy Infantry teams have an MG 42 and carry satchel charges.*



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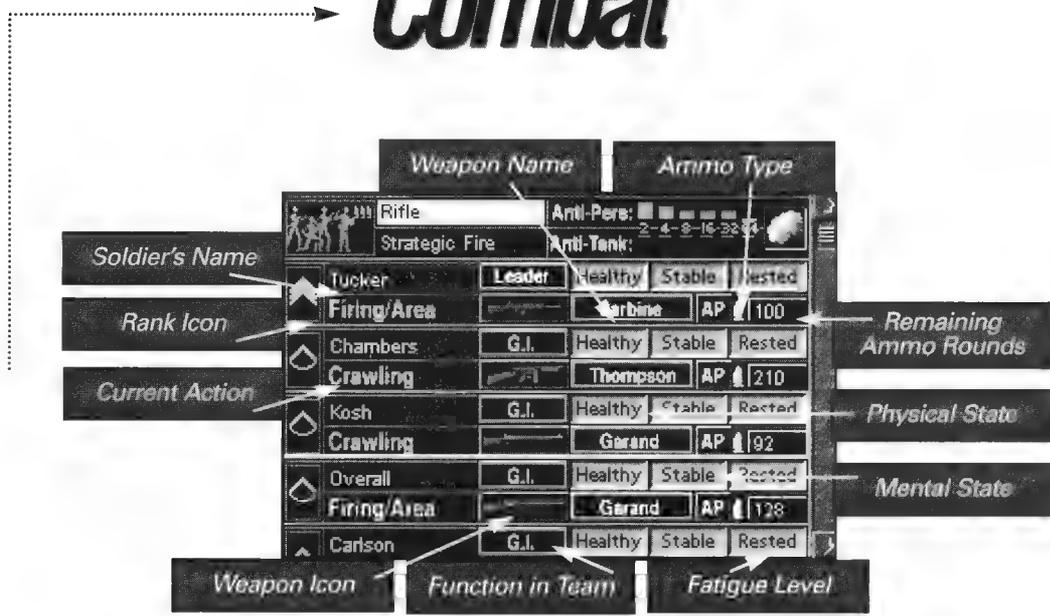


Figure 1-10. *The Soldier monitor.*



Figure 1-11. *Top panel of a tank crew's Soldier monitor listing. As with rifle team (above), individual members are then listed.*

Function in Team describes the soldier's official duty within the team of which he is a member (Leader, Driver, Loader, and so forth).

The next three panels display information about the soldier's physical condition (Healthy, Incapacitated, Dead), his mental state (Stable, Panic, Fanatic, Heroic, Berserk), and his level of fatigue (Rested, Winded, Fatigued).

Beneath the Function and Condition panels, the Soldier monitor shows the weapon the man is carrying, the type of ammo it's loaded with, and the number of rounds remaining in that soldier's possession.

If you have selected a vehicle or a heavy weapon team, the topmost entry in the Soldier monitor will display the Team Icon, the Team Name (more descriptive than the generic names shown on the Team monitor), a small graph showing how that team's main weapon is rated against personnel and armor targets at various ranges, and whether or not that weapon can fire smoke.



The Message Monitor

This monitor displays messages about actions carried out by your teams. Note that these messages are color-coded from dark red (most urgent) to white or green (routine information).

Obviously, the red messages are the ones you will most often want to respond to by issuing an order. Click the message, and the team that sent it is centered in the View Area.

If you want to filter out the less important or routine reports, click on the colors at the top of the monitor, and all messages corresponding to those colors will stop appearing.

The Overview Monitor

The Overview monitor displays a scaled-down map of the entire battlefield; on it you'll see Victory Locations, friendly units (blue dots), and all known enemy units (red dots). Move your cursor over this map, and it changes to a magnifying glass. Click, and the View Monitor will center on the spot selected with the magnifying-glass icon; if you click and hold while the View Area is at the Farthest view, the View Area switches to Normal view. You can inspect various parts of the battlefield much faster this way rather than scrolling the View Area display.

The Spyglass Monitor

This monitor appears only when you are running the game at 1024 x 768 resolution and the View Area is in its Normal mode. It displays a close-up view of the part of the View Area your cursor is over.

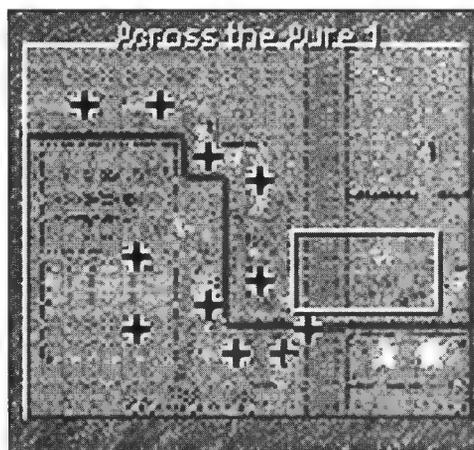


Figure 1-12. *The Overview monitor.*

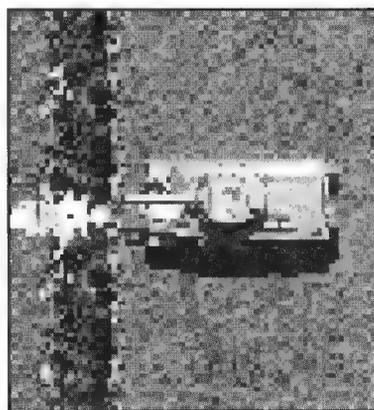


Figure 1-13. *The Spyglass monitor.*

Keeping Score: The Point System

The computer tallies victories and defeats according to points scored by each side. Points are awarded for killing, wounding, or capturing enemy personnel; for destroying or capturing enemy vehicles, tanks, and guns; and for controlling certain important terrain features (Victory Locations) when a battle ends.

Capturing an enemy soldier is worth twice as many points as killing or wounding him. This reflects the fact that a live prisoner is more valuable than a corpse because prisoners can be interrogated for useful information, while corpses...well, you get the idea. Note that German losses or captures are worth 50 percent more than American ones. This reflects the historical situation—it was much harder for the Germans to replace losses of both men and material.

Casualty points are awarded as follows:

Table 1-1. *Casualty Points.*

Victim	American Killed or Wounded In Action Points	German In Action Points	American Captured Points	German Captured Points
Soldier	2	3	4	6
Light Vehicle (trucks, jeeps, personnel carriers, half-tracks)	5	7	10	15
Artillery	10	15	20	30
Heavy Vehicle (tank, self-propelled guns, tank destroyers)	20	30	40	60
Victory Location, small			N/A	1-20
Victory Location, medium			N/A	21 - 49
Victory Location, large			N/A	50 - 200



Figure 1-14. *Point display after a battle.*

Tanks, other vehicles, and immobile weapons are considered captured if the crew is dead or if the unit is immobilized, and if you occupy the hardware's location at the end of the battle. Crews will not voluntarily abandon a vehicle or gun. Crews of open-topped vehicles, such as the M3 half-track, Marder, and M10, can be killed by small arms fire, especially at short range. You'll need something heavier for the tanks.

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Soldiers who surrender during battle are liberated if you control their location at the end of the battle. We use “occupy” and “control” here in the same way that Close Combat uses them. Both sides can occupy a location at the end of a battle. Occupy means that each side has units within a 12 meter radius of the location in question. The notion of mutual occupancy applies to scoring as well. If a Victory Location is still contested—for instance, both sides have troops inside the same building when the computer decides to end a battle, each side gets credit for half the value of that Victory Location.

Control is unilateral. As used in the game it means that your troops had sole possession of a location. The side that starts a battle in control of a Victory Location (as opposed to gaining control during a battle) receives half the points that location is worth.

In the event that one side decisively breaks before a battle ends, the winning side earns 1/2 credit for all buildings not yet controlled, and the losing side gets only 1/2 credit for any buildings still under its control.

For example, let’s say there are five Victory Locations on the map, worth 20, 40, 40, 20, and 20 points respectively. A battle starts with the Americans in control of the first Victory Location and the Germans in control of the other four. If the battle results in a German rout, with the Americans now in control of the first two Victory Locations and the Germans still hanging on to the last three, the computer will award terrain-control scores as follows:

Americans

- 10 for first Victory Location (1/2 as original owner)
- 40 for the second Victory Location (sole owner)
- 20 for the third Victory Location (1/2 as Germans broke)
- 10 for the fourth Victory Location (1/2 as Germans broke)
- 10 for fifth Victory Location (1/2 as Germans broke)

Total terrain-based points: 90

Germans

- 0 for first Victory Location (not owned)
- 0 for second Victory Location (not owned)
- 10 for third Victory Location (1/2 as broke; 1/2 as originally owned)
- 5 for fourth Victory Location (1/2 as broke; 1/2 as originally owned)
- 5 for fifth Victory Location (1/2 as broke; 1/2 as originally owned)

Total terrain-based points: 20

Battle Over

When you first begin to play Close Combat, you may find yourself asking the question: why did it stop just when I was obliterating them? A battle normally ends in one of three ways:

- One side has been wiped out.
- One side clicks the End Battle button.
- The end-game timer has expired.

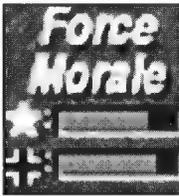


Figure 1-15.
Morale bars warn that the clock is ticking. Red bars indicate that the game ends within two minutes.

You're probably wondering just what in the world an "end-game timer" is. It's Close Combat's internal clock that starts ticking off the seconds until the game is over. You'll find this happening sometimes just as you're able to really crush your opponent.

If both sides' cohesion (represented by the Force Morale bars on the right-hand side of the screen) deteriorates enough to put them into the yellow zone, the battle will end within two minutes. This can signify that both sides are so tired and demoralized that the battle will peter out of its own accord.

If one side's strength bar goes into the red zone, the battle will end no more than two minutes later. This signifies that one side has been whipped pretty badly and is no longer capable of effective resistance, much less offensive action.

When the Force Morale bars begin to flash on and off, you know the timer has started. It will run for anywhere from 30 to 120 seconds.

Otherwise, the outcome will be determined by comparing points scored:

If
American points > German points + 180
Then = Decisive American Victory

American points > German points + 90
Then = Major American Victory

American points > German points
Then = Minor American Victory

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If
German points > American points + 180
Then = Decisive German Victory

German points > American points + 120
Then = Major German Victory

German points > American points
Then = Minor German Victory

(Note: > means greater than.)

If the game ends because one side has been wiped out or because one side clicks End Battle, the results are the same as if that side was “in the red” and the other was not.

If you’re playing the American side and you enjoy exceptional success in smiting the Germans, say inflicting 21 casualties on them while sustaining only three yourself, you might find that the game ends with startling abruptness, before you can swoop down on all the now vulnerable Victory Locations.

Don’t worry; you’ll still get credit for at least a major victory. The game shuts down under these conditions to prevent the player from having to mop-up the entire map and hunt down every German when, in reality, a decisive outcome has already been achieved. Once one side has been beaten badly enough to ensure a rout, the game timer will cut on, and the battle will end within two minutes.

Read ‘Em and Weep: The After-Battle Debriefing Screens

The first thing you see when a battle ends is a scorecard (Figure 1-16). You’ll be told whether or not you won, and whether your (or the opponent’s) victory was minor, major, or decisive. You also see a tally of how many men each side killed, wounded, or captured; how many vehicles, tanks, and guns were destroyed; and how many Victory Locations were seized or held by game’s end. And, of course, a final point score.

If you’re playing single battles, this is all the information you really need, since you’ll get fresh, healthy units from the Order of Battle variant that kicks in with the next battle you elect to play. But if you’re playing the Campaign game, you should also click the Details button to see what happened to each of your men. After all, you’ll be leading the survivors in the next Campaign battle.

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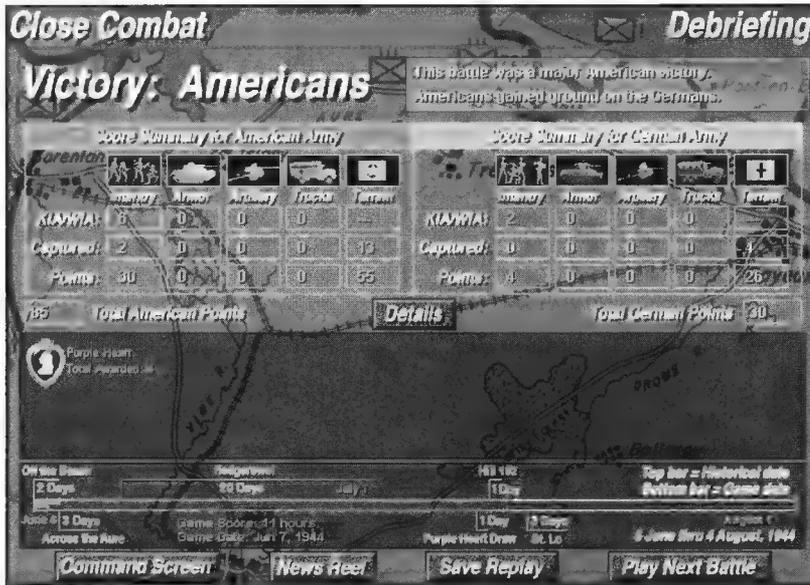


Figure 1-16. *The Debriefing screen.*

When you click Details, you'll see a grid display with the names of all the soldiers on both sides lined up on the right. In the columns to the left of the names, you'll learn the status of each man's health, physical well-being, mental attitude, experience level, and overall morale.

If an arrow appears in one of these columns, it means the soldier either gained or lost quality in one of those areas. Everybody who survives a battle, logically enough, will show an "up arrow" under the Experience heading. If Morale or Mental Condition changed significantly, you'll also see arrows under those headings, and so on.

This data is also color-coded, as you can see on your monitor from the multihued strip that runs along the bottom of the screen. Each color signifies how well or how poorly a soldier is doing at this point in the campaign. A black square indicates the soldier is dead; a black square with crosses in it indicates the soldier is wounded (one cross for a light wound, two for a severe injury). Red means, "Not doing so hot," yellow and tan mean, "Doing okay, but could be better," and green means, "Rarin' to have another crack at 'em, Sir!"

To the left of the color-coded squares, columns give details of a soldier's performance in the recently concluded engagement: how many enemy soldiers he killed or captured, how many tanks or guns he knocked out, how many acts of bravery or cowardice he performed, and what decorations he might have earned. (You'll see a lot of Purple Hearts, but medals for valor appear much less frequently.)



Chapter Two

THE GHOST IN THE MACHINE

How were the designers of Close Combat able to create such a realistic depiction of something as dynamic, unpredictable, and fluid as human behavior on the battlefield?

Conventional PC wargames allow for solitaire play against the computer by means of an Artificial Intelligence program (AI) that attempts to mimic the decision-making logic of a human opponent. Because human opponents tend to be more devious and intuitive and are quicker to grasp a sudden, subtle strategic opportunity than a program designed to react as a human would, the AI in many wargames simply cheats: it makes computerized units stronger, more resistant to damage, more aware of enemy movements, and more mobile than the equivalent units under the player's control—all in order to level the playing field.

In their quest for realism, however, the designers of Close Combat devised a different kind of AI: a two-tiered pair of programs that interact in a flexible manner according to the constantly evolving tactical situations of any given battle.

Understanding how this two-tiered AI system works will help you understand how and why Close Combat plays as it does. Let's take a look under the hood to learn how the game works.

Tier 1: Strategic Artificial Intelligence

Perhaps the best way to look at the Strategic Artificial Intelligence (SAI) is as your army's main headquarters. The "big picture" is considered and acted upon here, with little or no attention given to how an objective is actually achieved. If the image of Eisenhower deciding the actions of each individual soldier on D-Day seems ludicrous, then you're on your way to understanding how the SAI operates.

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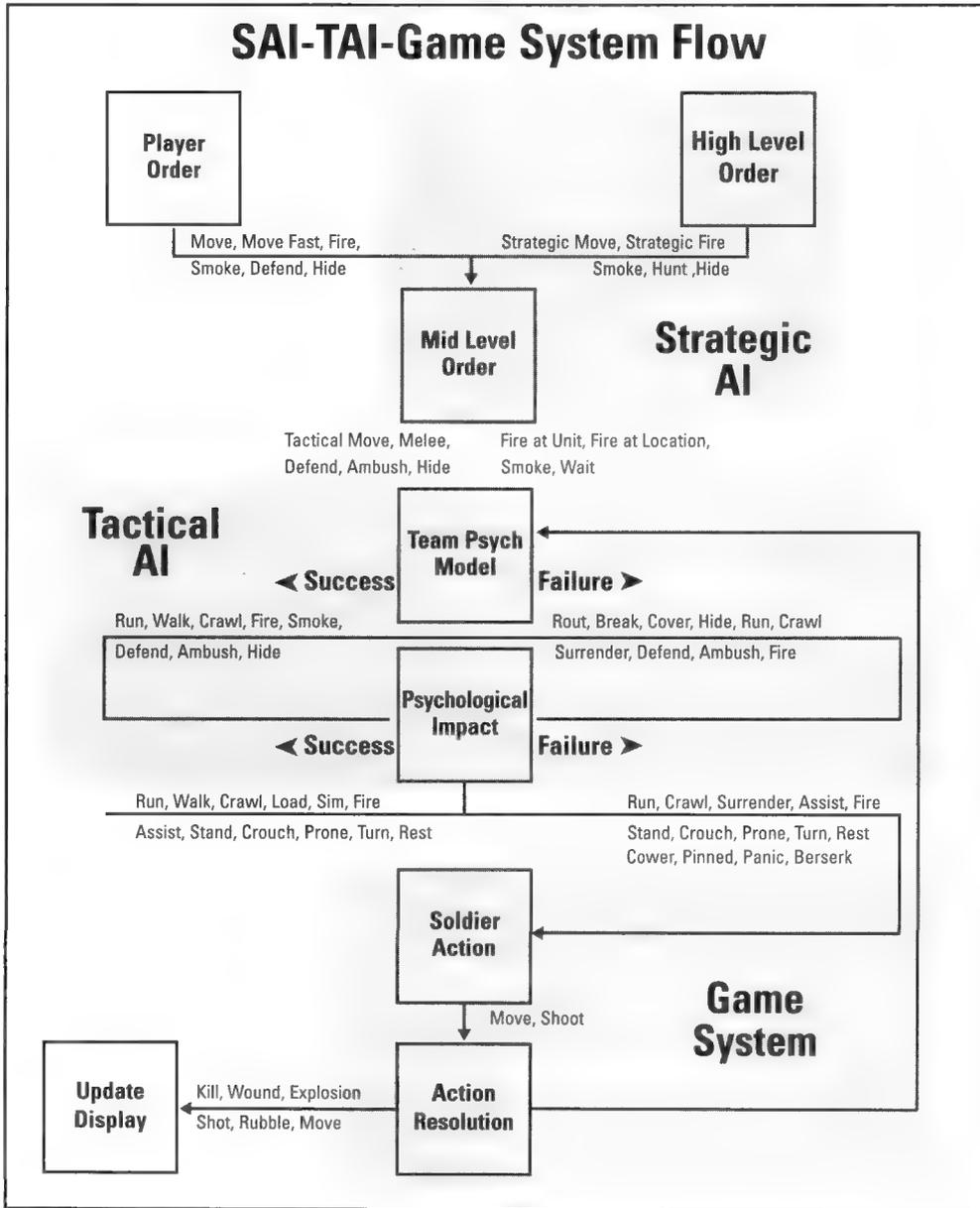


Figure 2-1. Interaction of Artificial Intelligence programs and resulting battle behavior. Flowchart courtesy of Atomic Games.

CHAPTER TWO: THE GHOST IN THE MACHINE



You are, of course, in command of your overall strategy, but on the computer's side, the SAI makes all the upper echelon decisions that would normally come down the chain of command. Let's say one objective in a battle is to take a small farmhouse that just happens to command the high ground in a particular sector. The SAI considers its resources, picks the units that should carry out the attack, and directs the overall squad movement. These grand designs are then passed down to an intermediate level which, in our analogy, functions as a General Staff.

The orders are less broad at this level, but still go no lower than the individual squad. It's here that the SAI takes on the task of initiating orders for both you and your computerized opponent. Most often these orders are concerned with gross squad movements, the laying out of "road maps" if you will: the General Staff might set up the way points for your, or the enemy's, tanks and other motorized weapons. It's just the sort of planning that the platoon leader in innumerable war movies flagrantly ignores—and in playing Close Combat you'll soon discover that those old films were surprisingly accurate regarding that aspect of the chain of command.

Under normal circumstances, the SAI would no more consider the status of an individual piece of ground than it would the movement of an individual soldier, but there is a bit of flexibility included on this level so that the ever-present random variables do not dominate game play. For example, while the SAI normally would not have input into individual targeting, there are occasions when it might step in and lend you a hand. A squad in Defend mode, with no firing orders, might receive a little kick in the pants from the SAI should it come under fire. For the most part, however, the SAI confines its appraisal to relatively large plots of real estate. And it considers its work done when it has generated the intermediate orders that form the final blueprint for battlefield activity.

Tier 2: Tactical Artificial Intelligence

The SAI's orders eventually reach the squad level, where the Tactical Artificial Intelligence, or TAI, functions as the squad commander. Like a squad commander, the TAI is aware of minute variables of terrain, and circumstance that the SAI can't be bothered with; using that knowledge, the TAI searches for ways to implement the SAI's orders. And they aren't always the best ways, either, because essentially the TAI is looking only for the line of least resistance.

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Figure 2-2a. Under the guidance of the Tactical Artificial Intelligence program, your teams "behave" independently. We selected this team (above right) and ordered it to move fast to this building (above left).

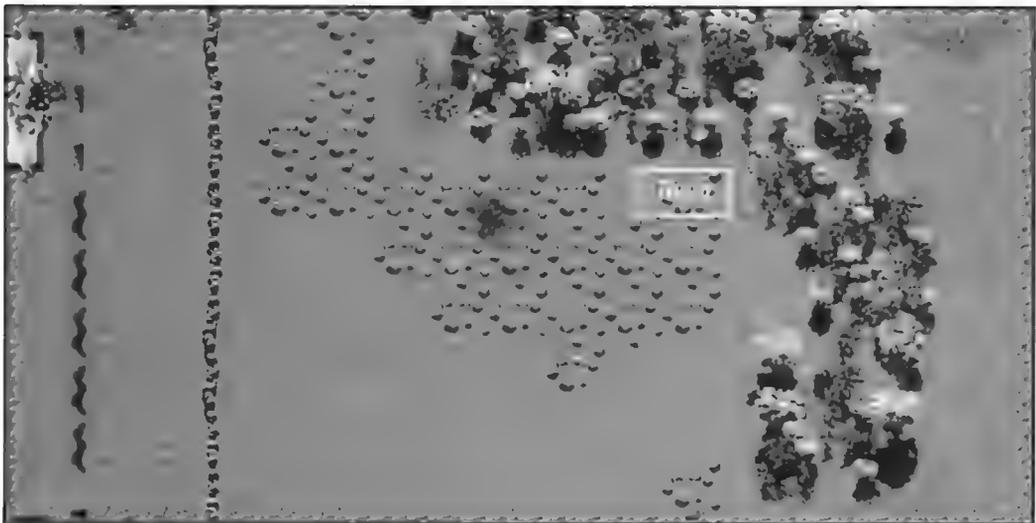


Figure 2-2b. In a display of the game-playing impact of Tactical Artificial Intelligence, the team chose not to rush headlong across the field but rather crept through the woods, staying in the cover of the trees for as long as possible.

CHAPTER TWO: THE GHOST IN THE MACHINE

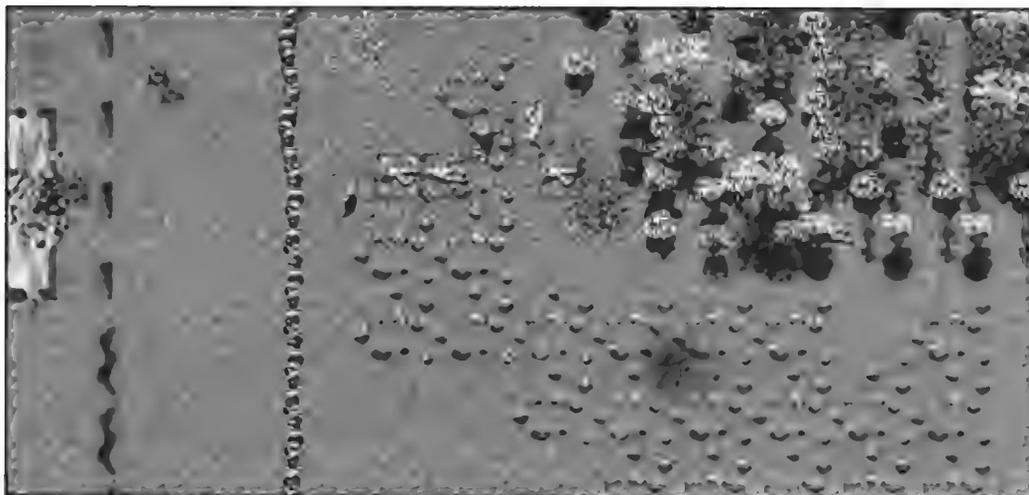


Figure 2-2c. *Our team reached this point, refused to go any further, and began to pull back. Realizing the need for command intervention, we ordered mortars to lay down a smoke barrage.*

This is where you and the computer get down to directing the moves of individual soldiers, as well as fine-tuning the placement and movement of individual squads. As you'll quickly discover in your first battle, the TAI has a mind of its own, making some decisions with a randomness that will soon have you understanding just why Patton occasionally slapped soldiers. That's because the TAI, in order to simulate the effects of morale and physical condition, can throw an assortment of monkey wrenches into your well-oiled war machine. If, for example, your mortars are in a "can't miss" firing position but do nothing more than neatly bracket their target, blame it on the TAI. This works the same way for both sides in a battle, but your subjective appraisal might tell you otherwise.

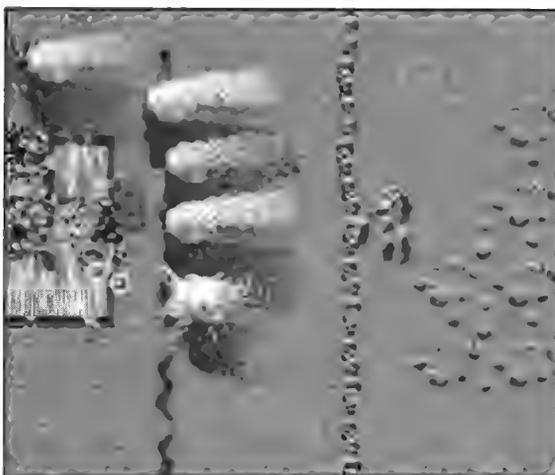


Figure 2-2d. *As soon as the smoke thickened, the team regrouped and turned around.*

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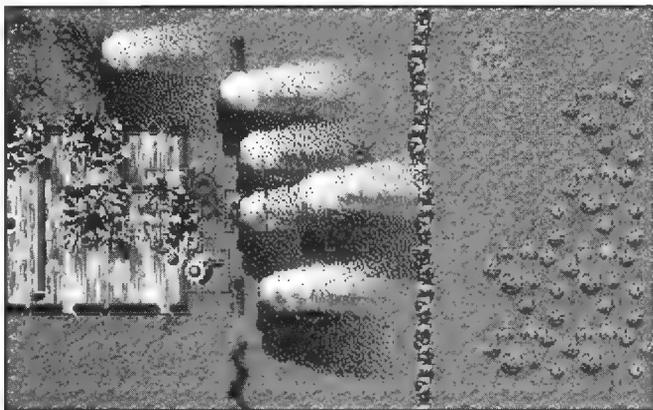


Figure 2-2e. *With some thoughtful assistance from their commander and the Artificial Intelligence program, this team has safely entered the building.*

On the other hand, there are times when this can work to your advantage, with the TAI countermanding or modifying your orders when it recognizes a factor you might have overlooked. If you've ordered your troops to move through a field of withering fire, for example, or to advance over an impassable plot of ground, the TAI might then countermand an order for rapid movement or for targeting a particular area. There will be instances where your orders are eventually carried out, but not for the reasons you based them on, and

often not in the way you anticipate. This can apply to a single squad or several squads, although frequently this "initiative" to disregard orders rests with the lone foot soldier.

Once an order is acted upon and a result obtained, the TAI will "report back" to the SAI with an update of squad status. The constant updating of squad data is factored into subsequent TAI field orders, as well as SAI intermediate level orders. The SAI has no real input into this process—the TAI just "borrows" the SAI's access codes. In a perverse way, that makes sense. If you've ever seen the landmark film *Paths of Glory* (okay, so it's about World War I—go convene a court-martial), you've seen a prime example of the one-way flow of information under battle conditions. The generals make the big plans, and when the soldiers don't perform as prescribed, the commanders don't want to hear about *why* their orders weren't obeyed—they simply expect that they *are* obeyed, period.

Exactly how the TAI decides to interpret orders involves a lot of factors, not the least of which is the psychological condition of the soldiers, both at the squad and individual level. Taking the profiles of each soldier in a squad, it calculates just how well-integrated a particular unit is. If there's a high degree of friction or perhaps a relatively high percentage of slackers, that unit will often decide to hightail it in a tight situation. Conversely, a tight, efficient unit with a high degree of motivation just might surprise you with its resourcefulness and aggression. As you might imagine, that surprise is especially striking when the unit in question belongs to your foe.

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The psychological variables reach down to individual soldiers, so while as a whole a unit might perform admirably, there might be one or two grunts who decide to head for Calais. Usually this isn't a major problem, unless the vacationer happens to be the guy with the Bazooka who was covering the road on your flank. You know the road... the one those three enemy tanks are trundling down.

The TAI also factors in that most important of parameters, battlefield experience. It's rather entertaining to see just how differently a seasoned vet and a green rookie will approach similar situations. Individual troop movement is particularly telling, as the experienced soldiers disperse over a wide area to minimize the effects of a well-tossed *Stielhandgranate*. Newcomers, on the other hand, bunch up as if they're crowding the stage while the Andrews Sisters perform at the Bob Hope show: keep that up and they won't be sitting under the apple tree with *anyone*.

Fortunately, the TAI is fairly generous in experience upgrades.

Soldiers acting under the supervision of the TAI display a surprising degree of initiative. If you give a fire command, they don't just fire carelessly. They'll usually wait for what they perceive to be the optimum moment before they let off their rounds. Moreover, they can differentiate between firing to kill a specific target and laying down suppression fire. Tell them to move, and they'll appraise the situation, selecting the best moment to take off, as well as finding the best cover to head for. Those manning weapons heavier than rifles can show even more initiative, to the point where it's not even necessary for you to direct their fire, except when circumstances or strategy dictate a more hands-on approach.

Although usually not advisable or even enjoyable, it is possible to turn off the TAI's influence on the proceedings. Options to remove all fear from your

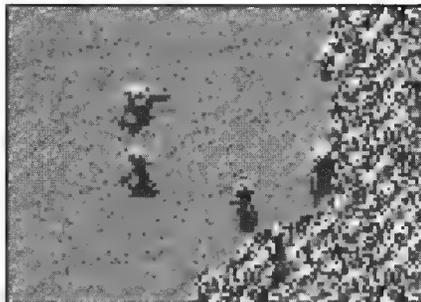


Figure 2-3a. *Your experienced troops will spread out.*

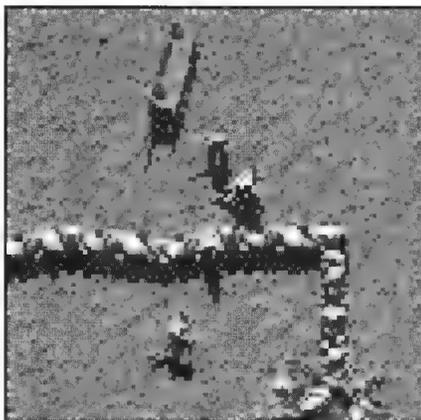


Figure 2-3b. *"Green" troops will bunch together—a dangerous behavior you cannot alter.*

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troops or to make them blindly obey might be novel for a few rounds, but are otherwise unrewarding as far as depth of play is concerned. You might find it necessary to exercise one of these options on an extremely selective basis, but for the most part, letting your orders filter through the TAI is the way to go.

Randomization of Starting Forces

Since Close Combat is designed to yield maximum replay value, it stands to reason that the Order of Battle (OOB) for each side is going to vary from game to game. Without going into all the technical details, suffice it to say that there are hundreds of possible variants in the OOBs for each battle.

Think of it this way: in each battle—be it an individual battle in an Operation or a battle during the course of the Campaign—each side has available to it a “force pool” which is larger or smaller, stronger or weaker, depending on which battle you’re playing. Every time you start a new battle, the computer will randomly select specific units from that pool and assign them to the side you have chosen to play.

Here’s how it works: each side’s force pool is assigned a numerical value that reflects the base odds ratio of each side. If the American vs. German odds in a given battle are two to one, for example, the American force pool value might be 60 points, the German’s 30. Each team in a squad also has a base numerical value that reflects its firepower and effectiveness in combat. (A German team with bolt-action rifles is worth four points, a Tiger tank is worth 35, and so forth.)

When the computer generates a random Order of Battle, it automatically assigns each side units whose combined numerical point value totals at least 80 percent of the total force pool value available for each side. Simultaneously, it will make sure that the final ratio created is within 80 percent of the “ideal” odds ratio. This random but controlled interaction between the force pool values and odds ratios means that, even if you play the same battle repeatedly, it will take many tries before you see the exact same number and type of teams used more than once for a given side. At the same time, they’re weighted to ensure historical accuracy.

Within the parameters described above, the assignment of specific teams and weapons is totally randomized. You have to take the luck of the draw and do the best you can with it.

It’s clear to see that, under such a system, it’s impossible to know exactly which units and weapons you’ll be working with—and facing—in a given battle. But each battle incorporates a finite range of possible variants, and



that information can be valuable.

If you're playing as the American, for instance, it's helpful to know whether or not there's even a chance you'll face German armor in a given battle and to have a realistic estimate of what sort of support weapons the enemy might have deployed.

Your Game Manual has an excellent weapons section, as does the in-game Help in Close Combat. You'll need to familiarize yourself with the names, characteristics, and capabilities of the various weapons to make the most of the game and this battle planner.

Orders of Battle

Orders of Battle are arrayed by squads representing the various battlefield groupings: Rifle, Support, Armor, Gun, and Miscellaneous Squads. The lineups within each squad listing represent all the possible permutations that might comprise a particular

The Deadly Panzerfaust

These one-man, one-shot weapons are not included in the German Order of Battle, but they are there—and you'd best not forget about them. If an American tank gets close enough and there's a good line of sight (and the firing team is not pinned down or panicked or decimated by casualties), a



Figure 2-4. *The Panzerfaust can knock out an American tank with one good shot.*

stand a good chance of scoring a hit. That's bad news for American players, because a single hit from one of these hand-held rocket launchers is enough to destroy any American tank. Therefore, it's unwise to let your tanks get embroiled

with German infantry at close range unless they're either protected by infantry teams, or you're positive that a given German team has used its allotment of these deadly rockets. An MG 42 or Rifle team has one man with a Panzerfaust, a Recon team has two men carrying Panzerfausts and a Sturm (Assault) team has three men armed with Panzerfausts.

The Panzerfaust's Weakness

Before moving tanks close to an enemy held building, measure the range by issuing a Fire command and seeing how many meters separate the tank from its target. The Panzerschreck has a range of 140 meters and the Panzerfaust has a maximum range of 150 meters (although its optimal range is 50-80 meters). Try to park your tanks just outside that range. The tank is then invulnerable to anything but an incredibly lucky hit, but it can deliver accurate fire in return.

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squad. There are usually four or five variations, and although the randomness factor is in play here, too, some lineups are more likely to appear than others, owing to the occasional overlapping of game data.

In the interests of brevity, certain abbreviations have been used: *PzS*= *Panzerschreck*, and *Sturm*=*Sturmgruppe* (think “Stormtroopers,”) as in the guys who carry flame-throwers, satchel charges, and other nasty specialized equipment. Keep a keen eye on any battlefield where *Sturm* teams or their American equivalent the Assault team are likely to show up. These OOBs are presented in the play-through sections of the chapters that follow, but here’s an example of what you’ll be assigned.

In the Operation strategies that begin with Chapter Four, you’ll see Orders of Battle for each side arrayed in a list for each Maneuver. These represent the choices the computer will use to select the forces for each side. To save space, we’ve indicated the appearance of multiple squads with the same potential composition to the right of the first occurrence, rather than repeating the entry each time it appears. (See the second squad, American Order of Battle, below.)

Sample from Order of Battle Variants for Off the Beach, Battle One

American Order of Battle

Rifle Squad

BAR Light Rifle and Recon or
Two Light Rifle and Recon or
Two BAR and Bazooka or
BAR and Light Rifle or
BAR Light Rifle Bazooka and Recon

Rifle Squad (2 Squads)

BAR and Light Rifle or
Two Light Rifle or
Two Light Rifle and Recon or
BAR and Half Team

Support Squad

Two 60mm Mortar .30-cal. MG and Bazooka or
Two 81mm Mortar and Bazooka or
81mm Mortar Bazooka and .50-cal. MG or
Two 81mm Mortar .50-cal. MG and Bazooka or
Two .30-cal. MGs and 60mm Mortar

German Order of Battle

Rifle Squad

Bolt Rifle and MG 42 or
MG 42 PzS and Half Team or
MG 42 Bolt Rifle and PzS

Rifle Squad

MG 42 and Half Team or
Bolt Rifle and Half Team or
MG 42 PzS and Half Team or
Bolt Rifle and MG 42

Support Squad

80mm Mortar and PzS or
MG 42 and PzS or
MG 42 PzS and Sniper or
MG 42 and Two Sniper or
80mm Mortar PzS and Sniper

Note that a squad can comprise several teams—a BAR team and a Recon team, for instance.

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Generally speaking, the farther you go in a campaign, the larger the available forces. Armor and heavy weapons will be arrayed under the platoons to which they are attached (even though you'll most likely move them and target them as independent units). Occasionally, the German or American OOBs will display individual teams or weapons attached to a specific battle, but not part of the normal variant system. In *Across the Aure*, Battle One, for example, the Germans always draw a Flak 88, representing a one-time, battle-specific weapon that is not part of the standard hierarchy of unit listings shown above. You might also occasionally receive (or find yourself fighting against) individual German infantrymen armed with semiautomatic *Gewehr 41* and *Karabiner 43* rifles, but for game purposes, they are grouped in the Order of Battle as members of ordinary Bolt Rifle teams.

Team Values

We've provided a list of the various teams to be found on each side and of the basic point values the computer uses when dealing your hand before the start of a battle.

German		American	
Team Type	Value	Team Type	Value
50mm AT Gun	12	3-Inch Howitzer	15
75mm AT Gun	15	.30-cal. MG	6
75mm IG	10	.50-cal. MG	7
80mm Mortar	7	57mm AT Gun	12
Bolt Rifle	4	60mm Mortar	5
Flak 88	20	81mm Mortar	7
Jagd Pz V	40	Assault	8
Kubelwagen	5	Bazooka	3
LMG	8	Heavy Rifle	7
Marder	20	Jeep	5
Mark III	18	Light Rifle	6
Mark IV	25	M10	20
Panther	35	M3 HT	7
Panzerschreck	3	M36	30
Recon	3	Recon	3
SDKfz 232	10	Sherman	25
SDKfz 250/1	7	Sherman 105	30
Sniper	2	Sherman 76	30
Stug 42	30	Sniper	2
Stug IIIG	22	Stuart	15
Sturm	9		
Tiger	35		

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Mine Enemy Grows Stronger

Another unique feature of Close Combat is the way in which the game dynamically adjusts its tactics against a specific human opponent: you. Of course, the start-up Orders of Battle for each battle reflect the waxing and waning strength of the opponents based on real historical data—something any good wargame would do. But Close Combat automatically creates more balanced play by taking into account the quality of your performance.

This means that players who win most battles will find themselves facing incrementally stronger variants of the enemy's Order of Battle as they move from one battle to the next. If you're playing the American side, for instance, and clobber the German defenders in Off the Beach, Battle One, you're less likely to receive a full, historically accurate complement of reinforcements or replacements with which to fight Off the Beach, Battle Two. Ouch!

Likewise, if the player suffers defeat or stalemate, the computer will cough up an added boost of firepower or manpower in the succeeding battles.

This element of game play is usually fairly subtle (an extra squad here, an additional machine gun there), but its intended effect is to enhance Close Combat's replay value by making the battles progressively more challenging for the expert player and less frustrating for the beginner.

Strength Balancing in the AI

As mentioned above, the AI does its best to keep matters fairly balanced without enforcing unrealistic conditions on either side. It uses a much more refined approach that precludes the sort of far-fetched advantages some war games impose. The AI tries to arrive at a reasonable balance by calculating the ratio of each side's order of battle. All this is necessary because the effects of an overwhelming victory—or defeat—in the Campaign game tend to snowball, so that subsequent battles can become nearly untenable because of the large number of troops that would be involved.

Say, for example, you, as the U.S. forces, rout the Germans and score a decisive victory. Left to its own devices, the AI would simply try to compensate such a lopsided battle by awarding the Germans with reinforcements to ensure that the next battle in the Campaign would pit reasonably balanced forces against each other. These supplemental troops provide the *Wehrmacht* with the advantage it needs to really nail you in the next battle, after which you are compensated in like fashion. Before long, we're looking at Order of Battle compensation exceeding 100 percent of the



maximum force pool points, and it can only get worse. So there's a capping mechanism that limits compensation to 90 percent to head off the force escalation by the AI. This cap applies regardless of what the strength ratio is between the two sides.

Reinforcements

Whenever you're shellacked in battle the AI seeks to level the playing field a bit by sending you reinforcements. Reinforcements are supplemental units you were not supposed to get but which are needed to balance the game play (because you got wiped out or were especially effective against your opponent). As in real battle, however, the *kind* of reinforcements you get is pretty much a crapshoot. In order to simulate the logistical vagaries of real war, the AI uses a rather complex formula to determine just what type of unit or units will be sent in as reinforcements. To determine what type of reinforcements are received, the OOB for that side is used. The odds determining who you'll receive are based on the type of squad listed in the OOB (thus determining your Base Chance) and the frequency of Entry for that type squad. Infantry, for example, has a Base Chance value of 100, while armor has only 33. Three infantry squads would equal 300 (100 x 3) while three armor squads would only be 100 (33 x 3). If the total of all your units in this particular example was 500, you'd have a 300 in 500—or three in five—chance that any reinforcements would be infantry and a 100 in 500 chance they'd be armor. Big surprise—you're a lot more likely to get infantry reinforcements. Probably right off the boat, too.

Overall replacements are governed by the weighting table shown below. Replacements can occur at the team level (replacing soldiers lost in the team) or the squad level (replacing a lost team). While the function is trying to reach the minimal 80 percent balance between opponents, the chances of actually receiving a replacement are:

Replace Soldiers in a Team:	50%
Replace Team in a Squad:	33%
Receive a Reinforcement:	16%

The function will keep trying to add replacements or reinforcements until either the 80 percent of each side's OOB has been reached and 80 percent of the ratio has been reached or both sides have exceeded 90 percent of the OOB.

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Replacements in later battles within a single map are done a bit differently. As long as the battles continue within a map area (Across The Aure, for example), the AI will lower the parity levels to 60 percent rather than 80 percent. This reinforces the notion of dwindling reserves as long as battle continues in the same area. Once you move on to another battlefield, the old percentages are restored.

The Mysteries of Weapons' Capabilities

In Close Combat, as in real warfare, there are no hard-and-fast rules about which weapon to use against which target. The manual contains a complete listing of terrain features and rates them in terms of the protection they provide against high-explosive rounds, which gives you a basic idea of how effective your heavier weapons will be against certain targets, such as enemy troops behind stone walls or inside bunkers.

Logic and experience will lend wisdom to your selection of weapons. If you know from scanning the Order of Battle variants that you will not be facing German armor in the battle you're about to fight, there's no need to hold your Bazooka teams in reserve, waiting for a *Marder* to poke its nose into the open; instead, you can have them lob rockets at the windows of enemy-occupied stone buildings. You probably won't cause any fatalities, but there's always the chance of a lucky hit, and at least you'll achieve some degree of suppression.

If your support weapons include only light (60mm) mortars, don't waste your limited ammo supply by targeting bunkers or stone buildings; save those shells for infantry in the open, under trees (air bursts can be very deadly), or hiding behind stone walls.

Even 81mm mortars are only marginally effective against stone structures, unless you target enemy troops gathered near a shell crater inside a building; this indicates that the roof has already been blown open above that spot. Your mortars will suppress or injure troops sheltering in wooden buildings, however, so if you can't spot any targets in the open, by all means bang away.

Close Combat's program tracks every single round fired by every weapon during a battle. The effectiveness of any given round is basically a function of three factors: blast, penetration, and protection value.



The Weapons tables are reproduced in the Appendix as a stand-alone group of charts because they run for several pages. There you will find a full explanation for deciphering them. Here's how the process works in a nutshell: each weapon is rated for how many millimeters of steel, at a 90-degree slope, its various types of ammo will penetrate at range categories of Point Blank, Close, Medium, and Long. These ratings are shown in the columns of the Weapons Table. Each weapon will have different optimum ranges for each range category.

For example, a Garand firing Antipersonnel ammo at Point Blank uses a range value of 20 meters. At that range, the penetration rating for the AP bullet is 10mm.

If the ammunition is explosive (HE or HEAT), it will also have a blast rating expressed in millimeters of steel penetrable by ammo type, and a radius affected by the blast. For example, a Garand firing an HE rifle grenade has a blast radius of five meters and a blast rating of four. This level of detail is only necessary for the most committed gamer, but as you grow more experienced with Close Combat, you may well get to the point of wanting to understand it.

Personal Weapons

On the next two pages, you'll find the Soldier Chart. This chart presents some of the more useful data Close Combat uses to model soldiers. Here's an example: want to see what the Primary Weapon (personal weapon carried by a soldier) in a MG 42 team is? Find the row for MG 42 in the Soldier Chart and follow it over to column O, the number there is 43. Key number 43 in this chart tells you each soldier is carrying a Walther P38. The key numbers apply to columns I, O, and U of the Soldier Chart.

Weapon	Country	Key #	Weapon	Country	Key #
None		-1	5cm L/60	GE	22
Melee	Any	0	37mm L/50	US	23
Grenade	Any	1	2cm L/55	GE	24
Colt .45	US	2	7.5cm L/70	GE	25
Mauser	GE	3	8.8cm L/56	GE	26
Garand	US	4	76mm L/53	US	27
Thompson	US	5	90mm L/50	US	28
Carbine	US	6	MG 34	GE	29
MP40	GE	7	Springfield	US	30
BAR	US	8	Scoped Mauser	GE	31
MG 42	GE	9	57mm L/50	US	32
.30-cal. MG	US	10	105mm L/28	US	33
Bazooka	US	11	7.5cm L/12	GE	34
Panzerschreck	GE	12	Assault MG 42	GE	35
Panzerfaust	GE	13	Nahvtdgnwf	GE	36
60mm Mtr	US	14	Smoke Mortar	US	37
75mm L/48	GE	15	Smoke Discharger	GE	38
75mm L/40	US	16	3-Inch	US	39
.50-cal. MG	US	17	10.5cm L/28	GE	40
8.8cm Flak	GE	18	Demo Charge	Any	41
80mm Mtr	US	19	Gewher 43	GE	42
8cm Mtr	GE	20	Walther P38	GE	43
8.8cm L/71	GE	21			

(continued on page 42)

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A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
Garand	US	0	3	0	20	0	40	-1	0	0	0	0	0	4	16	0	0	0
Carbine	US	1	3	0	20	0	40	-1	0	0	0	0	0	6	5	0	0	0
Thompson	US	2	3	0	20	0	40	-1	0	0	0	0	0	5	7	0	0	0
BAR	US	3	3	0	20	0	40	-1	0	0	0	0	0	8	5	0	0	0
Gun Crew	US	4	3	0	20	0	20	-1	0	0	0	0	0	4	16	0	0	0
Mauser	GE	5	3	0	20	0	30	-1	0	0	0	0	0	3	18	0	0	0
MG 42	GE	6	3	0	20	0	30	9	2	0	0	0	0	43	32	0	0	0
60mm Mortar	US	7	3	0	20	0	40	14	0	40	0	12	0	6	5	0	0	0
.30-cal. MG	US	8	3	0	20	0	40	10	5	0	0	0	0	2	1	0	0	0
Mauser/PzF	GE	9	3	0	20	0	30	-1	0	0	0	0	0	3	18	0	0	0
Panzerschreck	GE	10	3	0	20	0	30	12	0	0	8	0	0	3	13	0	0	0
MP40	GE	11	3	0	20	0	30	-1	0	0	0	0	0	7	7	0	0	0
Bazooka	US	12	3	0	20	0	40	11	0	0	10	3	0	6	5	0	0	0
80mm Mortar	US	13	3	0	20	0	20	19	0	30	0	10	0	6	5	0	0	0
8cm Mortar	GE	14	3	0	20	0	30	20	0	30	0	10	0	3	13	0	0	0
.50-cal. MG	US	15	3	0	20	0	20	17	5	0	0	0	0	2	1	0	0	0
Springfield	US	16	3	0	20	0	40	-1	0	0	0	0	0	30	12	0	0	0
Scoped Mauser	GE	17	3	0	20	0	30	-1	0	0	0	0	0	31	18	0	0	0
Assault MG 42	GE	18	3	0	20	0	30	9	3	0	0	0	0	9	3	0	0	0
Colt .45	US	19	3	0	20	0	10	-1	0	0	0	0	0	2	2	0	0	0
Gewehr 43	GE	20	3	0	20	0	30	-1	0	0	0	0	0	42	5	0	0	0
Demo Charge	US	21	3	0	20	0	40	-1	0	0	0	0	0	4	16	0	0	0
Gun Crew	GE	22	3	0	20	0	20	-1	0	0	0	0	0	3	16	0	0	0
Walther P38	GE	23	3	0	20	0	10	-1	0	0	0	0	0	2	2	0	0	0
Demo Charge	GE	24	3	0	20	0	30	-1	0	0	0	0	0	3	16	0	0	0
Vehicle Crew	US	25	0	0	0	0	20	-1	0	0	0	0	0	2	2	0	0	0
Garand-Grenade	US	26	3	0	20	0	40	-1	0	0	0	0	0	4	12	4	0	0
Mauser-Grenade	GE	27	3	0	20	0	30	-1	0	0	0	0	0	3	12	4	0	0
Vehicle Crew	GE	28	0	0	0	0	20	-1	0	0	0	0	0	43	2	0	0	0
MP40/PzF	GE	29	3	0	20	0	30	-1	0	0	0	0	0	7	7	0	0	0

- A** Name of Principle Weapon used by Soldier
- B** Nationality (American or German)
- C** Type
- D** Millimeters of Steel Protection for the Head
- E** Millimeters of Steel Protection for the Body
- F thru G** % Chance to Hit Armor on Head/Body (value/128 x 100 = %)
- H** Battle Weight (does not include ammo or weapon)
- I** Crewed Weapon (weapon that is carried by this soldier that can be used by a crew)

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T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF
0	-1	0	0	0	0	0	1	0	2	0	0	0
0	-1	0	0	0	0	0	1	0	0	0	2	0
0	-1	0	0	0	0	0	1	0	2	0	1	0
0	-1	0	0	0	0	0	1	0	1	0	0	0
0	-1	0	0	0	0	0	1	0	0	0	0	0
0	-1	0	0	0	0	0	1	0	2	0	0	0
0	-1	0	0	0	0	0	1	0	0	0	0	0
0	-1	0	0	0	0	0	1	0	0	0	0	0
0	-1	0	0	0	0	0	1	0	0	0	0	0
0	-1	0	0	0	0	0	1	0	0	0	0	0
0	13	0	0	1	0	0	1	0	1	0	0	0
0	-1	0	0	0	0	0	1	0	0	0	0	0
0	-1	0	0	0	0	0	1	0	2	0	1	0
0	-1	0	0	0	0	0	1	0	0	0	0	0
0	-1	0	0	0	0	0	1	0	0	0	0	0
0	-1	0	0	0	0	0	1	0	0	0	0	0
0	-1	0	0	0	0	0	1	0	0	0	0	0
0	-1	0	0	0	0	0	1	0	0	0	0	0
0	-1	0	0	0	0	0	1	0	2	0	0	0
0	-1	0	0	0	0	0	1	0	2	0	0	0
-1	0	0	0	0	0	1	0	0	0	0	0	0
0	-1	0	0	0	0	0	1	0	0	0	0	0
0	41	0	1	0	0	0	1	0	1	0	0	0
0	-1	0	0	0	0	0	1	0	0	0	0	0
0	-1	0	0	0	0	0	1	0	0	0	0	0
0	41	0	1	0	0	0	1	0	1	0	0	0
0	-1	0	0	0	0	0	1	0	0	0	0	0
0	-1	0	0	0	0	0	1	0	0	0	0	0
0	-1	0	0	0	0	0	1	0	0	0	0	0
0	-1	0	0	0	0	0	1	0	0	0	0	0
0	-1	0	0	0	0	0	1	0	0	0	0	0
0	13	0	0	1	0	0	1	0	1	0	0	0

J thru N	Crewed Weapon Ammo (quantity of ammo of each type)
O	Primary Weapon (personal weapon carried by this soldier)
P thru T	Primary Weapon Ammo (quantity of ammo of each type)
U	Secondary Weapon (sidearm carried by this soldier)
V thru Z	Secondary Weapon, Quantity of Ammo
AA	Grenade Weapon (this soldier can use grenades)
AB thru AF	Number of Grenades of Each Type

The Soldier Chart

For those readers who really want to get a handle on the nuts and bolts of the game, we've reproduced a chart that gives you all the basic data for every soldier, on both sides, who appears in the game.

As you can see, the data is displayed in 32 columns; the columns themselves are identified alphabetically: A-Z, and then starting over with AA-AF. The rows reflect a soldier's principal weapon. Some of the information is fairly obvious, such as the armor protection figures (everyone wore the same helmet, after all, and no one wore body armor, except for the odd apocryphal Zippo lighter). The columns pertaining to ammo quantities, however, might prove very useful. Note for example that the varieties of the Mauser appear well-equipped with ammo, slightly more than a Garand rifle and considerably more than either an American carbine or a BAR. This disparity could be a deciding factor if you're waging a battle of attrition. Also, secondary weapons could prove critical in a closely matched battle, so be sure to check out which soldiers actually carry extra weapons and how much ammo each secondary weapon carries.

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(continued from page 39)

When a target is fired upon, the terrain the target is hiding behind is adjusted as follows, based on the accuracy of the shot:

Accuracy	Result
Miss	Penetration rating is added to the suppression value of the location where the round landed.
Area	Penetration value is compared to the full defensive value of the terrain the target is using for cover.
Poor	Penetration rating is compared to half the defensive value of the terrain.
Good	No terrain defensive value is used.
Critical	No terrain defensive value is used, and the penetration rating of the weapon is doubled.

Terrain defensive values can be found in the Elements data file (see Appendix). For example, for Open Ground, Prone target, you'll find the defensive value is ten. Using the above example of a Garand firing at Point Blank range, the rifle has a penetration value of ten. Thus, if the accuracy of the shot was an Area hit, the computer compares the penetration of ten to the defense value of ten to determine if the targeted soldier was hit. If the penetration is equal to the defense, the chance to hurt the target is about 50 percent. If the penetration is less than the defense, the chance drops rapidly; if penetration is greater than defense, the chance increases moderately.

Chapter Three



BASIC TRAINING

Now that you're familiar with the Close Combat interface and have a good understanding of why the program does what it does, it's time to get acquainted with some combat basics. We'll explore Close Combat's online tutorial, which takes you on a step-by-step tour of how and when to use certain combat techniques, and discuss in detail some of the most common tactics you'll need to master for victory: how to assault a hedgerow, how to set up a defense-in-depth, how to launch a flanking attack, and the keys to successful use of armored units.

But before we do that, let's take a look at some phrases associated with combat that will crop up repeatedly throughout this guide.

Common Military Phrases

It's a good bet that some of you already know the terms defined below, but those of you playing your first wargame might find the terms unfamiliar. Because the vocabulary of warfare (and hence of wargaming) is specialized, we thought it would be helpful to include the definitions of some basic terms used in the game and in this book.

Military Terms

Deployment: The act of positioning units under your command before a battle starts, the idea being that some arrangements of units are more likely than others to achieve your goals.

Direct-Fire Weapon: A weapon that fires projectiles that travel in a straight line. Direct-fire weapons in Close Combat include rifles, machine guns, tank guns, and antitank guns.

Enfilade: Weapons fire that is delivered against the sides of a unit or position, rather than against its more protected front. Bear in mind that in Close Combat,

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unlike in real warfare, you'll never be fired on by units that are "off the board"—that is, beyond the edges of the battlefield map. This rule was implemented in order to make the game manageable and fair: after all, you

can't very well return fire against forces that are impossible to target.

You can, however, both deliver and receive enfilade fire from units on the map. All other things being equal, enfilade fire is more dangerous than frontal fire to those on the receiving end; the best way to respond to it is to redeploy so that your troops are facing the source, and then issue the Defend order (use Hide if they're under extreme pressure).

You can counter enfilade fire in one of three ways: by retargeting your heavy weapons against the unit shooting at you; by moving other infantry units forward to outflank the enfilading unit (in effect, turning the tables on them); or, as a last resort, by

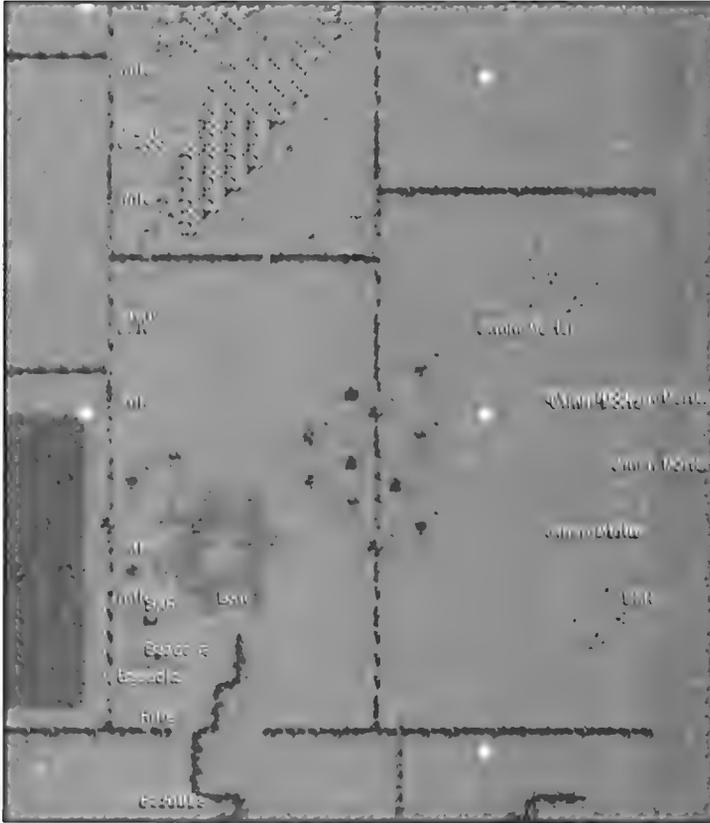


Figure 3-1. A typical Deployment screen. When placing immovable units such as large guns, be sure to check where they'll be able to fire. Select the unit and press the Alt key (PC) or the Command key (Mac), then move the mouse in the directions you wish to fire. A Red line means you can fire at a spot; black means you can't.

withdrawing the targeted unit to safer ground.

Field of Fire: The area that a weapon or a group of weapons can cover effectively with fire from a given position.



Flank: One of the sides—left or right—of a military formation or position. When describing the enemy's flank, right or left refers to the enemy's point of view.

Flanking Attack: A maneuver that moves an attacking force around and behind the flank of an opposing force. This maneuver creates a tactical advantage because it renders the defender vulnerable to enfilade fire and forces him to divert strength from his front line.

Jump Point: A position marked on a map to designate the point of departure for a military formation assigned to perform an offensive operation. Think “jumping-off point,” and the idea should become clear.

Line of Sight (LOS): An invisible line between an observing soldier and the enemy unit or vehicle he is trying to observe. Two soldiers standing in an open field, for instance, are within each other's LOS. Direct-fire weapons must have an unobstructed LOS in order to hit their targets. (Due to the scale of the Close Combat battlefields, all weapons except mortars are direct-fire.)

Phase Line: A line drawn on a map, utilized for control and coordination of military

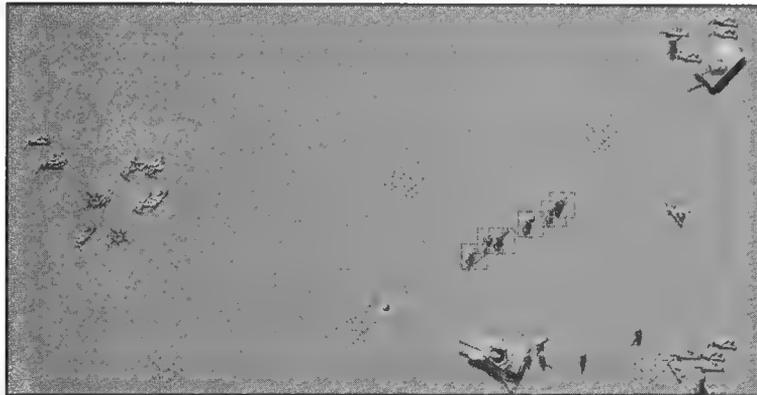


Figure 3-2. Illustration of enfilade fire. American tanks and infantry caught this German squad in the open and gunned it down from the southeast and northeast.

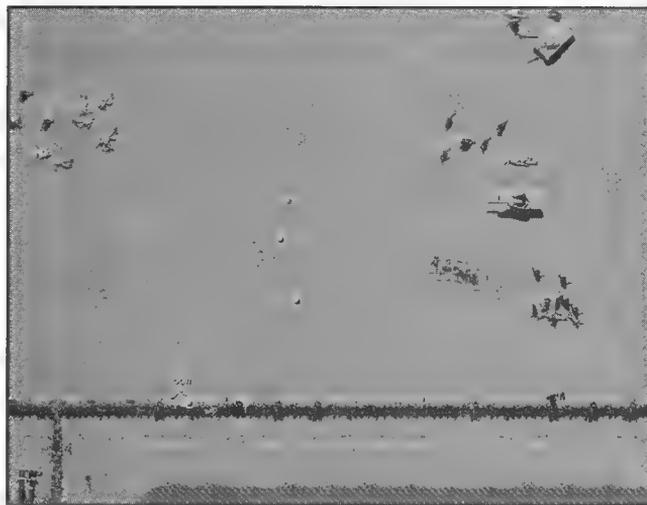


Figure 3-3. Example of a flanking attack. The unit being flanked is the German squad in the hedgerows at the bottom left of the screen.

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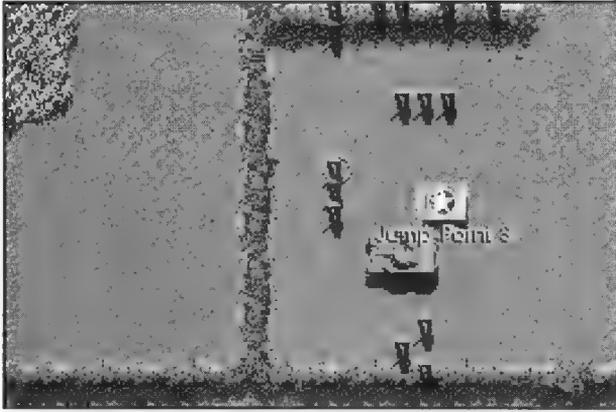


Figure 3-4. *Troops deployed at a Jump Point before the battle begins.*



Figure 3-5. *At the start of a battle, Phase Lines are designated as being under German or American control and often serve as Victory Locations.*

operations, usually (but not always) offensive in nature. As in: “When the troops have secured Phase Line 1A, wait five minutes to collect stragglers, and then jump off for Phase Line 1B.”

Strategy: The art and science of employing the armed forces of a nation to secure the objectives of national policy by the application of force or the threat of force. To put it more simply, strategy is the overall plan of action, or the Big Picture.

Although Close Combat is primarily a game of tactical warfare, you should remember that each of the game’s battles form part of a grand Allied strategy designed to break through the daunting hedgerow country and capture the vital road junction at St. Lo. Beyond St. Lo, the French countryside becomes open, and numerous roads branch north and east—toward Paris, the Rhine River, and the border of Germany itself. This is good tank country, where the enormous number of Allied tanks can be used to great advantage.

If you’re playing the Campaign game as the Americans, the Historical Timeline at the bottom of the Debriefing screens will show how your progress matches the historical record; if you’re playing the German side, it shows how well you’re thwarting the Allied strategic plan.

Suppression: A volume of fire that forces enemy troops to keep down or to disperse and find cover. The side that is suppressed will not be able to shoot as often or as accurately as the side issuing the suppressing fire.



Tactics: The techniques of deploying and directing military forces in coordinated combat activities against the enemy in order to attain the objectives designated by strategy. Tactics are the specific, on-the-spot methods local commanders must employ to attain their immediate objectives, within the framework of their High Command's overall strategy. A successful tactician must be quick to adapt to the fluid demands of the combat situation and must be able to improvise with the resources available.

Making the Most of Boot Camp Maneuvers

Even if you're a veteran wargamer, we recommend that you put yourself through Close Combat's Boot Camp (you are not required, however, to wake up at 0500 and do 20 minutes of calisthenics before breakfast). Because Close Combat is a very different kind of wargame, the Boot Camp exercises serve as a handy, methodical, easy-to-grasp tutorial.

Boot Camp consists of five sections:

- The Quick Tour
- Viewing Terrain
- Monitors and the Toolbar
- Infantry Tactics
- Armor Tactics

Let's examine what's explained in each section, and delve a little deeper into the techniques of fire and movement.

The Quick Tour

Here's where you'll learn how to issue the most basic commands to your teams: move, move fast, fire at a target, set up a defensive perimeter, lay down a smoke screen, and hide from the enemy. Remember: this is the basic stuff of survival and the recipe for victory. To make things as clear as possible, you see large gray arrows showing you where to click and lots of feedback screens from the program telling you how well you're doing and why you're doing it.

Let's take a closer look at how these basic orders work.

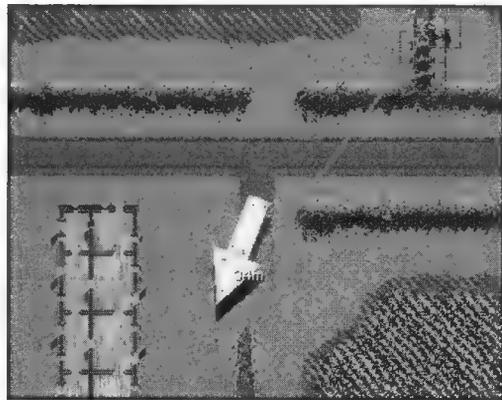


Figure 3-6. *Close Combat's tutorial is simple yet efficient—just read the instructions, click at the point indicated by the large gray arrows, and watch the action unfold.*

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Move vs. Move Fast

Both commands are issued in the same way:

1. Position the cursor on any member of the team you wish to give a Move command to, and then click and hold the mouse button.
2. The Command menu appears.
3. Click Move or Move Fast and drag the mouse to the point on the map that you want this team to reach. A blue line between the team and its destination will briefly appear.
4. Click the spot you want the team to move to and a destination marker (dark blue for Move, purple for Move Fast) will appear on the map.
5. The team will attempt to reach that destination. Once they arrive there, the message “Redeploying successful” will appear in the Message monitor, and the destination dot will vanish. Should enemy action prevent completion of the movement, a message describing the situation will be displayed; if the situation is urgent and requires your immediate intervention, the message will be shown in dark red.

When given a Move command, a team will advance cautiously, taking advantage of available cover. Move commands are suitable when stealth is required or when you want a team to traverse a long distance without becoming tired or winded.

Move Fast, on the other hand, is best used for short rushes or close assaults. Don't forget that each soldier is carrying at least 50 pounds of weaponry and

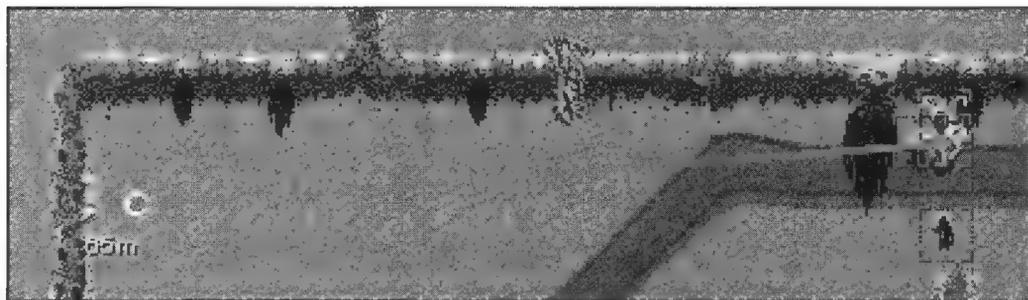


Figure 3-7. *Don't use the Move Fast command unless the destination is less than 60 meters away.*



gear, so it's unwise to issue a Move Fast command for long distances (60 meters or more, as a general rule). That is because if your team should make it to the destination marker without enemy interference, the men will be too exhausted to fight well, rendering them much more susceptible to a loss of cohesion and eventually panic.

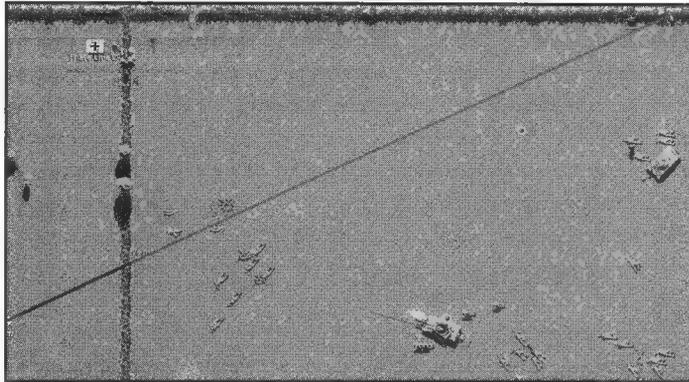


Figure 3-8. *The target line for a Fire command. Notice where the line turns black—your team can't see or fire on any enemy unit beyond that point.*

The Fire Command

Issuing a Fire command is very similar to issuing a Move command. When you've selected the team you want to fire and chosen Fire from the Command menu, drag the cursor to the intended target. A line will extend from the selected team to the target—red for direct fire, orange for indirect fire—and correspondingly colored dots will appear when you click to mark the target.

Because of the scale of Close Combat's maps, all units except mortars can issue only direct fire—that is, their targets must be visible in order to be hit. To be visible, the firing unit must have line of sight (LOS) to the target.

If the line between the firing unit and the target is bright red, then the team has a clear shot; if the line is dark red, then the team can see the target but can't yet fire because something—a tree or a friendly tank, for example—is blocking the line of fire. Issue the Fire command while the team's view is blocked, and the team will maneuver in order to get a clear shot.

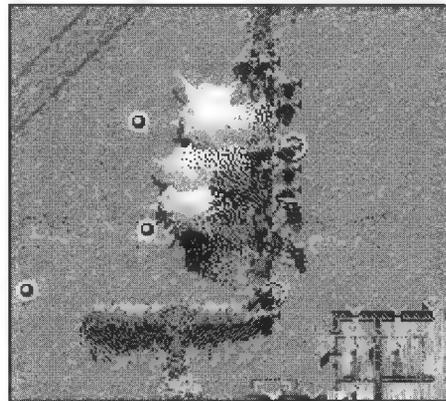


Figure 3-9. *Infantry smoke screens are limited to a range of about 45 meters.*

The Smoke Command

Smoke screens are invaluable; they hide your movements from the enemy and greatly reduce the accuracy of his fire. Tanks and mortars can lay down smoke at long distances. Infantry teams carry smoke grenades (usually one or two per man), but the distance at which they can create a smoke screen is obviously limited to how far they can throw a grenade (about 45 meters). Don't waste your infantry's smoke grenades at too long a range; save them for masking close assaults over open ground.

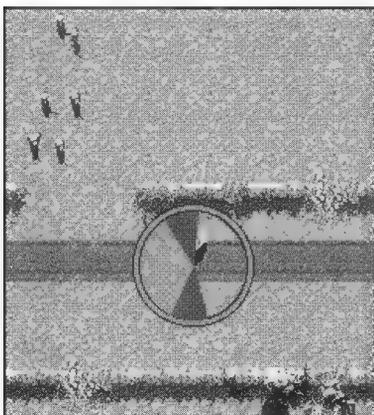


Figure 3-10. *Setting a defensive scan arc.*

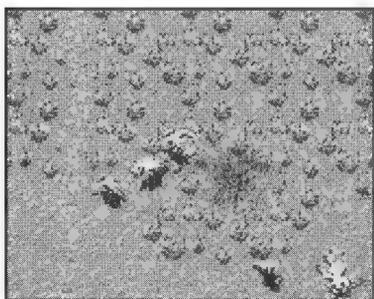


Figure 3-11. *Scrub-grass and open fields provide minimum cover but can be traversed quickly.*

Defend and Hide Commands

When a team comes under direct enemy attack, you'll want to issue a Defend command. Teams so ordered will seek cover, lie prone, and arrange their field of fire to meet the enemy threat. When a team receives a Defend order, a blue circle appears around it, centered on the team leader. A blue, fan-shaped arc fills in part of that circle; use the mouse to adjust the width and direction of the arc according to the size and direction of the enemy threat. When you're satisfied that the arc is properly set, click, and the arc will be replaced by a defense marker (yellow).

When you issue a Hide command, the selected team will seek the nearest cover and try to conceal itself from the enemy; teams who've been ordered to Hide are indicated by a green marker. This command also initiates the possibility of an ambush because a team that's been ordered to Hide will automatically open fire on any enemy unit that comes within 30 meters.

Viewing Terrain

These exercises will familiarize you with the game maps and teach you how to spot good cover, such as stone walls, woods, hedgerows, buildings, and wheat fields. The manual covers every different terrain feature in detail, but we'd like to show you some of



the most commonly encountered ones and comment on how they might affect game play.

Natural Terrain Features

Dirt, Grass, and Plowed Fields: These terrain features are open and flat, making them easy to move across but providing no cover. Any attacks mounted across these types of terrain should be masked by smoke and supported with suppressive fire.

Hedgerows: The Normandy hedgerow is the essential natural feature of the *bocage* countryside. Dense, thick, and difficult to traverse, it offers excellent concealment and fairly good protection against fire. Infantry and heavy armor can cross hedgerows; half-tracks, jeeps, and scout cars cannot.

Man-Made Features

Stone Walls: Farm buildings in Normandy were commonly bordered by stone walls. They offer good concealment and protection against direct fire, but troops sheltering behind them are still vulnerable to mortar fire.

Wooden Farm Buildings: Farm buildings are often made of wood. They offer good concealment, but only fair protection against fire. If parts of the building have been fortified (look for sandbags near doors and windows), they're significantly harder to damage and to take by direct assault.

Stone Buildings: In villages and on some farms you'll find stone buildings. They're natural fortresses, especially if they've been augmented by sandbags, and offer good

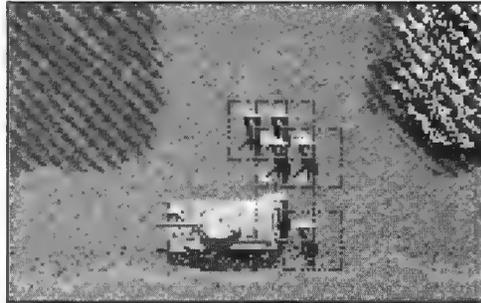


Figure 3-12. *The plowed field (left) offers no cover; the wheat field (right) offers moderate cover but little protection.*

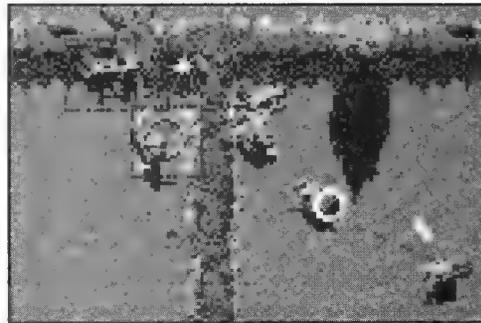


Figure 3-13. *Hedgerows provide excellent cover for defenders and can only be crossed by tanks and infantry.*

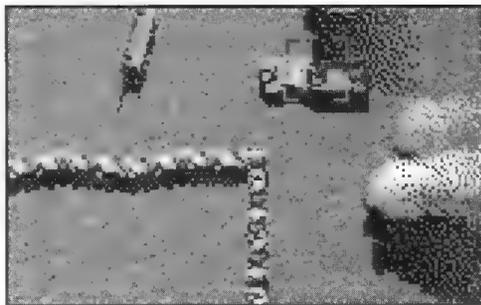


Figure 3-14. *Stone walls are commonly found around farm buildings; they offer good protection against small-arms fire.*

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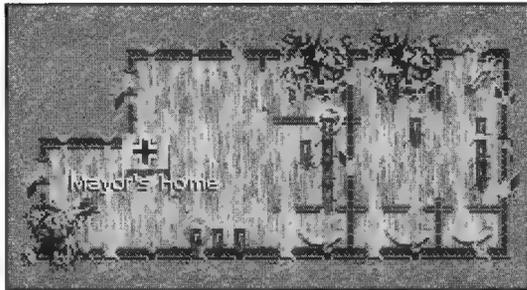


Figure 3-15. *Wooden buildings provide good cover from small-arms fire, but are susceptible to damage by tank, mortar, and artillery fire.*

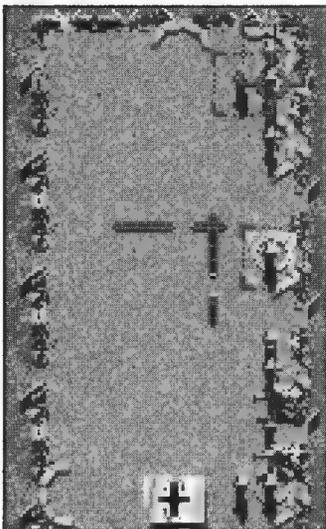


Figure 3-16. *Because they can provide protection even against tank fire, stone buildings are the perfect spot to place hand-held antitank weapons. The German cross indicates that this is a Victory Location.*

protection against mortar fire and small arms fire. They can be destroyed by tank shells, but only piecemeal. If you're defending such a position, it's a natural spot to deploy your hand-held antitank weapons.

Rifle Pits: You'll see hundreds of these in the hedgerow country. Some will be occupied by the enemy, some will be vacant—you have no way of knowing until you start drawing fire. They offer good front line protection and concealment. Both sides can use empty

rifle pits to their advantage.

Field Entrenchments: Visible on many of the maps are foxholes, zigzag trenches, and other earthworks. Unoccupied earthworks can be very useful when you're advancing on an enemy-held building—you can short-rush your infantry through open terrain and then have them take cover in the earthworks until they're ready for the next rush. These features offer moderately good cover from aimed fire, both tank and infantry, but only fair cover from mortar shells.

Pillboxes: Occasionally you'll run into a fixed concrete fortification called a pillbox. These offer maximum protection from all kinds of fire and are virtually impossible to capture with infantry unless they've been softened up first by tank and mortar fire. Don't waste ammo firing at a pillbox with 60mm mortars. Heavier shells will do cumulative, visible damage by gradually chipping away at the concrete.

Monitors and the Toolbar

This is crucial information. The monitor screens provide a sort of running commentary on how each of your teams—and each soldier on a team—is doing at various times during every phase of a battle.



We've already described these features in some detail, but here are some specific examples of information and messages you might encounter in a typical game.

Team Effectiveness

You can quickly determine a team's effectiveness by checking the number of gold bars by the team icon, as well as the type of shading in the team description. A tan shading and two gold bars, for instance, tell you that the team is composed of green and potentially unreliable men. You might improve their performance by stationing a veteran unit nearby during Deployment, but don't count on it. Green units generally panic or cower after firing a few shots. If they perform at least moderately well during a Campaign game, they might gain an experience bar before their next engagement.

Fatigue Levels

The team shown in Figure 3-19 has been pushed too hard by too many Move Fast orders over long distances, and should be given a rest until they're no longer winded. Put them on the defensive for a few minutes, and they should recuperate. If you try to assign them offensive tasks before doing so, they're much more likely to fall apart.

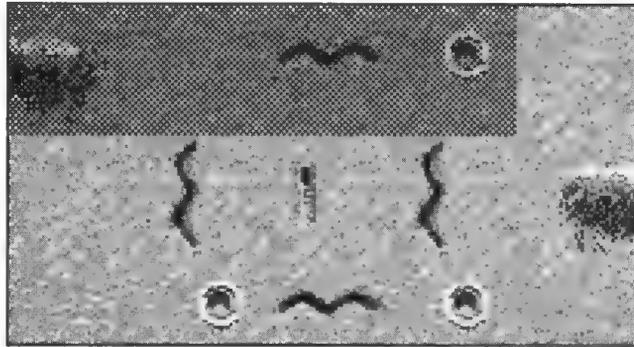


Figure 3-17. Field entrenchments are a good place to rest your troops between short, fast advances. Take advantage of shell craters too—they offer good protection.

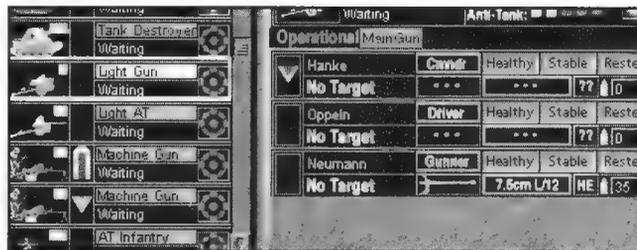


Figure 3-18. Inexperienced teams are indicated by tan or red shading and one or two gold bars.

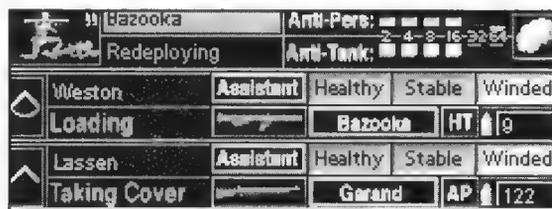


Figure 3-19. Too many Move Fast orders with no rest between orders results in fatigued troops—and a tired soldier isn't nearly as effective as a rested one.

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You'll need to pay particularly close attention to monitor messages about your vehicles. Can't get that assault gun to fire? Check its status: is it because the gun is jammed or because it can't see the target or because it's out of ammo? Obviously, there's no point in ordering a vehicle to fire until you receive a message informing you that the problem has been fixed.

Infantry Tactics

This tutorial instructs you in the most common fire-and-movement techniques found in the game. Based on our many hours of play testing, here are some detailed, specific examples.

Attacking a Hedgerow Position

If you play as the Americans, you'll have to attack and seize numerous fortified hedgerow positions. Sometimes you'll have control of hedgerows that flank the one you're trying to attack, but more often than not you'll have to make a direct, frontal assault—the most dangerous kind of maneuver to perform.

The good news is that if you study and apply the actual tactics used to do this, you can succeed without sustaining prohibitive losses. Here's the technique, step by step.

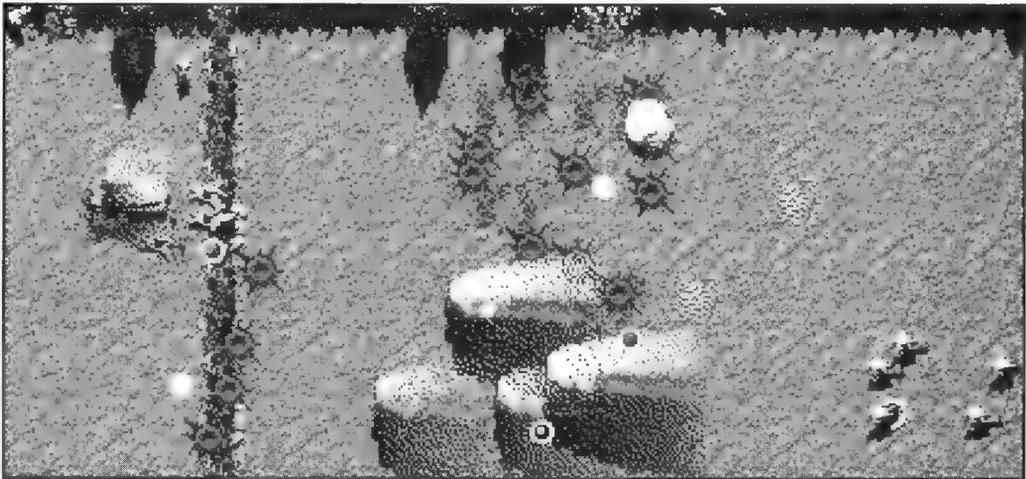


Figure 3-20. A successful hedgerow assault. Observe the burning German half-track (top left), the smoke screen, and the charging American troops (bottom right).



1. Put out all the suppressive fire you can muster, using BARs, machine guns, and tanks, if you have them. This will at least force the Germans to keep their head down, and you might get lucky and inflict a few casualties at the same time.
2. Lay down the heaviest smoke screen you can, around 20 or 30 meters in front of the enemy position. Tanks and mortars are best for this (unless the open field is narrow enough for infantry-thrown grenades to provide useful cover). It'll take a couple of minutes for the smoke screen to reach maximum density: after a few attempts, you'll have a pretty good idea of when to stop laying smoke.
3. While other teams continue to fire at the enemy positions (avoiding the area your troops are about to advance through), use the Move Fast command to send your assault teams into the smoke. You can have a tank accompany them to increase the impact of the assault, but it's risky—when the vehicle emerges from the smoke, it'll be within easy *Panzerfaust* range. If you placed the smoke screen correctly, your teams should emerge from its cover only a few meters from the German rifle pits—too close for even an MG 42 to get off more than a quick burst before the two sides become intermingled.
4. Once your infantry has penetrated the defenders' line, have them move up and down the hedgerow, wiping out individual rifle pits as they go. At this point, the Germans are likely to retreat, sometimes running into the open. Target them and try to wipe them out—every enemy soldier you take out this way is one less you'll have to face from a prepared position later on.

How to Set Up a Defense-in-Depth

This is a useful tactic for anyone playing the Germans in Campaign mode. In the Campaign, one of your major objectives is to protect your best, most experienced men—if you lose them, they'll be replaced by shaky and untested troops, reducing the cohesion and reliability of your entire force.

To set up a layered defense-in-depth, place your best teams in forward positions, where they can exact the heaviest losses from the attacking Americans. At the same time, establish a secondary line of positions that your first-line teams can withdraw to when the pressure becomes too great.

Timing is critical to a successful withdrawal—issue the order too soon, and you minimize the damage you can do to the attackers, but if you wait too long

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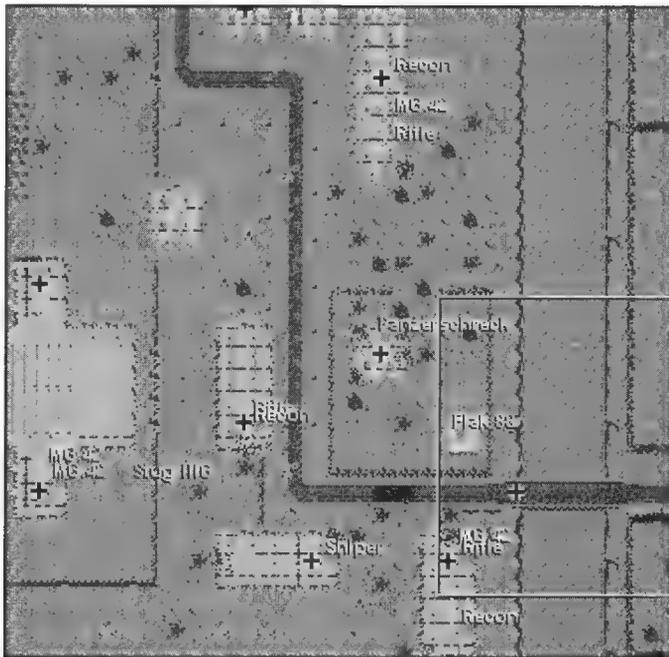


Figure 3-21. A typical defense-in-depth for the German player: Rifle teams, MGs, and antitank weapons at the front; Snipers and MGs forming a secondary line; and armored units in reserve, ready to deploy forward if the opportunity arises.

to issue the order your front-line teams might be too close to the enemy to disengage. After playing a few battles, you'll begin to develop a feel for this sense of timing. *All* units ordered to pull back should be covered by fire from the secondary line.

How to Stage a Feint and a Flanking Attack

Let's say that you've studied the map and concluded that the defender's left flank offers the best avenue of approach to your objectives. You have accordingly deployed a very strong force on your own right flank.

In order to deceive the enemy as to your intentions, you have also massed a fairly strong force on your left flank, taking advantage of trees, hedgerows, buildings, and other terrain features to conceal their presence from the enemy. When the battle begins, put all your units in Defend mode (to prevent premature movement by some overzealous team leader) and start going through the motions of attacking from your left flank—lay smoke, open suppressive fire, have some units make limited advances, and so forth.

With any luck, the enemy (human or computer-controlled) will think you're about to attack in that sector. His attention will be focused there, and he might even send some reserve teams in that direction.

Now is the time to launch your *real* attack on the enemy's left flank. Issue Move Fast orders to the teams committed to that operation, and retarget your mortars (firing high-explosive shells, not smoke) against suspected enemy positions in front of your main attack (taking care that the infantry doesn't move into the area targeted by your mortars).

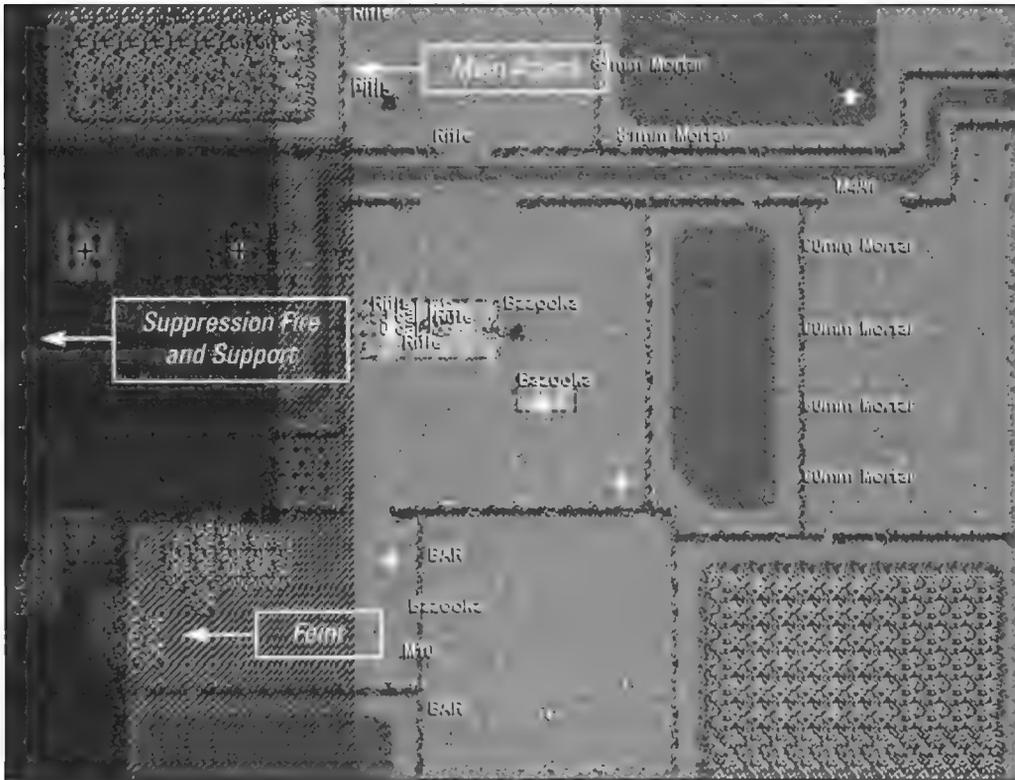


Figure 3-22. Example of a feint and flanking attack.

The easiest way to know whether or not this tactic is working is to zoom out to the Farthest view and note the way the red dots are shifting. If the enemy starts moving teams to meet this new threat, you might be able to take advantage of his confusion and order a general advance all along your line.

Armor Tactics

This segment of Boot Camp outlines the basics of armor deployment and some useful tips on how to protect your tanks. Gamers playing the American side will be astonished at how vulnerable Allied armor was in the confining terrain of the Normandy countryside.

If you're playing as the Americans, we recommend not committing your armor until you have a fix on enemy positions. Remember the scale of the

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Close Combat

game: if you can see it, you can hit it, and the gun sights in German armored vehicles were superb.

Foot soldiers have much greater visibility than tank crews, so they're more likely to spot and suppress enemy antitank squads. Tanks therefore have a much better chance of survival if they're protected by infantry escorts.

If you're playing as the Germans, we recommend keeping your armor well hidden until you see how the Americans' attack is developing. A quick counterattack by even a single German tank or assault gun can wreak havoc if the timing is right. In your favor is the fact that the American infantry teams do not have integral antitank weapons like the *Panzerfaust*; if you know where the Americans' Bazooka teams are, send your armor into battle where they ain't. This tactic can even lead to your recapturing a Victory Location that was previously lost.

Chapter Four



OFF THE BEACH

At 0630, June 6, 1944, the drenched, frightened, and seasick troops of the 116th Infantry, 29th Division staggered through bullet-lashed surf and landed on the southern side of Omaha Beach. For several hours, chaos reigned as the well-entrenched defenders of the German 352nd Division poured fire onto the crowded beach from the high bluffs that overlooked the landing sites.

Of the 32 “amphibious” tanks assigned to land with the 116th, 27 were sunk before their treads touched sand; the five tanks that did get ashore immediately attracted tremendous volumes of German fire, proving to be more of a liability than an asset.

Not until the American second wave (comprising the 115th Infantry and the cannoneers of the 111th Field Artillery Battalion) came ashore at approximately 1100 were the Americans able to make any progress off the corpse-strewn beach. Platoon and company-sized units, acting largely on their own initiative, blew up the German wire entanglements blocking the ravines that led to the high ground and began to work their way cautiously inland.

By the end of June 7, the last pockets of German resistance had been cleared from the bluffs overlooking Omaha Beach, and the 175th Infantry Regiment had landed, bringing the 29th to full strength—minus, of course, the 1000 or so casualties the Division had sustained on D-Day.

One battalion of the 116th moved west and relieved the badly battered Ranger detachment that had stormed the German gun emplacements on Pointe du Hoc; the rest of the Division cleared the small towns of Colleville, Saint Laurent, and Vierville on the east-west coastal road before fanning out southward, probing toward the Bayeux-Isigny highway.

Close Combat begins on June 6, at a large French farm just south of the beachhead.

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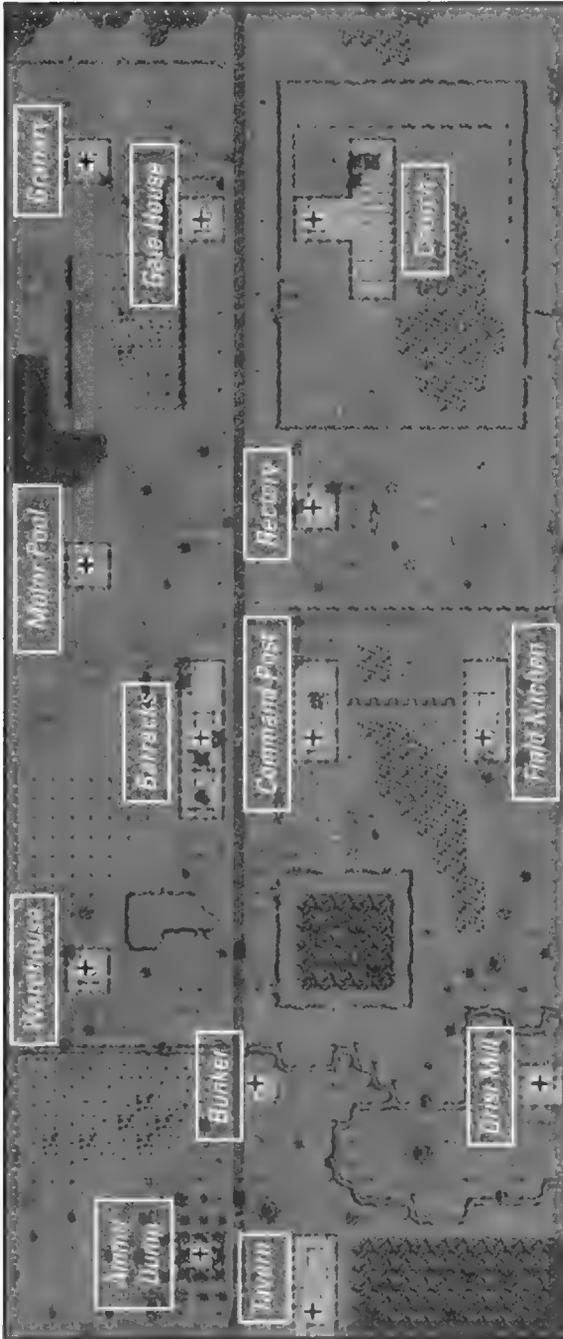


Figure 4-1. All three battles in the Off the Beach Operation take place on this battlefield.



American Objectives

The beachhead is jammed with incoming supplies and equipment, and the American foothold must be expanded. At the same time, good defensive positions need to be secured against the possibility of a German counterattack. To further both of these objectives, you are ordered to attack, secure, and hold the stone building in the center of the map (the German Command Post).

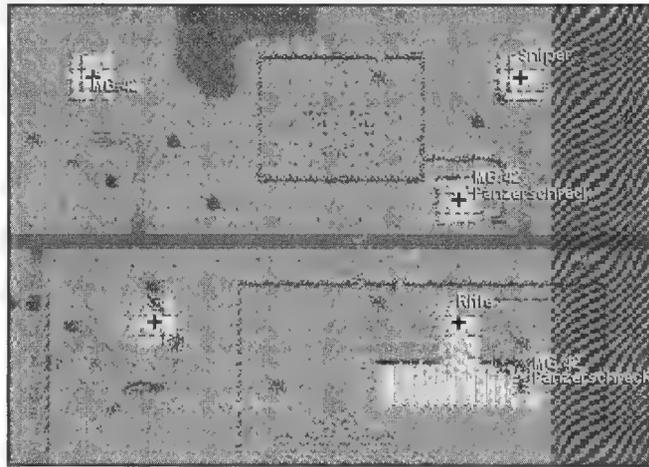


Figure 4-2. Suggested German deployment for *Off the Beach, Battle One*.

German Objectives

In these first battles, the basic German objectives are the same as throughout the rest of *Close Combat*: prevent expansion of the area under American control, delay the invaders so that reinforcements can be hurried forward, and exact the maximum cost in blood. Hold out as long as possible, but if the defense begins to crumble, stage an orderly withdrawal to the west (left of screen) in order to preserve as much of your force as possible.

Off the Beach, Battle One

Victory Locations

Site	Point Value	Site	Point Value
Granary	10	Field Kitchen	10
Church	30	Warehouse	5
Gate House	40	Bunker	15
Rectory	20	Grist Mill	5
Motor Pool	20	Tavern	10
Command Post	20	Ammo Dump	5
Barracks	10		

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Order of Battle Variants for Off the Beach, Battle One

American Order of Battle

Rifle Squad

BAR Light Rifle and Recon or
Two Light Rifle and Recon or
Two BAR and Bazooka or
BAR and Light Rifle or
BAR Light Rifle Bazooka and Recon

Rifle Squad (2 Squads)

BAR and Light Rifle or
Two Light Rifle or
Two Light Rifle and Recon or
BAR and Half Team

Support Squad

Two 60mm Mortar .30-cal. MG and Bazooka or
Two 81mm Mortar and Bazooka or
81mm Mortar Bazooka and .50-cal. MG or
Two 81mm Mortar .50-cal. MG and Bazooka or
Two .30-cal. MGs and 60mm Mortar

Armor Squad

Sherman or
Stuart or
M3 Half-track or
Stuart and M3 Half-track or
Sherman and M3 Half-track

German Order of Battle

Rifle Squad

Bolt Rifle and MG 42 or
MG 42 PzS and Half Team or
MG 42 Bolt Rifle and PzS

Rifle Squad

MG 42 and Half Team or
Bolt Rifle and Half Team or
MG 42 PzS and Half Team or
Bolt Rifle and MG 42

Support Squad

80mm Mortar and PzS or
MG 42 and PzS or
MG 42 PzS and Sniper or
MG 42 and Two Sniper or
80mm Mortar PzS and Sniper

(See Chapter Two for a complete explanation of OOB format.)

German Tactics

Your most important assets are *Panzerschreck* teams and the *Panzerfausts* carried by your infantry. If you can knock out the Americans' armor early in the battle, you'll lower their morale and deprive them of their most important weapons. So station your antitank team where it has the best field of fire, and *always* protect it with either a machine gun or an infantry team. If you're lucky enough to get a mortar, it's a good idea to position back at least as far as the Command Post—you don't want a lucky shot early in the battle to cost you the suppressive effect a mortar offers.

CHAPTER FOUR: OFF THE BEACH



As German commander, you have two options here. The first (and most tempting) is to group your most lethal units close to the American start line—in the Church, the Gate House, and the Granary—in order to do as much damage as quickly as possible and take the steam out of the attack. Your other choice is to stage a defense-in-depth centered around your Command Post, deploying only a couple of units in the Church and Gate House. (The latter is an especially good place for your Sniper, while the former is a good location for one of your MG 42s.)

The Americans aren't likely to be stupid enough to come straight down the road, but there is considerable open terrain between each of the buildings on the map—terrain that they must traverse in order to reach your Command Post. Interlocking fields of fire (between the Church and Gate House, for instance) can exact a high cost from them when they do.

If you feel the situation is deteriorating and decide to withdraw, don't procrastinate—the American superiority in numbers will make the maneuver very hazardous. Each unit given a Move order during the withdrawal should be covered by a firing unit to suppress the Americans as much as possible.

American Tactics

First of all, you won't be facing any German armor, so your Bazooka team's armor-piercing rounds will be of only marginal value. But you can still use the Bazooka against observed enemy units inside stone buildings—it's projectiles will have some value as a factor in suppression, and you just might get lucky and score the occasional bull's-eye on a window or door.

Your armor will almost certainly be destroyed by the Germans' *Panzerschreck* if you move it around in the open, so try to keep it behind cover as much as possible. If you spot *Panzerschrecks*, make them your top priority. And if you should manage to knock them out

Tip: *If you opt for a defense-in-depth, put an MG 42 in the Motor Pool. From there it can cover the road should the Americans break through and enfilade any American units trying to outflank you at the top of the map.*



Warning: *Keep your armor well away from any German Recon teams—they'll be carrying a pair of Panzerfausts. Unless you're able to keep them suppressed with heavy fire, they're the most dangerous infantry team on the field, at least as far as your armored vehicles are concerned.*



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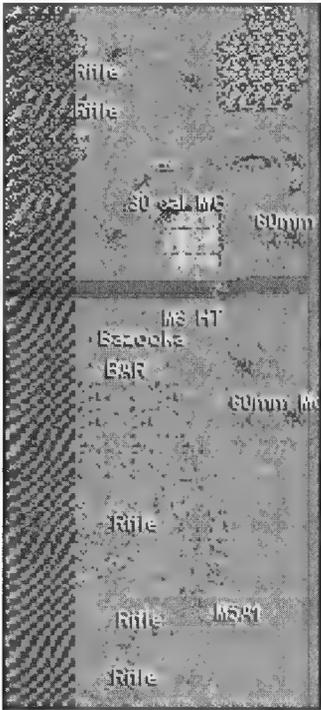


Figure 4-3. *Suggested American deployment for Off the Beach, Battle One.*

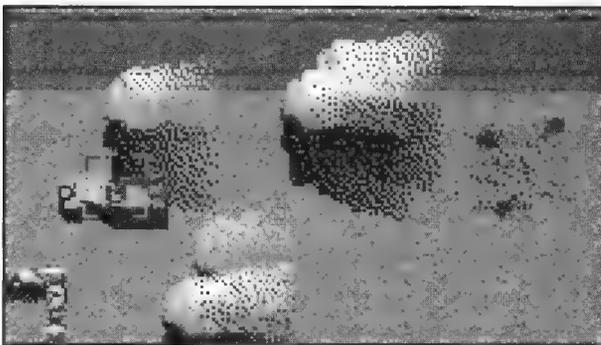


Figure 4-4. *One good shot from a Panzerschreck can have devastating effects on even your strongest armored units, and weaker ones like this half-track are even more vulnerable.*

early in the battle, your armor's mobility and its capacity to lay down heavy volumes of machine gun fire can be the key to overrunning the German Command Post.

Both the Church and the Gate House must be either occupied or neutralized as quickly as possible—if you leave any Germans behind when you pass them, you can be certain they'll shoot at you from the rear.

To assault these two buildings, put out a smoke screen before advancing any units beyond the start line. Both the BAR and the .50-caliber machine gun are good suppression weapons: keep them behind the stone wall at the start line and have them spray both buildings with fire until your own troops mask their fire, and then redeploy them forward as soon as the two buildings are taken. If both the Granary and the Gate House are defended (and chances are good they will be), put heavy suppression fire on the Gate House, and then rush two teams into the Granary.

From there, move the teams quickly into the cratered, hedge-bordered orchard in order to rush the Gate House from the rear. Once you control the Gate House, you should be able to concentrate fire from your tanks or other armored units on the Church and launch a frontal assault. Remember to use short rushes to approach the building—

say, from the stone wall to the German earthworks—and then move quickly into the Church itself. It's unlikely the defenders will stay in the Church and duke it out at close range; when they start to pull out of the building, target them with your mortar(s) while they're in the open.

How you get from the first two or three buildings to your other objectives depends on what the situation is after you capture them. One good option is to send some of your infantry around the



German right flank (with an armored unit, if you can spare it), taking advantage of the walls and foliage at the bottom of the map.

(Remember: you will not be fired on from any hypothetical off-the-map units.) Once the Germans see what you're up to, they'll be compelled to divide their fire.



Figure 4-5. *Occupying or neutralizing the Church and Gate House are key components of a successful American Assault, so be prepared for bloody close-in fighting.*

Off the Beach, Battle Two

Victory Locations

Site	Point Value	Site	Point Value
Granary	5	Field Kitchen	10
Church	5	Warehouse	10
Gate House	10	Bunker	30
Rectory	20	Grist Mill	10
Motor Pool	0	Tavern	50
Command Post	30	Ammo Dump	10
Barracks	20		

Order of Battle Variants for Off the Beach, Battle Two

American Order of Battle

Rifle Squad (3 Squads)
 BAR and Light Rifle or
 Two Light Rifle or
 Two Light Rifle and Recon or
 BAR and Half Team

German Order of Battle

Rifle Squad
 MG 42 and Half Team or
 Bolt Rifle and Half Team or
 Bolt Rifle or
 MG 42 PzS and Half Team

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American Order of Battle, continued

Support Squad

Two 60mm Mortar .30-cal. MG and Bazooka or
81mm Mortar .50-cal. MG and Bazooka or
60mm Mortar Two .30-cal. MG or
Two 81mm Mortar and Bazooka or
Two 81mm Mortars .50-cal. MG and Bazooka

Armor Squad

Sherman or
M3 Half-track or
Stuart or
Stuart and M3 Half-track or
Sherman and M3 Half-track

German Order of Battle, continued

Rifle Squad

MG 42 Bolt Rifle and Recon or
MG 42 Rifle Bolt Rifle and PzS or
MG 42 Rifle PzS and Recon

Support Squad

80mm Mortar and PzS or
MG 42 and PzS or
MG 42 and Two Sniper or
MG 42 PzS and Sniper or
80mm Mortar PzS and Sniper

German Tactics

The Americans will almost certainly go first for the Rectory—it's close to their start line, and there's a stone wall that provides them with good cover. Your forces are so limited that there's no way you can expect to hold that position indefinitely, but you should station an MG 42 and a Rifle team inside—that stone wall isn't as protective as it looks from the American side. Hold the Rectory as long as possible, and then lay down some smoke and withdraw to the entrenchments southwest of the building.

Another location you should defend heavily is the Motor Pool because it offers a good position to bring enfilade fire on the road and the orchard. This is a good location for a Recon team, a *Panzerschreck*, or a Sniper.

Because of its proximity (and the fact that it's worth 30 victory points), the Americans will probably try to take your Command Post as soon as they've occupied the Rectory. They'd be fools to try before then because the open terrain between the Church and the Command Post is a real "killing ground," devoid of cover except for the odd shell crater. A single MG 42 in the Field Kitchen, another in the

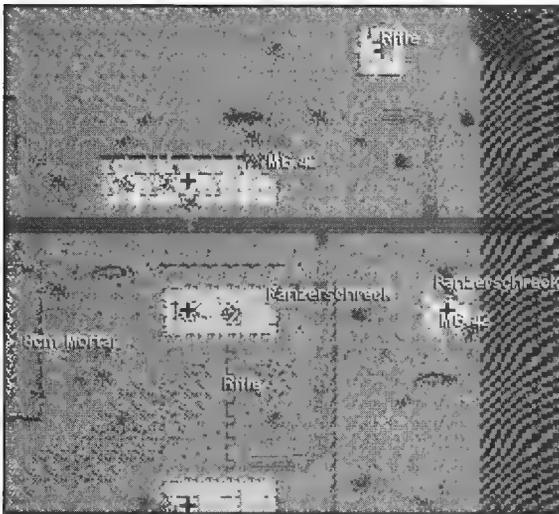


Figure 4-6. Suggested German deployment for Off the Beach, Battle Two.



Command Post, and a Rifle team in the entrenchments between the two (order them to Hide as soon as the battle begins) should enable you to lay down a murderous crossfire on that field, even if the attackers use a lot of smoke.

Behind and to the west of the Command Post and the Field Kitchen is a wheat field bordered by a stone wall. If you're lucky enough to have received a mortar in your OOB, this is a good spot for it.

In most of the battles we ran, the computerized American tanks stayed pretty far back on the road, sometimes as far back as the Church, advancing only occasionally (and then only near the end of the battle). Don't send your antitank teams after them—let their tanks come to you.

American Tactics

In some ways, this is even tougher than the first battle. At the start, you control the eastern third of the map. Your teams will be lined up 50 meters or so from the stone wall to the right of the Rectory. Toward the north (top of the map), you can line up at the hedge that surrounds the orchard. In short, there's a lot of ground between your start line and the Command Post, and while you enjoy numerical superiority, the Germans can hit you from several directions at once no matter what plan you execute.

You should attack and hold the Rectory early in the battle: it's close enough to rush, and you should easily overwhelm or eject whatever teams the Germans have placed there. The angle of the stone wall—the corner nearest the road—*looks* like a good place to put a team, but in reality the Germans inside the Rectory have a clear shot at that spot. Every team we put there was either wiped out or badly mauled.

Instead, put down lots of smoke in the field below the Rectory and rush it from the southeast, while simultaneously issuing heavy suppression fire.

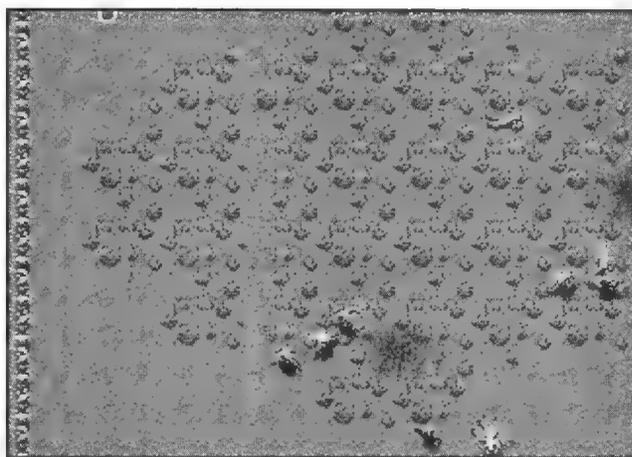


Figure 4-7. A reckless assault over the “killing ground” between the Church and the Command Post will almost surely result in heavy American casualties.

Tip: If you're driven from both the Command Post and the Field Kitchen, the wheat field is a good rallying point.



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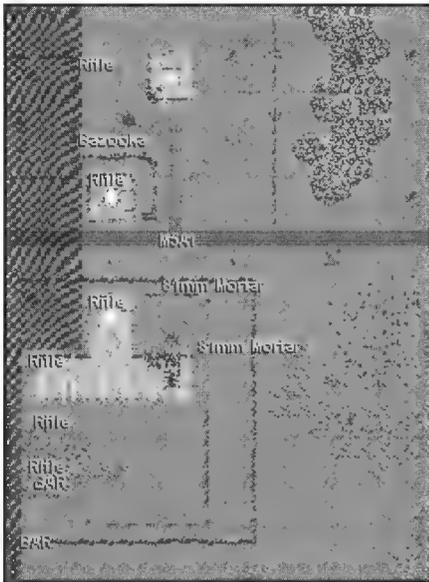


Figure 4-8. Suggested American deployment for *Off the Beach, Battle Two*.



Figure 4-9. The angle of the stone wall looks like it provides good cover, but don't mass troops there unless they're supported by armor that can suppress the defenders in the Rectory.

Once you've taken the Rectory, bring your armor up cautiously to suppress anyone in the Barracks and the Command Post. If the Germans have a mortar, it'll probably be behind the stone wall surrounding the wheat field—you can see the puff of smoke when it fires, even if you can't observe the weapon itself. Target it with your own mortars. Using smoke grenades and all the covering fire you can bring to bear, try to rush the Command Post with overwhelming force, and watch out for Germans in the entrenchments below the Command Post.

Another approach is to mass two Rifle teams and a machine gun (or BAR) in the orchard and put your tank(s) on the northern border of the map, as close to the Motor Pool as you can deploy them. Lay down a smoke screen, and then assault the Motor Pool with one team while the other gives covering fire. Once you take the Motor Pool, you can outflank the Barracks and bring tank fire to bear on most German positions south of the road.

Germans who withdraw from the Motor Pool can retreat to the woods between the Motor Pool and the Warehouse. If they're not too demoralized they might counterattack, and at the very least they'll snipe at you.

From the Motor Pool, attack the Barracks; once it's taken, you might have good results with a two-pronged attack on the Command Post from there and from the Rectory. By this time you should have neutralized (or at least spotted and suppressed) the *Panzerschreck* team(s), so you can use your armor more aggressively.

CHAPTER FOUR: OFF THE BEACH



Avoid direct attacks across the area between the stone wall and the Field Kitchen unless you're confident that most of the defenders' firepower is busy elsewhere. It can be done, and it's the most direct path to your main objective (the Command Post)—

but you'll need every man you can muster, all the

smoke you can lay down, and plenty of suppressive fire from the Rectory.

Usually, the battle ends soon after you capture the Command Post. If you have time and your men aren't too winded, you can keep going into the wheat field bordered by the stone wall. We obtained mixed results when we continued across the field with armor support: sometimes the armor punched right through, "unlocking" the complex of German positions (Command Post-Field-Kitchen-entrenchments); at other times the armor was knocked out quickly and the troops following were slaughtered. It's your call.

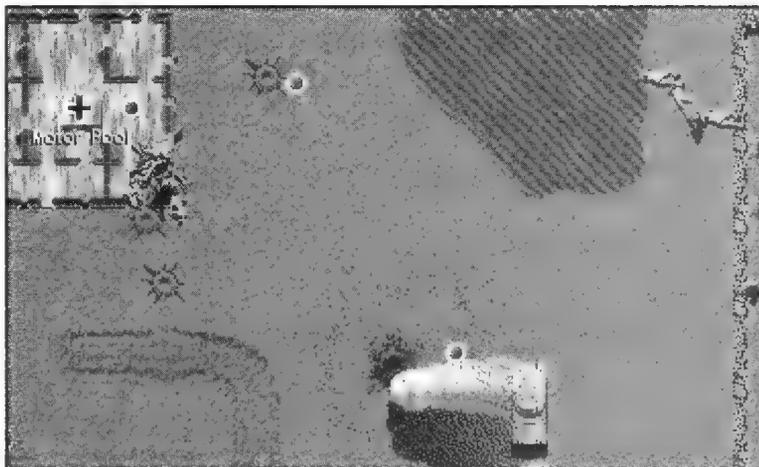


Figure 4-10. American troops assaulting the Motor Pool from the woods east of the building.

Off the Beach, Battle Three

Victory Locations

Site	Point Value	Site	Point Value
Granary	1	Church	2
Gate House	2	Rectory	4
Motor Pool	1	Barracks	10
Command Post	10	Field Kitchen	10
Bunker	30	Warehouse	10
Grist Mill	10	Tavern	60
Ammo Dump	10		

Order of Battle Variants for Off the Beach, Battle Three



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American Order of Battle

Rifle Squad (3 Squads)

BAR and Light Rifle or
Two Light Rifle or
Two Light Rifle and Recon or
BAR and Half Team

Support Squad

Two 60mm Mortar .30-cal. MG and Bazooka or
Two 81mm Mortar and Bazooka or
81mm Mortar Bazooka and .50-cal. MG or
Two 81mm Mortar .50-cal. MG and Bazooka or
60mm Mortar and Two .30-cal. MG

Armor Squad

Sherman or
Stuart or
M3 Half-track or
Stuart and M3 Half-track or
Sherman and M3 Half-track

German Order of Battle

Rifle Squad

MG 42 and Half Team or
Bolt Rifle and Half Team or
Bolt Rifle or
MG 42 PzS and Half Team

Rifle Squad

MG 42 Bolt Rifle and Recon or
MG 42 Bolt Rifle and PzS or
MG 42 Rifle PzS and Recon

Support Squad

80mm Mortar and PzS or
MG 42 and PzS or
MG 42 and Two Sniper or
MG 42 PzS and Sniper
80mm Mortar and PzS and Sniper

German Tactics

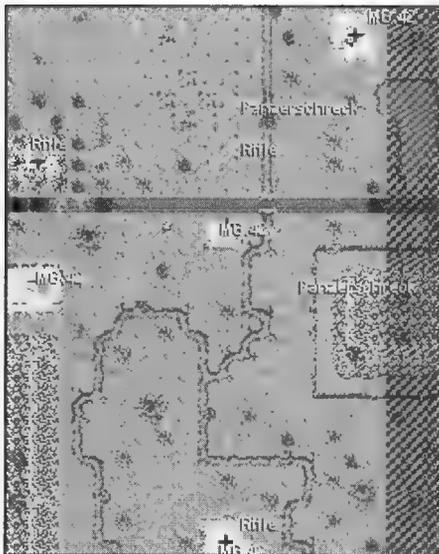


Figure 4-11. Suggested German deployment for *Off the Beach, Battle Three*.

The wheat field surrounded by a stone wall looks like a good place to set up your rather weak defenses, but it's a deathtrap. If you have a *Panzerschreck* team, you can deploy them there and put them in Hide mode as soon as the battle begins; they'll have a good shot at American armor whether it comes down the road or across the fields south of it. But the wheat field is *not* a good place to make a stand with your remaining infantry and machine guns. The Americans can bring terrific firepower to bear, and you'll be decimated in a shoot-out.

If you have a Sniper, put him and another team in the woods and the Warehouse northwest of the Barracks. Otherwise, deploy all your units on the west side of the stream. The water won't stop vehicles or infantry, but it will slow them down and make them easier to hit.

Spread your Rifle and MG 42 teams in the

CHAPTER FOUR: OFF THE BEACH



Tavern, the Grist Mill, the Bunker, and the woods northwest of the bridge; if you've got a Mortar team, put it in the wheat field at the southwest corner of the map. When the battle begins, put everybody in Hide or Defend mode and let the Americans come to you.

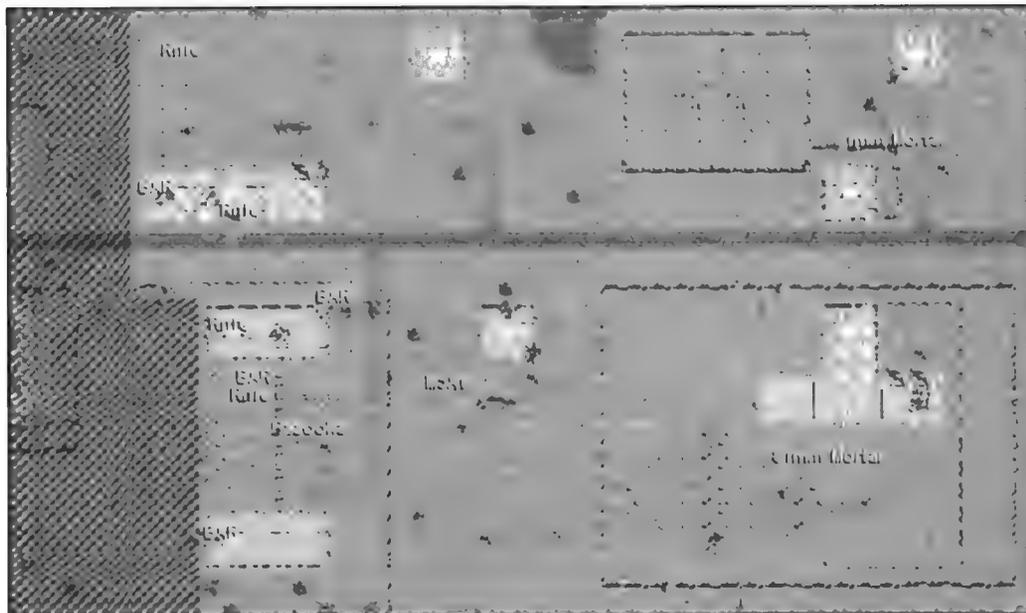


Figure 4-12. Suggested American deployment for Off the Beach, Battle Three.

American Tactics

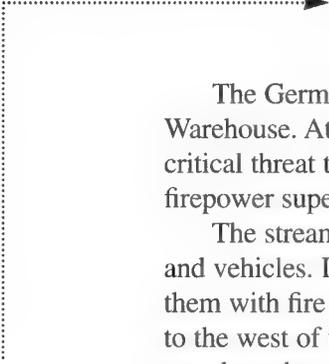
If the Germans make a stand in the wheat field, just shoot it out with them. You have much more firepower, and eventually you'll either kill everybody there or drive them out.

Wait until you spot the tell-tale plume of smoke from antitank fire before advancing your armor. At this stage of the Off the Beach Operation, the Germans probably have only a handful of antitank weapons left. Once you've destroyed or pinned them down, your armor can roll over the bridge with minimal risk.

Tip: The German MG 42 is the deadliest infantry weapon in the game. To assault one, lay down smoke, and then attack it from the flanks!



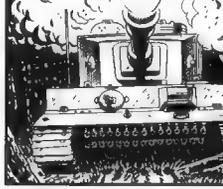
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The Germans are likely to have teams hidden in the woods or the Warehouse. Attack them or not as you choose—they're a nuisance, but not a critical threat to your objectives. Basically, just make use of your numerical and firepower superiority and grind the Germans down.

The stream is a minor obstacle because it must be forded by both infantry and vehicles. If the Germans make a stand to the east of the stream, overwhelm them with fire and advance when the opportunity presents itself. If they dig in to the west of the stream, you might obtain good results by driving through the woods to the west of the Warehouse and assaulting their left flank. Once you've got substantial forces across the stream, you ought to be able to seize the remaining Victory Locations methodically.

Chapter Five



ACROSS THE AURE

For the 29th Division to move south from the beachhead and secure the approaches to St. Lo, it first had to manage a crossing of the Aure River, which is a branch of the much larger Vire River that empties into the sea about a mile and a half from the town of Isigny.

The Aure itself wasn't much of an obstacle—it was only about ten feet wide, and in most places could be forded by men on foot—but in the 29th's sector, the river flowed through a shallow, swampy valley about two miles wide for most of its length. Intelligence reports indicated that the marshy depression was "impassable." At the eastern and western sides of the valley were two bridges whose possession would greatly facilitate the advance toward St. Lo.

On June 9, the 1st Battalion of the 115th Regiment attempted to cross the eastern bridge, near the village of Trevieres, but was given such a hot reception by the German defenders that it had to fall back. Patrols from the regiment's 3rd Battalion, pushing into the valley south of the hamlet of Canchy, discovered that the supposedly "impassable" swamps were much drier than anticipated. With assistance from the Division's 121st Combat Engineer Battalion, the 115th made a muddy but unopposed crossing about three miles west of Trevieres.

Meanwhile, the Division's 175th Regiment drove west along the coastal road, overcoming several pockets of determined German troops fighting a delaying action and enduring the shattering experience of being strafed and rocketed by British Typhoons (American casualties: six dead and 18 wounded).

Driven hard by the 29th's commander, General Charles H. Gerhardt (the GIs called him "Uncle Charlie," but it wasn't always meant affectionately), the 175th rallied and pushed on to capture Isigny, on the western edge of the marshes, at daybreak on June 9. The first patrols to enter the utterly devastated town were astonished to discover that the Germans had neglected to demolish the Aure bridge.

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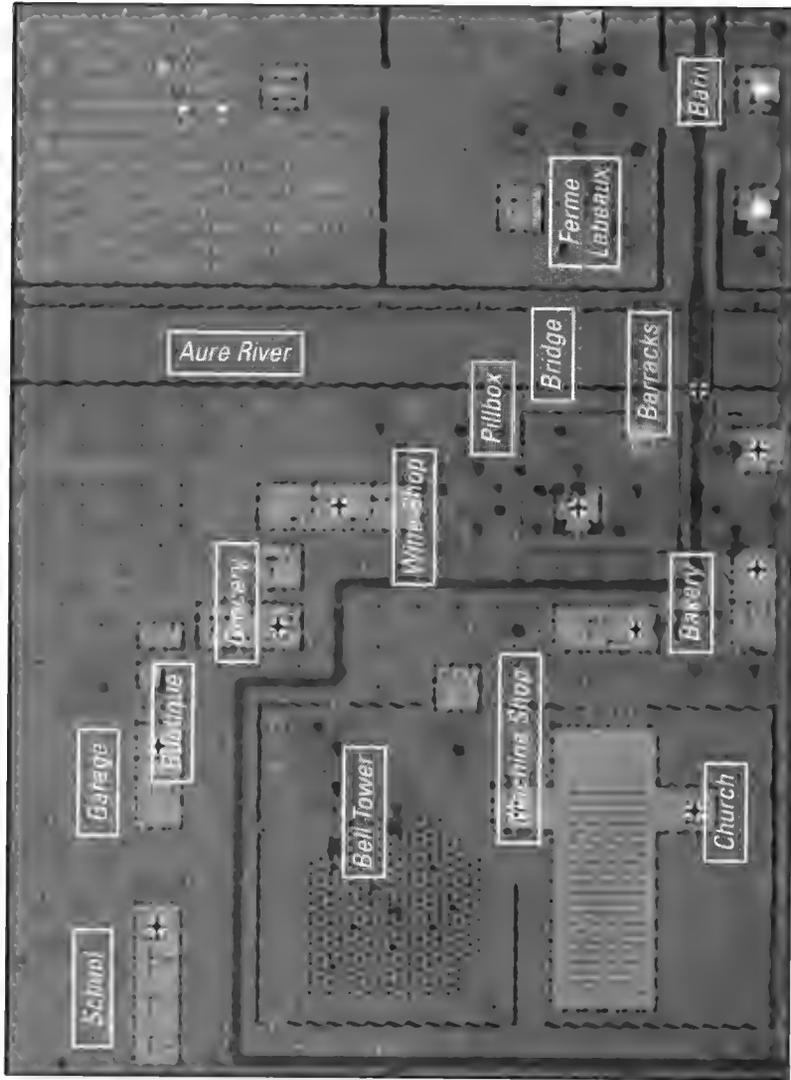


Figure 5-1. Terrain map for Across the Aure, Battles One and Two.

CHAPTER FIVE: ACROSS THE AURE



Thanks to that oversight, about two-thirds of the 29th Division was across the Aure by midday on June 10, and the fire-breathing Gerhardt was making bold plans to dash forward and seize St. Lo before the scattered and demoralized Germans could pull themselves together.

He figured his men could do it in two or three days; it took them a month. “Uncle Charlie” had not reckoned on two things: the German soldiers’ incredible powers of resilience and improvised defense, and the *bocage* itself.

American Objectives

In this Operation, both sides have a chance to change history. If the Americans can seize the Trevieres crossing, the capture of St. Lo. can occur sooner than it did in real life—and every day less spent in combat means fewer casualties and more veterans to make the eventual push to the German border.

German Objectives

As German commander, your goal should be nothing less than to throw the attackers back in all four battles—or better still, smite them with a successful counterattack. Do that, and you’ve seriously upset the whole Allied campaign plan.

Across the Aure, Battle One

Victory Locations

Site	Point Value	Site	Point Value
Barn	10	Ferme Lebeaux	10
Bridge	40	Barracks	30
Grocery	20	Wine Shop	20
Bakery	20	Machine Shop	20
Boutique	10	Church	20
Bell Tower	10	Garage	10
School	10		

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Order of Battle Variants for Across the Aure, Battle One

American Order of Battle:

Rifle Squad (4 Squads)

BAR and Recon or
Two Rifle or
BAR and Rifle or
Two Rifle and Recon

Support Squad

60mm Mortar and Two .30-cal. MG or
81mm Mortar .50-cal. MG and Bazooka or
Two 60mm Mortar .30-cal. MG and Bazooka or
Two 81mm Mortar and Bazooka or
Two 81mm Mortar .50-cal. MG and Bazooka

Armor Squad

M3 Half-track or
Stuart or
Sherman M4 or
Stuart and M3 Half-track or
Sherman M4 and M3 Half-track

Armor Squad

Sherman M4 76 and Stuart or
Sherman M4 and M10 or
Sherman M4 76 and M10 or
Two Sherman M4 and M10

German Order of Battle:

Rifle Squad

Bolt Rifle or
Bolt Rifle and Half Team or
Two MG 42 and Half Team or
Two MG 42 Half Team and PzS

Rifle Squad (2 Squads)

Two MG 42 Bolt Rifle and Recon or
Two MG 42 Bolt Rifle and PzS or
Two MG 42 Bolt Rifle Recon and PzS

Support Squad

MG 42 PzS
80mm Mortar or
MG 42 PzS and Sniper or
MG 42 and PzS
80mm Mortar PzS and Sniper

Armor Squad

Stug III G or
Two Sherman M4 or
Marder or
Marder and SDKfz 250/1 or
Stug III G and SDKfz 232

Gun Squad

Flak 88 or
50mm AT Gun and 75mm IG or
75mm AT Gun or
Two 50mm AT Gun or
75mm AT Gun and 75mm IG

German Tactics

Few military operations are as hazardous as a “hot” river crossing. The Americans must advance through the narrow end of a funnel (the bridge) and emerge at the apex of a formidable cone of German fire.

This is the first battle in the game in which the German player receives some heavy-duty weaponry—a Flak 88mm gun and a Stug III assault gun. These powerful assets, together with the MG 42s’ ability to hose down the opposite river bank with terrific volumes of fire, give the Germans the edge in



this battle. Position your Stug III at the far left of the screen, behind the stone wall surrounding the Church. This gives you a straight-on field of fire across the bridge and down the road. Emplace the 88 in the bunker on the northwest corner of the bridge, and spread out your infantry and MG 42s in the Grocery, the Wine Shop, and especially the Barracks.

After hitting Begin to start the battle, issue a Defend command. That may be all you need to do; with a little luck you might be able to sit back and watch a spectacular German victory unfold.

Both the assault gun and the 88 will open fire as soon as the first Sherman tank pokes its nose out onto the road—the 88 is so accurate that you’ll probably score a direct hit with the first shot. Using the burning Sherman as cover, the Americans will probably attempt to bring forward another Sherman (and an M10 tank destroyer, if they received one). Even if the AI puts down a smoke screen, you should be able to hit any armored unit that tries to cross the bridge.

Bravely but stupidly, the Americans will then attempt to rush the bridge with infantry, possibly backed up by a half-track. Knock out the half-track, and the infantry attack will falter and then break.

Both sides will then exchange fire across the river for about five minutes. When the Americans’ Morale Bar turns brown, you might want to intervene and order the Stug III and several relatively unscathed Rifle teams to counterattack. If the assault gun reaches the American side of the bridge, it can begin shooting up everything in sight. The tables will now be turned on the Americans, and unless they have a Bazooka team to take out the Stug, you’ll

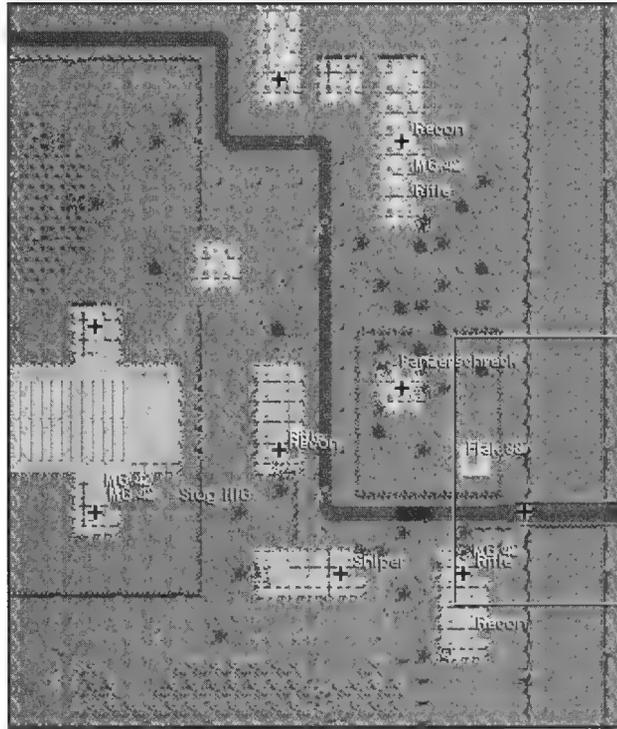


Figure 5-2. Suggested German deployment for *Across the Aure, Battle One*.

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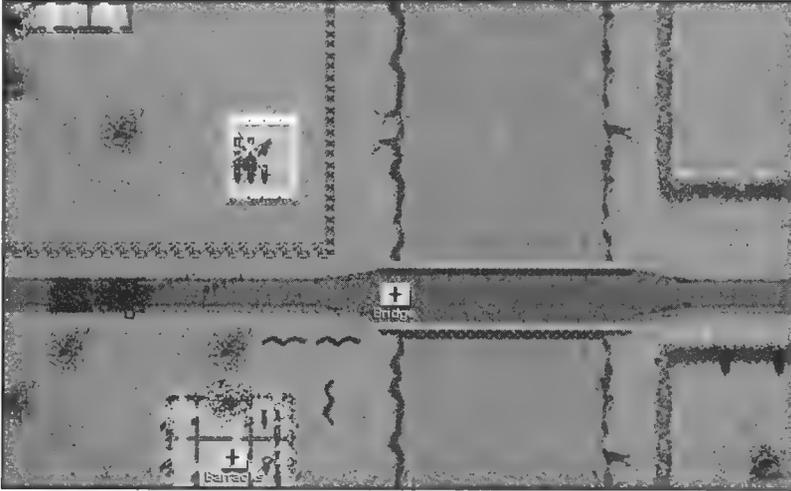


Figure 5-3. When placed in this bunker, the powerful 88 can wreak havoc while remaining invulnerable to anything except an infantry assault, a lucky shot by an American tank, or repeated direct 81mm mortar hits.

Warning: The real Aure River was so shallow in many places that it could be crossed on foot. In the game, it can't be. Don't even think about it.



executed this tactical move, we took great satisfaction in scoring a Decisive German Victory. In addition to the armor we'd destroyed, we killed or wounded 51 enemy troops (at a cost of only 19 casualties for our side), and scored 266 points to the Americans' contemptible 61.

Ah, victory is sweet!

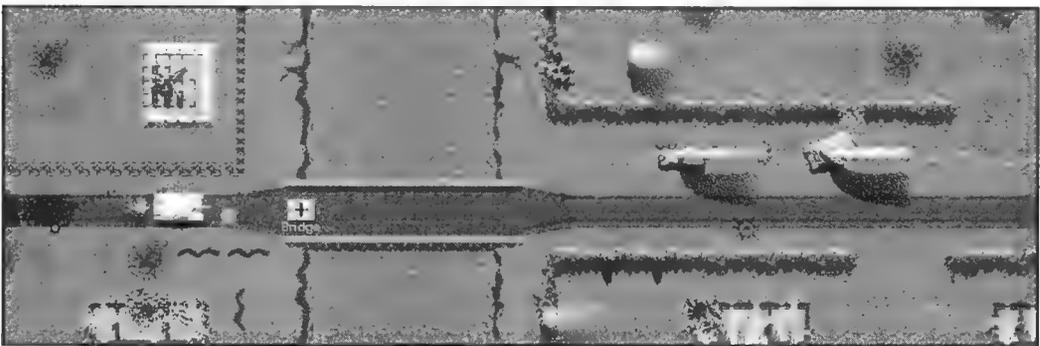


Figure 5-4. This Stug III leads a smashing German counterattack across the bridge.



American Tactics

In this battle, you'll come face to face with the deadliest, most versatile, and most accurate German artillery piece of the war: the dreaded 88. After fighting this battle several times, you'll learn why the Allies feared and respected this superb weapon.

To lessen the impact of the 88, you'll have at least two Sherman tanks at your disposal, and probably more. Start with your tanks dispersed and under cover while you let the 88 burn up most of its ammo on infantry targets. If you're lucky enough to receive a couple of 81mm mortars, target the pillbox where the 88 is hiding. We've sometimes been able to damage the 88 with mortar fire, but usually they run out of ammo before the job is done. If you've received 60mm's, don't even bother. They can't damage the pillbox, even with direct hits. In any event, if you hide your tanks well and are patient, the 88 might run out of ammo. As soon as this happens, storm the bridge behind a massive smoke screen. It will be costly, but you should manage to eke out a Minor American Victory by seizing the Bridge, the pillbox, and half of the Barracks.

After playing a dozen test games, we concluded that the American-side player can rarely hope to win this battle unless he or she receives a very strong Order of Battle variant. You can wait patiently for the computer to give it to you, or you can just set up a Custom battle and simply give yourself a strong lineup from the start.

It's not really cheating—sooner or later you're bound to draw such a variant anyhow—but it is like kissing the dice.

Tip: *The 88 has a limited ammo supply, and if the AI can't "see" your tanks, the gun will randomly shell targets. Wait it out, and you might be able to move your Shermans across the bridge without worrying about the 88. Don't expect a human opponent to waste his ammo like this, though.*

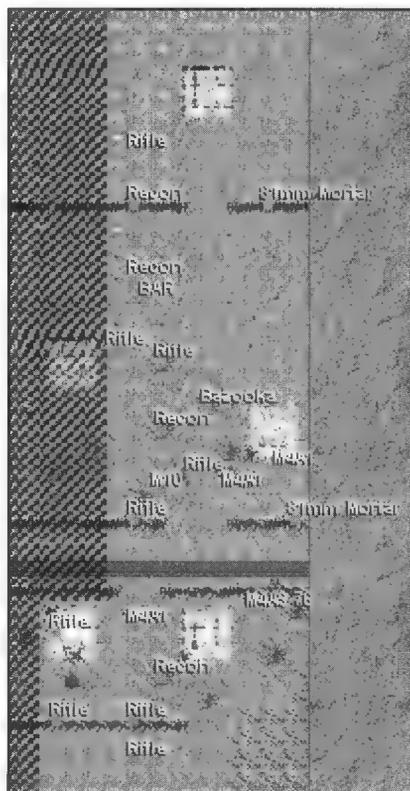


Figure 5-5. *Suggested American deployment for Across the Aure, Battle One.*

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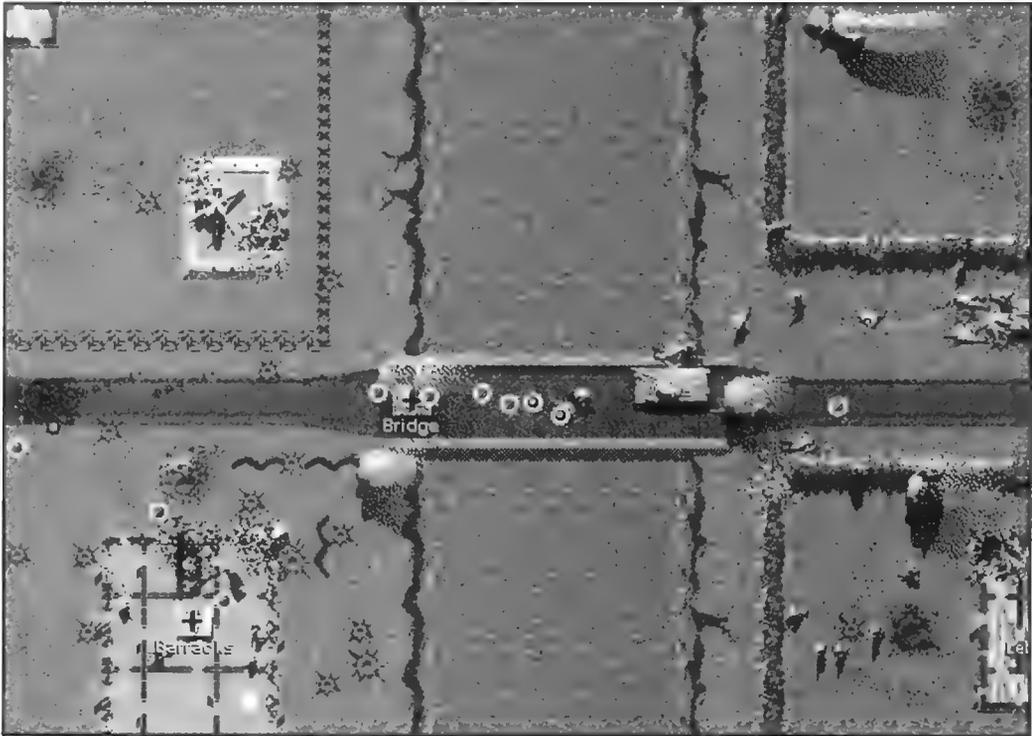


Figure 5-6. *The climactic moment of an American assault over the Aure bridge.*

Across the Aure, Battle Two

Victory Locations

Site	Point Value	Site	Point Value
Barn	2	Ferme Lebeaux	2
Bridge	10	Barracks	10
Grocery	20	Wine Shop	10
Bakery	20	Machine Shop	20
Boutique	10	Church	40
Bell Tower	30	Garage	20
School	20		

CHAPTER FIVE: ACROSS THE AURE



Order of Battle Variants for Across the Aure, Battle Two

American Order of Battle:

Rifle Squad (4 Squads)

BAR and Recon or
Two Rifle or
BAR and Rifle or
Two Rifle and Recon

Support Squad

60mm Mortar and Two .30-cal. MG or
81mm Mortar .50-cal. MG and Bazooka or
Two 60mm Mortar .30-cal. MG and Bazooka or
Two 81mm Mortar and Bazooka or
Two 81mm Mortar .50-cal. MG and Bazooka

Armor Squad

M3 Half-track or
Stuart or
Sherman M4 or
Stuart and M3 Half-track or
Sherman M4 and M3 Half-track

Armor Squad

Two Sherman M4 or
Sherman M4 76 and Stuart or
Sherman M4 and M10 or
Sherman M4 76 and M10 or
Two Sherman M4 and M10

German Order of Battle:

Rifle Squad

Bolt Rifle or
Bolt Rifle and Half Team or
MG 42 and Half Team or
MG 42 Half Team and PzS

Rifle Squad (2 Squads)

MG 42 Bolt Rifle and Recon or
MG 42 Bolt Rifle and PzS or
MG 42 Bolt Rifle Recon and PzS

Support Squad

MG 42 and PzS or
80mm Mortar or
MG 42 PzS and Sniper or
MG 42 and PzS
80mm Mortar PzS and Sniper

Armor Squad

Stug III G or
SDKfz 232 or
Marder or
Marder and SDKfz 250/1 or
Stug III G and SDKfz 232

German Tactics

This is an exceptionally well-balanced battle. The Americans will probably have three armored vehicles and a machine gun emplaced in the pillbox near the bridge (that's where the AI always seems to put it, anyway), and the distances between the buildings you both hold are very short—less than 40 meters in some locations.

Playing the German side, you'll typically receive a Stug or a Marder (both if you're really lucky), a half-track, and a single *Panzerschreck* team. Keep the vehicles in reserve until the Americans have revealed their armor. Put the *Panzerschreck* into Hide mode, but keep it fairly

Warning: While the Germans hold the Bell Tower, they can see you a lot better than you can see them!



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Until the lesson was driven home to us by several stinging defeats, we made the mistake of deploying our armor too far forward early in the battle. In one game, the German *Panzerfausts* knocked out all three of our tanks before the tanks could fire more than a few shots. By using smoke and large numbers of infantry, we were able to capture a couple of nearby buildings, but without armored support, we could make no further progress.

Success will finally come when you keep your armor back, occasionally moving a Sherman from behind a building for a quick shot and then pulling it back under cover.

Once you've overrun the Machine Shop and Bakery, it becomes much safer to bring the armor up and deploy it for close support. But remember to watch out for the Marder—it will probably be hidden north of the graveyard, and when it does go into action, it can get off two or three shots before you can effectively target it.

One final bit of advice: the Germans almost certainly have an MG team (and possibly a Recon unit as well) hidden in the Grocery, a perfect spot for them to lay down effective flanking fire. You'll find that it helps to keep one or two BAR teams on the far side of the river in order to suppress this threat.



Figure 5-9. A Panzerfaust firing on a Sherman that got too close! Any German infantry unit can do this at least once. Scout units carry two, and Recon units three, antitank missiles.

Across the Aure, Battle Three

Victory Locations

Site	Point Value	Site	Point Value
Objective 1	30	Road to Trevieres	20
Objective 2	10	Stone Bridge	40
Brewery	30	Farmhouse	10
Potter's Shop	10	Brick House	10
Church	5	Bell Tower	10
Hotel Briqueville	10	Offices	15



Microsoft
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Order of Battle Variants for Across the Aure, Battle Three

American Order of Battle:

Rifle Squad (4 Squads)

BAR and Recon or
Two Rifle or
BAR and Rifle or
Two Rifle and Recon

Support Squad

60mm Mortar and Two .30-cal. MG or
81mm Mortar .50-cal. MG and Bazooka or
Two 60mm Mortar .30-cal. MG and Bazooka or
Two 81mm Mortar and Bazooka or
Two 81mm Mortar .50-cal. MG and Bazooka

Armor Squad

M3 Half-track or
Stuart or
Sherman M4 or
Stuart and M3 Half-track or
Sherman M4 and M3 Half-track

Gun Squad (2 Squads)

Two 3-inch Howitzer or
Sherman M4 105 or
Two 57mm AT Gun and Bazooka or
Sherman M4 105 and Bazooka or
Two 3-inch Howitzer and Bazooka

German Order of Battle:

Rifle Squad

Bolt Rifle or
Bolt Rifle and Half Team or
MG 42 and Half Team or
MG 42 Half Team and PzS

Rifle Squad (2 Squads)

MG 42 Bolt Rifle and Recon or
MG 42 Bolt Rifle and PzS or
MG 42 Bolt Rifle Recon and PzS

Rifle Squad

Two Sturm Recon and PzS or
Sturm Bolt Rifle Recon and PzS or
MG 42 or
MG 42 and Sniper

Support Squad

MG 42 and PzS or
80mm Mortar or
MG 42 PzS and Sniper or
MG 42 and PzS
80mm Mortar PzS and Sniper

Armor Squad

Stug IIIG or
SDKfz 232 or
Marder or
Marder and SDKfz 250/1 or
Stug IIIG and SDKfz 232

Armor Squad

Two Stug IIIG and Marder or
Mark IV and Marder or
Panther and Marder or
Tiger and Panther



German Tactics

When you first play this battle from the German side, you'll probably exclaim "At last!" when you see the inventory of weapons at your command. For it is in this battle that the German player gets the opportunity, for the first time in the game, to launch a smashing counterattack.

Yes, the High Command has heard your pleas and has, temporarily, attached substantial armor resources to the 352nd Division. Now is the moment to turn and strike hard at the Americans—a major or decisive victory in this battle can seriously upset their plans for the drive on St. Lo.

The computer should give you *at least* four Stug III assault guns and a couple of Marder tank destroyers, along with several *Sturm* teams to bolster your infantry strength. There's even a chance you'll draw your first Panther. Now that's a tank!

Study the map, which shows the town of Briqueville (three miles southwest of Trevieres, near the intersection of the main road to St. Lo and a lateral, east-west road that skirts the bottom edge of the Aure River marshes) and its northern approaches. The big gully at the bottom protects your right flank from American armor, but you have the luxury of setting up in good tank country anywhere on the screen.

You'll obtain the best results by sending most of your armor, and all your best infantry units, through and around the wheat field above the road, leaving the less experienced infantry inside the buildings and sheltered in the gully, in a defensive posture. Hold one Stug and one Marder back to guard the road, which is where the American armor usually appears. It's rare for the Americans to draw more than two tanks in this battle, so once you've knocked out two vehicles, you can safely advance along the road, too.

Just don't commit *all* the German armor to the road—that's where you'll encounter the strongest concentration of fire. The Americans have a couple of artillery pieces, but they are not mobile. As long as you don't drive straight into

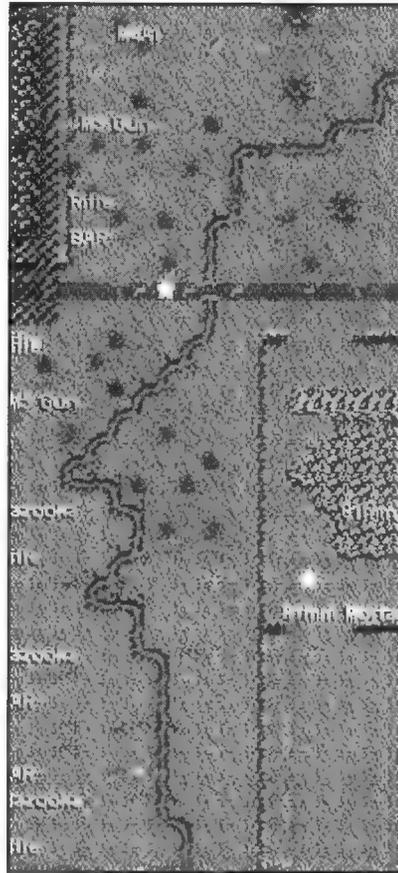


Figure 5-10. Suggested German deployment for *Across the Aure*, Battle Three.

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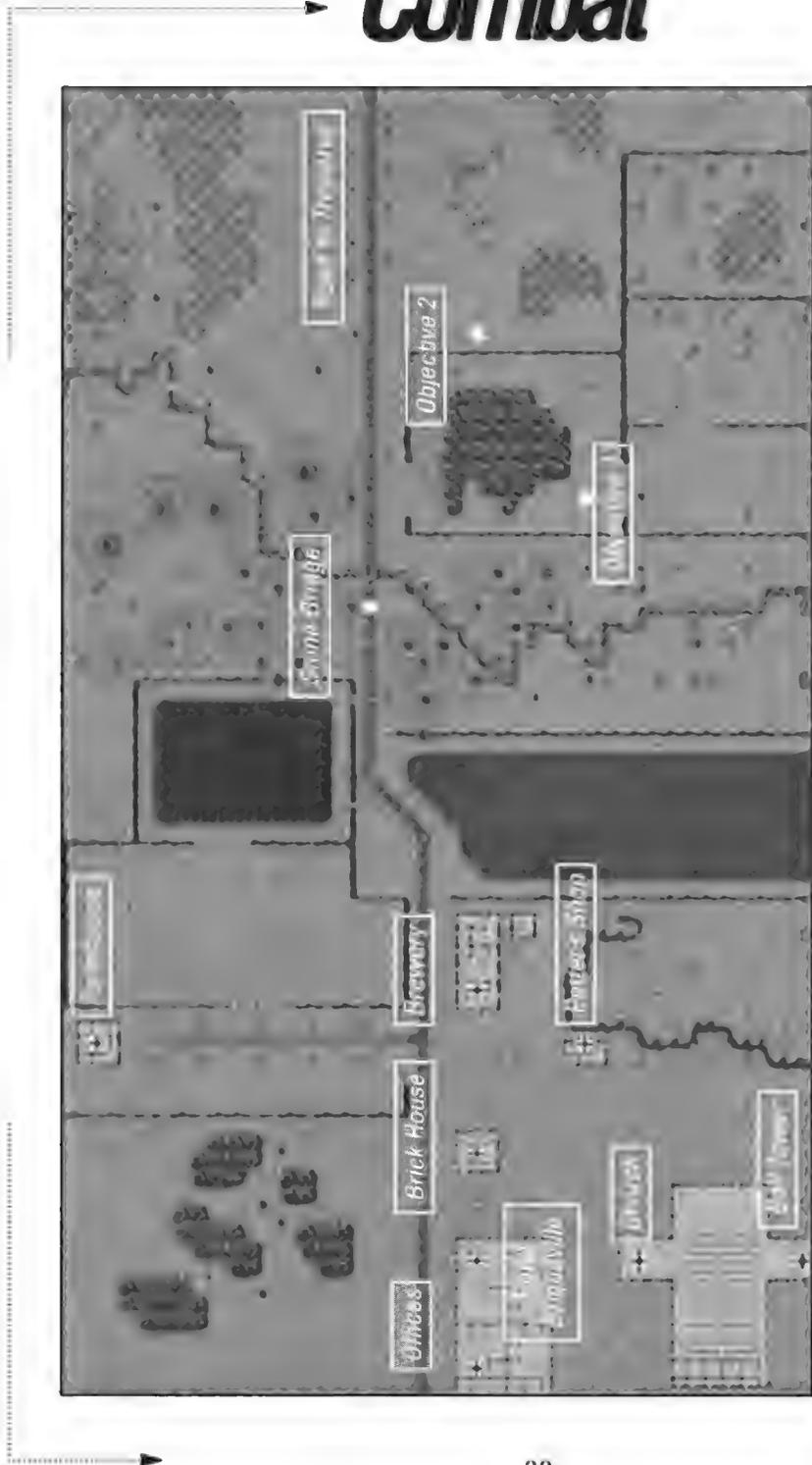


Figure 5-11. Terrain map for Across the Aure, Battles Three and Four.

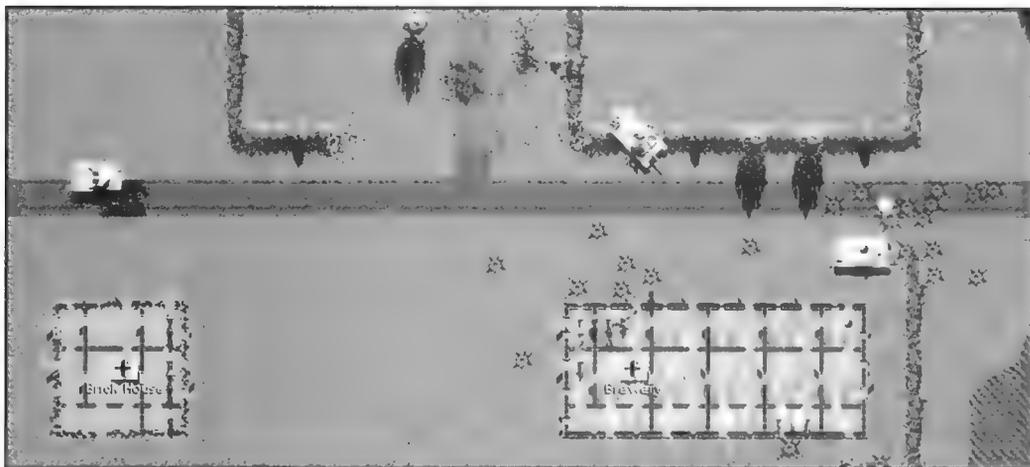
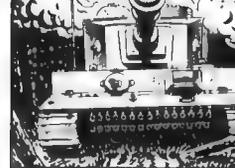


Figure 5-12. German armor advancing on the Briqueville road. But remember: don't commit all of your armor to the road until you've spotted and neutralized the American guns.

their sights, you should be able to gang up on each gun and destroy them one at a time.

Once your tank-infantry force has turned the American right flank by cutting through and above the wheat field, it won't take long for the Americans to rout. Just press the attack vigorously, and a major victory should be yours. Using the tactics described above, we always achieved a kill ratio of about six-to-one, and half the time succeeded in destroying both American armored units without losing a single German one.

American Tactics

Even though your ultimate objective is Briqueville, don't set up for offensive action. Be aware that this battle is intended to simulate a strong surprise

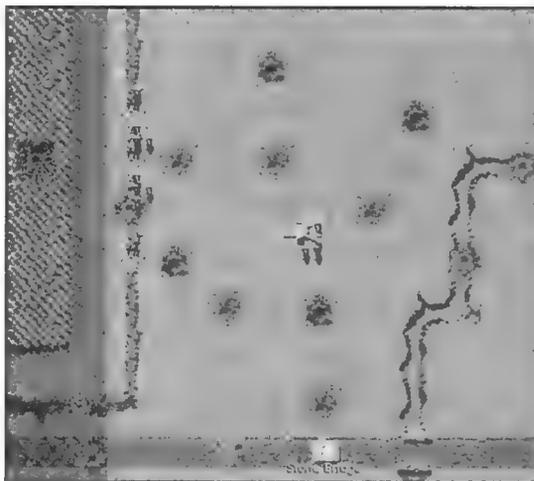


Figure 5-13. Here's a good place for one of your big guns: between the wheat field and the Stone Bridge. These weapons are not mobile, so once you've exited the Deployment Screen, they're stuck wherever you placed them.

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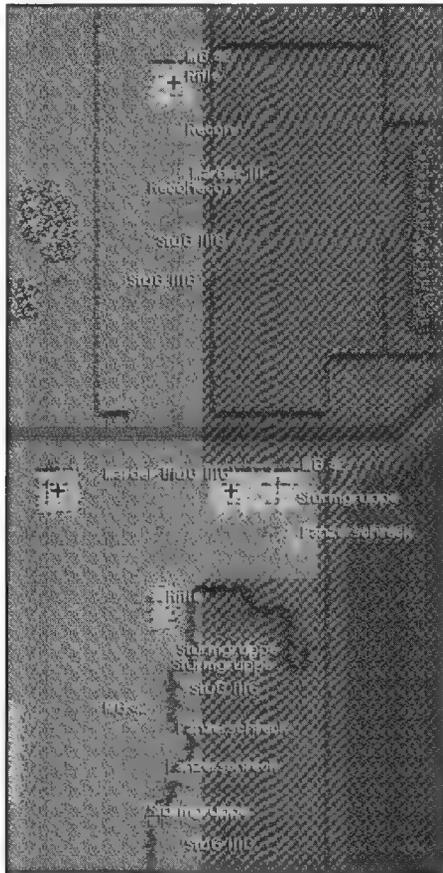


Figure 5-14. Suggested American deployment for *Across the Aure, Battle Three*.

Warning: As you advance your tanks, make sure you don't allow enemy antitank teams to move in position to fire at the sides of your vehicles—that's where the armor is weakest.



German counterattack and organize your forces accordingly.

You will not have much armor (typically, you'll receive just one Sherman and either a Stuart or a half-track), but you will have at least a pair of M5 cannons. They're too heavy to move manually, so give considerable thought to placing them where they have the best fields of fire consistent with some degree of cover.

Also remember that the scale of a *Close Combat* map does not allow for indirect fire by any weapons save mortars. Even though your artillery was, historically, capable of being used as light howitzers, it can only function in the game in a direct-fire, antitank mode.

Be realistic: the Germans have got a half-dozen tanks, and you've got, at best, one Sherman (or maybe just one li'l ol' Stuart!). Obviously, a tank-to-tank shooting match is out of the question.

But victory is not! That's right: you can weather the storm and actually turn the tables on this powerful attacking force. Because this is a *defensive* battle, you need not capture any German-held VLs in order to win a decisive victory—all you have to do is prevent them from capturing any of yours.

The key to a successful defense is your strength in Bazookas. Cover the road and the whole line south of it with at least three teams and one M5 gun. If you have a fourth Bazooka, use it to cover the field northwest of the Stone Bridge. Even if you don't knock out all the German vehicles, you can make them think twice about advancing. While their tanks are wandering around behind the hedgerows, your BAR, MG, and mortar teams can pound the German infantry to bits.

If you can fend off the tanks until you



CHAPTER FIVE: ACROSS THE AURE



inflict sufficient loss on the German infantry, you will cause the whole attack to waver. At this point, you might consider sending your lone tank north and then east, around the top of the wheat field. We tried this ploy in several games, and we always managed to wipe out a squad or two of enemy infantry—from behind. And remember: even a humble Stuart can destroy a Marder from the rear.

Needless to say, this will probably not work quite so well against a human opponent. It works against the computer because the AI tends to maneuver all those tanks very conservatively.

Tip: For a really intense battle, select *Custom* from the *Command Screen* and set both sides on *Very Strong*. Doing so results in a rip-snorting firefight!



Across the Aure, Battle Four

Victory Locations

Site	Point Value	Site	Point Value
Objective 1	5	Road to Trevieres	5
Objective 2	5	Stone Bridge	5
Brewery	10	Farmhouse	10
Potter's Shop	10	Brick House	20
Church	30	Bell Tower	50
Hotel Briqueville	30	Offices	40

Order of Battle Variants for Across the Aure, Battle Four

American Order of Battle

Rifle Squad (4 Squads)

BAR and Recon or
Two Rifle or
BAR and Rifle or
Two Rifle and Recon

Support Squad

60mm Mortar and Two .30-cal. MG or
81mm Mortar .50-cal. MG and Bazooka or
Two 60mm Mortar .30-cal. MG and Bazooka or
Two 81mm Mortar and Bazooka or
Two 81mm Mortar .50-cal. MG and Bazooka

German Order of Battle

Rifle Squad

Bolt Rifle or
Bolt Rifle and Half Team or
MG 42 and Half Team or
MG 42 Half Team and PzS

Rifle Squad (2 Squads)

MG 42 Bolt Rifle and Recon or
MG 42 Bolt Rifle and PzS or
MG 42 Bolt Rifle Recon and PzS



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American Order of Battle, continued

Armor Squad

M3 Half-track or
Stuart or
Sherman M4 or
Stuart and M3 Half-track or
Sherman M4 and M3 Half-track

Armor Squad

Two Sherman M4 or
Sherman M4 76 and Stuart or
Sherman M4 and M10 or
Sherman M4 76 and M10 or
Two Sherman M4 and M10

German Order of Battle, continued

Support Squad

MG 42 and PzS or
80mm Mortar or
MG 42 PzS and Sniper or
MG 42 and PzS
80mm Mortar PzS and Sniper

Armor Squad

Stug IIIG or
SDKfz 232 or
Marder or
Marder and SDKfz 250/1 or
Stug IIIG and SDKfz 232

Gun Squad

Flak 88 or
50mm AT Gun and 75mm IG or
75mm AT Gun or
Two 50mm AT Gun or
75mm AT Gun and 75mm IG

German Tactics

If you're lucky enough to draw a strong OOB, put your Marder or Stug behind the Brewery. The American armor will almost certainly appear either on the road or in the fields north of it—at the right moment, pop out and try to bushwhack whatever vehicle comes into your sights first.

Deploy your Scouts in the hedgerows close to no man's land and put them into Hide mode; if you're lucky, you might be able to ambush a couple of American teams as they advance through or around the wheat field. Also put at least an MG 42 in the Farmhouse, west of the wheat field near the top of the screen.

If you draw a weak variant (no armor at all), you should still put your scouts in ambush position around the wheat field and garrison the Farmhouse, as stated above. Distribute any teams you have left over in the main cluster of buildings or the squiggly ditch, creating overlapping fields of fire wherever possible. Without armor support, the Americans will eventually overwhelm you with sheer numbers.

All you can really hope to do is fight an effective delaying action.



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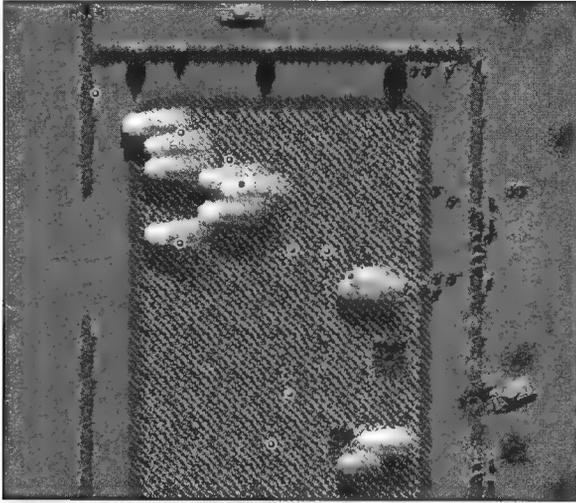


Figure 5-17. *Illustration of right hook through the wheat field. The success of this attack depends on gaining and maintaining forward momentum.*

house west of the wheat field, and assault it with at least two teams. Once that building is in your possession, you can move south, picking off defenders as you go, and put pressure on the cluster of buildings in the southwest corner of the map.

A tank plus a Bazooka team hidden in the hedges north of the road should be enough to take care of a Marder, should one appear. Once the right hook has been executed and the German armor (if any) neutralized, launch a converging attack on the Brewery, using smoke in the field east of that objective and methodically putting pressure on the defenders from the

hedgerow east of the big plowed field and from the dirt road that leads from the highway to the Farmhouse. Alternate smoke and high-explosive shells from your mortars as the situation dictates.

More often than not, this battle ends when you've taken both the Brewery and the Farmhouse; by the time you've taken both of these objectives, the Germans should be routed due to heavy casualties and a nice, satisfying major victory is yours.

Chapter Six



HEDGEROWS!

Once the Aure River had been crossed, the Americans found themselves in the heart of the *bocage* country: a thousand square miles of the best defensive terrain imaginable. In every history of the Normandy Campaign you'll find phrases such as "every field was a fort," and that was literally true. Dug in at the base of overgrown earthen embankments—some of them fifteen feet high—were determined German veterans lavishly equipped with MG 42s and antitank launchers. Stationed behind the first German lines were small packets of tanks and assault guns, which could be brought forward rapidly to seal off penetrations and add power to lightning-fast counterattacks.

The hedgerow country was so extensive and so deep that there simply was no way to bypass it. Aerial reconnaissance photos made the region look much less formidable than it actually was; the Allied high command, in fact, had scheduled between four and six days to conquer the area and reach the critical road junction at St. Lo, just twenty miles away from the start line south of the Aure. Instead, it took more than a month.

Not until the Americans developed new tactics and new technology—(bulldozer tanks, rhino tanks with steel prongs welded to their bows, and tanks equipped with telephones mounted to their hulls, so that nearby infantry teams could instantly request fire on an enemy position)—did their advance start to gain momentum again.

American Objectives

Playing as the Americans, your job is to figure out assault tactics that will minimize casualties, yet sustain the momentum of your offensive. It won't be easy. The Hedgerows! battles are grinding, slogging, bloody affairs. Visibility is usually limited to less than 100 meters, and you must become adept at coordinating armor and infantry movement so that one element protects the other.



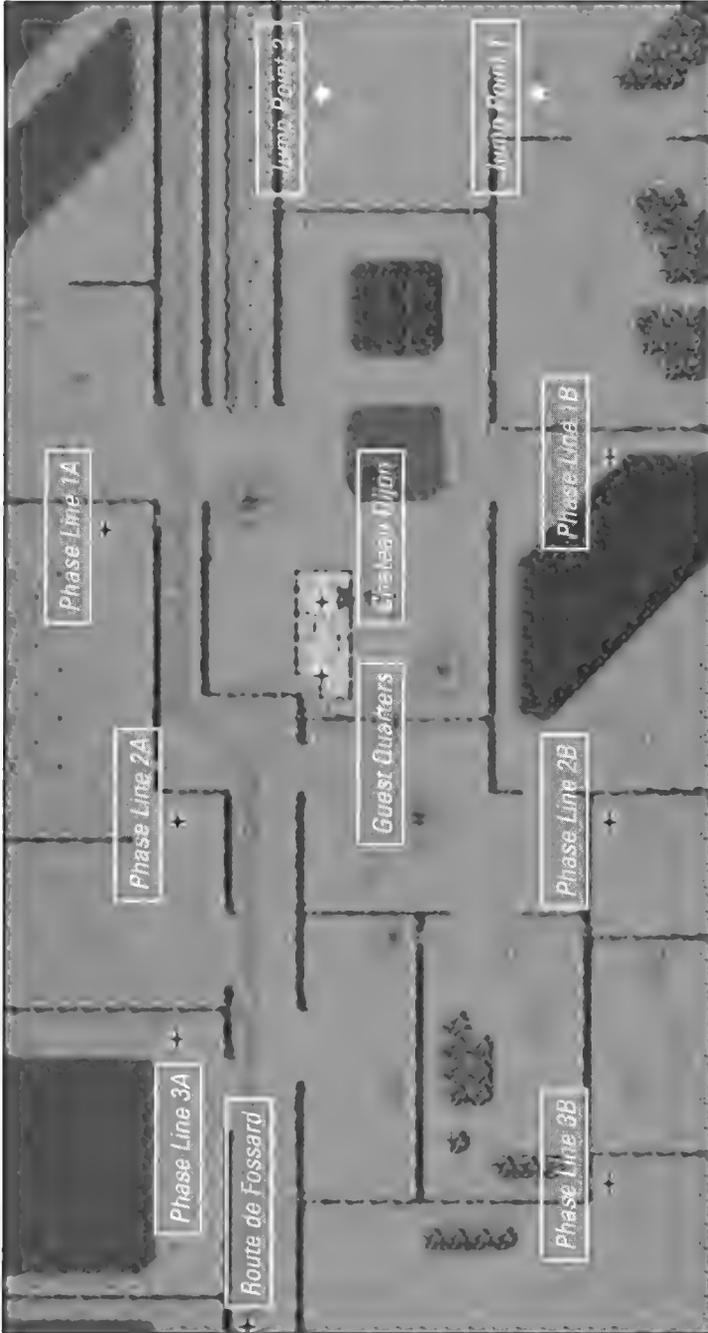


Figure 6-1. Terrain map for Hedgerows I, Battles One and Three.

CHAPTER SIX: HEDGEROWS!



One of the grimmest aspects of the *bocage* fighting was the sense of profound isolation that affected the American foot soldiers. As they groped forward through the densely confining terrain, they frequently lost sight of friendly units on their flanks and felt as though they were fighting the battles alone. The AI program in Close Combat reflects this phenomenon: American teams tend to lose cohesion and panic more quickly, and you'll see more stragglers and malingerers in these battles than in those of any other battle set.

Good luck.

German Objectives

This battle set gives the German-side player a chance to change history significantly. Because the German High Command fully realizes the advantages of stubbornly defending the *bocage* country, you'll receive significant armor and artillery resources in most battles. The historical German tactics can scarcely be improved upon; your job is to replicate their effectiveness and bring the American advance to a halt by decimating the attackers at every opportunity.

Once the Americans penetrate the hedgerow region, they'll reach open land and a good road network that will allow them to deploy their masses of armor to good effect. Stop them cold in the *bocage* and you'll unravel the whole Allied plan.

Hedgerows!, Battle One

Victory Locations

Site	Point Value	Site	Point Value
Jump Point 1	10	Jump Point 2	10
Phase Line 1A	10	Phase Line 1B	10
Chateau Dijon	30	Guest Quarters	20
Phase Line 2A	20	Phase Line 2B	20
Phase Line 3A	20	Phase Line 3B	20
Route de Fossard	30		

Microsoft
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Order of Battle Variants for Hedgerows!, Battle One

American Order of Battle

Rifle Squad (5 squads)

BAR and Half Team or
Two Light Rifle or
BAR and Light Rifle or
Two Light Rifle and Recon

Rifle Squad

BAR Light Rifle and Recon or
BAR and Light Rifle or
Two Light Rifle and Recon or
Two BAR and Bazooka or
BAR Two Light Rifle Recon and Bazooka

Support Squad

Two 60mm Mortar .30-cal. MG and Bazooka or
60mm Mortar and Two .30-cal. MG or
81mm Mortar .50-cal. MG and Bazooka or
Two 81mm Mortar and Bazooka or
Two 81mm Mortar .50-cal. MG and Bazooka

Armor Squad

Sherman or
M3 Half-track or
Stuart or
Stuart and M3 Half-track or
Sherman and M3 Half-track

Armor Squad

Two Sherman or
Sherman 76 and Stuart or
Sherman and M10 or
Sherman 76 and M10 or
Two Sherman and M10

German Order of Battle

Rifle Squad

Bolt Rifle or
Bolt Rifle and Half Team or
MG 42 and Half Team or
MG 42 Half Team and PzS

Rifle Squad (2 squads)

MG 42 Half Team and PzS or
MG 42 and Bolt Rifle or
MG 42 Bolt Rifle and PzS

Support Squad

80mm Mortar or
MG 42 and Two Sniper or
MG 42 and PzS or
MG 42 Sniper and PzS or
80mm Mortar Sniper and PzS

Armor Squad

SDKfz 232 or
Marder or
Stug III

Gun Squad

50mm AT Gun or
50mm AT Gun and PzS or
75mm IG

Miscellaneous Squad

Two Sniper or
Sniper or
Kubelwagen



German Tactics

Distribute your machine guns evenly along the whole front, taking advantage of vertical hedgerows as cover. You won't have enough teams to defend Chateau Dijon and the Guest Quarters as heavily as you might like; we put one Rifle team and one *Panzerschreck* there and they sufficed. There's a chance you'll have a PAK-38 AT gun, and the computer tends to place it where it doesn't have the best field of fire. Study the terrain carefully before deciding where to put this valuable weapon; we suggest placing it behind the hedges below the bend in the road.

Place any armor you get in reserve to back up your machine gun teams. If you draw a single SDKfz armored car, put it in the field above the road, behind Phase Line 1A; if you also draw a Stug or a Marder, put it near the Phase Line 2A marker, behind the hedges.

In most of the games we played, the computerized American opponent seemed to regress to World War I tactics, just sending infantry teams forward in haphazard waves without much supporting fire. Basically, all the German player has to do is sit tight, stay cool, and target any U.S. unit that gets close. We scored several Minor German Victories simply by issuing the global Defend command, then sitting back and watching the action unfold.

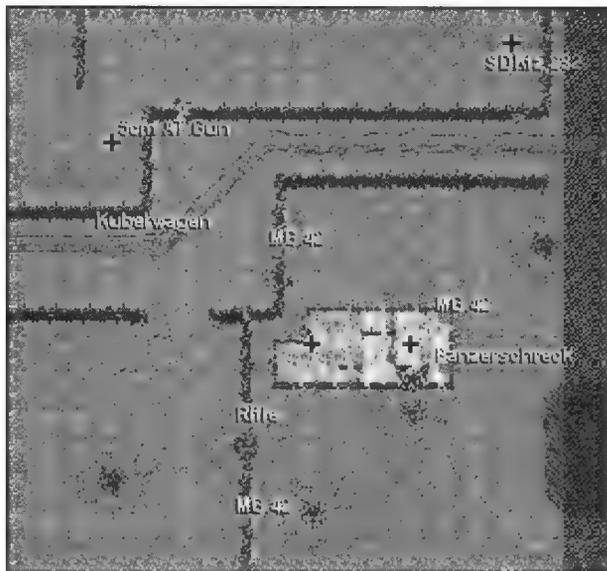


Figure 6-2. Suggested German deployment for *Hedgerows!*, Battle One.



Figure 6-3. If the American tanks advance near the top or bottom of the map, you'll be deprived of the ability to fire on one of their flanks.

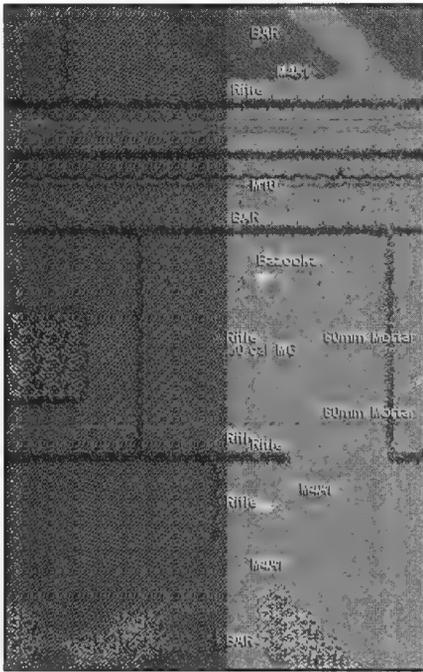


Figure 6-4. Suggested American deployment for *Hedgerows!, Battle One*.

Of course, if you want something more than a minor victory, you can always intervene as opportunities present themselves.

American Tactics

You can obtain good results by placing one tank and two infantry teams on both the northern and southern flanks. The AI tends to concentrate most of the German firepower in the center, so deploy the remaining American units to put maximum suppressive fire on that sector. Put your mortars anywhere behind either Jump Point; if you draw a third tank or a half-track, place it south of the stream, but above the hedgerow north of Jump Point 2.

Advance your tanks cautiously on both flanks, making sure their supporting infantry teams kill or suppress any Germans firing from the hedges at the top and bottom of the screen. (Because no fire can come from off the map, this tactic ensures you won't have to worry about enfilade fire from at least one side.) Once the

tanks have dealt with most of the enemy troops in those hedgerows, quickly advance your infantry from those locations and begin rolling up the defenders' line from both sides.

Hedgerows!, Battle Two

Victory Locations

Site	Point Value	Site	Point Value
Jump Point 1	10	Jump Point 2	10
Jump Point 3	10	Phase Line 1A	10
Phase Line 1B	10	Manor	20
Kitchen	10	Stables	10
Phase Line 2A	20	Phase Line 2B	20
Phase Line 2C	20	Phase Line 3A	10
Phase Line 3B	10	Phase Line 3C	10
Road to St. Lo	20		

CHAPTER SIX: HEDGEROWS!



Order of Battle Variants for Hedgerows!, Battle Two

American Order of Battle

Rifle Squad (4 squads)

BAR and Half Team or
Two Light Rifle or
BAR and Light Rifle or
Two Light Rifle and Recon

Support Squad

60mm Mortar and Two .30-cal. MG or
81mm Mortar and .50-cal. MG or
Two 60mm Mortar and Two Bazooka or
81mm Mortar .50-cal. MG and Bazooka or
Two 60mm Mortar .30-cal. MG and Bazooka

Armor Squad

Sherman or
M3 Half-track or
Stuart or
Stuart and M3 Half-track or
Sherman and M3 Half-track

Rifle Squad

BAR and Half Team or
Two Light Rifle or
BAR and Light Rifle or
Two Light Rifle and Recon

Armor Squad

Sherman and M3 Half-track or
Sherman or
Stuart and M3 Half-track or
Sherman 76 or
Sherman and Stuart

German Order of Battle

Rifle Squad

Bolt Rifle or
Bolt Rifle and Half Team or
MG 42 and Half Team or
MG 42 Half Team and PzS

Rifle Squad (2 squads)

MG 42 Bolt Rifle and Recon or
MG 42 Bolt Rifle and PzS or
MG 42 Bolt Rifle Recon and PzS

Support Squad

80mm Mortar or
MG 42 and Two Sniper or
MG 42 and PzS or
MG 42 Sniper and PzS or
80mm Mortar Sniper and PzS

Gun Squad

50mm AT Gun and 75mm IG or
50mm AT Gun and PzS or
75mm IG or
75mm AT Gun or
Flak 88

Miscellaneous Squad

Two Sniper or
Sniper or
Kubelwagen

Armor Squad

Stug III G or
SDKfz 232 or
Marder or
Marder and SDKfz 250 or
Stug III G and SDKfz 232

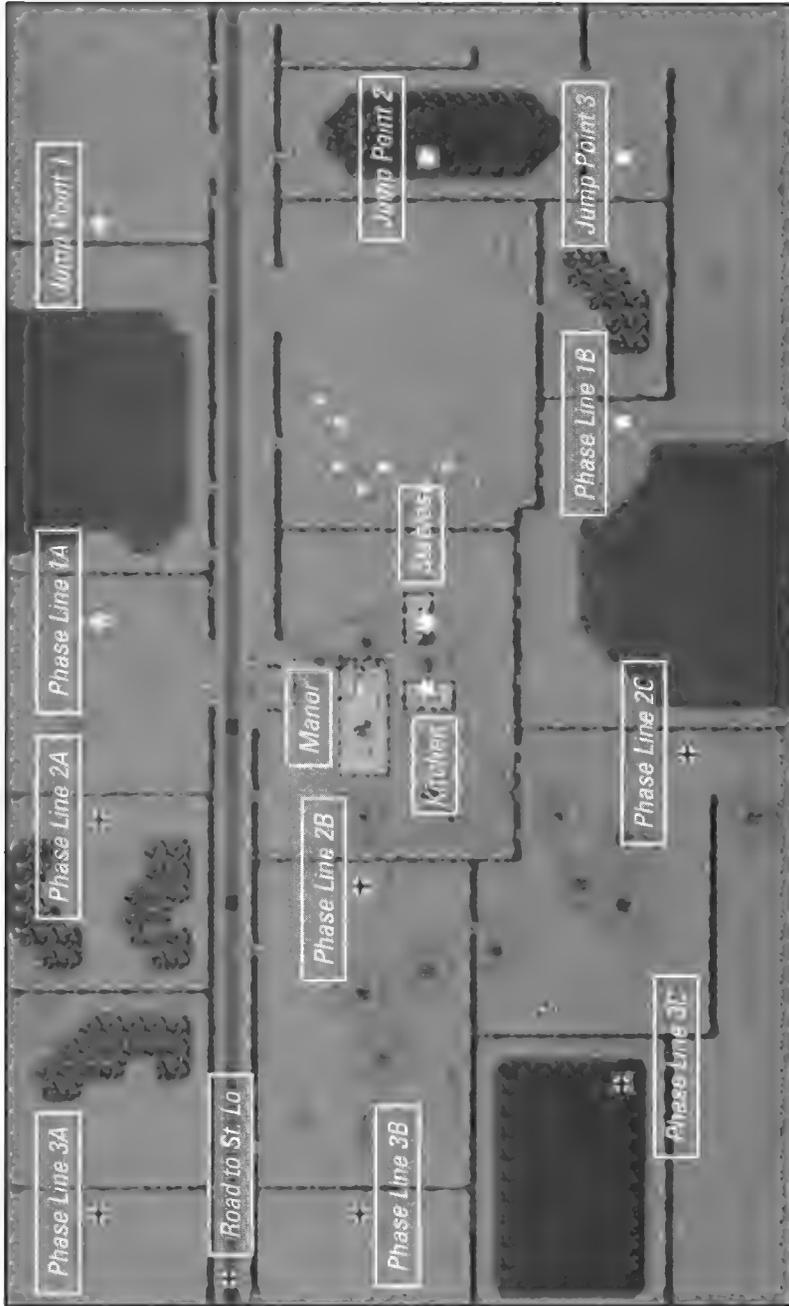


Figure 6-5. Terrain map for Hedgecrows!, Battles Two and Six.



German Tactics

You can't be strong everywhere, but fortunately you don't really need to be in this battle. Both German flanks can only be approached via wide, open fields. Because the most critical objectives are the buildings in the center and the road itself, it's a good idea to concentrate your forces there and leave both flanks lightly manned.

Your right flank faces a broad, plowed field; a Sniper, a single Rifle team, and one MG 42 should be enough to defend it. On your left flank, place a single MG 42 backed up by an antitank gun and a *Panzerschreck* team. You'll probably get a Stug III or a Marder; position any armor on your left flank near the road, making sure it's screened by good cover. Whatever other teams you receive, distribute in the center of your line.

When we tried this setup, a Sherman almost immediately came lumbering down the road and crashed through the hedges almost in front of our Stug. While our *Panzerschreck* damaged the American tank, we moved the Stug slightly so it could aim at the Sherman's rear and finish the job, as shown in Figures 6-7 and 6-8.

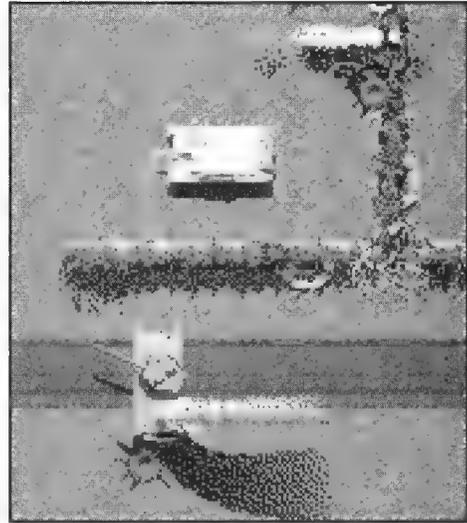
The Americans then attacked our left no less than three times with a large force of infantry. Our single MG proved quite enough to deal with them because the AI did not lay down a very effective smoke screen. Eventually, the MG team was killed by mortar fire, but by that time the steam had gone out of the American attacks and the Stug alone was easily able to hold the left (aided by the *Panzerschreck*, whose projectiles proved surprisingly effective at suppressing one Rifle team) until the battle ended.

Similar infantry attacks on our right were easily repulsed. Only in the center, near the Manor, did the enemy succeed in getting close, only to lose a second Sherman to a *Panzerfaust* fired from inside. The loss of that tank seemed to sap the attackers' will quite dramatically.



Figure 6-6. Suggested German deployment for Hedgerows!, Battle Two.

Microsoft
**Close
 Combat**



Figures 6-7 and 6-8. Ambushing a Sherman at close range. You'll quickly learn why their crews frequently referred to the M4's as "Ronsons," after a popular brand of cigarette lighter.

If nothing else, this battle proved what even a single piece of armor, supported by just one machine gun, could achieve in *bocage* conditions. We won a decisive victory (inflicting 51 casualties and suffering only three!) simply by putting our resources in the right places and letting the enemy come at us.

American Tactics

Methodical planning and concentration of force are the keys to successful offensive operations in the *bocage*. Leaving only minimal forces on our right flank, we massed all of our armor (two Stuarts and a half-track) below the road, along with three-quarters of our Rifle teams, both mortars, and two machine guns.

We chose to attack Phase Line 1B first, figuring that if we controlled that location, we would be close enough to the cluster of buildings to have a good

	Infantry	Armor	Artillery	Trucks	Terrain	Infantry	Armor	Artillery	Trucks	Terrain	
KIA/WIA:	3	0	0	0	---	KIA/WIA:	51	2	0	1	
Captured:	0	0	0	0	4	Captured:	1	0	0	16	
Points:	9	0	0	0	11	Points:	106	40	0	5	
20	Total American Points					Details	Total German Points 248				

Figure 6-9. The scorecard for this battle illustrates how well the terrain favored the defense.

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chance of rushing them. To prevent premature movement by any overzealous team, we issued a Defend command when the battle started, then had both mortars lay down the densest possible smoke screen in the field in front of Phase Line 1B. Once the smoke was thick, we switched the mortars to HE and plastered the German hedge line.

A wide end-run by our half-track (which could not traverse the hedgerows) didn't work out as well: it was hit and set ablaze in short order. But a steady advance through the smoke screen by one Stuart and two Rifle teams, supported by fire from a machine gun and a BAR team, quickly overran the German defenders.

Finding the hedges north of Phase Line 1B to be undefended, we brought up another tank and several more infantry teams, then opened fire on the buildings at close range. At this point, our troops spotted a German Marder and we were compelled to order up a Bazooka team, which had been kept in reserve to handle just this contingency. Once the Marder was neutralized, we assaulted the Stables, gaining control of them after a sharp firefight. The surviving Germans fled right into the sights of one of our Stuarts, which cut them down to a man.

At this point, the Germans routed and we scored a major victory (206 points to 72).



Figure 6-10. *Suggested American deployment for Hedgerows!, Battle Two.*

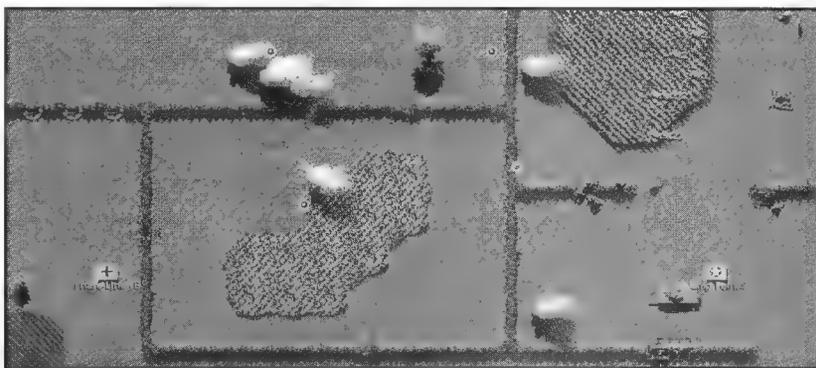


Figure 6-11. *The successful assault on Phase Line 1B required careful planning, starting with as heavy a smoke screen as we could put down.*

Microsoft
**Close
 Combat**

Hedgerows!, Battle Three

Victory Locations

Site	Point Value	Site	Point Value
Jump Point 1	2	Jump Point 2	2
Phase Line 1A	8	Phase Line 1B	8
Chateau Dijon	10	Guest Quarters	20
Phase Line 2A	20	Phase Line 2B	20
Phase Line 3A	30	Phase Line 3B	30
Route de Fossard	40		

Order of Battle Variants for Hedgerows!, Battle Three

American Order of Battle

Rifle Squad (5 squads)

BAR and Half Team or
 Two Light Rifle or
 BAR and Light Rifle or
 Two Light Rifle and Recon

Rifle Squad

BAR Light Rifle and Recon or
 BAR and Light Rifle or
 Two Light Rifle and Recon or
 Two BAR and Bazooka or
 BAR Two Light Rifle Recon and Bazooka

Support Squad

Two 60mm Mortar .30-cal. MG and Bazooka or
 60mm Mortar and Two .30-cal. MG or
 81mm Mortar .50-cal. MG and Bazooka or
 Two 81mm Mortar and Bazooka or
 Two 81mm Mortar .50-cal. MG and Bazooka

Armor Squad

Sherman or
 M3 Half-track or
 Stuart or
 Stuart and M3 Half-track or
 Sherman and M3 Half-track

German Order of Battle

Rifle Squad

Bolt Rifle or
 Bolt Rifle and Half Team or
 MG 42 and Half Team or
 MG 42 Half Team and PzS

Rifle Squad (2 squads)

MG 42 Half Team and PzS or
 MG 42 and Bolt Rifle or
 MG 42 Bolt Rifle and PzS

Support Squad

80mm Mortar or
 MG 42 and Two Sniper or
 MG 42 and PzS or
 MG 42 Sniper and PzS or
 80mm Mortar Sniper and PzS

Gun Squad

50mm AT Gun or
 50mm AT Gun and PzS or
 75mm IG

Miscellaneous Squad

Two Sniper or
 Sniper or
 Kubelwagen

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American Order of Battle, continued

Armor Squad

Two Sherman or
Sherman 76 and Stuart or
Sherman and M10 or
Sherman 76 and M10 or
Two Sherman and M10

German Order of Battle, continued

Armor Squad

SDKfz 232 or
Marder or
Stug IIIG

German Tactics

In this battle, the odds are stacked very much in favor of the Americans. They usually draw at least three armored units, some mortars, and between two and three times the number of infantry teams as the Germans. The Germans, by contrast, are lucky to get a single Marder or Stug III assault gun. And they're usually stuck with a *Kubelwagen* or two.

Due to the Americans' overwhelming superiority in numbers, it took us several attempts to figure out a winning deployment. Finally, we set up crossfires (one Rifle team and one MG 42) to cover the open ground above the road and west of Chateau Dijon; put our one strong armored unit (a Marder) in ambush near Phase Line 3A to cover the road and the fields north of it; placed one Rifle team in reserve behind the hedges near Phase Line 3B; and issued a blanket Defend order. Refer to Figure 6-12 for more details.

What finally brought victory was a combination of the MG 42s' awesome firepower and the accurate shooting of a highly experienced mortar crew, which was able to switch targets quickly and hit them without wasting any shells.

The Marder nailed a Sherman as it tried to bash through the hedges north of the road, then turned its firepower loose on the American infantry. Together with a single MG 42, the Marder held off several attacks.

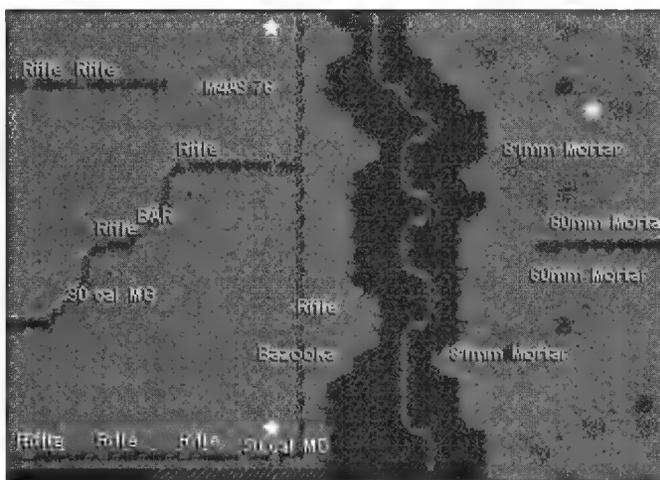


Figure 6-12. Suggested German deployment for Hedgerows!, Battle Three.

Hell on Wheels—Not!

An odd and marginal asset is the humble Kubelwagen—think of it as a Volkswagen with teeth. It's not armored, it carries but a single machine gun, and it can't traverse hedgerows. In more open terrain, it can be used as a scout car or to conduct lightning raids against the enemy's rear, but in the confines of the bocage it's pretty worthless. We never did find a way to get much use out of it, at least not in this battle. Your best bet is to keep the thing out of harm's way and hope for a chance to send it against unprotected infantry.

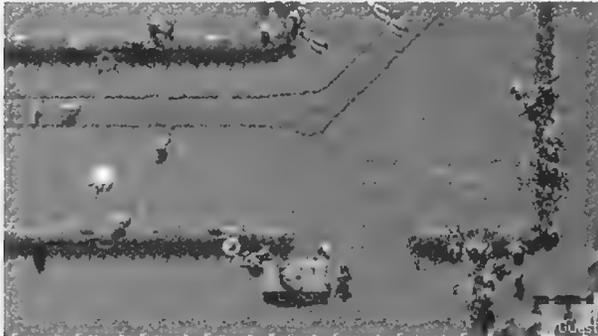


Figure 6-13. *In the confining terrain of the hedgerows, the Kubelwagen is even outmatched by infantry.*

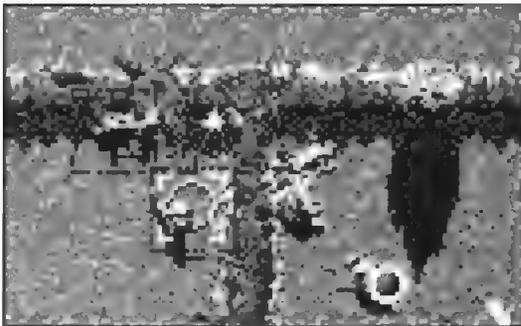


Figure 6-14. *The MG 42 crew fights for its life. At the highest resolution, your Spyglass Monitor helps you watch combat up close.*

In the fields west of Chateau Dijon, our rifle and machine gun crossfire eventually wore down the attackers, although at one point the machine gun crew was in danger of being overwhelmed by sheer weight of numbers.

All the while, we kept switching mortar targets from one American position to another, whittling down the odds with virtually every shot.

These tactics worked, although the issue was in doubt more than once. One by one, the American attacks stalled and crumbled. Rather to our surprise, these tactics gave us a decisive victory: we

inflicted 51 casualties and captured six prisoners, at a cost of only eight casualties for our side.

American Tactics

You have considerable armor at your disposal, as well as massive amounts of infantry, so with a little patience you should prevail (unless your men have an irrational fear of the *Kubelwagen*).

As with many other hedgerow battles, the key to a successful attack

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seems to lie in the concentration of force. Put between two-thirds and three-fourths of your resources on one flank, plop down plenty of smoke, and mount a coordinated assault consisting of tank and infantry teams on the nearest German positions.

In battles where the Germans don't have many heavy weapons, the AI defensive schemes tend to be tight and brittle. If you can drive a wedge into enemy territory and unlock one sector, the AI tends to react rather incoherently, and the entire defensive plan starts to buckle.

When our concentrated blow overwhelmed a defended hedgerow southwest of Chateau Dijon, the computer responded by launching a desperate counterattack on our center, across the open road. There was ferocious fighting for a time, but the Germans simply did not have the manpower to sustain the pressure, and by attacking they lost the advantage conferred by their deadly machine guns.

Warning: *The AI has a tendency to reinforce failure by launching successive attacks against the same general sector. If you repel one attack, don't relax—another one is probably coming.*



Tip: When playing a Campaign, conduct dress rehearsals by playing the next battle in Maneuver mode, from both sides. It can really help.



The success of our massive flanking attack and the failure of their desperate assault on Chateau Dijon drove the German side into the red in a matter of minutes and gave us a very satisfying major victory.

Hedgerows!, Battle Four

Victory Locations

Site	Point Value	Site	Point Value
Jump Point 1	4	Jump Point 2	4
Jump Point 3	4	Phase Line 1C	10
Phase Line 1B	10	Phase Line 1A	10
Maison Martin	40	Chateau Bourvil	30
Phase Line 2A	20	Phase Line 2B	20
Phase Line 2C	20	Phase Line 3A	10
Phase Line 3B	10	Phase Line 3C	10
Route de Fossard	20		

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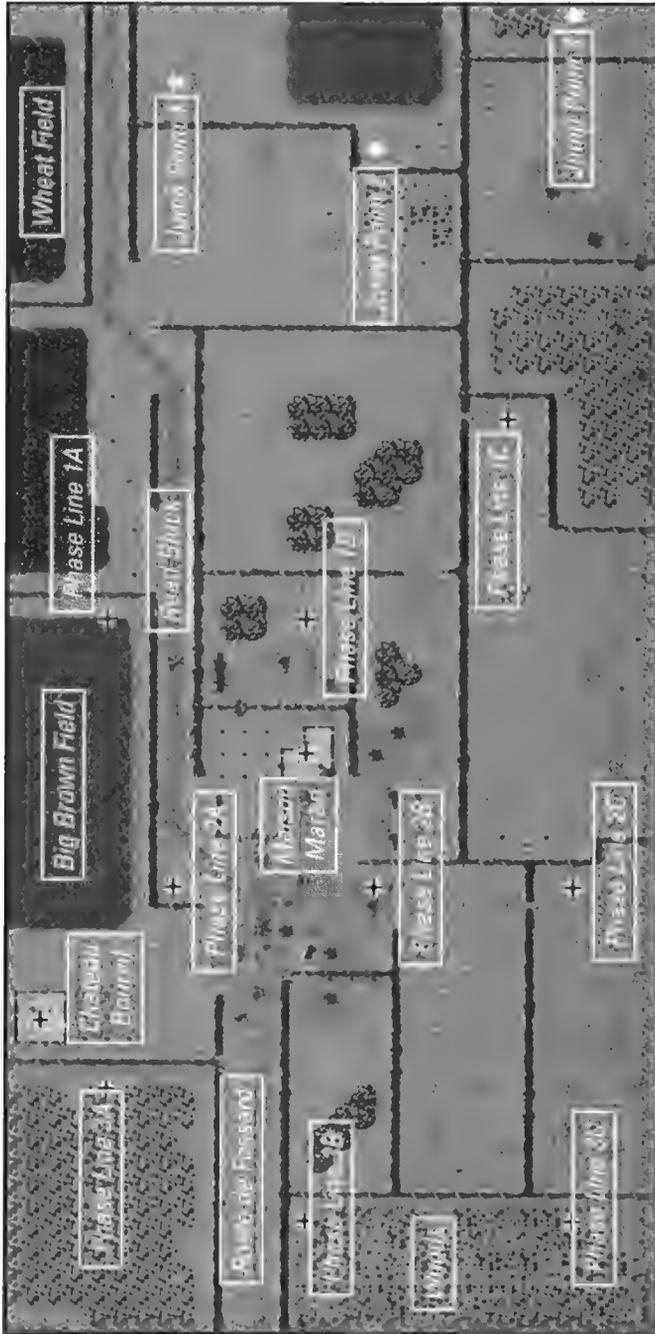


Figure 6-15. Terrain map for Hedgerows!, Battles Four and Five.

CHAPTER SIX: HEDGEROWS!



Order of Battle Variants for Hedgerows!, Battle Four

American Order of Battle

Rifle Squad (4 squads)

BAR and Half Team or
Two Light Rifle or
BAR and Light Rifle or
Two Light Rifle and Recon

Rifle Squad

Two BAR and Bazooka or
Two Light Rifle and Recon or
BAR Light Rifle and Recon or
BAR Two Light Rifle Recon and Bazooka or
Two BAR Recon and Bazooka

Armor Squad

Sherman and M3 Half-track or
Sherman or
Stuart and M3 Half-track or
Sherman 76 or
Sherman and Stuart

Armor Squad

Two Sherman or
Sherman 76 and Stuart or
Sherman and M10 or
Sherman 76 and M10 or
Two Sherman and M10

Support Squad

60mm Mortar .30-cal. MG and Bazooka or
81mm Mortar and Bazooka or
Two 60mm Mortar and Bazooka or
81mm Mortar and .50-cal. MG or
Two 60mm Mortar and Two Bazooka

German Order of Battle

Rifle Squad

Bolt Rifle or
Bolt Rifle and Half Team or
MG 42 and Half Team or
MG 42 Half Team and PzS

Rifle Squad

MG 42 Bolt Rifle and Recon or
MG 42 Bolt Rifle and PzS or
MG 42 Bolt Rifle Recon and PzS

Support Squad

80mm Mortar or
MG 42 and Two Sniper or
MG 42 and PzS or
MG 42 Sniper and PzS or
80mm Mortar Sniper and PzS

Rifle Squad

MG 42 Half Team and PzS or
MG 42 and Bolt Rifle or
MG 42 Bolt Rifle and PzS

Gun Squad

50mm AT Gun or
50mm AT Gun and PzS or
75mm IG

Miscellaneous Squad

Two Sniper or
Sniper or
Kubelwagen

Armor Squad

SDKfz 232 or
Marder or
Stug III G

German Tactics

By studying the map, you can see that the Germans have been dealt a strong defensive position in this battle. A roadblock prevents American tanks from turning your left flank, and there are several successive hedgerows covering your center and right flank. This means that you can fight and, if necessary, withdraw to the next line of defense.

Only north of the road, where there's a wheat field and a wide plowed field, is your position easily assailable. Nevertheless, we had a hunch the main attack would be launched through the fields south of the road, with only a secondary effort against our left. We therefore put two Snipers in the hedges between the wheat field and the pasture, and backed them up with an MG 42 hidden in the bushes just south of the roadblock.

We often drew a single PAK-38 AT gun and one *Panzerschreck*. The gun we retained south of the Maison Martin, near Phase Line 2C, behind the hedges, anchoring our right; the rocket launcher was put up front, north of Phase Line 1B, near a Rifle team, in the expectation that the Americans would put at least half their armor into that sector. If you draw a second rocket-launcher, put it in the hedgerow below Phase Line 1C. Our one armored unit, a Marder, we kept in reserve near the U-shaped stone wall, where it could move either north or south as circumstances warranted.

When the battle started, the Americans did as we had anticipated, putting most of their strength in the southern fields. We blasted one Sherman at close range. A secondary infantry attack through the wheat field north of the road was pinned down by our Snipers.

The most dangerous moment came when a Sherman drove up to the roadblock, tried unsuccessfully to bash through it, then turned south and got behind the flank of our infantry. We sent the Marder forward to deal with it, but until it arrived our infantry was hard-pressed in the center, coming under fire from two sides.

Once the second Sherman had been disabled, we rushed forward our one reserve



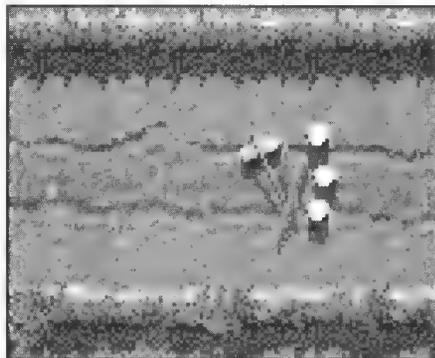
Figure 6-16. Suggested German deployment for Hedgerows!, Battle Four.



Figure 6-17. This German roadblock proved to be a valuable asset in this battle. You'll find that tanks must either halt in front of it or make dangerous detours around.

Rifle team—which had been hiding in the Maison Martin—to relieve the pressure on our center. Our riflemen caught many of the attackers in the open and soon restored the integrity of our line.

The main American effort, aimed at our right flank, made some initial progress, but without armored support it too petered out. The attackers finally routed, leaving at least 35 bodies strewn in the fields. Result: a Decisive German Victory, even though there were times when our Strength Bar turned brown.



American Tactics

A frontal assault, equally strong along the whole line, will almost certainly result in a slaughter. We learned that the hard way. We finally achieved victory by leaving the north and center thinly held and massing both men and armor

on the south flank. We used lots of smoke and saturated each enemy position with fire before advancing in short rushes, and eventually broke the German line. The AI responded by rushing

Warning:

Weakening your center to reinforce a flank attack is a calculated risk—the computer will launch counterattacks if it sees an opening. Be ready to issue Defend orders to any teams in the path of such an attack!



reinforcements from the German center, but by this time our forces were under cover and were able to bushwhack nearly every man sent south.

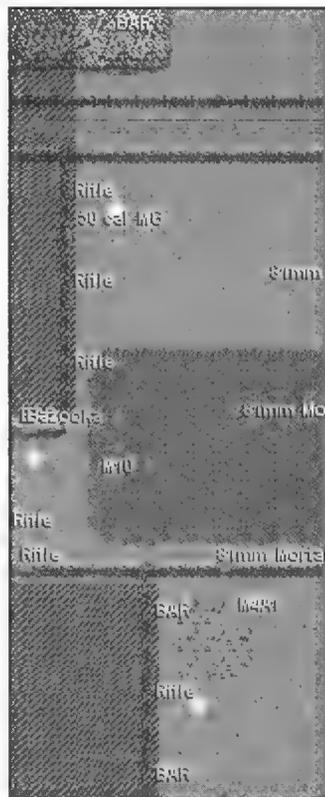


Figure 6-18. Suggested American deployment for Hedgerows!, Battle Four.

Hedgerows!, Battle Five

Victory Locations

Site	Point Value	Site	Point Value
Jump Point 1	2	Jump Point 2	2
Jump Point 3	2	Phase Line 1C	4
Phase Line 1B	4	Phase Line 1A	4
Maison Martin	20	Chateau Bourvil	20
Phase Line 2A	10	Phase Line 2B	10
Phase Line 2C	10	Phase Line 3A	30
Phase Line 3B	30	Phase Line 3C	30
Route de Fossard	40		

Order of Battle Variant for Hedgerows!, Battle Five

American Order of Battle

Rifle Squad (4 squads)

- BAR and Half Team or
- Two Light Rifle or
- BAR and Light Rifle or
- Two Light Rifle and Recon

Rifle Squad

- Two BAR and Bazooka or
- Two Light Rifle and Recon or
- BAR Light Rifle and Recon or
- BAR Two Light Rifle Recon and Bazooka or
- Two BAR Recon and Bazooka

Support Squad

- 60mm Mortar .30-cal. MG and Bazooka or
- 81mm Mortar and Bazooka or
- Two 60mm Mortar and Bazooka or
- 81mm Mortar and .50-cal. MG or
- Two 60mm Mortar and Two Bazooka

Armor Squad

- Sherman and M3 Half-track or
- Sherman or
- Stuart and M3 Half-track or
- Sherman 76 or
- Sherman and Stuart

German Order of Battle

Rifle Squad

- Bolt Rifle or
- Bolt Rifle and Half Team or
- MG 42 and Half Team or
- MG 42 Half Team and PzS

Rifle Squad

- MG 42 Bolt Rifle and Recon or
- MG 42 Bolt Rifle and PzS or
- MG 42 Bolt Rifle Recon and PzS

Support Squad

- 80mm Mortar or
- MG 42 and Two Sniper or
- MG 42 and PzS or
- MG 42 Sniper and PzS or
- 80mm Mortar Sniper and PzS

Rifle Squad

- MG 42 Half Team and PzS or
- MG 42 and Bolt Rifle or
- MG 42 Bolt Rifle and PzS

Gun Squad

- 50mm AT Gun or
- 50mm AT Gun and PzS or
- 75mm IG

CHAPTER SIX: HEDGEROWS!



American Order of Battle, continued

Armor Squad

Two Sherman or
Sherman 76 and Stuart or
Sherman and M10 or
Sherman 76 and M10 or
Two Sherman and M10

German Order of Battle, continued

Miscellaneous Squad

Two Sniper or
Sniper or
Kubelwagen

Armor Squad

SDKfz 232 or
Marder or
Stug III G

German Tactics

Armored support is light in this battle, to put it mildly: the most common unit we drew was a SDKfz 232 armored car, mounting a puny 20mm gun. Because armored cars can't traverse hedgerows, we were stumped about where to deploy it. Putting it on the road is suicidal—it can fire at a Sherman all day and not do much more than leave scuff marks on the turret.

We finally positioned the armored car as shown in Figure 6-21, in a field that was open on the north side. It was initially screened from tank and Bazooka fire, and when the Americans moved from Maison Martin toward the center of our line, it darted forth and cut down at least a half-dozen enemy soldiers before being shot up by an M10 that appeared from behind Maison Martin.

If this battle is stingy with German armor, it's more generous in terms of antitank capabilities: we typically drew two *Panzerschreck* teams and a 50mm antitank gun. The

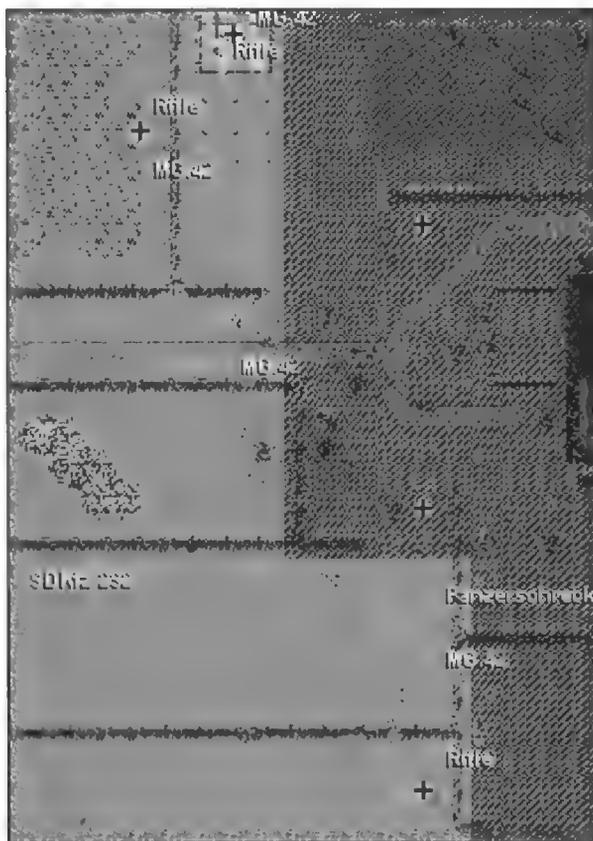


Figure 6-19. Suggested German deployment for Hedgerows!, Battle Five.

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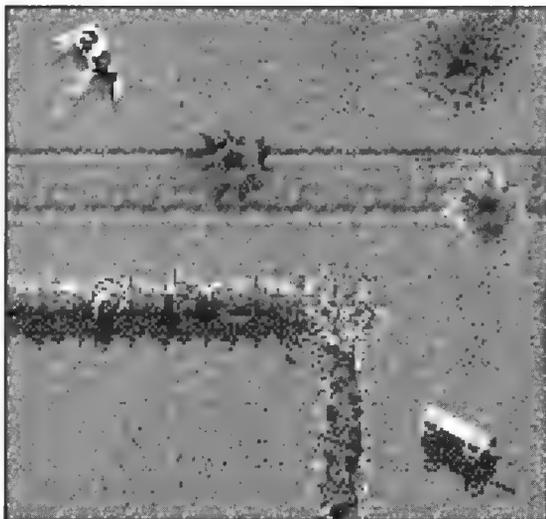


Figure 6-20. One grisly feature of the Normandy battlefield was the large number of dead farm animals that lay strewn about. In case you're wondering, a dead cow does offer moderately good protection from small-arms fire.

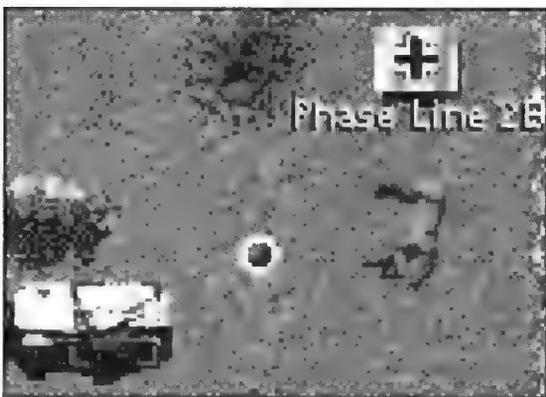


Figure 6-21. The lightly armed SDKfz 232 is helpless against tanks, but it can devastate unprotected infantry.

roadblock makes it unlikely that the Americans will employ their armor in the center, so you can gird both flanks strongly with antitank weapons. We covered the northern approaches with the cannon and the southern fields with the *Panzerschrecks*.

It's likely that one of your *Panzerschreck* teams will be inexperienced (one or two bars). Place the less experienced team in front, where it can get off a few shots early in the fight, before the pressure stresses out the green crew. Place the most experienced launcher in a reserve position and bring it forward only when you have a visual fix on the American armor.

You will likely be facing three, even four, American tanks, so keep calm and concentrate on knocking them out methodically. Once the threat of American tanks has been neutralized, you can send your SDKfz forward to attack their infantry aggressively.

With the roadblock protecting your center, the antitank launchers guarding your right, and a strong garrison in Chateau Bourvil, you should be able to weather anything the Americans throw at you in this battle. If you time your counterattacks just right—especially that of the armored car—you can easily score a Major German Victory.



American Tactics

The American starting position juts out to form a salient in front of Maison Martin; the distance from there to the nearest objectives is much less than it is on the flanks, so we chose to make a strong thrust in the center, while leaving only token forces at the top and bottom of the screen. Because the American side is likely to draw three or even four tanks in this battle, you have the luxury of armor support anywhere you want it.

Of course, as we've already discussed, the German side has the luxury of considerable antitank firepower, too, so the key to an American victory is caution. Don't rush your tanks out into the open, or move them too far ahead of the infantry, until you've spotted and neutralized the defender's AT gun and rocket launchers.

The first time we tried an attack in the center, however, we made the mistake of rushing things, and lost several tanks needlessly. Once this happened, the infantry could not sustain the attack; instead of obeying orders to keep driving straight ahead (we kept shouting "Head for the dead cow!"), the angle of our infantry's advance gradually curved toward the bottom of the screen as the teams responded to galling long-range Sniper and machine gun fire. After a while, most of the fighting was down in the southwest corner of the screen, with only two badly winded infantry teams still heading cow-wards.

By the time our wayward troops had neutralized several



Figure 6-22. *The first American attack on the German's center, which ended in failure—an object-lesson on the risks of pushing your troops too hard.*

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pockets of resistance in the southwest corner of the screen, they were too exhausted to redeploy in the direction we wanted them to go originally. When we moved them back toward the dead cow, they responded sluggishly—no surprise, since the Message Monitor was filled with information about troops winded or panicking.

So our first attack on the German center—which we had envisioned as being a smashing pile-driver—turned out to be only a feeble, glancing blow. Both sides became too exhausted to continue, which of course means a Minor German Victory.

The next attack, we got it right. The secret is: Don't rush anything, anywhere, and you should eventually be able to whittle down the defender's strength to such an extent that you can move forward irresistibly from Maison Martin, and either swing north to capture Chateau Bourvil or south to roll up the German right flank. By taking our time and deploying our armor more cautiously, we scored a Major American Victory. This is one battle in which the human player can usually out-guess and out-gun the computer, no matter which side the human player chooses to control. Between two human opponents, however, this is a balanced and pretty deadly contest.

Hedgerows!, Battle Six

Victory Locations

Site	Point Value	Site	Point Value
Jump Point 1	2	Jump Point 2	2
Jump Point 3	2	Phase Line 1A	10
Phase Line 1B	10	Manor	20
Kitchen	10	Stables	4
Phase Line 2A	10	Phase Line 2B	10
Phase Line 2C	10	Phase Line 3A	30
Phase Line 3B	30	Phase Line 3C	30
Road to St. Lo	40		

Order of Battle Variants for Hedgerows!, Battle Six

American Order of Battle

Rifle Squad (5 squads)

BAR and Half Team or
Two Light Rifle or
BAR and Light Rifle or
Two Light Rifle and Recon

German Order of Battle

Rifle Squad

Bolt Rifle or
Bolt Rifle and Half Team or
Two MG 42 and Half Team or
Two MG 42 Half Team and PzS

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American Order of Battle, continued

Support Squad

60mm Mortar and Two .30-cal. MG or
81mm Mortar and .50-cal. MG or
Two 60mm Mortar and Two Bazooka or
81mm Mortar .50-cal. MG and Bazooka or
Two 60mm Mortar .30-cal. MG and Bazooka

Armor Squad

Sherman or
M3 Half-track or
Stuart or
Stuart and M3 Half-track or
Sherman and M3 Half-track

Armor Squad

Sherman and M3 Half-track or
Sherman or
Stuart and M3 Half-track or
Sherman 76 or
Sherman and Stuart

German Order of Battle, continued

Rifle Squad (2 squads)

Two MG 42 Bolt Rifle and Recon or
MG 42 Bolt Rifle and PzS or
MG 42 Bolt Rifle Recon and PzS

Support Squad

80mm Mortar or
MG 42 and Two Sniper or
MG 42 and PzS or
MG 42 Sniper and PzS or
80mm Mortar Sniper and PzS

Gun Squad

50mm AT Gun and 75mm IG or
50mm AT Gun and PzS or
75mm IG or
75mm AT Gun or
Flak 88

Miscellaneous Squad

Two Sniper or
Sniper or
Kubelwagen

Armor Squad

Stug IIIIG or
SDKfz 232 or
Marder or
Marder and SDKfz 250 or
Stug IIIIG and SDKfz 232

German Tactics

This well-balanced battle usually deals the German player sufficient firepower to inflict heavy losses on the Americans. If you get a variant that gives you a Stug III or a 50mm AT gun (or both), the computer will often try to place it in the fields, on your right flank. Reposition them to cover the Road to St. Lo (that *is* the main objective you're trying to protect, after all). We recommend putting the antitank gun behind the hedgerows south of the Kitchen.

If you get a 75mm Infantry Gun, position it to fire on the cluster of buildings in the American center—the computer seems predisposed to mass

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Figure 6-23. *This set-up finally brought us victory!*

American infantry in those buildings, and you can probably decimate several squads with converging fire.

If your line is pierced, try to seal it off with an immediate counterattack. If you don't, the American superiority of numbers will quickly unhinge your entire defensive scheme.

American Tactics

For the American player, this is a tough, bloody battle any way you slice it. We tried several times to outflank the Germans by massing most of our forces on the northern or southern edge of the map, and the best result we ever got was a draw. The terrain is just too open and the distance your troops have to cover is just too great.

The shortest route into the German line is in the center, but your only option there is a frontal assault against strong defenses. The first time we tried it, we were slaughtered, losing 52 men to the German's 20; that cluster of buildings doesn't offer as much protection as it appears to!

The essential thing to remember is that, in this battle, the German line is a tough but thin crust; pierce it at any point, and the momentum shifts to your side. One approach we tried was massing virtually all our resources on the right flank, leaving just a few automatic weapons to cover the center and left. (The Germans aren't likely to try a frontal counterattack because they just don't have the men to spare.) By using lots of smoke, leap-frogging our armor, and keeping the infantry going from one smoke cloud to the next, we managed to break the German line on the north edge of the map and roll up their flank.

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Success might have crowned our efforts, except the Germans had been cunning enough to cover the Road to St. Lo with a Stug III and an antitank team, which picked off two of our tanks as they came into the open. That took the steam out of our attack, and led to a Minor German Victory.

Finally, we went back to the center again, this time initially positioning the infantry well back in the buildings, so they wouldn't be butchered. Again, we stripped both flanks to provide maximum punch in the middle. As soon as the smoke screen thickened, we moved the infantry to the eastern side of the buildings, ordered the mortars to switch from smoke to HE, and moved all available armor out from behind the buildings.

Thanks to the psychological comfort of the smoke screen and the presence of so much armor, the men stormed the nearest hedgerow quite gallantly. We lost all the armor except for one Stuart to *Panzerfausts*, but it proved to be enough. Our infantry moved south in the hedges, cleaning out German positions one by one, while the Stuart—after

Warning: *Your troops aren't robots, and unless you set them on Always Obey from the Options menu, they may sometimes fail to carry out orders.*

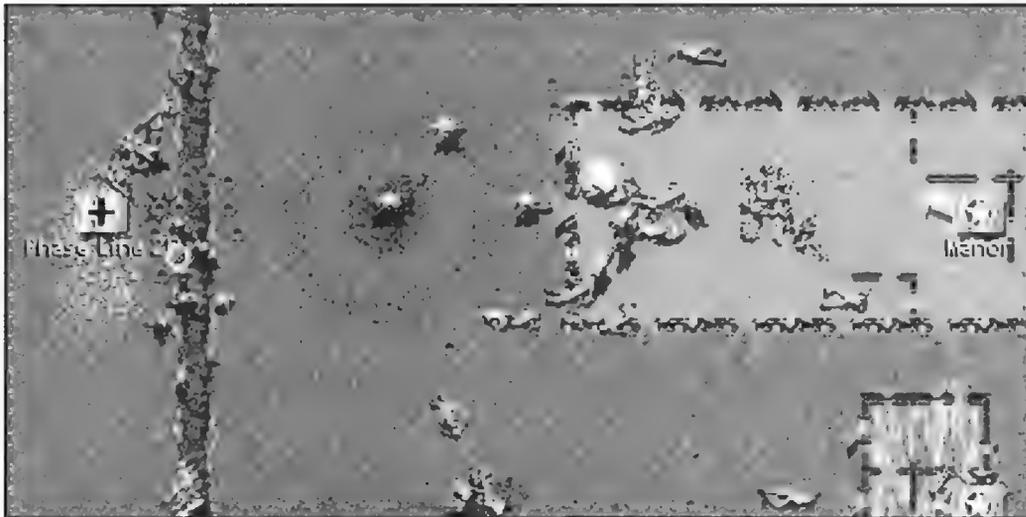


Figure 6-24. *Slaughter at the Manor! The next time, we placed our infantry at the rear of the building and they fared much better.*

quickly knocking out a 75mm Infantry Gun on the far side of the hedgerow—wheeled north and covered the road. The Germans reacted to our penetration in the center by rushing reinforcements from their left flank, but the Stuart cut them down as they tried to cross the road.

At that point, the Germans' Force Morale indicator went into the red. They still had a Stug III wandering around the fields on their right flank, but that was irrelevant; by the time it tried to intervene, the surviving German infantry had routed, leaving us with a Major American Victory.

Hedgerows!, Battle Seven

Victory Locations

Site	Point Value	Site	Point Value
Jump Point 1	10	Jump Point 2	10
Phase Line 1A	10	Phase Line 1B	10
Battalion HQ	40	Pillbox	20
Phase Line 2A	20	Phase Line 2B	20
Barracks	20	Machine Shop	20
Garage	20	Road to St. Lo	10

Order of Battle Variants for Hedgerows!, Battle Seven

American Order of Battle

Rifle Squad (4 Squads)

BAR and Half Team or
Two Light Rifle or
BAR and Light Rifle or
Two Light Rifle and Recon

Rifle Squad

Two BAR and Bazooka or
Two Light Rifle and Recon or
BAR Light Rifle and Recon or
BAR Two Light Rifle Recon and Bazooka or
Two BAR Recon and Bazooka

Support Squad

60mm Mortar and Two .30-cal. MG or
81mm Mortar and .50-cal. MG or
Two 60mm Mortar and Two Bazooka or
81mm Mortar .50-cal. MG and Bazooka or
Two 60mm Mortar .30-cal. MG and Bazooka

German Order of Battle

Rifle Squad

Bolt Rifle or
Bolt Rifle and Half Team or
MG 42 and Half Team or
MG 42 Half Team and PzS

Rifle Squad

MG 42 Bolt Rifle and Recon or
MG 42 Bolt Rifle and PzS or
MG 42 Bolt Rifle Recon and PzS

Support Squad

80mm Mortar or
MG 42 and Two Sniper or
MG 42 and PzS or
MG 42 Sniper and PzS or
80mm Mortar Sniper and PzS

CHAPTER SIX: HEDGEROWS!



American Order of Battle, continued

Armor Squad

Sherman and M3 Half-track or
Sherman or
Stuart and M3 Half-track or
Sherman 76 or
Sherman and Stuart

Armor Squad

Sherman 76 or
Sherman and Stuart or
Sherman 76 and Stuart or
Sherman and M10

German Order of Battle, continued

Rifle Squad

MG 42 Half Team and PzS or
MG 42 and Bolt Rifle or
MG 42 Bolt Rifle and PzS

Gun Squad

50mm AT Gun and 75mm IG or
50mm AT Gun and PzS or
75mm IG or
75mm AT Gun or
Flak 88

Miscellaneous Squad

Two Sniper or
Sniper or
Kubelwagen

Armor Squad

Stug IIIIG or
SDKfz 232 or
Marder or
Marder and SDKfz 250 or
Stug IIIIG and SDKfz 232

German Tactics

This battlefield gives the defender a strong natural position. In addition to the Pillbox (north of the road, top-center of map), the Battalion HQ is virtually a fortress unto itself. No matter whether they move against the left, right, or center of your line, the Americans will have to cross a lot of open ground.

In a typical variant of this battle, we drew a 50mm AT gun, a 75mm Infantry Gun, a Stug III, and—just what we wanted!—another *Kubelwagen*. The driveway connecting the Barracks and Battalion HQ with the main road gives you considerable flexibility when the time comes to move your Stug forward. We knocked out several enemy tanks by having the Stug pop out first on one side of the hedge between the two roads, then on the other. Fire and pull back, scoot around the hedge, and fire again—this tactic worked so well that sometimes the Americans reacted as though they thought we had *two* assault guns instead of one!

Whatever selection of artillery you draw, the computer will probably place it at the edge of your deployment zone, in front of the wheat field that leads to

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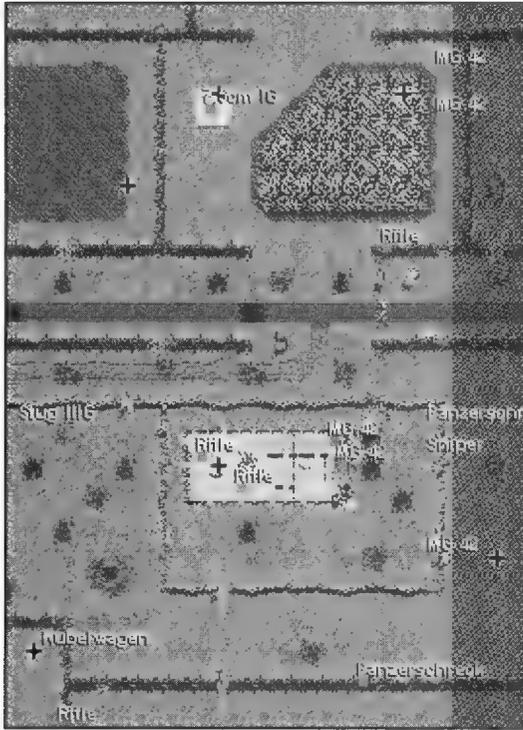


Figure 6-25. Suggested German deployment for Hedgerows!, Battle Seven.

Tip: If you start a battle in possession of buildings within fifty meters or less of the enemy, deploy your men in the rooms that are farthest from the front line, at least until you achieve suppression or put out a good smoke screen.



cunningly held his fire, not revealing his positions, so that our one mortar had no firm targets and could only sprinkle shells on where we *thought* the defenders might be.

the pillbox. Do *not* leave it there! Whether you get two machine guns or one, you should place the artillery farther to the rear; otherwise they'll be flanked by enemy armor and probably destroyed before their crews can crank the guns around to face the threat. While the Infantry Gun is nothing to write home about in an antitank role, it can do considerable damage if you place it in the Pillbox and cover it with an MG 42.

If you deploy your forces wisely, you should be able to fend off most American attacks—the terrain strongly favors the defender. Out of six games we played on the German side, we won five. Once, we even got to shoot up a few infantrymen with our li'l ol' *Kubelwagen!*

American Tactics

No doubt about it: this German position is a tough nut to crack. The Pillbox makes it dangerous to strike at the Germans' left flank, and the stout-walled Battalion HQ can turn into a miniature deathtrap if you storm the center. On the other hand, if you can seize the Battalion HQ, you win many points and will demoralize the Germans to the point of routing.

After several defeats, we decided to mass virtually everything east of the big wheat field, put down a smoke screen, and try to bash through. The enemy

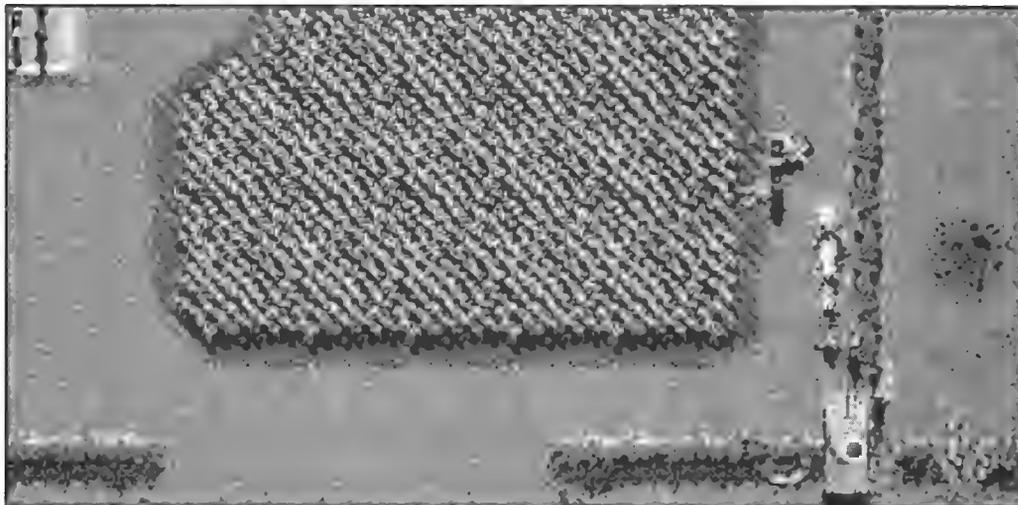


Figure 6-26. *If the computer puts your artillery too far forward, put it closer to either the Pillbox or the Battalion HQ, else it will be vulnerable to enemy armor.*

The massive tank and infantry attack across the wheat field was an awesome thing to see, and it took place in eerie silence. In between the cough of our mortars, we could hear bird calls. Had we taken the Germans by surprise?

Alas, no. As soon as our tanks emerged from the smoke screen, the field was crisscrossed by the smoke trails of a *Panzerfaust* in ambush: we lost half



Figure 6-27. *Surprise! A German assault gun emerges from behind a hedgerow and gets the drop on a Sherman.*

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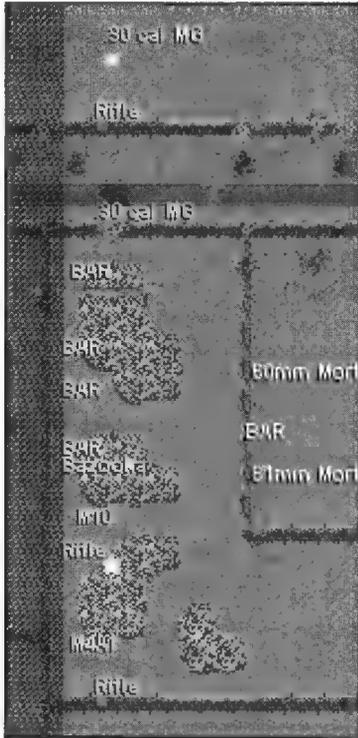


Figure 6-28. Suggested American deployment for Hedgerows, Battle Seven.

of our armor in a matter of seconds. One Sherman, fortunately, was only immobilized, so it continued to rake the hedgerow with its bow machine gun. Thanks largely to its cover, the wave of infantry kept going, however, and actually reached the stone wall around the Battalion HQ. A terrific firefight developed and we might well not have taken the objective, but for a well-placed BAR team on the southern edge of the battlefield; this unit's fire prevented the Germans from reinforcing the Battalion HQ.

There was nothing pretty about the victory; one-third of our men died or were seriously wounded. But once we brought up a relatively fresh Recon team, and it broke into the Battalion HQ with Tommy Guns blazing, the tide turned and most of the surviving defenders surrendered.

By the way, that Pillbox is not quite as formidable as it looks—while we were piling it on in the center, a humble Stuart tank and a 50 caliber MG crew managed to smother it with fire to such an extent that its firepower and its garrison played only a marginal role in the battle.



Figure 6-29. The big attack goes through the wheat field.



Hedgerows!, Battle Eight

Victory Locations

Site	Point Value	Site	Point Value
Jump Point 1	2	Jump Point 2	2
Phase Line 1A	4	Phase Line 1B	4
Battalion HQ	10	Pillbox	20
Phase Line 2A	10	Phase Line 2B	10
Barracks	20	Machine Shop	20
Garage	30	Road to St. Lo	40

Order of Battle Variants for Hedgerows!, Battle Eight

American Order of Battle

Rifle Squad (4 Squads)

- BAR and Half Team or
- Two Light Rifle or
- BAR and Light Rifle or
- Two Light Rifle and Recon

Rifle Squad

- Two BAR and Bazooka or
- Two Light Rifle and Recon or
- BAR Light Rifle and Recon or
- BAR Two Light Rifle Recon and Bazooka or
- Two BAR Recon and Bazooka

Support Squad

- 60mm Mortar and Two .30-cal. MG or
- 81mm Mortar and .50-cal. MG or
- Two 60mm Mortar and Two Bazooka or
- 81mm Mortar .50-cal. MG and Bazooka or
- Two 60mm Mortar .30-cal. MG and Bazooka

Armor Squad

- Sherman and M3 Half-track or
- Sherman or
- Stuart and M3 Half-track or
- Sherman 76 or
- Sherman and Stuart

German Order of Battle

Rifle Squad

- Bolt Rifle or
- Bolt Rifle and Half Team or
- MG 42 and Half Team or
- MG 42 Half Team and PzS

Rifle Squad

- MG 42 Bolt Rifle and Recon or
- MG 42 Bolt Rifle and PzS or
- MG 42 Bolt Rifle Recon and PzS

Rifle Squad

- MG 42 Half Team and PzS or
- MG 42 and Bolt Rifle or
- MG 42 Bolt Rifle and PzS

Support Squad

- 80mm Mortar or
- MG 42 and Two Sniper or
- MG 42 and PzS or
- MG 42 Sniper and PzS or
- 80mm Mortar Sniper and PzS

Gun Squad

- 50mm AT Gun and 75mm IG or
- 50mm AT Gun and PzS or
- 75mm IG or
- 75mm AT Gun or
- Flak 88

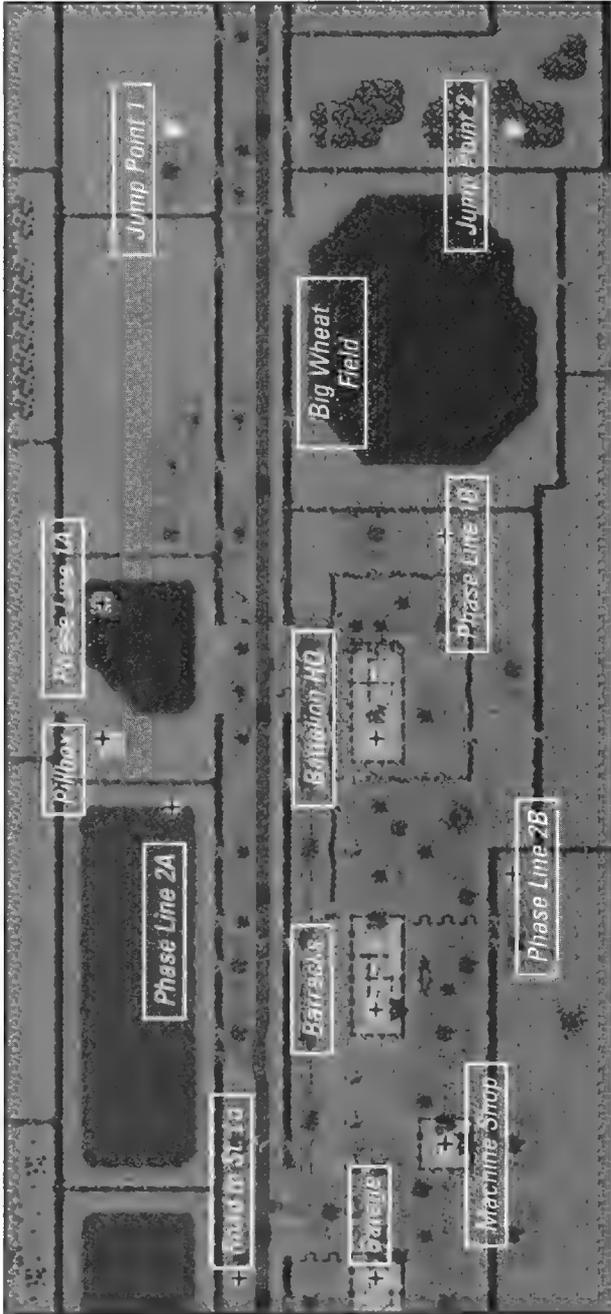


Figure 6-30. Terrain map for Hedgerows!, Battles Seven and Eight.

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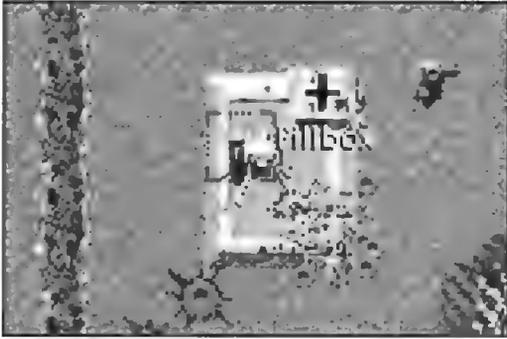


Figure 6-32. *The German Pillbox finally falls! A patient mortar attack, or a well-timed infantry assault, are the best ways to eliminate these fortifications. The infantry assault may be faster, but it's also the most hazardous.*

Other sectors you should defend? The Barracks, of course, but we also recommend putting a Rifle team in the zig-zag trenches south of that building, and at least one MG 42 in the hedges that border the southwest corner of the map. As for the armor—usually a Stug or Marder and a half-track—keep it back in reserve behind the Barracks until you can determine where the Americans are making their strongest effort.

Using this set-up, or others resembling it closely, we won five battles out of five (one decisive, two major and two minor victories).



Figure 6-33. *A furious assault on the Barracks; the results were a bloody shambles for the Americans.*

CHAPTER SIX: HEDGEROWS!



American Tactics

Because the distance from the Battalion HQ perimeter to the Barracks is so short, we kept trying to crack the German line there. But no matter how much smoke we put down or how many mortar shells we lobbed, we never gained more than temporary control over that objective.

After bloodying our noses several times, we switched to a right-hook strategy against the German left (the general area of the Pillbox), using all our armor and all but one of our mortars to support the attack. We took heavy losses (both sides' Strength Bars were low and had turned brown at the battle's height), but then one little Stuart tank broke through the hedgerow above the Pillbox, wiped out a German MG, routed a *Panzerfaust* team, and began systematically shelling the remaining enemy positions from the rear.

Tip: Tanks don't always burn when hit, and you don't want to waste time and ammo firing at a vehicle that's already destroyed. If you're in doubt, click on the target and check the information in the Soldier Monitor.



Call it luck, call it heroism (the tank crew did receive decorations on the detailed Debriefing Screen), but that one maneuver caused the whole German defense plan to unravel. As our French allies would say, *C'est la guerre*.

Hedgerows!, Battle Nine

Victory Locations

Site	Point Value	Site	Point Value
Jump Point 1	10	Jump Point 2	10
Phase Line 1A	10	Phase Line 1B	10
Laundry	20	Garment Shop	40
Phase Line 2A	10	Phase Line 2B	10
Hotel de Fossard	30	Market	20
Chapel	20	Phase Line 3A	10
Phase Line 3B	10	Butcher Shop	10
Road to St. Lo	20		

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Order of Battle Variants for Hedgerows!, Battle Nine

American Order of Battle

Rifle Squad (5 Squads)

BAR and Half Team or
Two Light Rifle or
BAR and Light Rifle or
Two Light Rifle and Recon

Support Squad

60mm Mortar .30-cal. MG and Bazooka or
81mm Mortar and Bazooka or
Two 60mm Mortar and Bazooka or
81mm Mortar and .50-cal. MG or
Two 60mm Mortar and Two Bazooka

Armor Squad

Sherman 76 or
Sherman and Stuart or
Sherman 76 and Stuart or
Sherman and M10

Armor Squad

Two Sherman or
Sherman 76 and Stuart or
Sherman and M10 or
Sherman 76 and M10 or
Two Sherman and M10

German Order of Battle

Rifle Squad

Bolt Rifle or
Bolt Rifle and Half Team or
MG 42 and Half Team or
MG 42 Half Team and PzS

Rifle Squad (2 Squads)

MG 42 Bolt Rifle and Recon or
MG 42 Bolt Rifle and PzS or
MG 42 Bolt Rifle Recon and PzS

Support Squad

80mm Mortar or
MG 42 and Two Sniper or
MG 42 and PzS or
MG 42 Sniper and PzS or
80mm Mortar Sniper and PzS

Gun Squad

50mm AT Gun and PzS or
50mm AT Gun or
75mm IG or
50mm AT Gun and 75mm IG

Miscellaneous Squad

Two Sniper or
Sniper or
Kubelwagen

Armor Squad

Stug III G or
SDKfz 232 or
Marder or
Marder and SDKfz 250 or
Stug III G and SDKfz 232

German Tactics

The historical location for this battle, as well as Battles Ten and Eleven, is a bulge in the German line called the Villiers-Fossard Salient, based on the village of Villiers-Fossard, about 2,000 yards west of the highway from Isigny to St. Lo. On June 29, 1944, two regiments of the 29th Division attacked the

CHAPTER SIX: HEDGEROWS!



shoulders of this bulge (the 175th on its left and the 115th on its right), while part of the American 3rd Armored Division hammered the center.

For the tankers, it was their first taste of battle, and they boasted that they would succeed where the infantry had failed. After the two-day battle for Villiers-Fossard, they did no more boasting: at a cost of 400 tankers killed and wounded, the 3rd Armored gained only a half-mile of ground.

Playing as the Germans, you'll be defending the eastern side of the salient against the 115th Infantry, bolstered by attached armor. If you can do as well or better than your historical counterpart, you'll inflict a serious delay on the American drive toward St. Lo, only five miles distant.

This map offers many defensive possibilities, since it incorporates both hedgerows and several stout buildings. Most of the time you'll be outnumbered in terms of armor, so you'll have to use the terrain to multiply its effectiveness.

Typically, the Germans will draw a Marder or a Stug, a 50mm AT gun, and a SDKfz-232. Hide the Marder in the corner of the hedgerow-bordered field below the Garment Shop, place the AT gun where it can cover the road (inside a building is better than behind a hedge because it gives the weapon a wider field of fire), and hide the armored car behind the Chapel and the Market. Distribute the rest of your teams so that roughly one-third of their firepower covers the fields above the road and two-thirds is sheltered in the Garment Shop and the Laundry.

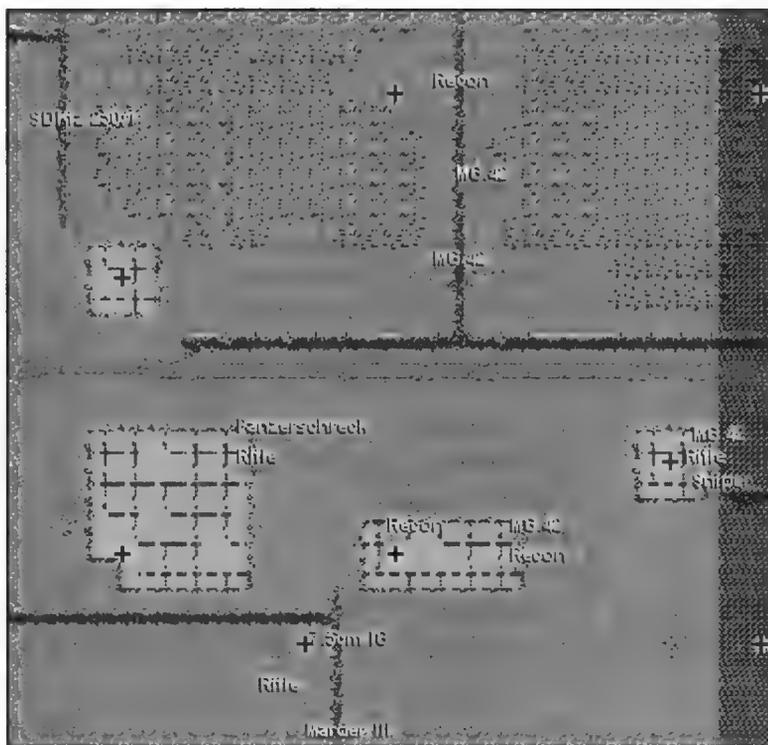


Figure 6-34. Suggested German deployment for *Hedgerows!*, Battle Nine.

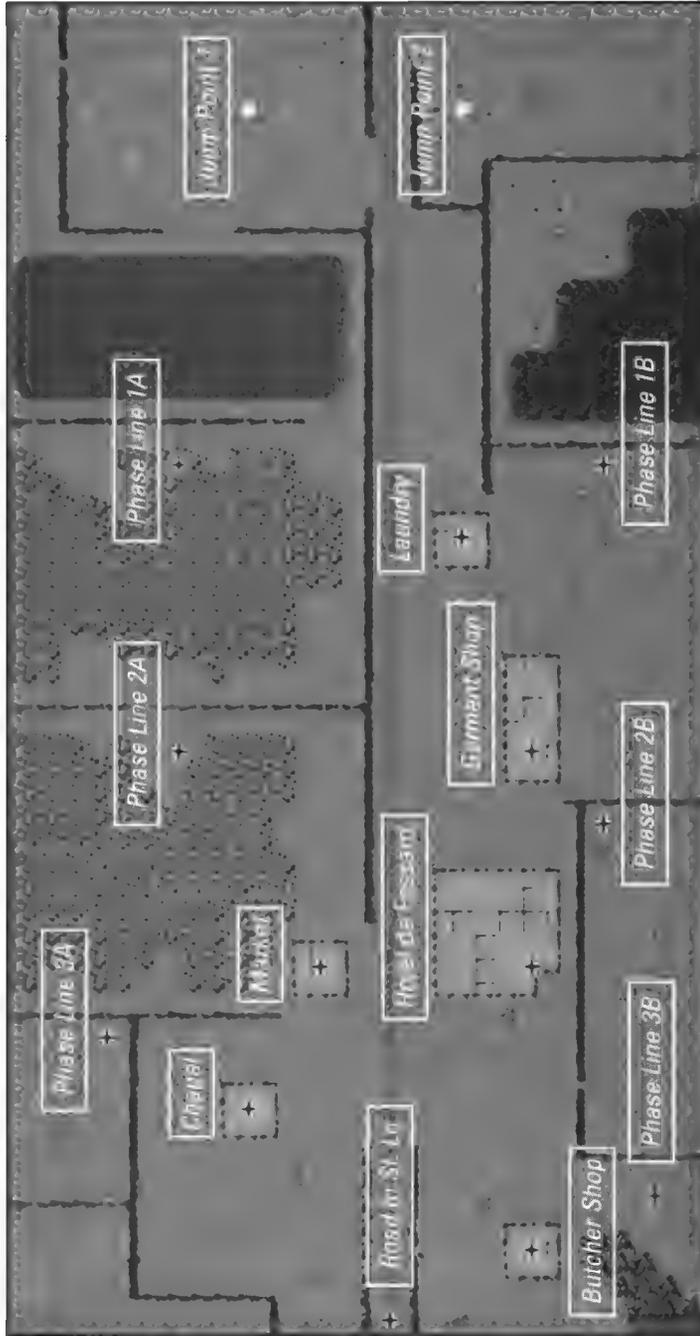


Figure 6-35. Terrain map for Hedgerows!, Battles Nine, Ten, and Eleven.

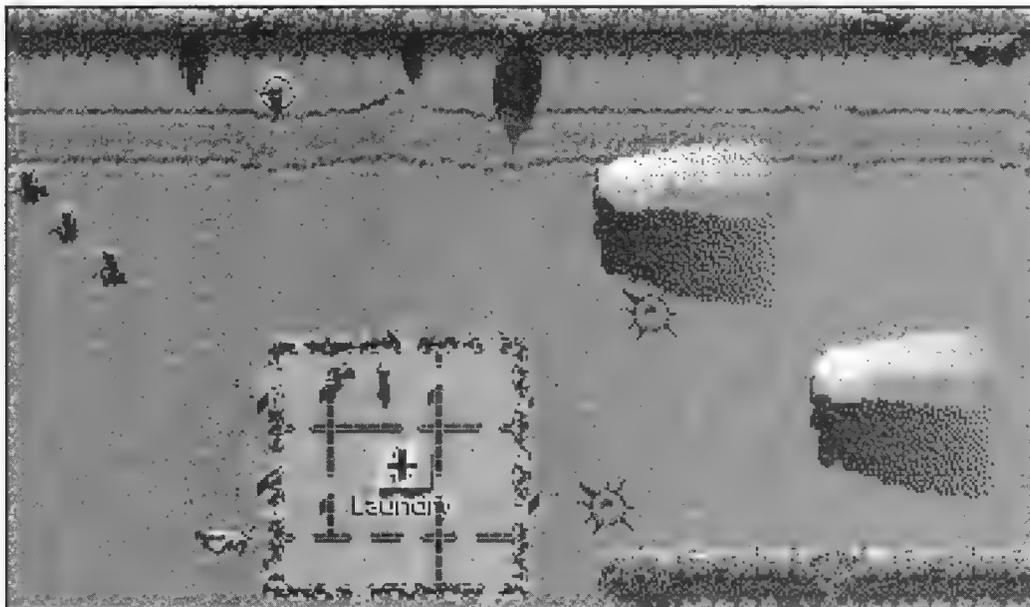


Figure 6-36. *Under heavy shelling, German defenders withdraw from the Laundry. Put a more experienced unit there, and it might stay and fight.*

Wait until the Americans cross Phase Line 1B before moving your Marder into the open. By that time, your hand-held antitank weapons should have knocked out at least one of the enemy's tanks, and the enemy infantry will probably be embroiled in a close-range fight for the Laundry. The Marder, therefore, can do a lot of damage—and it can always retreat behind Phase Line 2B if it starts drawing Bazooka fire.

If the Americans move their tanks on the road, your AT gun and *Panzerschreck* should stop them. When all the attackers' armor has been knocked out, your MG and Rifle teams should be able to hold on until the Americans' Morale Bar turns brown.

If this happens while fighting is still going on in the Laundry, you might consider reinforcing that building's defenders with a reserve Rifle team or a Recon team.

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Figure 6-37. *The American set-up should take full advantage of this oddly shaped hedgerow formation. Study each terrain map carefully for odd features that can be used to your advantage.*

American Tactics

Because the buildings are worth so many Victory Points, the logical American tactic is to mass both tanks and infantry for an assault over the field to Phase Line 1B, and from there into the Garment Shop. You have a lot of infantry, but scan the team icons before you deploy them, so you can give the most dangerous jobs to the most experienced men.

Mount the attack using standard tactics for

the *bocage*: Smoke, close cooperation between tanks and infantry, Bazooka teams on the flanks, and keeping an eye out for German armor. Look for the L-shaped hedgerow that's directly east of the Laundry: put a machine gun or a pair of BARS there to suppress fire from the enemy-held buildings. You should be able to reach Phase Line 1B without heavy losses.

Wait long enough for stragglers to catch up, then storm the Laundry; numbers and sheer momentum should allow you to gain control. As soon as the flag changes to reflect American possession, keep going and try to capture the Garment Shop. It won't be a cheap victory, but once you've taken those two buildings the Germans should rout quickly.



Hedgerows!, Battle Ten

Victory Locations

Site	Point Value	Site	Point Value
Jump Point 1	4	Jump Point 2	4
Phase Line 1A	4	Phase Line 1B	4
Laundry	10	Garment Shop	20
Phase Line 2A	10	Phase Line 2B	10
Hotel de Fossard	30	Market	20
Chapel	20	Phase Line 3A	20
Phase Line 3B	20	Butcher Shop	20
Road to St. Lo	40		

Order of Battle Variants for Hedgerows!, Battle Ten

American Order of Battle

Rifle Squad (5 Squads)

- BAR and Half Team or
- Two Light Rifle or
- BAR and Light Rifle or
- Two Light Rifle and Recon

Support Squad

- 60mm Mortar .30-cal. MG and Bazooka or
- 81mm Mortar and Bazooka or
- Two 60mm Mortar and Bazooka or
- 81mm Mortar and .50-cal. MG or
- Two 60mm Mortar and Two Bazooka

Armor Squad

- Sherman 76 or
- Sherman and Stuart or
- Sherman 76 and Stuart or
- Sherman and M10

Armor Squad

- Two Sherman or
- Sherman 76 and Stuart or
- Sherman and M10 or
- Sherman 76 and M10 or
- Two Sherman and M10

German Order of Battle

Rifle Squad

- Bolt Rifle or
- Bolt Rifle and Half Team or
- MG 42 and Half Team or
- MG 42 Half Team and PzS

Rifle Squad (2 Squads)

- MG 42 Bolt Rifle and Recon or
- MG 42 Bolt Rifle and PzS or
- MG 42 Bolt Rifle Recon and PzS

Support Squad

- 80mm Mortar or
- MG 42 and Two Sniper or
- MG 42 and PzS or
- MG 42 Sniper and PzS or
- 80mm Mortar Sniper and PzS

Gun Squad

- 50mm AT Gun and PzS or
- 50mm AT Gun or
- 75mm IG or
- 50mm AT Gun and 75mm IG

Miscellaneous Squad

- Two Sniper or
- Sniper or
- Kubelwagen

Microsoft
**Close
Combat**

German Order of Battle, continued

Armor Squad

Stug III G or
SDKfz 232 or
Marder or
Marder and SDKfz 250 or
Stug III G and SDKfz 232

German Tactics

You still have a chance to stop the American penetration of the Villiers-Fossard Salient, especially if you draw a strong Order of Battle. Obviously, you should garrison the Hotel de Fossard strongly. If you get an SDKfz, place it just below the Phase Line 3A marker, where it can intercept any wide flanking movement the Americans try to execute at the top of the map.

Position your Infantry Gun (or your 88, if you're lucky enough to have one) behind the hedges near the Phase Line 2B marker. Hide the Marder or the Stug either behind the Hotel or between the Chapel and the Market. If you draw two *Panzerschrecks*, put one in the Hotel and one in the hedgerow where Phase Line 2A comes closest to the road. If you draw an AT gun, place it inside the Market, where it can fire at both the road and any vehicles that advance toward the Hotel from behind the Garment Shop.

You'll probably draw a couple of Snipers, too. Put one inside the Market and the other up in the hedges near Phase Line 3A.

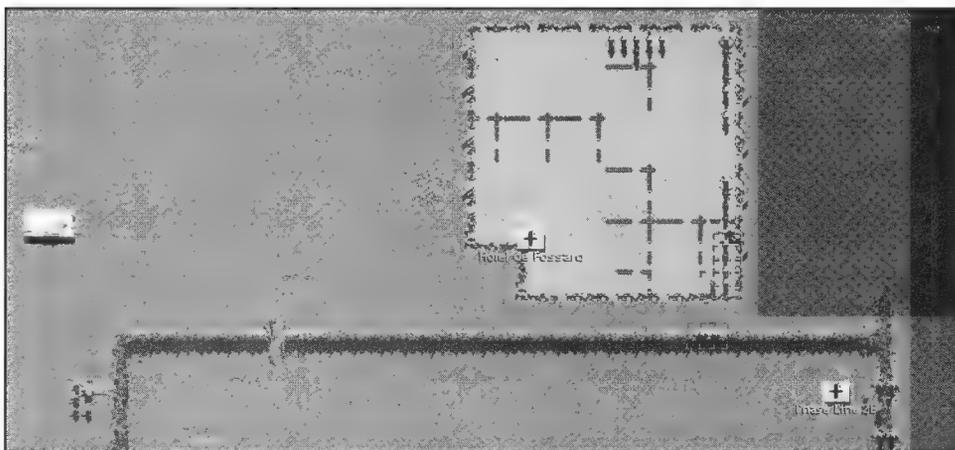


Figure 6-38. *The Germans must defend the Hotel de Fossard stubbornly in Battle Ten.*



When you're through deploying, make a rousing speech, issue a blanket Defend command, and let 'er rip.

American Tactics

In attacking Hotel de Fossard, you can try the conservative approach, just as you did when storming the Laundry and Garment Shop in Battle Nine, and it'll probably work if your preparations and coordination between tank and infantry teams are skillful. Should the Germans happen to draw an 88, though, you could be massacred before your men set foot in the lobby.

One rather daring and Patton-like alternative is to send a strong infantry force (no armor—it attracts too much attention) far around the German left flank, aiming for the meandering path that winds between Phase Line 2A and Phase Line 3A. Have them take along a Bazooka, just in case they encounter a SDKfz at the end of their journey.

While this flanking force is maneuvering, make the noisiest possible demonstration near Hotel de Fossard to keep the Germans' attention focused there. If the flanking tactic works, your detachment should emerge just behind the Chapel and take the enemy by surprise. Even if this daring maneuver doesn't result in the capture of the Chapel, it will almost certainly draw German reserves in its direction, which means you'll have an easier time storming Hotel de Fossard. In short, it's a tactic that works even if it fails.



Figure 6-39. Suggested American deployment for the sweeping right-hook around the top of the map.

Hedgerows!, Battle Eleven

Victory Locations

Site	Point Value	Site	Point Value
Jump Point 1	2	Jump Point 2	2
Phase Line 1A	2	Phase Line 1B	2
Laundry	8	Garment Shop	8
Phase Line 2A	8	Phase Line 2B	8
Hotel de Fossard	20	Market	10
Chapel	20	Phase Line 3A	20
Phase Line 3B	20	Butcher Shop	40
Road to St. Lo	50		

Order of Battle Variants for Hedgerows!, Battle Eleven

American Order of Battle

Rifle Squad (5 Squads)

BAR and Half Team or
 Two Light Rifle or
 BAR and Light Rifle or
 Two Light Rifle and Recon

Support Squad

60mm Mortar .30-cal. MG and Bazooka or
 81mm Mortar and Bazooka or
 Two 60mm Mortar and Bazooka or
 81mm Mortar and .50-cal. MG or
 Two 60mm Mortar and Two Bazooka

Armor Squad

Sherman 76 or
 Sherman and Stuart or
 Sherman 76 and Stuart or
 Sherman and M10

Armor Squad

Two Sherman or
 Sherman 76 and Stuart or
 Sherman and M10 or
 Sherman 76 and M10 or
 Two Sherman and M10

German Order of Battle

Rifle Squad

Bolt Rifle or
 Bolt Rifle and Half Team or
 MG 42 and Half Team or
 MG 42 Half Team and PzS

Rifle Squad (2 Squads)

MG 42 Bolt Rifle and Recon or
 MG 42 Bolt Rifle and PzS or
 MG 42 Bolt Rifle Recon and PzS

Support Squad

80mm Mortar or
 MG 42 and Two Sniper or
 MG 42 and PzS or
 MG 42 Sniper and PzS or
 80mm Mortar Sniper and PzS

Gun Squad

50mm AT Gun and PzS or
 50mm AT Gun or
 75mm IG or
 50mm AT Gun and 75mm IG

Miscellaneous Squad

Two Sniper or
 Sniper or
 Kubelwagen

Microsoft
**Close
Combat**

you may as well put your antitank resources up front, with good fields of fire, and hope that they're well-trained enough to score the first hits.

If you whittle down the American armor, you'll have rough parity in terms of infantry. We did score one Minor German Victory by seizing the Market with an infantry assault and holding it until the Americans were too bushed to fight any more, but that, we suspect, was a fluke. More often than not, this battle degenerates into a shooting match between two forces of infantry occupying buildings fairly close to each other.

In such a situation, the Germans' machine guns give them an edge, but only if the American advantage in armor has been eliminated or at least drastically reduced.

American Tactics

The Americans can win this battle handily, with a classic hold-and-flank maneuver. In the south and center of the map, deploy minimal forces: an MG, a BAR, a Bazooka, and one Rifle team in Hotel de Fossard; a BAR and Bazooka in the Market, and a single BAR team defending near the Phase Line 2B on your left flank (the southern side of the map). Put everything else, including all your armor, in the scrub-covered terrain up north.

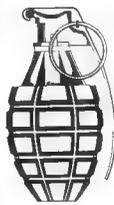
Open the attack with a smoke screen in front of the enemy-held hedge

west of the scrub. When the smoke is thick, move out toward the field near Phase Line 3A, and retarget your mortars to shell the hedgerow and the Chapel with HE.

Send a detachment from your flanking force southeast to prevent the Germans from reinforcing their teams around Phase Line 3A. Because the terrain in the center is relatively open, you can interdict the Germans' lateral line of communications with a minimum of firepower, and the Bazookas you deployed in the Market and Hotel de Fossard should keep their armor from moving freely.

Once you've secured the field around Phase Line 3A, send two-thirds of your flanking force south to attack the Chapel; the remaining third should continue west and clean out any pockets of resistance in that sector. When the north of the map is secure and the Chapel taken, concentrate all your forces on the center with the aim of taking the Road to St. Lo.

Warning: *Don't ignore an immobilized enemy tank. Maybe it can't move any more, but the crew's still inside and some (if not all) of its guns are still operable. Put a few shots into it until the Soldier Monitor indicates it's destroyed.*



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These tactics work (we won six out of seven test games) because the Germans are forced to spread their resources thin, and the open terrain in the center makes it easy for relatively modest American forces to prevent any reinforcements from moving north.

Hedgerows!, Battle Twelve

Victory Locations

Site	Point Value	Site	Point Value
Jump Point 1A	10	Jump Point 1B	10
Bend in the Road	20	Phase Line 1A	30
Phase Line 1B	30	Phase Line 1C	30
Barn	20	Farmhouse	20
Wine Shop	20	Stable	10
Chicken Coop	10	Phase Line 2A	10
Phase Line 2B	10	Phase Line 2C	10
Road to St. Lo	10		

Order of Battle Variants for Hedgerows!, Battle Twelve

American Order of Battle

Rifle Squad (5 Squads)

BAR and Half Team or
Two Light Rifle or
BAR and Light Rifle or
Two Light Rifle and Recon

Support Squad

60mm Mortar .30-cal. MG and Bazooka or
81mm Mortar and Bazooka or
Two 60mm Mortar and Bazooka or
81mm Mortar and .50-cal. MG or
Two 60mm Mortar and Two Bazooka

Armor Squad

Sherman or
M3 Half-track or
Stuart or
Stuart and M3 Half-track or
Sherman and M3 Half-track

German Order of Battle

Rifle Squad

Bolt Rifle or
Bolt Rifle and Half Team or
MG 42 and Half Team or
MG 42 Half Team and PzS

Rifle Squad (2 Squads)

MG 42 Bolt Rifle and Recon or
MG 42 Bolt Rifle and PzS or
MG 42 Bolt Rifle Recon and PzS

Support Squad

80mm Mortar or
MG 42 and Two Sniper or
MG 42 and PzS or
MG 42 Sniper and PzS or
80mm Mortar Sniper and PzS

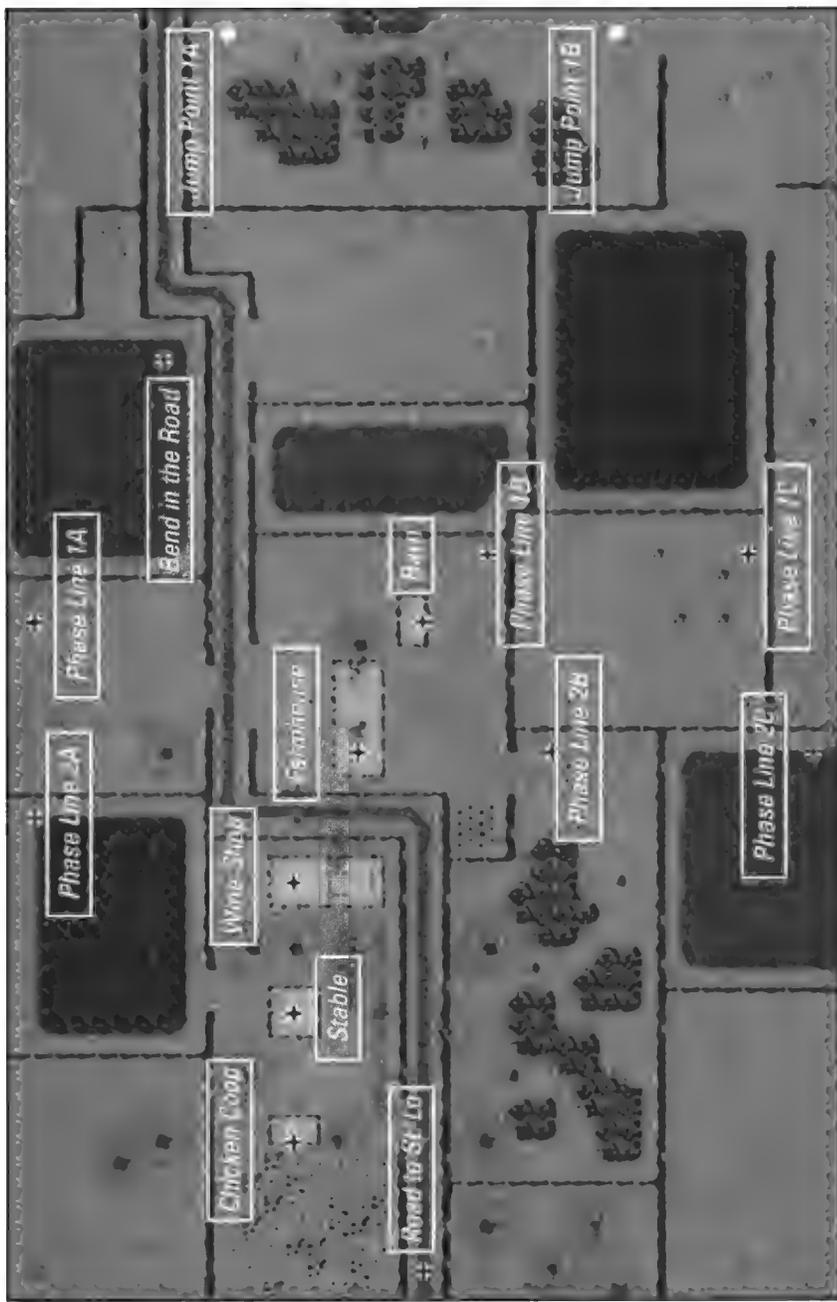


Figure 6-41. Terrain map for Hedgerows I, Battles Twelve, Thirteen, and Fourteen.

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American Order of Battle, continued

Armor Squad

Two Sherman or
Sherman 76 and Stuart or
Sherman and M10 or
Sherman 76 and M10 or
Two Sherman and M10

Armor Squad

Stug III G or
SDKfz 232 or
Marder or
Marder and SDKfz 250 or
Stug III G and SDKfz 232

Gun Squad

75mm IG or
50mm AT Gun or
50mm AT Gun and PzS or
50mm AT Gun and 75mm IG or
75mm AT Gun

German Order of Battle, continued

Rifle Squad

MG 42 Bolt Rifle and PzS or
MG 42 Bolt Rifle and Recon or
MG 42 Bolt Rifle Recon and PzS or
Sturm Bolt Rifle Recon and PzS

Miscellaneous Squad

Two Sniper or
Sniper or
Kubelwagen

German Tactics

The last three *bocage* battles are fought on the same map. It's one of the biggest, roomiest maps in the entire game, and battles fought on it tend to hinge on maneuverability rather than firepower. This is, in fact, one of our favorite maps in the entire game.

In Battle Twelve, the Germans get a wide assortment of possible units. There are also a wide range of experience levels—something to take into careful consideration when deploying. In several test games of this battle, for example, one *Panzerschreck* team was displayed in red before the battle even started; that's because its men were inexperienced (note the one lone experience bar next to their icon).

There are two schools of thought regarding “one-bar” units. The most accepted theory is that you should place them in secondary, relatively safe positions; and if you're playing the Campaign, that's a good idea—that way, they can become “blooded” in a baptism by fire, with minimum danger of them becoming suppressed or panicked. If you're playing a stand-alone battle, however, you might obtain better results by putting them in a more forward slot: that way, you can sometimes get very good performance for a short time, before the stress level and shock of combat takes effect.

Microsoft
**Close
Combat**

In several sessions with Battle Twelve, we drew one-bar *Panzerschreck* teams, which we positioned right on the front lines. Results? About 50-50. Half the time, the new guys performed with admirable heroism; the rest of the time, they funk'd out or surrendered at the earliest opportunity. You're the commander, so it's your call. Either way, you can make the inexperienced teams somewhat steadier by positioning them close to veterans.

Don't keep more than one reserve team in the buildings: your aim in this battle is to inflict maximum casualties on the Americans as far forward as you

can. (There'll be plenty of chances to fight from the buildings in Battles Thirteen and Fourteen.)

Keep your Stug or Marder out of sight on the far left side of the map, and don't bring it forward until you've spotted the American armor. If the American tanks are hit near the Bend in the Road, or are preoccupied with a flanking attack far off at the bottom of your screen, you may use your armor more aggressively.

In one very satisfying game we played, three out of four American tanks were hung up in the upper-left corner of the screen near Jump Point 1A—one on fire and the other two snarled in the hedgerows—so we were able to bring our Stug forward, then down, then forward again, until it actually penetrated the American rear and began shooting up mortar teams one by one. The result was a satisfying decisive victory.

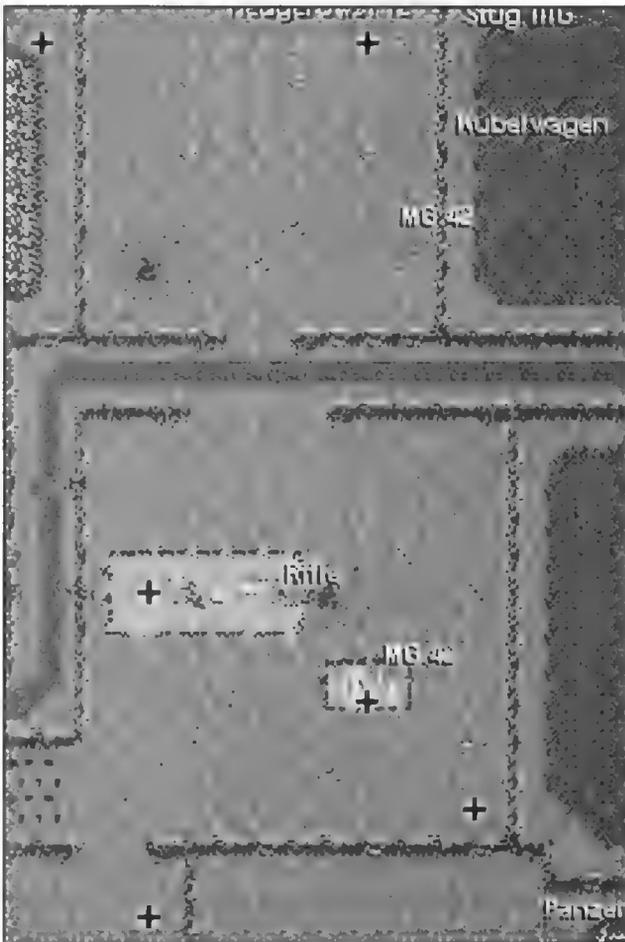


Figure 6-42. Suggested German deployment for Hedgerows!, Battle Twelve.



American Tactics

The key to success seems to be the Bend in the Road. It's a natural choke-point, and the Germans always defend it stubbornly.

Once you've secured that objective, the road can serve as an avenue deep into German territory. Place half of your tanks and several infantry squads near the eastern end of the road, and another comparably strong force in the fields just below that point, then mount a converging attack on the bend.

The Americans will draw three or possibly four armored units in this battle—a pair of Shermans and an M10 seemed the most common allotment—as well as a large number of infantry and at least one mortar.

Watch for the muzzle-flashes in order to pinpoint which of the many sandbagged foxholes are actually occupied by German teams, and bring them under systematic fire. Watch out for a surprise flanking movement by a Stug or a Marder in the fields on the southern part of the map. If you have the men to spare, it might be a good idea to keep one Bazooka team in reserve, until you know where the German armor is and how threatening it seems to be.

Until the pressure becomes too great, the Germans will stand and fight as close to your Start Line as possible. Expect tough going at first. But you have plenty of room to maneuver, three or four tanks, and a lot of experienced (two bars or more) infantry, so you should be able to take the defenses apart without too much trouble. Skillful coordination of fire and movement will bring victory. Remember: the Bend in the Road is the key that unlocks the whole German defense plan—if you can capture that region without excessive losses, you can use the road to exert pressure from the north, while maintaining pressure from the east.

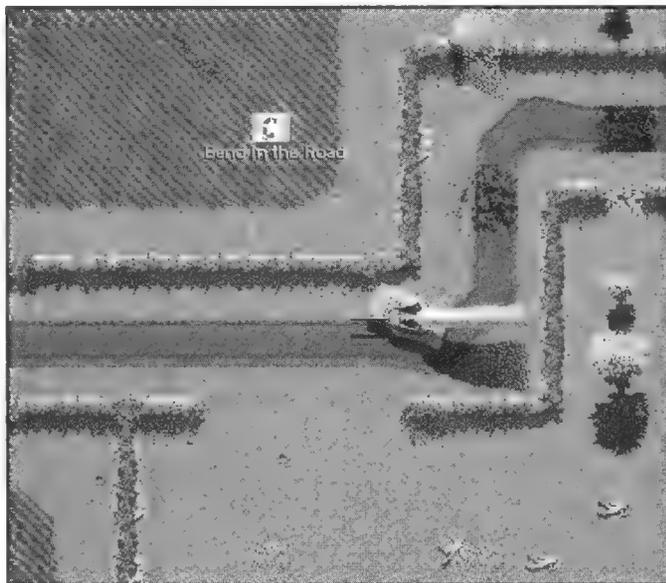


Figure 6-43. *The real key to Battle Twelve is the Bend in the Road—both sides will fight stubbornly to control it.*

Hedgerows!, Battle Thirteen

Victory Locations

Site	Point Value	Site	Point Value
Jump Point 1A	4	Jump Point 1B	4
Bend in the Road	10	Phase Line 1A	10
Phase Line 1B	10	Phase Line 1C	10
Barn	10	Farmhouse	20
Wine Shop	20	Stable	20
Chicken Coop	20	Phase Line 2A	20
Phase Line 2B	20	Phase Line 2C	20
Road to St. Lo	20		

Order of Battle Variants for Hedgerows!, Battle Thirteen

American Order of Battle

Rifle Squad (5 Squads)

BAR and Half Team or
Two Light Rifle or
BAR and Light Rifle or
Two Light Rifle and Recon

Support Squad

60mm Mortar .30-cal. MG and Bazooka or
81mm Mortar and Bazooka or
Two 60mm Mortar and Bazooka or
81mm Mortar and .50-cal. MG or
Two 60mm Mortar and Two Bazooka

Armor Squad

Sherman or
M3 Half-track or
Stuart or
Stuart and M3 Half-track or
Sherman and M3 Half-track

Armor Squad

Two Sherman or
Sherman 76 and Stuart or
Sherman and M10 or
Sherman 76 and M10 or
Two Sherman and M10

German Order of Battle

Rifle Squad

Bolt Rifle or
Bolt Rifle and Half Team or
MG 42 and Half Team or
MG 42 Half Team and PzS

Rifle Squad (2 Squads)

MG 42 Bolt Rifle and Recon or
MG 42 Bolt Rifle and PzS or
MG 42 Bolt Rifle Recon and PzS

Support Squad

80mm Mortar or
MG 42 and Two Sniper or
MG 42 and PzS or
MG 42 Sniper and PzS or
80mm Mortar Sniper and PzS

Rifle Squad

MG 42 Bolt Rifle and PzS or
MG 42 Bolt Rifle and Recon or
MG 42 Bolt Rifle Recon and PzS or
Sturm Bolt Rifle Recon and PzS

Miscellaneous Squad

Two Sniper or
Sniper or
Kubelwagen

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German Order of Battle, continued

Armor Squad

Stug III G or
SDKfz 232 or
Marder or
Marder and SDKfz 250 or
Stug III G and SDKfz 232

Gun Squad

75mm IG or
50mm AT Gun and PzS or
50mm AT Gun or
50mm AT Gun and 75mm IG or
75mm AT Gun

German Tactics

It is challenging for the Germans to do more than fight the American to a standstill in this battle—but a draw equates to a Minor German Victory according to the rules of the game. But a major, or even decisive, victory is perfectly possible, depending on what forces the computer gives you and how sagaciously you use them.

At first glance, it might seem necessary for the Germans to garrison the Barn with strong forces (and the computer always does so when controlling the Germans), because that position is so close to the American front line. In reality, the Barn is a deathtrap—a flimsy wooden structure that the American mortars and tanks can blow to pieces before any American infantry actually starts to advance. We placed a lone Sniper there in several games, and he was able to make three or four kills before the rain of mortar shells finally got him.

If you put a strong force in the Farmhouse, however, you can just let the Americans take the Barn and then shoot

Warning: *Don't neglect to retarget your mortars; losing men to friendly fire is one of the most demoralizing things that can happen in combat!*



Figure 6-44. *Fighting rages around the Barn and the Farmhouse.*

Microsoft
**Close
Combat**

them to pieces. In any case, the Farmhouse offers good protection from mortar and tank fire.

You'll probably receive a Marder or a Stug; place it below the curve on the road between the Farmhouse and the Wine Shop, out of enemy sight. From this reserve location, you can quickly move the vehicle in any direction once you've got a fix on where the attacker has deployed his tanks.

You may also draw an Infantry Gun, a 50mm antitank gun, and a couple of heavily armed Recon teams. Place the Recon teams in reserve near the graveyard just northwest of Phase Line 2B, and position the AT gun so that it has a good field of fire across the open terrain south of the Barn. The AI frequently deploys one or two Shermans and considerable infantry on that part of the map, somewhere near Phase Line 1C. If tanks do attack you from that direction, rush the Recon teams forward and into a couple of vacant Rifle pits. By the time the Recon teams have finished deploying the Shermans should be within *Panzerfaust* range.

We achieved several major victories by conducting a stubborn defense of the Farmhouse, tying down the American tanks in the open field in front of our right flank, and bringing up the armor units to counterattack along the road above the Farmhouse.

American Tactics

You'll be given a fairly strong suite of armor for this battle (a pair of Shermans and a Stuart/M-10 combo is not uncommon), but you won't get more than token mortar support.

Because the AI always seems to garrison the Barn very strongly, you can take a big bite out of the German inventory by simply putting all your forces on hold (by issuing a blanket Defend order) and blowing the Barn to smithereens. You'll probably kill a squad's worth of Germans and force the survivors to flee to the Farmhouse.

Now, switch your shelling from HE to smoke and lay down a smoke screen between the Farmhouse and the hedgerow near Phase Line 1B. At the proper moment, rush the Barn with two or three teams while plastering the Farmhouse with suppressive fire. You should capture the Barn easily.

Put heavy fire on the Farmhouse, then attack it head-on; the distance your men have to cover is short and you can feed in reinforcements from Phase Line 1B to add to the pressure. The Germans will fight hard for the Farmhouse, but by now your assault should have worked up irresistible momentum. Once you've captured the Farmhouse, you will have cracked the German line wide

CHAPTER SIX: HEDGEROWS!



open and can start moving troops and tanks at the top and bottom of the map, against their left and right flanks. The only danger now is the German armored unit (a Stug or a Marder). The AI has a marked propensity for deploying it in the northwest corner of the map, up near Phase Line 2A. Have Bazooka teams ready to blast it when it appears.

This is one of the relatively few battles in the whole Campaign that the Americans can win by means of a simple, crushing, frontal attack in the center.

Hedgerows!, Battle Fourteen

Victory Locations

Site	Point Value	Site	Point Value
Jump Point 1A	2	Jump Point 1B	2
Bend in the Road	4	Phase Line 1A	4
Phase Line 1B	4	Phase Line 1C	4
Barn	10	Farmhouse	10
Wine Shop	30	Stable	20
Chicken Coop	20	Phase Line 2A	10
Phase Line 2B	10	Phase Line 2C	10
Road to St. Lo	40		

Order of Battle Variants for Hedgerows!, Battle Fourteen

American Order of Battle

Rifle Squad (5 Squads)

BAR and Half Team or
Two Light Rifle or
BAR and Light Rifle or
Two Light Rifle and Recon

Support Squad

60mm Mortar .30-cal. MG and Bazooka or
81mm Mortar and Bazooka or
Two 60mm Mortar and Bazooka or
81mm Mortar and .50-cal. MG or
Two 60mm Mortar and Two Bazooka

Armor Squad

Sherman or
M3 Half-track or
Stuart or
Stuart and M3 Half-track or
Sherman and M3 Half-track

German Order of Battle

Rifle Squad

Bolt Rifle or
Bolt Rifle and Half Team or
MG 42 and Half Team or
MG 42 Half Team and PzS

Rifle Squad (2 Squads)

MG 42 Bolt Rifle and Recon or
MG 42 Bolt Rifle and PzS or
MG 42 Bolt Rifle Recon and PzS

Support Squad

80mm Mortar or
MG 42 and Two Sniper or
MG 42 and PzS or
MG 42 Sniper and PzS or
80mm Mortar Sniper and PzS

Microsoft
**Close
Combat**

American Order of Battle, continued

Armor Squad

Two Sherman or
Sherman 76 and Stuart or
Sherman and M10 or
Sherman 76 and M10 or
Two Sherman and M10

German Order of Battle, continued

Rifle Squad

MG 42 Bolt Rifle and PzS or
MG 42 Bolt Rifle and Recon or
MG 42 Bolt Rifle Recon and PzS or
Sturm Bolt Rifle Recon and PzS

Miscellaneous Squad

Two Sniper or
Sniper or
Kubelwagen

Armor Squad

Stug III G or
SDKfz 232 or
Marder or
Marder and SDKfz 250 or
Stug III G and SDKfz 232

Gun Squad

75mm IG or
50mm AT Gun or
50mm AT Gun and PzS or
50mm AT Gun and 75mm IG or
75mm AT Gun

German Tactics

In this final Hedgerows! battle, the German-side player is barely hanging on to the left-hand side of the map. You hold only three buildings—the Wine Shop, the Stable, and the Chicken Coop—but all three are fortified (note the sandbagged emplacements), and that makes them more resistant to both fire and attack. In addition, the Germans hold the hedgerow west of the big plowed field across from Phase Line 2C, and the hedges west of the big wheat field at the top of the map.

The computer most commonly deals out a basic order of battle for the Germans comprising a mix of artillery and armor—say, a Marder, a SDKfz 232, and a 75mm Infantry Gun—along with sufficient infantry teams to mount a defense along your whole line.

The focus of your defense should, of course, be the buildings in the center of your line. If you draw artillery, put your AT gun where it can cover the road

Microsoft
**Close
Combat**

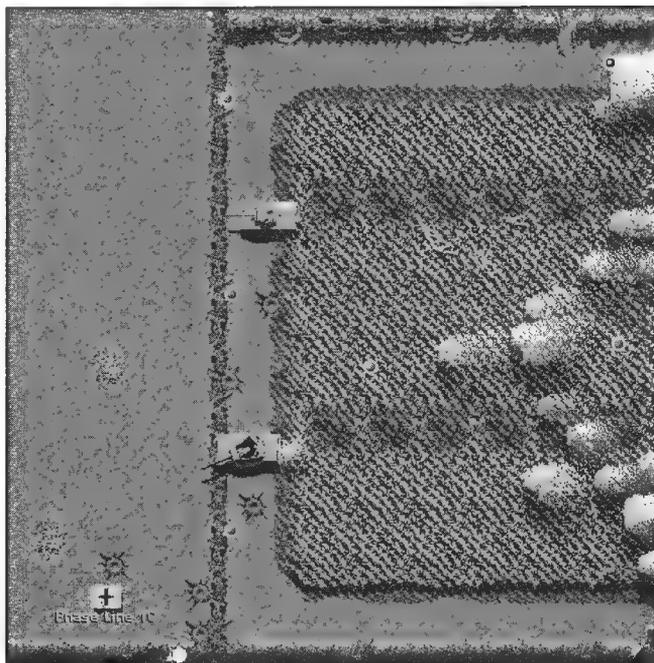


Figure 6-46. *A strong, well-prepared attack by the Americans gains control of Phase Line 1C.*

It should be obvious from a glance at the map that a frontal assault on the Wine Shop will be costly, smoke screen or not—it's a strongly fortified, stone-walled building. But notice: at the top of the map, on the German left flank, there's only one wheat field between your starting point (Phase Line 2A) and the hedgerow just north of the Wine Shop.

Mass half your infantry in that sector, and also garrison the Farmhouse with at least three infantry teams, a Bazooka, and whatever machine guns you're given. Have half of your tanks and mortars lay down a big smoke screen in the wheat field, while the other half maintain

heavy suppressive fire on the Wine Shop and the Stable. When the smoke screen reaches maximum density, wheel your teams in a 90-degree arc through the wheat field and storm the hedgerow just above the buildings (if that pesky Infantry Gun opens fire, retarget a mortar to suppress it).

Once your flanking force has gained the hedgerow, most of the Germans will be preoccupied with shooting in that direction. Rush your Farmhouse garrison forward so that the Wine Shop comes under attack from two directions. Don't forget to bring up the Bazookas, too, in case the Germans have a Marder lurking nearby.

Speed and momentum are of the essence if you're to capture the Wine Shop without taking heavy losses, but take it you almost certainly will. Give your men a breather, retarget your mortar(s) on the Stable and the Chicken Coop (save one or two tank guns to suppress whatever units the Germans have on the southern end of the map), then resume the assault. These tactics work. We scored either a Major American Victory or a Decisive American Victory seven out of eight times by employing them.

Chapter Seven



PURPLE HEART DRAW

General Omar Bradley, commanding the U.S. 1st Army, had decided by early July 1944 not to attack St. Lo head on. “We’re not going to spend a division just to take a place name,” he told his staff. True to his reputation as “the GIs’ general,” Bradley was appalled at the casualties already incurred during the *bocage* fighting, and he knew that direct assault on St. Lo might prove an even worse bloodletting.

Situated in a valley near the Vire River, St. Lo was encircled by heavily fortified ridges and slopes. There were gaps through which the U.S. 1st Army’s divisions could have attacked the city directly, but these were potential deathtraps. Every square meter of these approaches had been pre-registered by German artillery observers; any forces attacking through the gaps would be met by deadly shell fire as well as small arms fire from above, sometimes from three directions at once.

So Bradley decided to nibble away at the German positions on the high ground east of the city, where American firepower could support his attacks. Once the intervening ridges had been cleared, the way would be open for the final push into St. Lo.

Bradley’s plan called for the assault to begin on July 11. In a massive concentration of force, three divisions would attack along a ten-mile front. The main thrust would be made by the 29th Division, aiming at the ridges along the St. Lo-Bayeux highway, and thence into the city itself. On the 29th’s right, the 35th Division was to exert strong pressure between the Vire and the Isigny-St. Lo highway.

But the toughest job fell to the 2nd Division, on the 29th’s left, which drew the unenviable assignment of capturing Hill 192, defended by the elite German 3rd Parachute Division. As a “hill,” Hill 192 was not especially imposing: its slopes were gradual (rising only about 150 feet over the 1000-yard distance from the American starting point to the relatively flat top), and in peacetime you could stroll to the top without breaking much of a sweat.

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But the approaches to the hill were broken by numerous hedgerows, sunken roads, and stout-walled farmhouses that the Germans had turned into forts. For the attackers, it would be another dose of *bocage* fighting—only this time it would be uphill.

The most dangerous assignment on July 11 fell to the 1st Battalion of the 23rd Regiment, 2nd Division. It would have to assault the notorious terrain feature known as “Purple Heart Draw,” so christened because of the numerous American casualties sustained there in the first attacks on Hill 192 (on June 12). The draw was a depression that ran for 750 yards east to west along the battalion’s front, from 200 to 400 yards in front of the 1st Battalion’s line of departure. It was deep enough to be nearly impassable for tanks, and every foot of it was covered by MG, mortar, and rifle fire. Before the Americans could even begin to try to take Hill 192, they needed to secure the draw.

Company A of the 1st Battalion drew the job of clearing Purple Heart Draw. Jumping off at 0600, the company made good progress until it reached the draw. Four American tanks, unable to cross the depression itself, lined up on the north edge and tried to give fire support to a frontal assault mounted by Company A’s 1st Platoon.

The Germans cunningly held their fire until the platoon had reached the bottom of the draw and then opened up with everything from mortars to machine guns. Badly hit, the platoon dug in and fought back furiously. Company A’s commander sent in his 2nd Platoon (and eventually his 3rd and last Platoon) in an attempt to flank the draw from the west. This maneuver was aided by some additional tanks which drove to within 30 yards of German-held houses and blasted their foundations to rubble, causing the buildings to collapse on the defenders inside. This tactic effectively broke the back of the German defense.

By the time the German machine guns had been silenced, all but 13 of the men in 1st Platoon had been killed or wounded. But once the defense of Purple Heart Draw was neutralized, the way was open for the 2nd Division to push on and capture Hill 192. You’ll have your chance in Chapter 9, but first: Purple Heart Draw.

The Purple Heart Draw Operation in *Close Combat* tinkers a bit with actual history, breaking up the engagement into four separate battles (when playing Maneuvers, that is—if you’re successful as the American player in the Campaign mode, you won’t have to fight more than twice in this particularly deadly area). These battles are among the toughest engagements either side faces in the entire game—the Germans are well prepared, and the terrain works in their favor. But their inventory of units is smaller than it really was in 1944.



American Objectives

Break through this area as quickly as you can. Aggressive maneuvering will give the Americans momentum; caution will gain you nothing.

German Objectives

Take advantage of the terrain (your entire right flank is secure against armor, thanks to the draw itself) and try to inflict the same sort of losses as your historical counterparts. A good, flexible defensive plan is essential, because your forces will be stretched very thin indeed.

Purple Heart Draw, Battle One

Victory Locations

Site	Point Value	Site	Point Value
Jump Point 1A	10	Jump Point 1B	10
Jump Point 1C	10	Phase Line 1A	20
Phase Line 1B	20	Phase Line 1C	20
Phase Line 2A	30	Phase Line 2B	30
Phase Line 2C	30		

Order of Battle Variants for Purple Heart Draw, Battle One

American Order of Battle

Rifle Squad (5 squads)

- BAR and Half Team or
- Two Light Rifle or
- BAR and Light Rifle or
- Two Light Rifle and Recon

Support Squad

- Two 60mm Mortar .30-cal. MG and Bazooka or
- 60mm Mortar and Two .30-cal. MG or
- 81mm Mortar .50-cal. MG and Bazooka or
- Two 81mm Mortar and Bazooka or
- Two 81mm Mortar .50-cal. MG and Bazooka

German Order of Battle

Rifle Squad

- Bolt Rifle or
- Bolt Rifle and Half Team or
- MG 42 and Half Team or
- MG 42 Half Team and PzS

Rifle Squad (2 squads)

- MG 42 Bolt Rifle and Recon or
- MG 42 Bolt Rifle and PzS or
- MG 42 Bolt Rifle Recon and PzS

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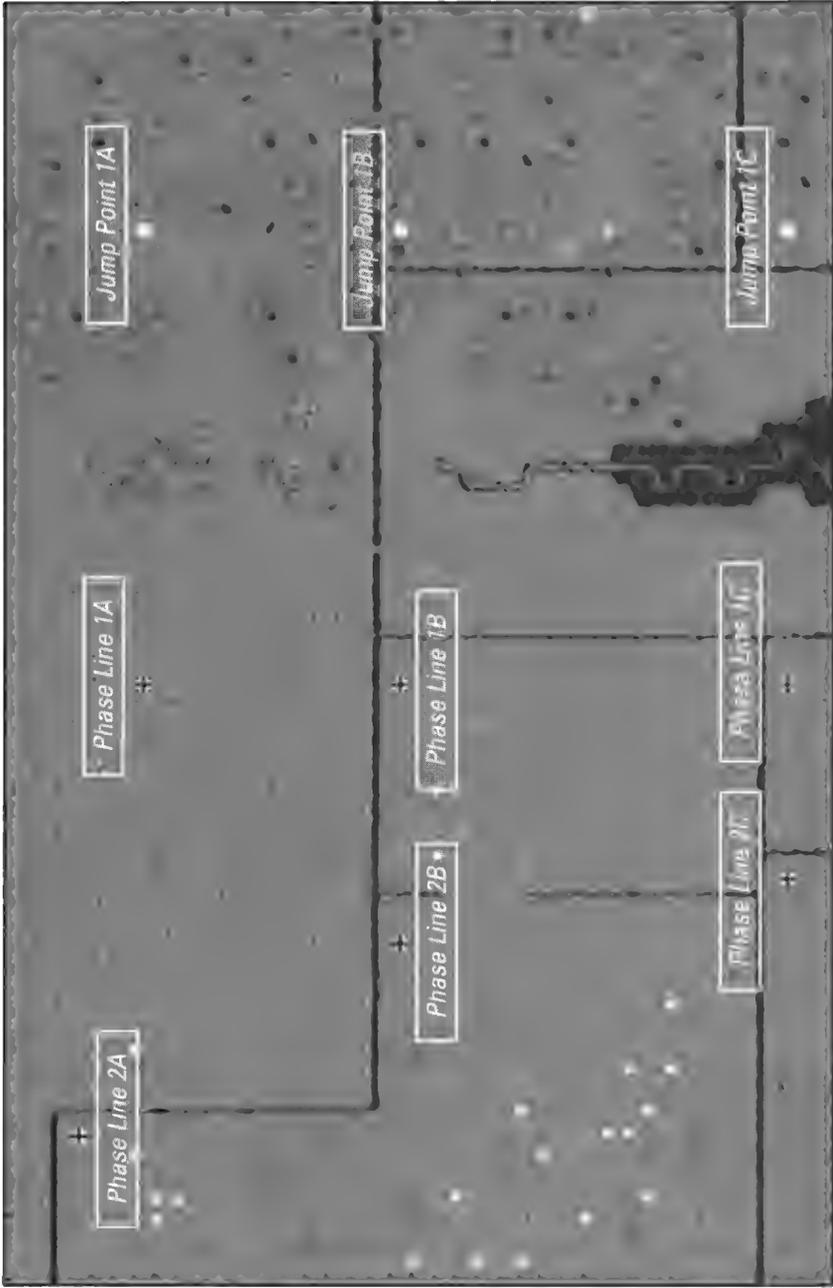


Figure 7-1. Terrain Map for Purple Heart Draw, Battles One and Two.

CHAPTER SEVEN: PURPLE HEART DRAW



American Order of Battle, continued

Armor Squad (2 squads)

Two Sherman or
Sherman 76 and Stuart or
Sherman and M10 or
Sherman 76 and M10 or
Two Sherman and M10

German Order of Battle, continued

Support Squad

80mm Mortar or
MG 42 and Two Sniper or
MG 42 and PzS or
MG 42 Sniper and PzS or
80mm Mortar Sniper and PzS

Armor Squad (2 squads)

Stug III G or
SDKfz 232 or
Marder or
Marder and SDKfz 250 or
Stug III G and SDKfz 232

German Tactics

You won't enjoy quite the same advantages of terrain as the Germans did in the historic engagement at Purple Heart Draw, nor are you likely to get any artillery (save for a mortar or two). So this makes for a trickily balanced battle.

The U.S. Start Line is along the eastern quarter of the map (from Jump Point 1A to Jump Point 1C). But no man's land covers a huge part of the map and is shaped like an upside-down "L," whose base conforms to the boundary of a large wooded area bounded by the Phase Line 2A marker and the Phase Line 1B marker. Just for the sake of convenience, we'll call this big forested area "the orchard."

The draw itself is obvious: a big, ugly scar in the ground that runs from the bottom right to the center of the map. Tanks cannot cross it, although they *can* cross the stream that flows north out of the gully.

A typical German OOB in this battle includes two Stugs (one inexperienced), a pair of *Panzerschrecks*, and a mortar.

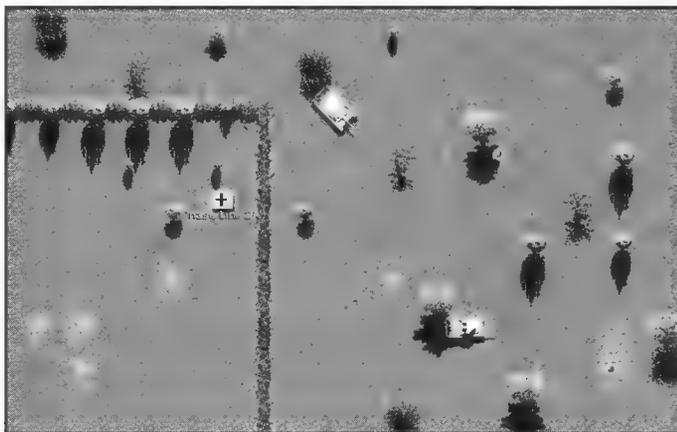


Figure 7-2. German armor hiding in the orchard. The German player will have to move his units forward quickly in order to beat the American to the draw.

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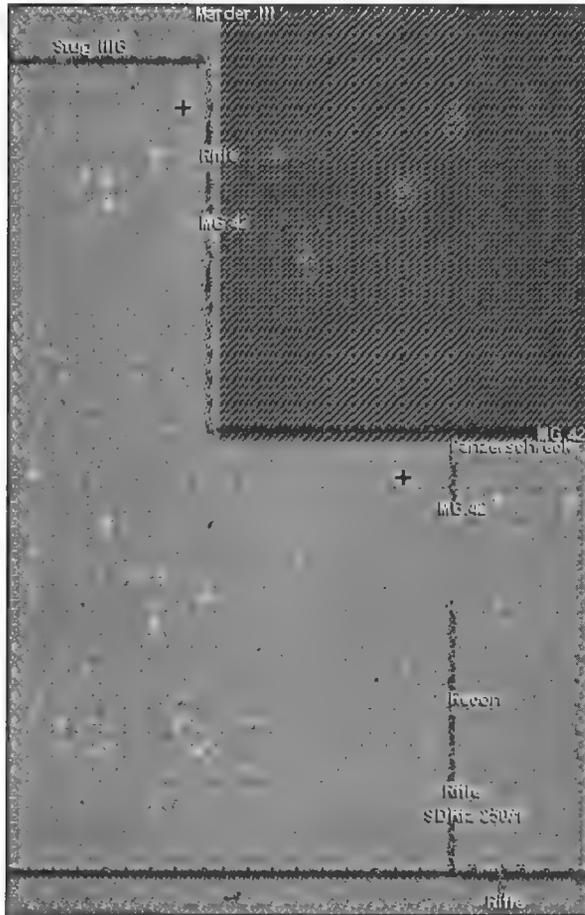


Figure 7-3. Suggested German deployment for Purple Heart Draw, Battle One.

Deploy your armor on the far west side of the map. Put one rocket launcher in the hedges that form the western boundary of the orchard and the other near the center, to cover the stream and the small area of clear land between it and the hedges bordering the orchard. Distribute your Rifle and MG teams equally between the center and your somewhat compressed left flank; put a couple of teams just at the edge of the shaded zone at the southern side of the orchard and then rush them forward into the cover of the hedges as soon as the game begins.

More often than not, the Americans' armor will appear—often quite suddenly—in the western half of the orchard. Engage their armor with *Panzerschrecks* while your own armor moves forward. Have your Stugs or Marders engage at long range—if you get the first hits, you should be able to stop the American infantry cold. You might be able to deploy one or both of your armored units in the orchard,

under tree cover, before the Americans have time to advance into view, which gives you a good chance of ambushing them. In this wooded terrain, the side that spots the enemy and gets off the first good shot will have the advantage.



American Tactics

The AI has a tendency to group most of the German forces around the hedgerows at the southwest corner of the orchard, between the two Phase Line 2A markers. The German right flank will be lightly defended, but because of the draw and the open terrain, that's not a good place to launch a big infantry attack. A couple of mortars and BAR teams will suffice.

The American side has two basic plans to choose from. One is a forceful central attack due west from Jump Point 1B, across the stream and the narrow neck of land between the terminus of the stream and the boundary of the orchard. This is an audacious move, and possibly hazardous, but it can work very well indeed if the Germans have put too much faith in the draw to guard their right flank.

The other, more conservative option is to launch a major sweep through the orchard with all your armor and roughly three-quarters of your infantry, starting from around Jump Point 1A. The cover there is good, and you should be able to get close to the enemy without suffering major losses. Once you close with their defenses, your tank and infantry teams should be able to pick off the German positions one by one.

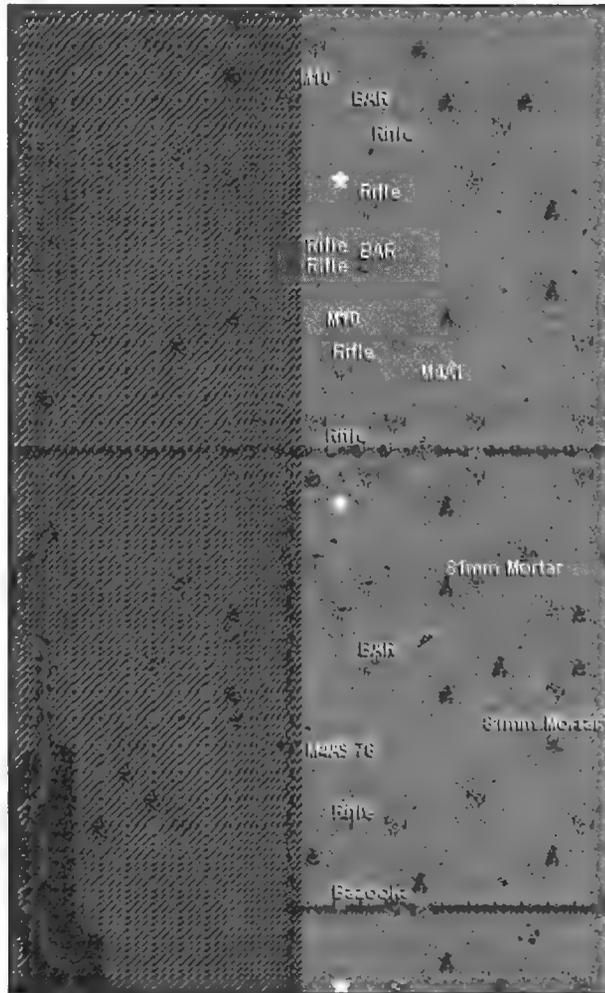


Figure 7-4. Suggested American deployment for Purple Heart Draw, Battle One.

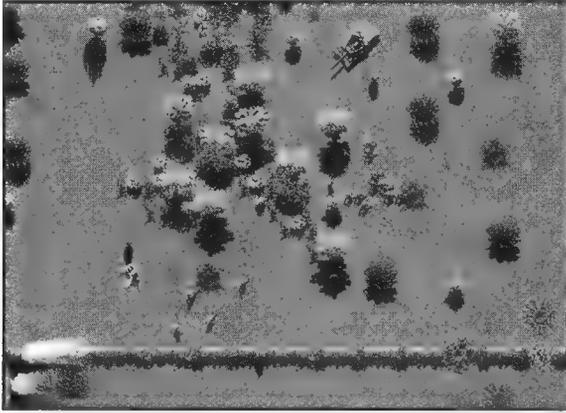


Figure 7-5. *The Americans launch a big sweep through the orchard and are likely to overwhelm the defenders in piecemeal fashion.*

At this point—but usually not before—the German armor will begin to advance from its starting position on the extreme left of the map. By the time it's close enough to engage, your own tanks should be at the edge of the orchard, under good cover, with a clear shot at any Stug or Marder that tries to approach.

This battle, while not exactly a walk in the park for the Americans, actually presents them with fewer dangers than the historical events on which it is based.

Purple Heart Draw, Battle Two

Victory Locations

Site	Point Value	Site	Point Value
Jump Point 1A	2	Jump Point 1B	2
Jump Point 1C	2	Phase Line 1A	10
Phase Line 1B	10	Phase Line 1C	10
Phase Line 2A	60	Phase Line 2B	60
Phase Line 2C	60		

Order of Battle Variants for Purple Heart Draw, Battle Two

American Order of Battle

Rifle Squad (5 squads)

BAR and Half Team or
Two Light Rifle or
BAR and Light Rifle or
Two Light Rifle and Recon

Support Squad

Two 60mm Mortar .30-cal. MG and Bazooka or
60mm Mortar and Two .30-cal. MG or
81mm Mortar .50-cal. MG and Bazooka or
Two 81mm Mortar and Bazooka or
Two 81mm Mortar .50-cal. MG and Bazooka

German Order of Battle

Rifle Squad

Bolt Rifle or
Bolt Rifle and Half Team or
MG 42 and Half Team or
MG 42 Half Team and PzS

Rifle Squad (2 squads)

MG 42 Bolt Rifle and Recon or
MG 42 Bolt Rifle and PzS or
MG 42 Bolt Rifle Recon and PzS

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American Order of Battle, continued

Armor Squad (2 squads)

Sherman 76 and Stuart or
Two Sherman or
Sherman and M10 or
Sherman 76 and M10 or
Two Sherman and M10

German Order of Battle, continued

Support Squad

80mm Mortar Sniper and PzS or
MG 42 Sniper and PzS or
80mm Mortar Sniper and PzS or
MG 42 and Two PzS or
MG 42 and 80mm Mortar

Armor Squad (2 squads)

Stug IIIG or
SDKfz 232 or
Marder or
Marder and SDKfz 250 or
Stug IIIG and SDKfz 232

German Tactics

At the start of this battle, the Americans start deploying along Phase Lines 1A, 1B, and 1C. The Germans hold a roughly L-shaped area comprising the western third of the map, anchored on all three Phase Line 2A markers. The setup is, in fact, nearly identical to that in Purple Heart Draw, Battle One, except that the Germans no longer hold the draw itself. They can, however, deploy along the western and southern edge of the orchard, which they could not do in the first battle. The Americans now hold most of the orchard, and it is from that direction that you can expect their main thrust.

On the rest of the map, however, the Americans are faced with nakedly open terrain. You might not get enough MG teams to set up crossfires, but you should receive a *Panzerschreck* and a couple of Recon teams, powerfully armed with *Panzerfausts*. Put one Recon team on the southern edge of the orchard; put the other, along with the *Panzerschreck*, in your center.

Often, you will draw a pair of Marders and at least one SDKfz 250. Place your

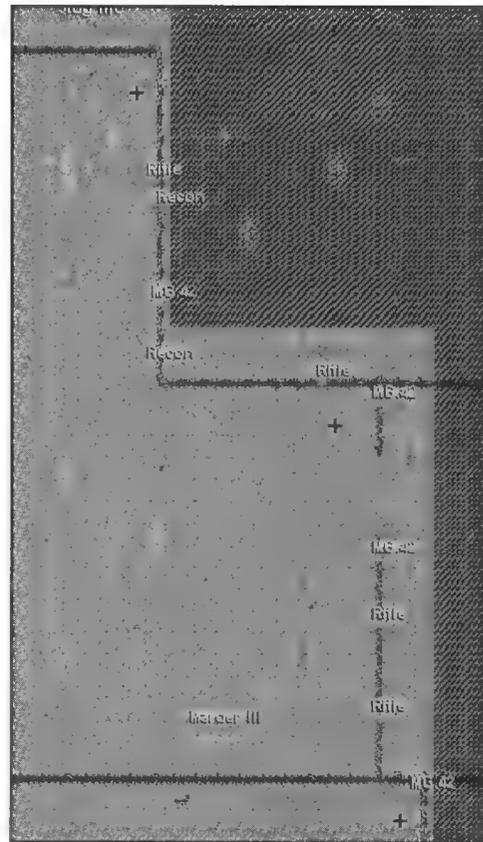


Figure 7-6. Suggested German deployment for Purple Heart Draw, Battle Two.

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most experienced Marder near the marker for Phase Line 2A, at the top of the map, at the western end of the orchard. From this relatively covered spot, it has at least a fair chance of hitting the American tanks when they appear amidst the trees. Change its position often to minimize the risk—it will be dueling with at least two and possibly four enemy tanks, and the trees will make establishing LOS tricky.

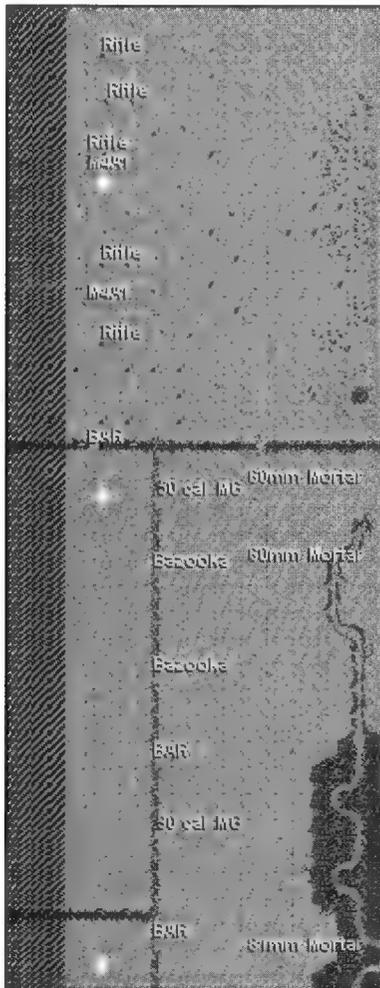


Figure 7-7. Suggested American deployment for Purple Heart Draw, Battle Two.

We enjoyed much success from deploying our remaining Marder on the extreme German right. Once the American infantry is locked in a firefight in the center, the Marder can sneak around the southern edge of the enemy line and pour deadly enfilade fire into the American ranks. Keep the half-tracks back until you have a good idea of the enemy's dispositions; they are useful for sealing off penetrations of your line.

However cunning your deployment, you'll find that victory and defeat are mercilessly balanced in this battle. If the German player succeeds in knocking out the Shermans and M10s in the orchard and in turning the Americans left with a Marder (or a Stug), he stands a chance of victory. If he doesn't, the American superiority in armor will sooner or later turn the tide against him. In that case, a well-timed withdrawal may be the best option, especially if you're playing the Campaign and are trying to conserve your best men. Simply issue the blanket Pull Back command from the Toolbar, and the computer will conduct an orderly retreat.

American Tactics

You can secure your left (southern) flank with BARs and machine guns only, though a Bazooka will come in handy if the Germans try to sneak any armor around your extreme left. Put everything else into the orchard at your starting points (Phase Lines 1A and 1B) in order to attack and crush the German left. Advance in careful stages, covering each forward lunge with smoke and maintaining close contact

CHAPTER SEVEN: PURPLE HEART DRAW



between your tanks and infantry. (You'll most often draw four armored units, either tanks or tank destroyers, including at least a couple of Sherman M4s.)

Your mortars (at least two of them in all the games we tested) should work over each German position that reveals itself.

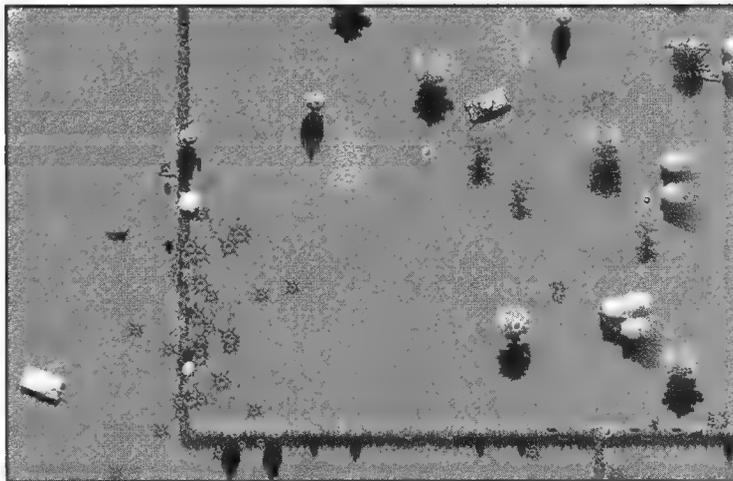


Figure 7-8. *The U.S. attack through the orchard nears its objective—the hedgerow angle that is the key to the Germans' left flank.*

Once your main thrust through the orchard draws within 80 meters or so of the main German defenses, the computer will send an armored unit forward to shore up the Germans' crumbling line, but between your tanks and some long-range Bazooka fire, you should have no trouble maintaining the momentum of your advance. A properly executed assault through the orchard will almost certainly gain you a major or decisive victory, regardless of what happens elsewhere on the map.

Purple Heart Draw, Battle Three

Victory Locations

Site	Point Value	Site	Point Value
Jump Point 1A	10	Jump Point 1B	10
Phase Line 1A	20	Phase Line 1B	20
Phase Line 1C	20	Bridge	20
Barn	30	Au Grognard	30
Horse Barn	20	Chateau Picard	20
Phase Line 2A	10	Phase Line 2B	10

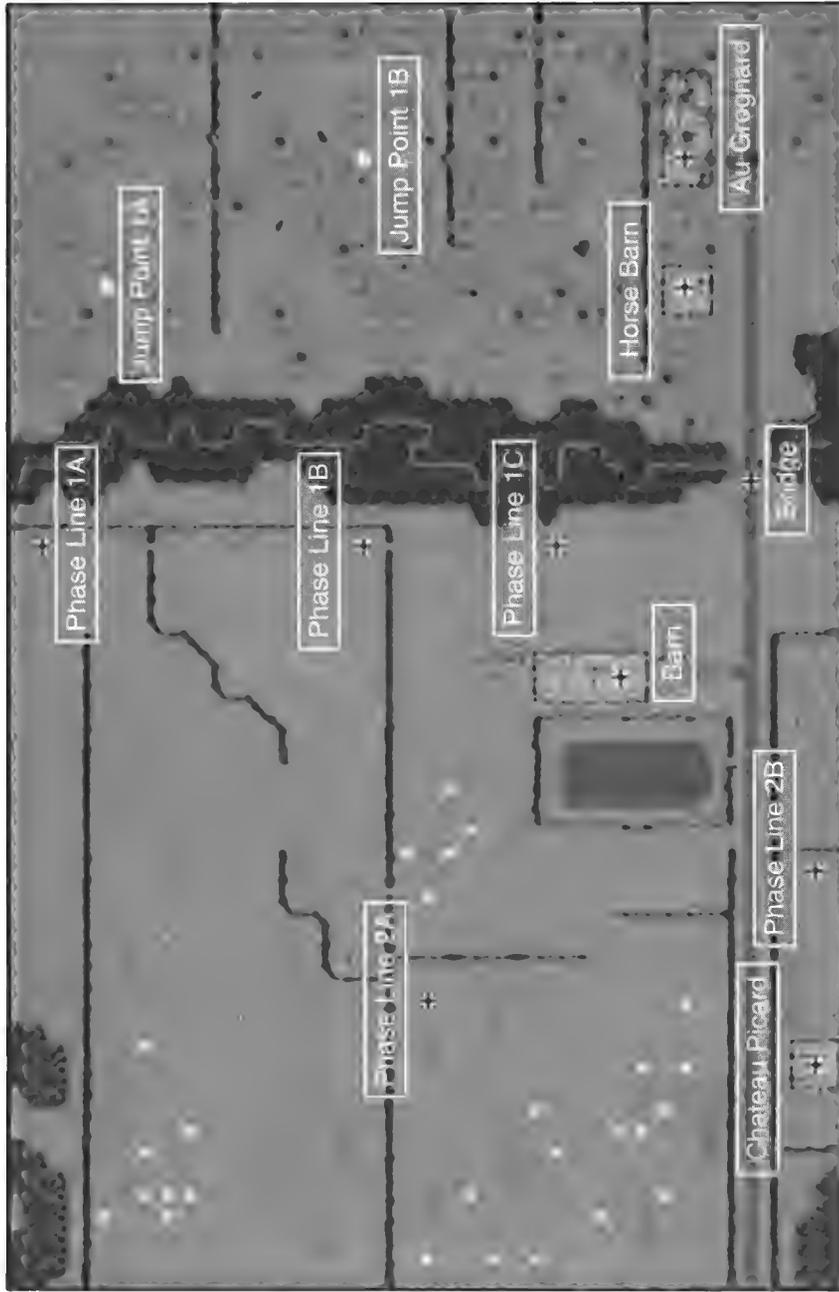


Figure 7-9. Terrain Map for Purple Heart Draw, Battles Three and Four.

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Order of Battle Variants for Purple Heart Draw, Battle Three

American Order of Battle

Rifle Squad (5 squads)

BAR and Half Team or
Two Light Rifle or
BAR and Light Rifle or
Two Light Rifle and Recon

Support Squad

60mm Mortar .30-cal. MG and Bazooka or
81mm Mortar and Bazooka or
Two 60mm Mortar and Bazooka or
81mm Mortar and .50-cal. MG or
Two 60mm Mortar and two Bazooka

Armor Squad

Sherman and M3 Half-track or
Sherman or
Stuart and M3 Half-track or
Sherman 76 or
Sherman and Stuart

Armor Squad

Two Sherman or
Sherman 76 and Stuart or
Sherman and M10 or
Sherman 76 and M10 or
Two Sherman and M10

German Order of Battle

Rifle Squad

Bolt Rifle or
Bolt Rifle and Half Team or
MG 42 and Half Team or
MG 42 Half Team and PzS

Rifle Squad (2 squads)

MG 42 Bolt Rifle and Recon or
MG 42 Bolt Rifle and PzS or
MG 42 Bolt Rifle Recon and PzS

Support Squad

80mm Mortar or
MG 42 and Two Sniper or
MG 42 and PzS or
MG 42 Sniper and PzS or
80mm Mortar Sniper and PzS

Armor Squad (2 squads)

Stug IIIIG or
SDKfz 232 or
Marder or
Marder and SDKfz 250 or
Stug IIIIG and SDKfz 232

Support Squad

MG 42 and Two 80mm Mortar or
Two MG 42 and Two PzS or
Two 80mm Mortar and PzS

German Tactics

This is one of the most interesting and challenging battles in the whole game; it truly does replicate the deadly nature of the historical battle for Purple Heart Draw. The draw itself runs the entire height of the map, with the only dry crossing being a small bridge near Phase Line 1C. The bridge approaches are covered by two fortified buildings (Au Grogard and the Horse Barn) as well as a very strong line of hedgerow entrenchments.

The entire American left is under German observation, and aside from the odd shell crater, is barren of cover. As the German, you won't be able to deploy teams in the hedges directly facing the draw, but you should have several teams waiting

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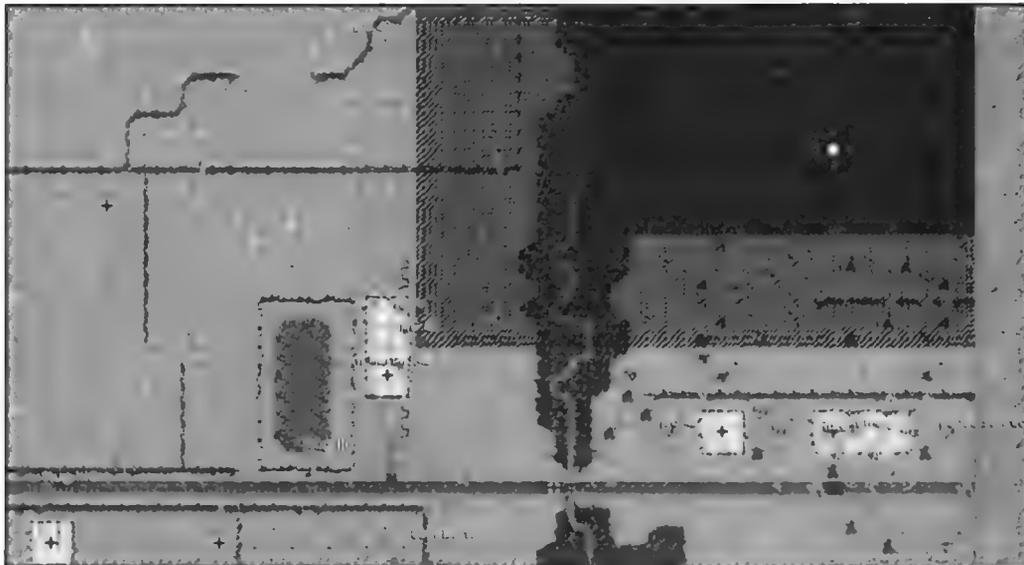


Figure 7-10. *Suggested German deployment for Purple Heart Draw, Battle Three.*

between Phase Lines 1A and 1B. As soon as the battle commences, deploy them eastward until they can pour enfilade fire across the river. Hold your

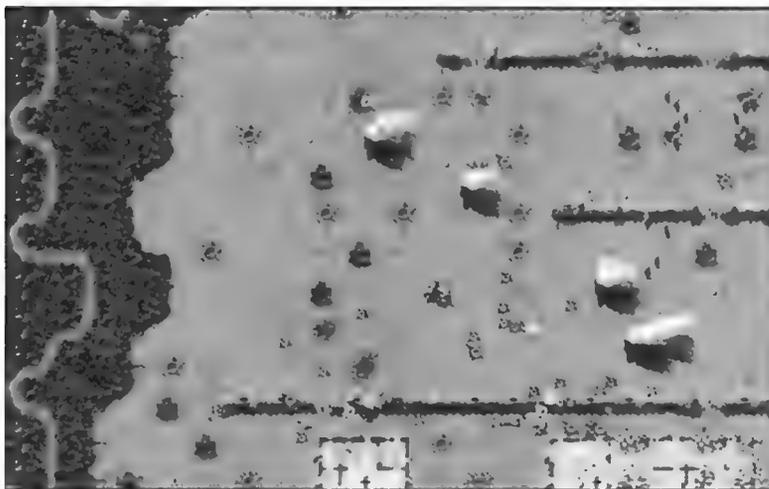


Figure 7-11. *The whole American left is devoid of cover; rake the enemy's units with machine gun fire from the western side of the draw.*

armor (probably some combination of Stugs, Marders, and possibly a SDKfz) in reserve near Chateau Picard and keep them there until the moment comes when they can decisively intervene.

Defend Au Grognard and the Horse Barn tenaciously with MGs and Panzerschrecks.

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The Americans must assault these buildings eventually if they are to gain passage over the bridge, and your garrison should be able to withstand the American mortar barrage and still have plenty of fight left when the enemy tries to storm the position.

Usually, the German side draws two 80mm mortars to supplement its firepower. (The Americans will have more mortars, but their crews won't, on the average, be as skilled as yours.) There's no shortage of targets, so you'll want to retarget often.

If the American attack runs out of steam or the Force Morale bar goes into the brown, send your armored reserves forward aggressively, firing first at any surviving American tanks and then at any pockets of infantry within easy range. If your Stugs catch the worn-out attackers in a crossfire, you should win a major or decisive victory.

American Tactics

This is as tough as it gets: a frontal attack on a fortified position (Au Grognard, the Horse Barn, and the hedges in front of them), with your left flank in full view of the enemy, completely exposed to enfilade fire from the western bank of the draw.

But study the map more closely. You can turn that apparent left-flank weakness

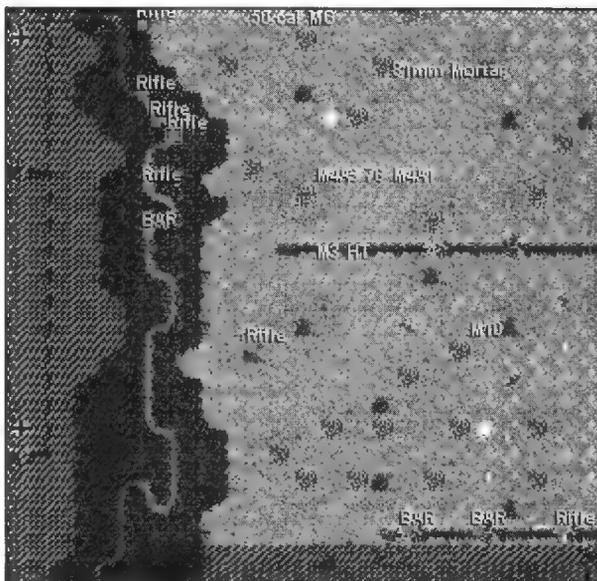


Figure 7-12. Suggested American deployment for Purple Heart Draw, Battle Three.

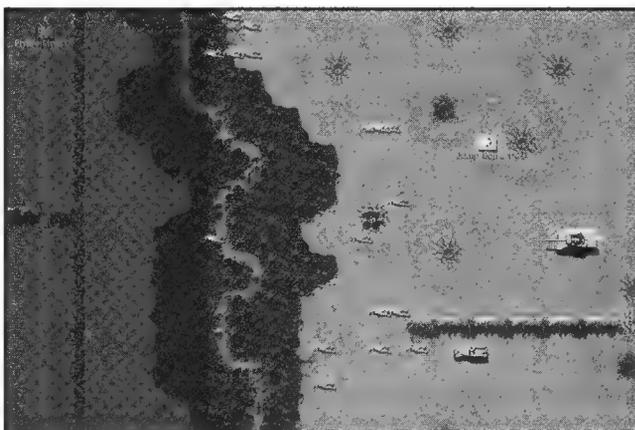


Figure 7-13. Turn the tables on the Germans by sending a strong force across the draw, into their rear.

into an asset. The draw cannot be crossed by tanks, but infantry can traverse it. Put down a heavy smoke screen and send three Rifle teams and a couple of

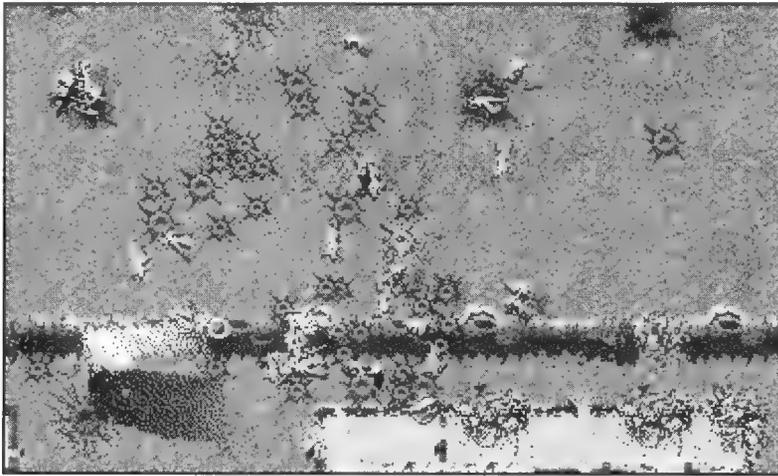


Figure 7-14. *Even a successful assault on Au Grognard will surely be a desperate and bloody affair.*

BARs straight across the draw; when they gain the far bank, have them take cover in the hedges and prepare to meet the inevitable German response.

Having your men on both sides of the draw splits the Germans' fire, helps secure your left flank on the eastern side of the stream, and gives you much

more tactical flexibility. Capturing Au Grognard and the Horse Barn will still be a tough assignment, but it'll be much less so if you also have forces on the German side of the draw, distracting them and causing them casualties.

As for attacking Au Grognard and the Horse Barn, be patient and let your mortars pound those targets—let them burn up 75 percent of their ammo, if necessary—before advancing. Leapfrog your teams from one hedgerow to another, one team moving while the others lay down covering fire.

Yes, you can use dead cows for cover! They have a protection rating equal to a wooden building—after all, it takes a pretty hefty projectile to penetrate a side of beef.

Eventually, your infantry teams will have to cross that last deadly open space north of the Horse Barn and Au Grognard. Switch your mortars to smoke, use the infantry's smoke grenades, and rush Au Grognard while every available weapon puts heavy suppression fire on the Horse Barn and the hedgerow in front of it.

If you can capture Au Grognard, you can outflank the Horse Barn's defenders and seize the bridge approaches. If you have any armor left at this point, be prepared to use it suddenly in case the Germans launch a counter-attack with their armor.

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A Minor American Victory is probably all you can hope for in this battle—the terrain is an attacker’s nightmare and a defender’s dream. We recommend setting the options to Strong for both sides: this setting doesn’t alter the basic balance of the battle, but it does give the American player 81mm mortars and a few more machine guns.

Purple Heart Draw, Battle Four

Victory Locations

Site	Point Value	Site	Point Value
Jump Point 1A	2	Jump Point 1B	2
Phase Line 1A	8	Phase Line 1B	8
Phase Line 1C	20	Bridge	30
Barn	30	Au Grogard	10
Horse Barn	10	Chateau Picard	40
Phase Line 2A	20	Phase Line 2B	20

Order of Battle Variants for Purple Heart Draw, Battle Four

American Order of Battle

Rifle Squad (5 squads)

- BAR and Half Team or
- Two Light Rifle or
- BAR and Light Rifle or
- Two Light Rifle and Recon

Support Squad

- 60mm Mortar .30-cal. MG and Bazooka or
- 81mm Mortar and Bazooka or
- Two 60mm Mortar and Bazooka or
- 81mm Mortar and .50-cal. MG or
- Two 60mm Mortar and Two Bazooka

Armor Squad

- Sherman and M3 Half-track or
- Sherman or
- Stuart and M3 Half-track or
- Sherman 76 or
- Sherman and Stuart

German Order of Battle

Rifle Squad

- Bolt Rifle or
- Bolt Rifle and Half Team or
- MG 42 and Half Team or
- MG 42 Half Team and PzS

Rifle Squad (2 squads)

- MG 42 Bolt Rifle and Recon or
- MG 42 Bolt Rifle and PzS or
- MG 42 Bolt Rifle Recon and PzS

Support Squad

- 80mm Mortar or
- MG 42 and Two Sniper or
- MG 42 and PzS or
- MG 42 Sniper and PzS or
- 80mm Mortar Sniper and PzS

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American Order of Battle, continued

Armor Squad

Two Sherman or
Sherman 76 and Stuart or
Sherman and M10 or
Sherman 76 and M10 or
Two Sherman and M10

German Order of Battle, continued

Armor Squad (2 squads)

Stug IIIG or
SDKfz 232 or
Marder or
Marder and SDKfz 250 or
Stug IIIG and SDKfz 232

Support Squad

MG 42 and Two 80mm Mortar or
Two MG 42 and Two PzS or
Two 80mm Mortar and PzS

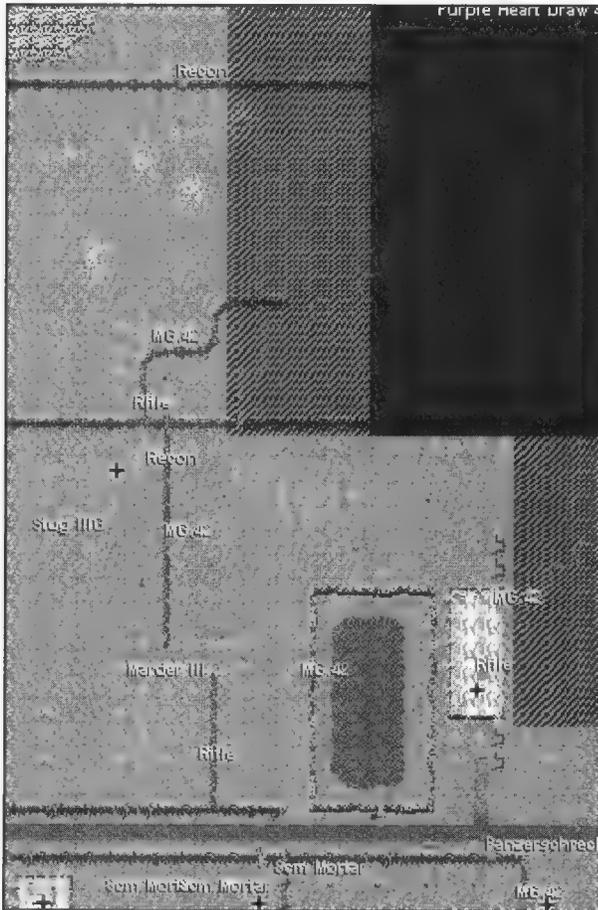


Figure 7-15. Suggested German deployment for Purple Heart Draw, Battle Four.

German Tactics

The Germans still hold the Barn, and nominally the bridge as well (although it will appear in no man's land), but the Americans hold a long, wide salient across the draw at the top of the map. Expect them to appear in strength in the hedgerows bordering that salient. Fortunately for the German, the attackers must advance on an east-west axis, at right angles to your line, which makes it easier for you to fire on them than for them to fire on you.

Use your mortars to disrupt their movements above the Barn (don't waste ammo on any targets across the draw), and when you judge them to be sufficiently softened up, bring your armor forward to engage them at close range. You should inflict sufficient losses to win at least a Minor German Victory, and it's very unlikely the Americans will ever get close enough to the Barn to take it.

CHAPTER SEVEN: PURPLE HEART DRAW

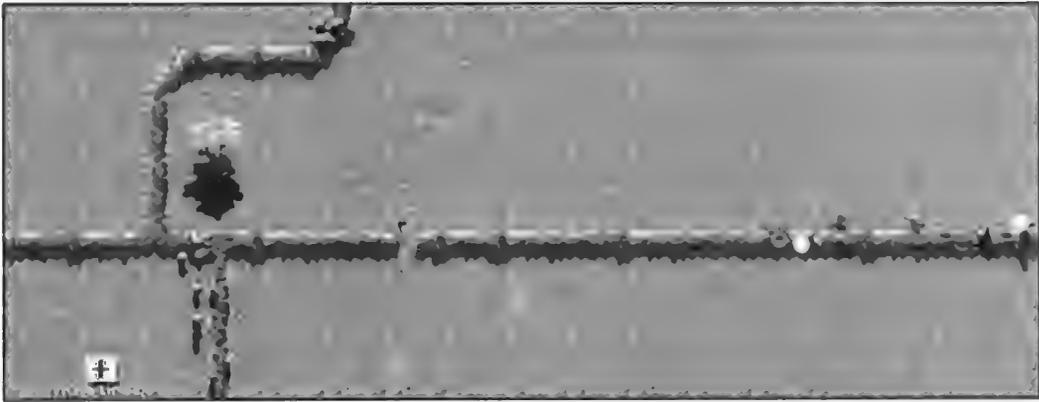


Figure 7-16. *The Americans will appear in strength in the hedges north of the Barn, prepare a hot welcome for them.*

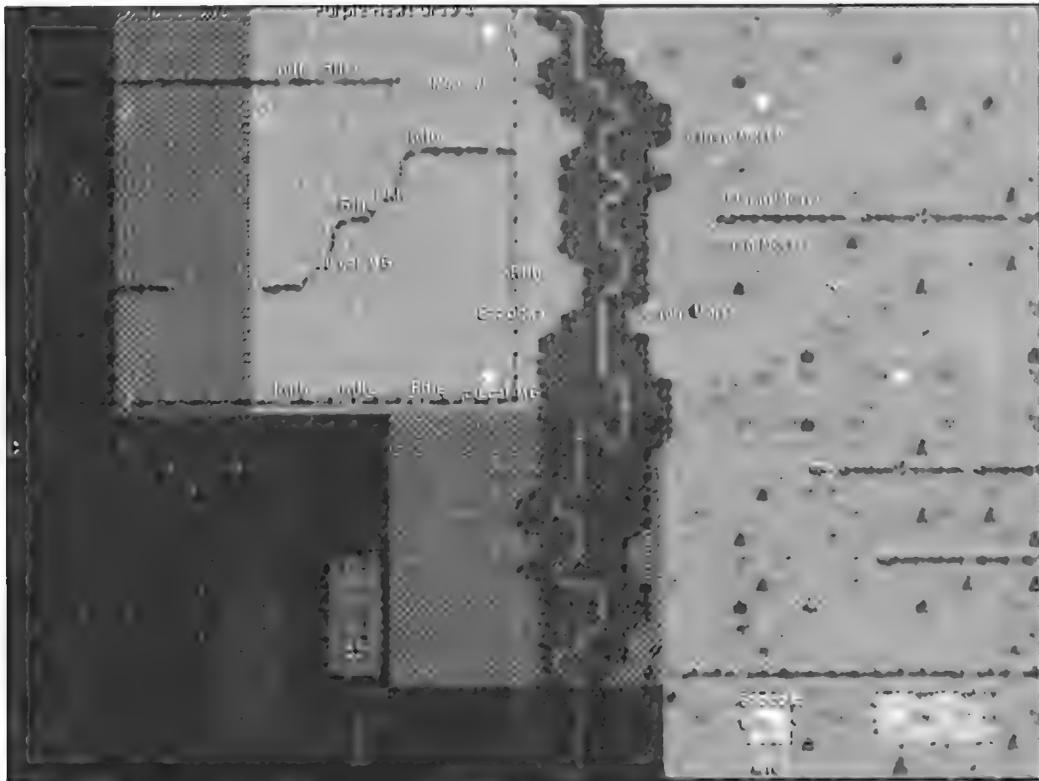


Figure 7-17. *Suggested American deployment for Purple Heart Draw, Battle Four.*

Microsoft
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Combat**

American Tactics

The computer will give you a very inefficient setup. Group your mortars closer together for ease in rapid retargeting and let them pound the Barn and the surrounding hedges for several minutes before you initiate an advance.

You have two basic strategies: split your armor and mount a double-pincers attack from the hedgerows north of the Barn and from the Bridge, or concentrate all your striking power in the salient north of the Barn and try to blast your way through the hedgerows in workmanlike fashion. The second of these may be the riskier option—the “grain” of the landscape favors the defenders, and the Germans are bound to have a couple of armored units hidden somewhere west of the Horse Barn.

Whichever offensive plan you choose, make sure your tanks don't get too far ahead of your infantry; once you lose your armor, your chances of success diminish greatly.

Chapter Eight



HILL 192

At this point in the battle for Normandy, the focus of the war (in history at least) is the operations of the American 2nd Division, positioned on the left flank of the 29th. It was really this outfit that drew the daunting assignment of seizing and holding Hill 192, which the 2nd Division had already assaulted and failed to capture—at the cost of 1200 killed or wounded—a month before, on June 12.

Hill 192 was the dominant terrain feature east of St. Lo; from the summit of its 1000-foot heights, the defending troops of the German 7th Army could observe everything from St. Lo almost to the Atlantic beaches. The hill was defended by the elite German 3rd Parachute Division, and during the month-long lull between the failed 2nd Division attack on June 12 (less than a week after the initial June 6 D-Day landing) and its renewed assault on July 11, the paratroopers had erected truly formidable defenses, registering their artillery, mortars, and antitank guns to cover every possible avenue of approach.

Despite a stupefying barrage of 20,000 shells from American artillery, the struggle for Hill 192 was a savage one, costing the 2nd Division 400 casualties in a single day. By the end of July 11th, most of the hill was in American hands, and a hastily organized German counterattack on the 12th was handily repulsed.

American Objectives

Playing as the Americans, you face a literal uphill fight against well-entrenched, fanatically motivated German troops—in fact, these Germans are one of the best units fielded by the *Wehrmacht* during the entire Normandy campaign. In some of these eight battles, the Germans will have more firepower and armor than you do. Your only chance to gain control of the hill and to push on to the most important objective beyond it—the St. Lo-Bayeux highway—is through superior tactics.

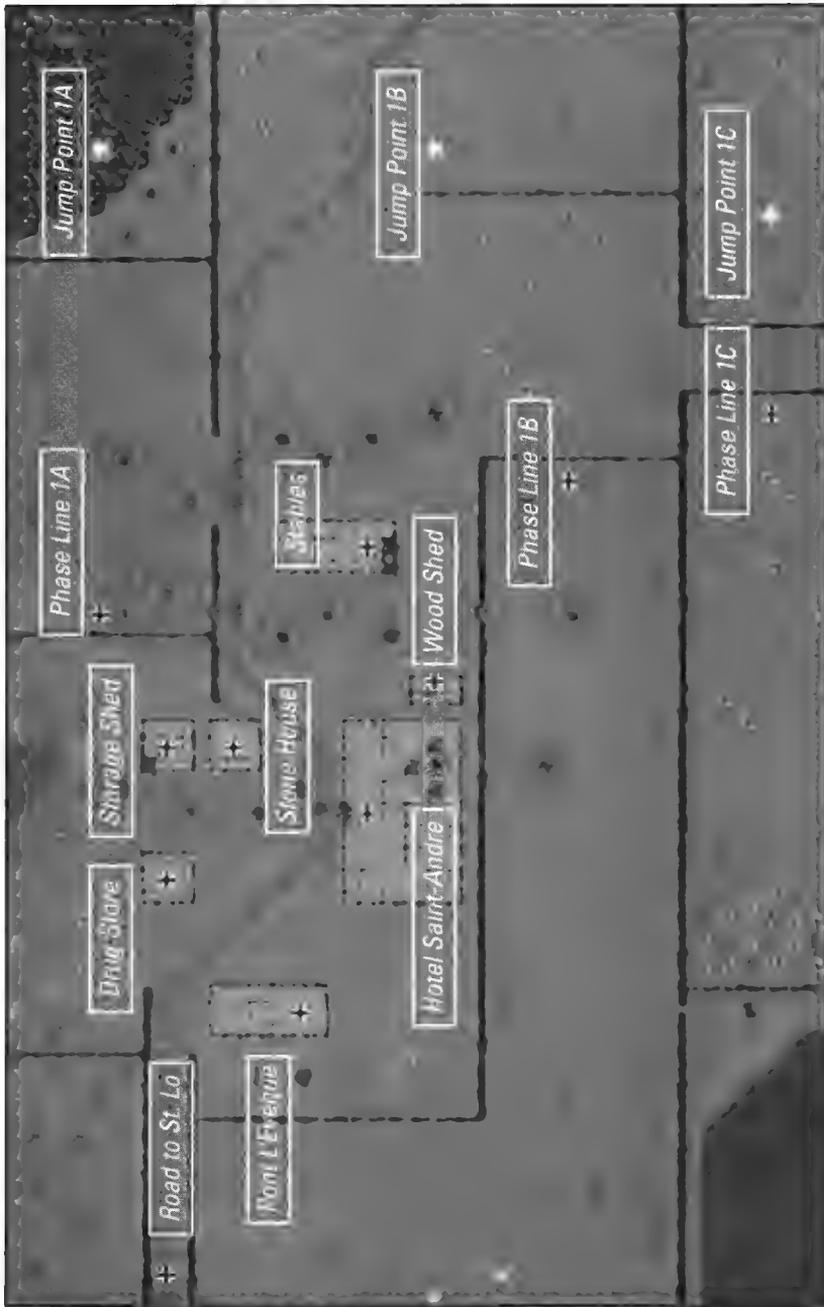


Figure 8-1. Terrain map for Hill 192, Battles One and Two.



German Objectives

If you're playing the German side, the stakes are high indeed; this is your last chance to keep the Americans bogged down in the *bocage* country and out of St. Lo. For once, you'll have adequate resources to mount not only a stubborn, but also a flexible defense—which means that opportunities for counterattacks against demoralized or pinned-down American units may present themselves.

Hill 192, Battle One

Victory Locations

Site	Point Value	Site	Point Value
Jump Point 1A	10	Jump Point 1B	10
Jump Point 1C	10	Phase Line 1A	20
Phase Line 1B	20	Phase Line 1C	20
Stables	20	Wood Shed	20
Hotel Saint-Andre	50	Stone House	20
Storage Shed	10	Pont L'Eveque	20
Drugstore	20	Road to St. Lo	20

Order of Battle Variants for Hill 192, Battle One

American Order of Battle

Rifle Squad (5 squads)

- BAR and Half Team or
- Two Light Rifle or
- BAR and Light Rifle or
- Two Light Rifle and Recon

Support Squad

- Two 60mm Mortar .30-cal. MG and Bazooka or
- 60mm Mortar and Two .30-cal. MG or
- 81mm Mortar .50-cal. MG and Bazooka or
- Two 81mm Mortar and Bazooka or
- Two 81mm Mortar .50-cal. MG and Bazooka

Armor Squad (2 squads)

- Two Sherman or
- Sherman 76 and Stuart or
- Sherman and M10 or
- Sherman 76 and M10 or
- Two Sherman and M10

German Order of Battle

Rifle Squad

- MG 42 Bolt Rifle and PzS or
- MG 42 Bolt Rifle and Recon or
- MG 42 Bolt Rifle Recon and PzS or
- Sturm Bolt Rifle Recon and PzS

Rifle Squad

- MG 42 Half Team and PzS or
- MG 42 and Bolt Rifle or
- MG 42 Bolt Rifle and PzS

Support Squad

- MG 42 and 80mm Mortar or
- MG 42 and Two PzS or
- Two MG 42 and Two PzS or
- Two 80mm Mortar and PzS

Microsoft
**Close
Combat**

German Order of Battle, continued

Rifle Squad (2 squads)

Bolt Rifle or
Bolt Rifle and Half Team or
MG 42 and Half Team or
MG 42 Half Team and PzS

Rifle Squad

Half Team or
Bolt Rifle or
Bolt Rifle and Half Team

Rifle Squad

Bolt Rifle or
Half Team or
Bolt Rifle and Half Team or
MG 42 and Half Team

Miscellaneous Squad

Two Sniper or
Sniper or
Kubelwagen

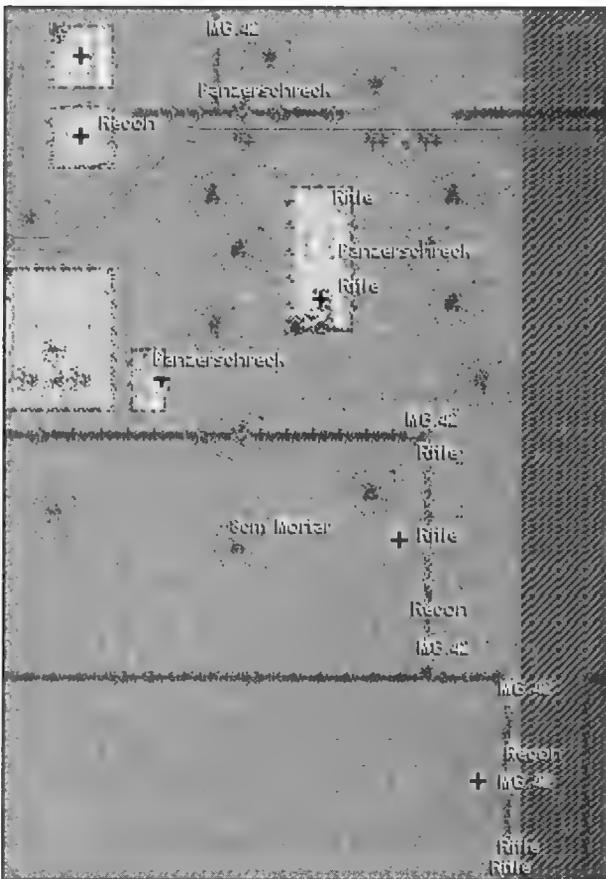


Figure 8-2. Suggested German deployment for Hill 192, Battle One.

German Tactics

Battles One and Two of the Hill 192 operation offer an interesting mix of terrain, which in turn gives rise to some equally interesting tactical possibilities. The Road to St. Lo zig-zags through the center of a small French village, which is surrounded by typical *bocage* countryside. The road is dominated by a large wooden stable situated approximately on Phase Line 1A.

The German player's first impulse will probably be to defend the Stables strongly, for the building commands an excellent field of fire. But there are a couple of reasons why you should resist that temptation. For starters, the stable is a rather flimsy wooden structure that draws American fire like a magnet. Furthermore, the lay of the land permits the American

sustained. (In one especially satisfying game, we actually wiped out an 81mm mortar team that had set up in mid-field near the Jump Point 1C marker!) To eject you from this murderously effective position, they'll have to retarget most (if not all) of their mortars or commit one of their precious tanks.

Spread the remainder of your teams along the hedges at Phase Line 1B, and you should stop their infantry attack cold. Unfortunately, there's not much that can be done if the Americans' have superiority in mortars, nor about their tanks, unless and until those vehicles come within *Panzerschreck* range. But if you draw a good complement of mortars and inflict heavy enough infantry losses, you'll still win a solid victory.

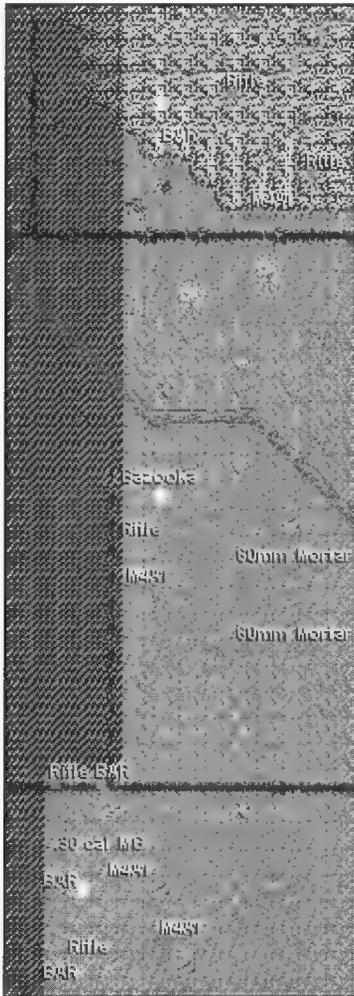


Figure 8-4. Suggested American deployment for Hill 192, Battle One.

American Tactics

The very same flank attack we discussed in the German tactics will work, in the opposite direction, for the Americans—thanks to the fact that the AI tends to have the Germans stay in defensive positions along Phase Line 1C. Deploy a strong task force (two tanks, a Bazooka, and a machine gun) in the field near Jump Point 1C. When the game starts, rush them forward to the hedges bordering the lane, cover the road with smoke, and then charge with several infantry teams. You'll take some hits, but the distance is short. And once you're in the German hedgerow positions, you can swing north and mop them up one by one. On several occasions, we saw an entire German squad waving the white handkerchiefs of surrender.

Capturing the defenses along Phase Line 1C puts you in a good position to shoot up the German positions on Phase Line 1B.

In the center, near the St. Lo Road, park your other tank(s) (it's possible for the Americans to draw three armored vehicles, but we never got more than two) just outside of *Panzerschreck* range (120 meters) and systematically blow the Stables to matchsticks (the AI will garrison the place strongly).

Use your mortars to smash any defensive positions in the hedgerow near Phase Line 1A, while your Rifle

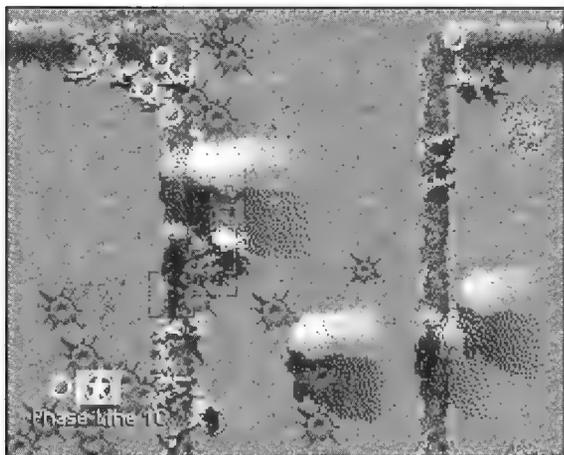


Figure 8-5. Fired-up American troops rooting out the last resistance along Phase Line 1C.

and BAR teams blast anything that moves from their relatively sheltered hedgerow position on the western boundary of the wheat field containing Jump Point 1A.

Once the Stables are piled with German dead and your attack across the bottom of the screen has rolled up the defenses along Phase Line 1C, launch a conventional smoke-shrouded attack across the field north of the Stables.

This will have the effect of squeezing the German center in a vise. Resistance will soon collapse, and at least a major victory should be yours.

Hill 192, Battle Two

Victory Locations

Site	Point Value	Site	Point Value
Jump Point 1A	4	Jump Point 1B	4
Jump Point 1C	4	Phase Line 1A	6
Phase Line 1B	6	Phase Line 1C	6
Stables	10	Wood Shed	10
Hotel Saint-Andre	30	Stone House	30
Storage Shed	20	Pont L'Eveque	40
Drugstore	40	Road to St. Lo	30

Order of Battle Variants for Hill 192, Battle Two

American Order of Battle

Rifle Squad (5 squads)

- BAR and Half Team or
- Two Light Rifle or
- BAR and Light Rifle or
- Two Light Rifle and Recon

German Order of Battle

Rifle Squad

- MG 42 Bolt Rifle and PzS or
- MG 42 Bolt Rifle and Recon or
- MG 42 Bolt Rifle Recon and PzS or
- Sturm Bolt Rifle Recon and PzS

Microsoft
**Close
Combat**

American Order of Battle, continued

Support Squad

Two 60mm Mortar .30-cal. MG and Bazooka or
60mm Mortar and Two .30-cal. MG or
81mm Mortar .50-cal. MG and Bazooka or
Two 81mm Mortar and Bazooka or
Two 81mm Mortar .50-cal. MG and Bazooka

Armor Squad (2 squads)

Two Sherman or
Sherman 76 and Stuart or
Sherman and M10 or
Sherman 76 and M10 or
Two Sherman and M10

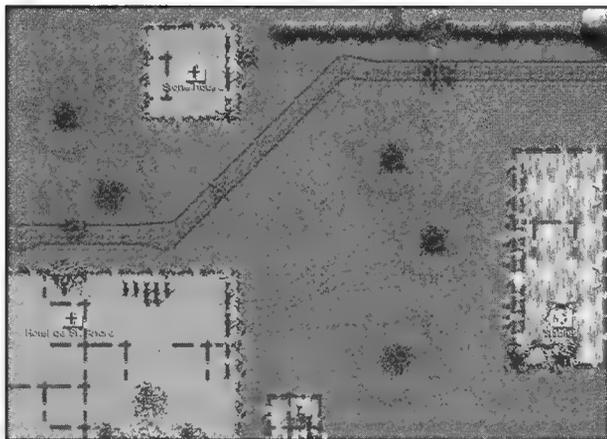


Figure 8-6. *Close, bloody fighting for possession of the Road to St. Lo.*

German Order of Battle, continued

Rifle Squad

MG 42 Half Team and PzS or
MG 42 and Bolt Rifle or
MG 42 Bolt Rifle and PzS

Support Squad

MG 42 and 80mm Mortar or
MG 42 and Two PzS or
Two MG 42 and Two PzS or
Two 80mm Mortar and PzS

Rifle Squad (2 squads)

Bolt Rifle or
Bolt Rifle and Half Team or
MG 42 and Half Team or
MG 42 Half Team and PzS

Rifle Squad

Half Team or
Bolt Rifle or
Bolt Rifle and Half Team

Rifle Squad

Bolt Rifle or
Half Team or
Bolt Rifle and Half Team or
MG 42 and Half Team

Miscellaneous Squad

Two Sniper or
Sniper or
Kubelwagen

German Tactics

The German player is really forced to operate with minimal forces in this battle: no tanks, maybe one mortar, and not enough Rifle and MG teams to cover his entire front. Center your defense on Hotel Saint-Andre, Pont L'Eveque, the Stone House, the Storage Shed, the Drugstore and, of course, the road itself, which is really the Americans' primary objective.

CHAPTER EIGHT: HILL 192



The Wood Shed is very close to the American start line and can easily be smashed to bits by tank and mortar fire, so don't place a large contingent of teams in it; a Sniper and an MG 42 can do considerable damage as long as you withdraw them before they're overwhelmed. The Stone House is a fairly stout building, and a *Panzerschreck* stationed there has a good field of fire down the road. Defend Hotel Saint-Andre strongly, and put one MG team in Pont L'Eveque—the MG team can cover the hotel's northern flank from there.

If you draw any vehicle, it's likely to be a *Kubelwagen*—fast, but very vulnerable. Keep it out of sight behind Hotel Saint-Andre, bringing it forward only if the American infantry becomes spread out enough for it to dart out, fire a few bursts, then pull back under cover.

Your entire southern flank is vulnerable because the hedgerows go “against the grain” of your defense. You'll probably have only two Rifle teams to cover that part of the line, and the Americans will come at you with at least twice that many men.

In all the games we played, the Americans showed a healthy respect for the Germans' antitank capabilities by keeping their armor just outside of *Panzerschreck* range—one tank on the road, the other in the fields south of the Stables. The American infantry, however, was aggressive, and the fighting around Hotel Saint-Andre and the Stone House was close, bloody work.

It is possible for the German player to win a minor victory in this battle. But if you're playing the Campaign game there may come a time, depending on the severity of your losses, when the

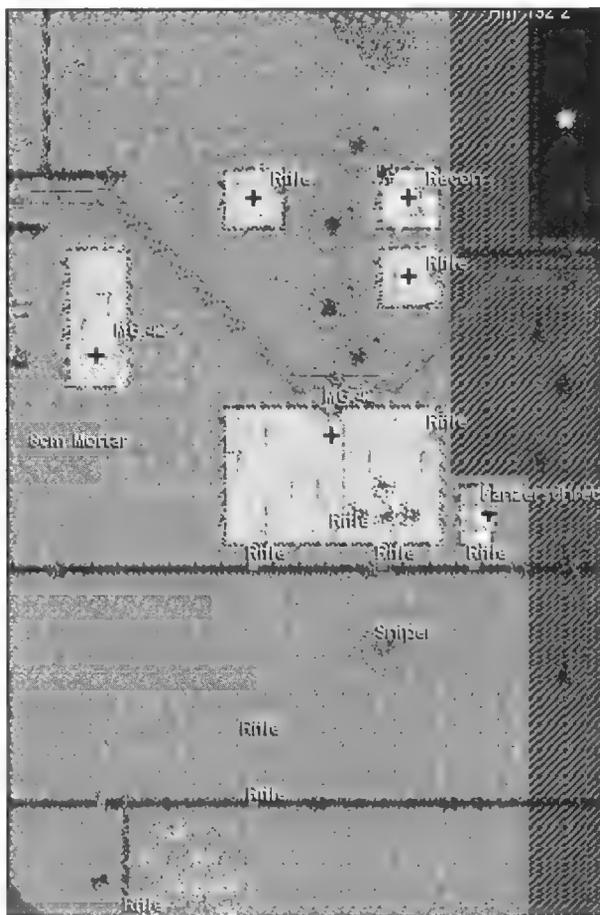


Figure 8-7. Suggested German deployment for Hill 192, Battle Two.

Microsoft
**Close
Combat**

wiser course of action is to order a general withdrawal to preserve as many of your veteran troops as possible.

American Tactics

This battle is yours to lose: you have significantly greater resources than your opponent and the advantage of starting close to his positions.

The best plan to use is the classic hold-'em-by-the-nose-while-you-kick-'em-in-the-pants maneuver. Send infantry through the fields south of the Stables, put out terrific volumes of suppressive fire from the Stables, and then launch a strong right hook from Phase Line 1A against the Storage Shed and Stone House. The

Germans simply aren't strong enough to adequately defend their entire line, and if you can capture all the buildings north of the road, you should be able to rout them.

Keep your tanks at a safe distance and use them to provide fire support. The enemy will have no armor, so you can move your tanks with impunity as long as you keep them 150 meters from German-occupied buildings.

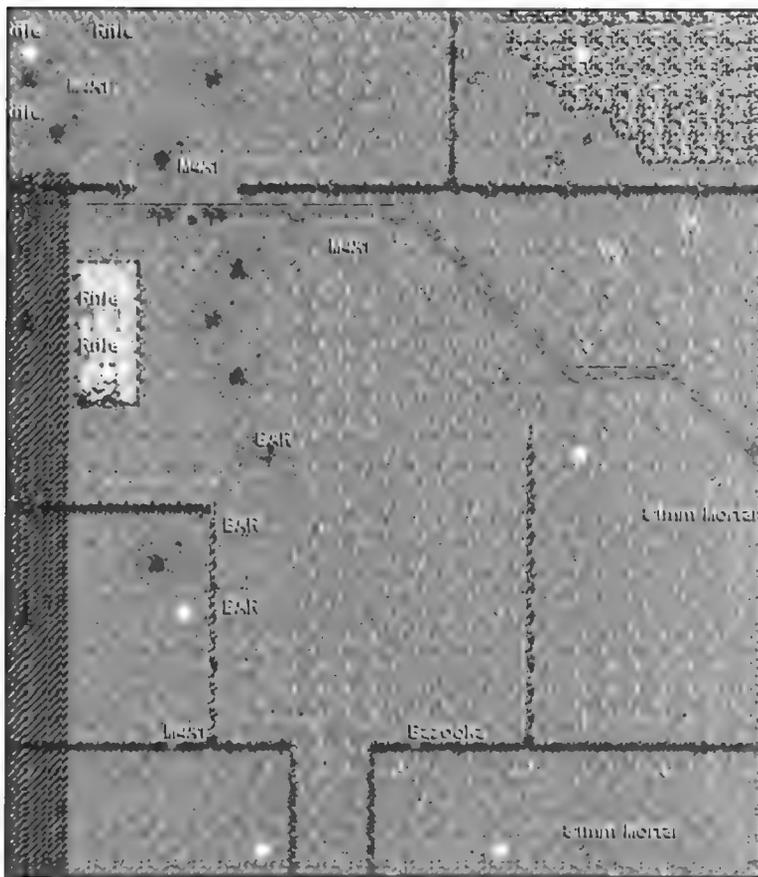


Figure 8-8. Suggested American deployment for Hill 192, Battle Two.



Hill 192, Battle Three

Victory Locations

Site	Point Value	Site	Point Value
Jump Point 1	10	Jump Point 2	10
Jump Point 3	10	Phase Line 1A	20
Phase Line 1B	20	Phase Line 1C	20
Phase Line 2A	20	Phase Line 2B	20
Phase Line 2C	20	North Gully	20
South Gully	20		

Order of Battle Variants for Hill 192, Battle Three

American Order of Battle

Rifle Squad (5 squads)

- BAR and Half Team or
- Two Light Rifle or
- BAR and Light Rifle or
- Two Light Rifle and Recon

Support Squad

- 60mm Mortar .30-cal. MG and Bazooka or
- 81mm Mortar and Bazooka or
- Two 60mm Mortar and Bazooka or
- 81mm Mortar and .50-cal. MG or
- Two 60mm Mortar and two Bazooka

Armor Squad

- Sherman and M3 Half-track or
- Sherman or
- Stuart and M3 Half-track or
- Sherman 76 or
- Sherman and Stuart

Armor Squad

- Two Sherman or
- Sherman 76 and Stuart or
- Sherman and M10 or
- Sherman 76 and M10 or
- Two Sherman and M10

German Order of Battle

Rifle Squad

- Bolt Rifle or
- Bolt Rifle and Half Team or
- MG 42 and Half Team or
- MG 42 Half Team and PzS

Rifle Squad (2 squads)

- MG 42 Bolt Rifle and Recon or
- MG 42 Bolt Rifle and PzS or
- MG 42 Bolt Rifle Recon and PzS

Support Squad

- 80mm Mortar or
- MG 42 and Two Sniper or
- MG 42 and PzS or
- MG 42 Sniper and PzS or
- 80mm Mortar Sniper and PzS

Rifle Squad

- MG 42 Bolt Rifle and PzS or
- MG 42 Bolt Rifle and Recon or
- MG 42 Bolt Rifle Recon and PzS or
- Sturm Bolt Rifle Recon and PzS

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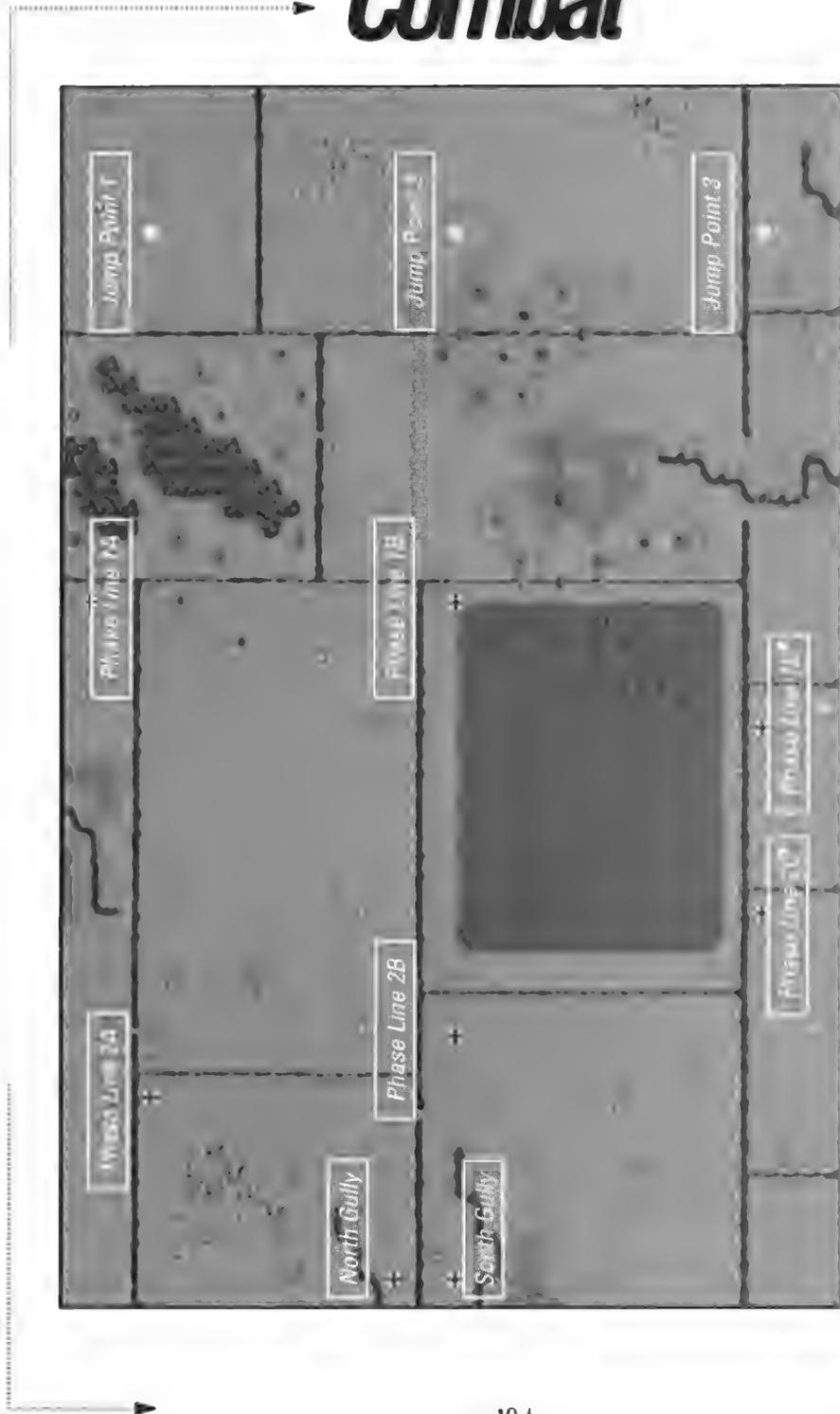


Figure 8-9. Terrain map for Hill 192, Battles Three and Four.



German Order of Battle, continued

Armor Squad

Mark IV or
Marder and SDKfz 250 or
Stug IIIG and SDKfz 232 or
Marder and SDKfz 232 or
Stug IIIG and Marder

Gun Squad

75mm IG or
50mm AT Gun or
50mm AT Gun and PzS or
50mm AT Gun and 75mm IG or
75mm AT Gun

Miscellaneous Squad

Two Sniper or
Sniper or
Kubelwagen

Rifle Squad (2 squads)

Sturm Bolt Rifle Recon and PzS (MG 42) or
MG 42 Bolt Rifle and Recon or
MG 42 Bolt Rifle Recon and PzS or
Two Sturm Recon and PzS

German Tactics

Study the map for a few minutes, and you'll see that you hold a very strong position. Your southern flank is protected by a gully deep enough to serve as an antitank ditch, and your northern flank is suitable for Snipers and Recon teams that can blunt any American attempt to turn that flank.

The Americans have one or two mortars and two or three tanks, but because of the AI's tendency to scatter mortar fire across the screen, you can probably weather the storm with plenty of troops left to stop any attack in the center.

If you draw only one *Panzerschreck* team, place it in the hedgerow west of the wheat field on the northern flank. A common German variant gives

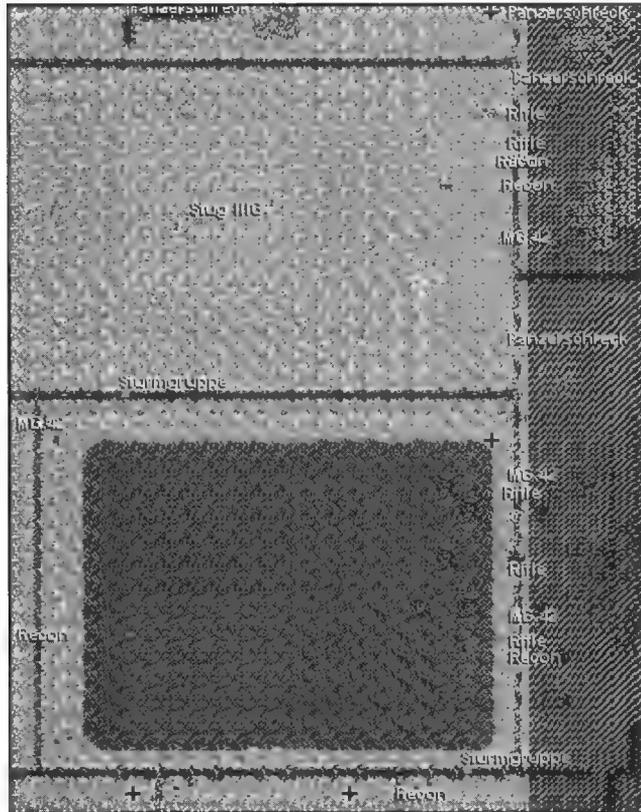


Figure 8-10. Suggested German deployment for Hill 192, Battle Three.

Microsoft
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Combat**

you a 50mm AT gun and a Marder (or a Stug) as well. Place the AT gun where it can cover the center, and hold the Marder back in reserve. You may also draw a SDKfz, but because half-tracks can't cross hedgerows, its movement will be severely restricted—you may as well just move it around in the field where it gets placed, exposing it long enough to siphon off mortar fire before scooting to a new location. There's a 20 percent chance that you'll draw a

single MK IV tank, a powerful asset indeed. But if you do get a MK IV, chances are you won't get any other armor to compliment it. In any case, your primary assets in this battle are your hand-held antitank weapons. Deploy those skillfully, and you should achieve victory, no matter what armored units you're given.

Usually, the Americans will try a combined armor and infantry attack on your northern flank. Let 'em come: your Recon teams' *Panzerfausts* can probably knock out whatever armor the U.S. commits in that sector. Even if you have to sacrifice most of the team to do that, it's worth the trade-off.

Otherwise, just stand fast along the whole line and duke it out. Frequently, near mid-game, the Americans will launch a desperate frontal assault in the center. In all the games we played as the Germans, no charging American ever got closer than 30 meters before being cut down.

American Tactics

This is almost a no-win battle, no matter what you do. The American start line is entirely in the open all across the map, and any frontal attack will result in your troops being cut to ribbons by enemy fire.

The shortest and most concealed route into the main German line is from the field in the northeast corner of the map, through the first line of hedges, and then across the wheat field (which does offer fair cover).

Unfortunately, *every* time we tried massing what appeared to be overwhelming force on that flank, the German Recon teams on the far side of no man's land

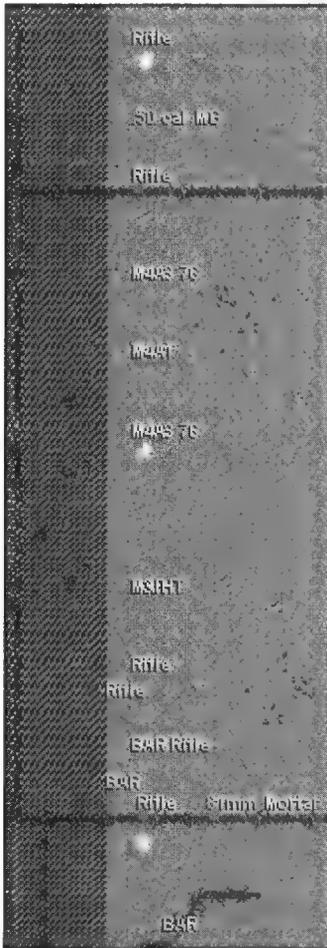


Figure 8-11. Suggested American deployment for Hill 192, Battle Three.

CHAPTER EIGHT: HILL 192



toasted our armor during the first minute or two of the battle. Without tank support, the infantry will become pinned in the wheat field.

After numerous bloody defeats, we finally figured out a way to squeeze out a Minor American Victory, but it took a lot of careful planning and setup. It also required the good luck of drawing a very strong Order of Battle variant (two Shermans, an M10, and two mortar teams).

Since that open field in the northwest corner is essentially a killing ground, we abandoned the idea of putting anything there. Instead, we placed a BAR team, a Rifle team, and a Bazooka in the hedges that border the southern side of that field. These units kept the German Recon teams suppressed and steadily wore them down with casualties until they withdrew into the wheat field.

In the center, we rushed all infantry units forward to the nearest hedgerow and then rested them while they exchanged fire with the Germans on the other side of the big open field. We kept our armor back in the small grove of trees near the eastern edge of the map. On the southern flank, we occupied the gully initially with one Recon team, then reinforced it with a BAR team and a Bazooka as quickly as possible.

Then we issued a global Defend command, and as both sides' infantry blazed away at each other, we pounded the German center with our mortars. The mortar barrage was enhanced by the way we'd deployed the tubes, in a loose diamond-shaped formation—far enough apart to be properly dispersed, but close enough for us to cycle through each weapon quickly for retargeting purposes. The mortars' primary target was the German AT gun, which was easily spotted and quickly neutralized, and after that the machine guns.

It took a long time, but eventually the cumulative effect of our mortar barrages drove the Germans Force Morale into the brown, at which point we brought up our armor, poured smoke into the central field, and launched a frontal attack. A German Marder tried belatedly to rumble towards the southern flank of our attack, but the Bazooka in the gully destroyed it before it could do more than get off a couple of rounds.

We still took heavy losses, and there was nothing pretty or elegant about the tactics—but the plan did give us the only American victory we achieved out of a dozen tries. And even this plan is not likely to work unless the computer deals you a very strong OOB variant.

Hill 192, Battle Four

Victory Locations

Site	Point Value	Site	Point Value
Jump Point 1	4	Jump Point 2	4
Jump Point 3	4	Phase Line 1A	10
Phase Line 1B	10	Phase Line 1C	10
Phase Line 2A	20	Phase Line 2B	20
Phase Line 2C	20	North Gully	30
South Gully	30		

Order of Battle Variants for Hill 192, Battle Four

American Order of Battle

Rifle Squad (5 squads)

BAR and Half Team or
 Two Light Rifle or
 BAR and Light Rifle or
 Two Light Rifle and Recon

Support Squad

60mm Mortar .30-cal. MG and Bazooka or
 81mm Mortar and Bazooka or
 Two 60mm Mortar and Bazooka or
 81mm Mortar and .50-cal. MG or
 Two 60mm Mortar and Two Bazooka

Armor Squad

Sherman and M3 Half-track or
 Sherman or
 Stuart and M3 Half-track or
 Sherman 76 or
 Sherman and Stuart

Armor Squad

Two Sherman or
 Sherman 76 and Stuart or
 Sherman and M10 or
 Sherman 76 and M10 or
 Two Sherman and M10

German Order of Battle

Rifle Squad

Bolt Rifle or
 Bolt Rifle and Half Team or
 MG 42 and Half Team or
 MG 42 Half Team and PzS

Rifle Squad (2 squads)

MG 42 Bolt Rifle and Recon or
 MG 42 Bolt Rifle and PzS or
 MG 42 Bolt Rifle Recon and PzS

Support Squad

80mm Mortar or
 MG 42 and Two Sniper or
 MG 42 and PzS or
 MG 42 Sniper and PzS or
 80mm Mortar Sniper and PzS

Rifle Squad

MG 42 Bolt Rifle and PzS or
 MG 42 Bolt Rifle and Recon or
 MG 42 Bolt Rifle Recon and PzS or
 Sturm Bolt Rifle Recon and PzS

Miscellaneous Squad

Two Sniper or
 Sniper or
 Kubelwagen

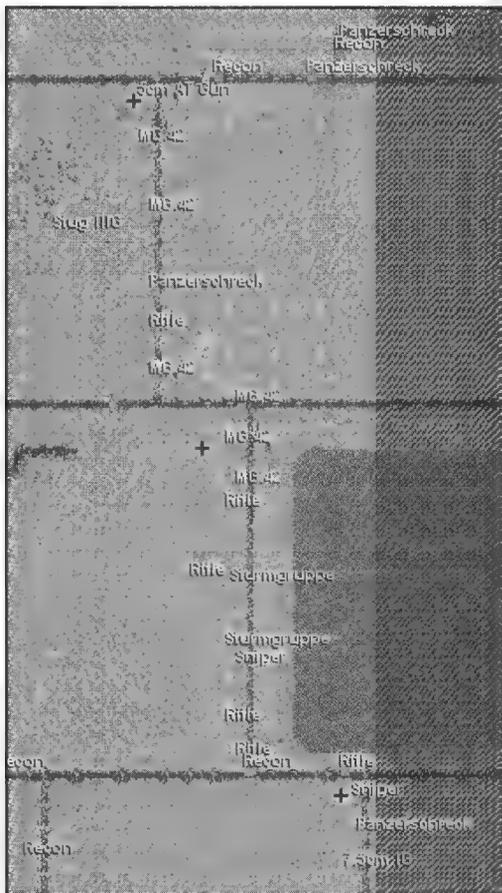


Figure 8-12. Suggested German deployment for Hill 192, Battle Four.

German Order of Battle, continued

Armor Squad

Mark IV or
Marder and SDKfz 250 or
Stug IIIc and SDKfz 232 or
Marder and SDKfz 232 or
Stug IIIc and Marder

Gun Squad

75mm IG or
50mm AT Gun or
50mm AT Gun and PzS or
50mm AT Gun and 75mm IG or
75mm AT Gun

Rifle Squad (2 squads)

Sturm Bolt Rifle Recon and PzS or
MG 42 Bolt Rifle and Recon or
MG 42 Bolt Rifle Recon and PzS or
Two Sturm Recon and PzS

German Tactics

The Americans will probably mass most of their strength against one of your flanks (probably the right). The attackers have lots of firepower, but you can count on the AI to squander that superiority by scattering fire all up and down your line. You should be able to hold your

ground even against three-to-one numerical superiority—especially if you draw a *Sturm* team and an Infantry Gun.

Hold a third to half of your forces in reserve, at least 100 meters behind the front line. Once the Americans have shot their bolt and are no longer aggressively moving forward, launch a counterattack with your reserves advancing your armor boldly. We enjoyed such success with this tactic that we were actually able to overrun one of the Victory Locations *behind* the American start line. Another play tester used the same general plan, but launched a two-pronged counterattack on both American flanks. He achieved a Major German Victory and captured *two* Victory Locations behind the American start line—a sterling performance indeed.

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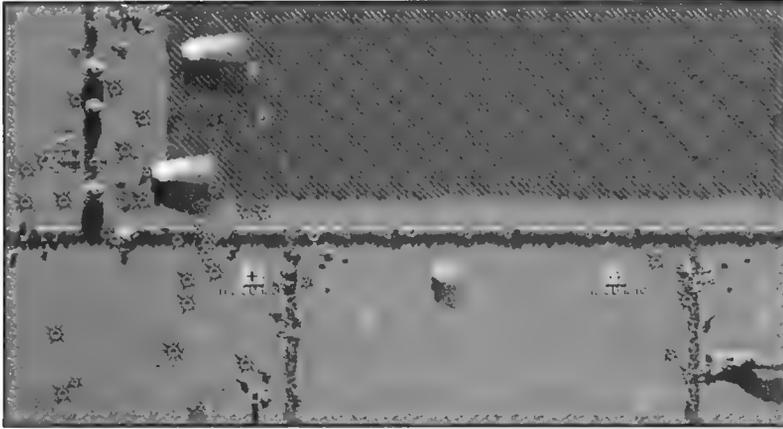


Figure 8-13. The Germans counterattack when the Americans have lost their offensive momentum.

**American
Tactics:**

You don't have a prayer of breaking the German line if you spread your forces evenly along the whole front. You must select what the Germans call a *Schwerpunkt*—a point of maximum pressure. Choose

the north flank or the south as you wish, but mass decisive force in that sector and press the attack aggressively.

The key to an American victory is the relatively lavish amount of firepower you'll have, but that works only if you individually target each weapon so as to rain down a massive barrage at the chosen point of penetration. (Mortars firing

under AI control will often spread their fire too broadly, just as they will if you're playing the German side of this battle.)

The AI can be positively vicious in sensing an opportunity for a counterattack, so be ready for the enemy to make such a move against the

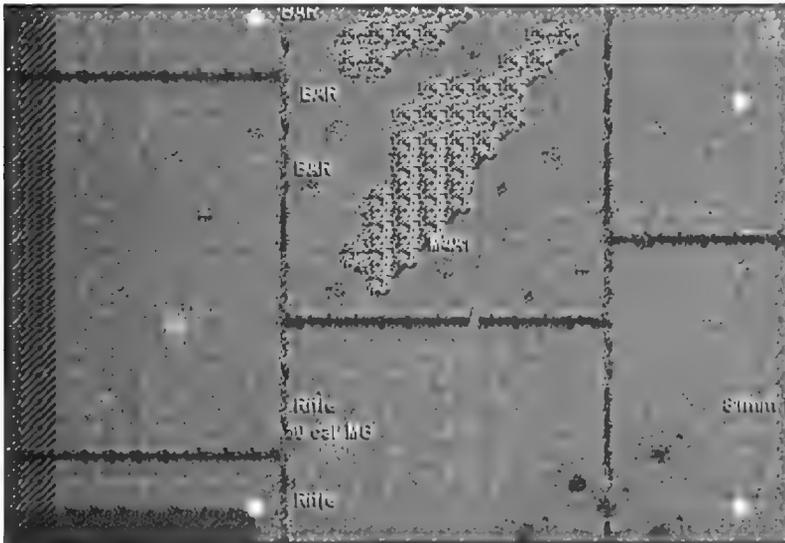


Figure 8-14. American mortar fire is critical in this battle, both offensively and defensively.

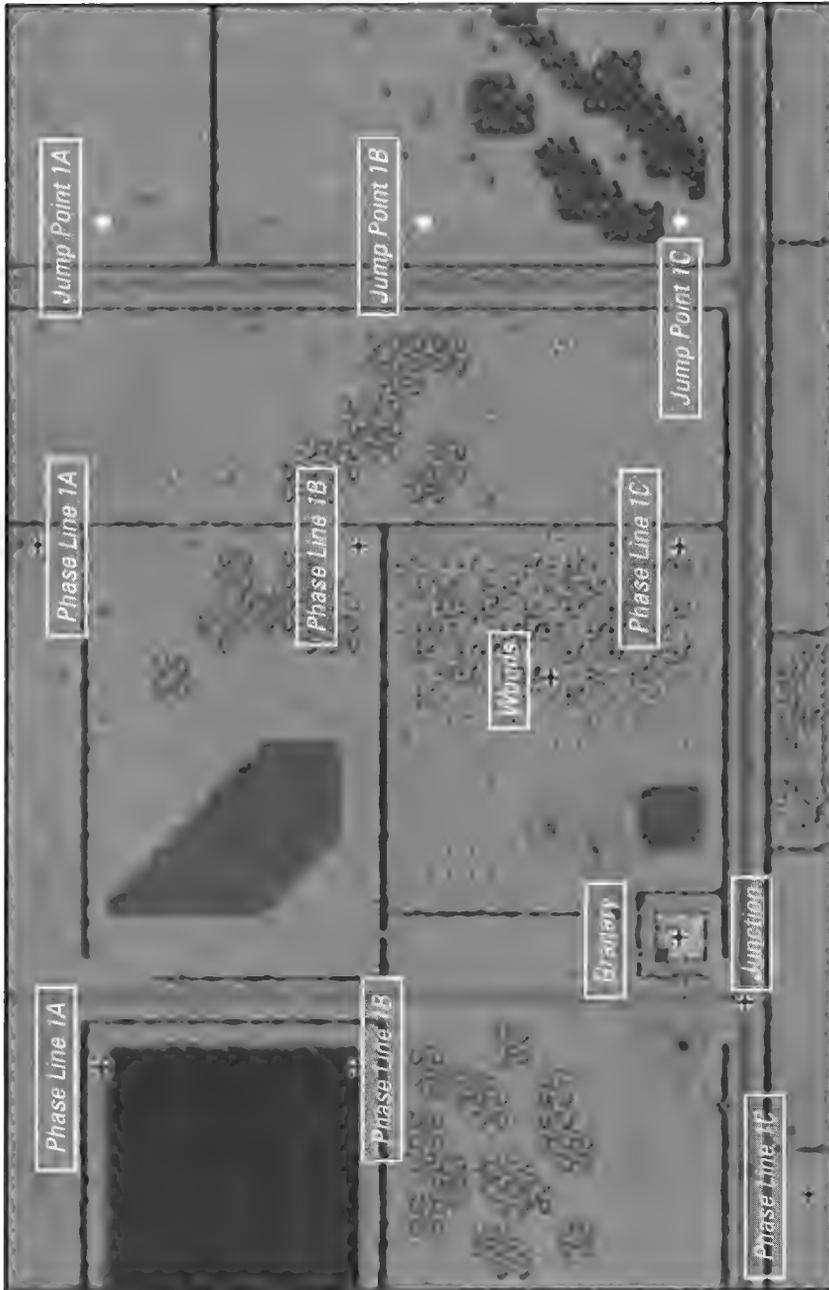


Figure 8-16. Terrain map for Hill 192, Battles Five and Six.



Hill 192, Battle Five

Victory Locations

Site	Point Value	Site	Point Value
Jump Point 1A	4	Jump Point 1B	4
Jump Point 1C	4	Phase Line 1A	20
Phase Line 1B	20	Phase Line 1C	20
Woods	20	Granary	20
Junction	20	Phase Line 1A	20
Phase Line 1B	20	Phase Line 1C	20

Order of Battle Variants for Hill 192, Battle Five

American Order of Battle

Rifle Squad (5 squads)

BAR and Half Team or
Two Light Rifle or
BAR and Light Rifle or
Two Light Rifle and Recon

Support Squad

Two 60mm Mortar .30-cal. MG and Bazooka or
60mm Mortar and Two .30-cal. MG or
81mm Mortar .50-cal. MG and Bazooka or
Two 81mm Mortar and Bazooka or
Two 81mm Mortar .50-cal. MG and Bazooka

Rifle Squad

BAR Light Rifle and Recon or
BAR and Light Rifle or
Two Light Rifle and Recon or
Two BAR and Bazooka or
BAR Two Light Rifle Recon and Bazooka

Armor Squad

Two Sherman or
Sherman 76 and Stuart or
Sherman and M10 or
Sherman 76 and M10 or
Two Sherman and M10

German Order of Battle

Rifle Squad

Bolt Rifle or
Bolt Rifle and Half Team or
MG 42 and Half Team or
MG 42 Half Team and PzS

Rifle Squad (2 squads)

MG 42 Bolt Rifle and Recon or
MG 42 Bolt Rifle and PzS or
MG 42 Bolt Rifle Recon and PzS

Support Squad

80mm Mortar or
MG 42 and Two Sniper or
MG 42 and PzS or
MG 42 Sniper and PzS or
80mm Mortar Sniper and PzS

Rifle Squad

Bolt Rifle or
Half Team or
Bolt Rifle and Half Team or
MG 42 and Half Team

Armor Squad

Mark IV and SDKfz 232 or
Marder and SDKfz 232 or
Stug III G and Marder or
Marder and Mark III or
Two Stug III G

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Combat**

German Order of Battle, continued

Support Squad

80mm Mortar Sniper and PzS or
80mm Mortar or
MG 42 Sniper and PzS or
80mm Mortar Sniper and PzS or
MG 42 and Two PzS

Rifle Squad

MG 42 Bolt Rifle and PzS or
MG 42 Bolt Rifle and Recon or
MG 42 Bolt Rifle Recon and PzS or
Sturm Bolt Rifle Recon and PzS

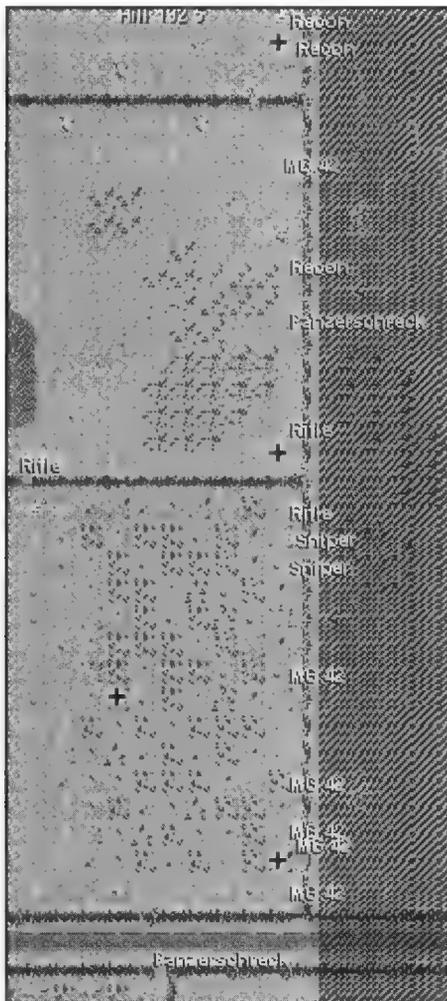


Figure 8-17. Suggested German deployment for Hill 192, Battle Five.

German Tactics

In this interesting and well-balanced battle, the German player will receive substantial infantry forces (including a *lot* of MG 42s) and between two and four units of armor, most commonly MK IV tanks and SDKfz 232s. With this much force at your disposal and favorable terrain, you should be able to mount a tough defense—possibly even a counterattack.

Notice the lozenge-shaped plowed field between the two dirt roads running north-south: one end of it is open, giving access for your armored car(s). Place them there in reserve, and they can move east to support your infantry or south along the dirt road, as the situation dictates.

Hide your MK IV(s) behind the hedges surrounding the Granary. Distribute your infantry teams along the hedgerows running from Phase Line 1A to Phase Line 1C. Much of that area is covered with dense woods, so you might want to use the Remove Trees option to keep track of your teams. Put at least one *Panzerschreck*, covered by a machine gun, in the stand of trees south of the paved road.

In several battles we also drew a Sniper, whom we placed in the scrub grass forward of the trees south of the road. He was well camouflaged and managed to take out four or five Americans before being killed.

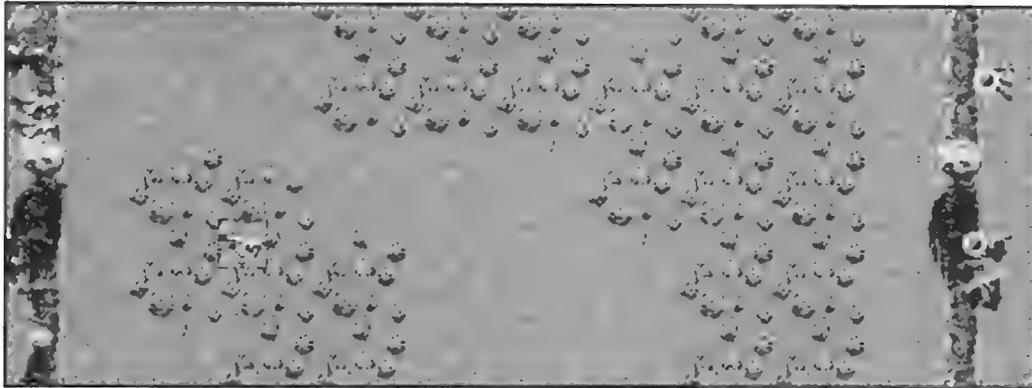


Figure 8-18. *This Sniper racked up an impressive number of kills, despite his relatively open position. Chalk it up to good camouflage.*

The Americans will advance cautiously westward from Jump Points 1A, 1B, and 1C in a long, linear formation. Most commonly, they'll have two tanks (a pair of Sherman M4s or an M4 and an M10), one of which will appear in the center of their line, between Jump Points 1A and 1B. The other tank tends to appear near the eastern road junction, near Jump Point 1C.

Intense fighting will erupt when the Americans reach the hedge line west of the dirt lane. Both sides have good cover; the German side has an advantage in automatic weapons, while the American side has an advantage in tanks and mortars. Use your *Panzerschrecks* to knock out at least one American tank, even if you have to sacrifice the teams to do it.

The second American tank usually appears near the eastern road junction. While it was preoccupied by a duel with the *Panzerschreck* hidden in the woods

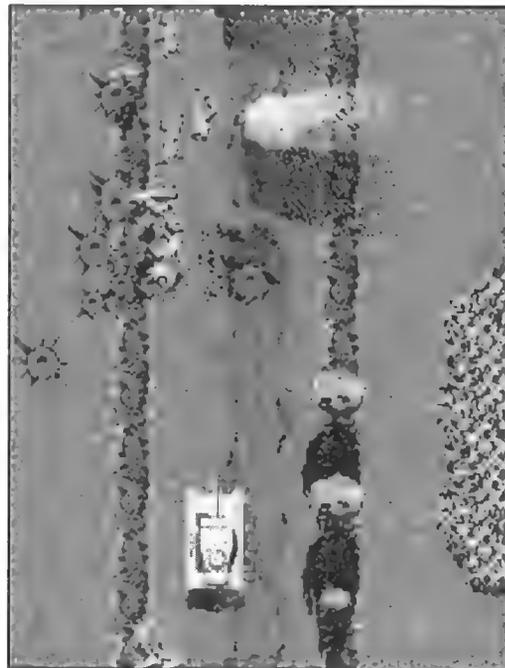


Figure 8-19. *MK IV tank counterattacking. Although it was not the best or newest of the German tanks, the MK IV was more than a match for the American Shermans.*

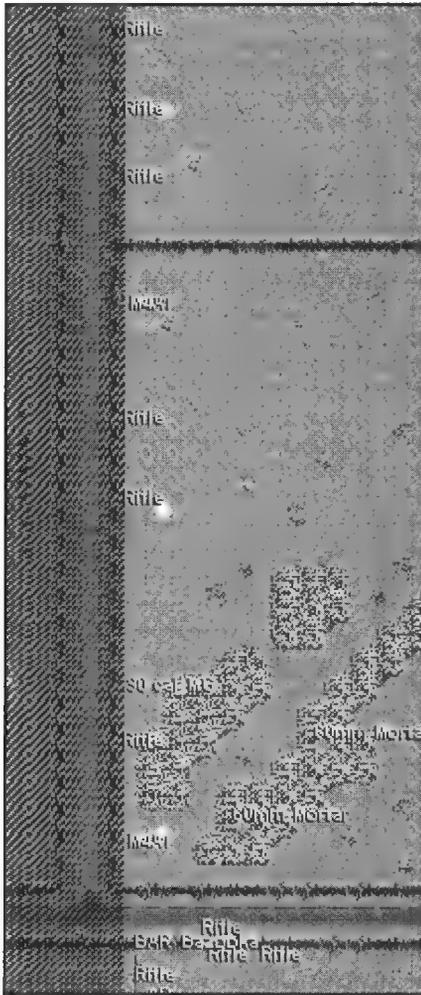


Figure 8-20. Suggested American deployment for Hill 192, Battle Five.

south of the road, we revved up our MK IV(s) and brought them into the open at the junction near the Granary. The Sherman was destroyed after two shots.

With one American tank destroyed and the other immobilized on the dirt lane east of Jump Point 1A, it was time to counterattack. This tactic worked reasonably well with a single MK IV; if you're lucky enough to draw a pair of them, it's a piece of cake.

Bring up your armored cars to support the infantry south of Phase Line 1A, and send your MK IV(s) east on the main road. When you get to the road junction beside Jump Point 1C, turn left and roll straight up the American line, shooting everything in sight. The result is a rout, and a Major or Decisive German Victory.

American Tactics

No doubt about it: the Americans have a tougher situation than the Germans in this battle. Frontal attacks are costly and futile—there's no cover, and the enemy is well screened by hedges and woods. If you study the map carefully, you'll spot the Achilles' Heel in the German lines: the long, narrow patch of woods south of the main road. True, you have to cross a dangerously open field to get there, but if you use a combination of smoke, short fast rushes, and covering fire, you should be able to move a considerable force of infantry into those woods without suffering

prohibitive losses. Do remember to cover the road with a Bazooka team, though, in case the German armor tries to intervene.

Keep your own armor well back until the Germans commit theirs. (Despite its age, the MK IV was more than a match for a Sherman in a head-to-head duel.) Once you have a sizable infantry force in the woods (they'll probably have to clean out a few German defenders in the process, but that shouldn't be too difficult), you'll have performed a classic tactical maneuver: you will have

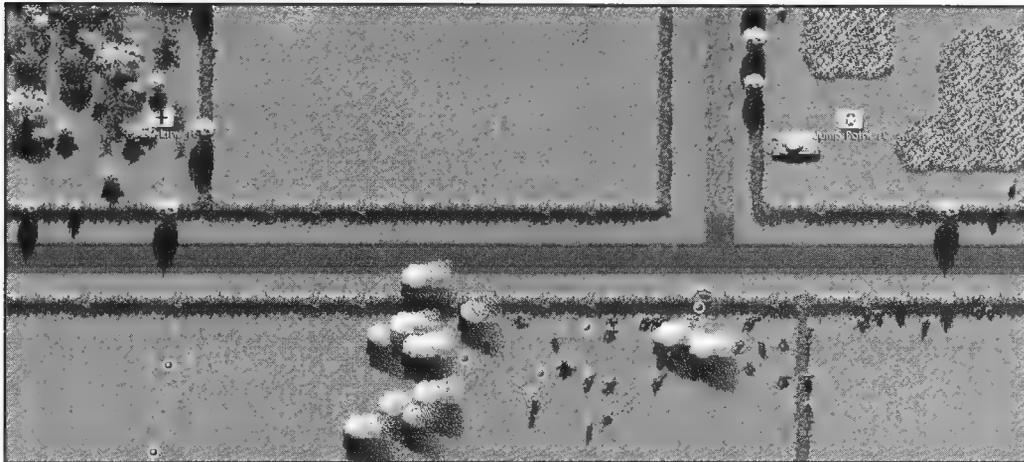


Figure 8-21. *Americans assaulting the woods south of the main road.*

turned the German right flank and severed their main line of communications. If the MK IVs come charging down the road, you're in a good position to ambush them from deep cover. Once you've eliminated that threat, you can proceed to capture the Granary and the Road Junction (worth 20 Victory Points each), or you can move across the road, into the woods, and take the German infantry from the rear.

You can also use your own armor aggressively, either to support your infantry on the western side of the first dirt road or to support your drive around the enemy's right flank. The choice is yours—once you have control of that southern patch of woods, you've essentially won the battle. The rest is just mopping up.

Hill 192, Battle Six

Victory Locations

Site	Point Value	Site	Point Value
Jump Point 1A	2	Jump Point 1B	2
Jump Point 1C	2	Phase Line 1A	4
Phase Line 1B	4	Phase Line 1C	4
Woods	10	Granary	20
Junction	20	Phase Line 1A	40
Phase Line 1B	30	Phase Line 1C	40

Order of Battle Variants for Hill 192, Battle Six

American Order of Battle

Rifle Squad (5 squads)

BAR and Half Team or
 Two Light Rifle or
 BAR and Light Rifle or
 Two Light Rifle and Recon

Support Squad

Two 60mm Mortar .30-cal. MG and Bazooka or
 60mm Mortar and Two .30-cal. MG or
 81mm Mortar .50-cal. MG and Bazooka or
 Two 81mm Mortar and Bazooka or
 Two 81mm Mortar .50-cal. MG and Bazooka

Rifle Squad

BAR Light Rifle and Recon or
 BAR and Light Rifle or
 Two Light Rifle and Recon or
 Two BAR and Bazooka or
 BAR two Light Rifle Recon and Bazooka

Armor Squad

Two Sherman or
 Sherman 76 and Stuart or
 Sherman and M10 or
 Sherman 76 and M10 or
 Two Sherman and M10

German Order of Battle

Rifle Squad

Bolt Rifle or
 Bolt Rifle and Half Team or
 MG 42 and Half Team or
 MG 42 Half Team and PzS

Rifle Squad (2 squads)

MG 42 Bolt Rifle and Recon or
 MG 42 Bolt Rifle and PzS or
 MG 42 Bolt Rifle Recon and PzS

Support Squad

80mm Mortar or
 MG 42 and Two Sniper or
 MG 42 and PzS or
 MG 42 Sniper and PzS or
 80mm Mortar Sniper and PzS

Rifle Squad

Bolt Rifle or
 Half Team or
 Bolt Rifle and Half Team or
 MG 42 and Half Team

Armor Squad

Mark IV and SDKfz 232 or
 Marder and SDKfz 232 or
 Stug IIIIG and Marder or
 Marder and Mark III or
 Two Stug IIIIG

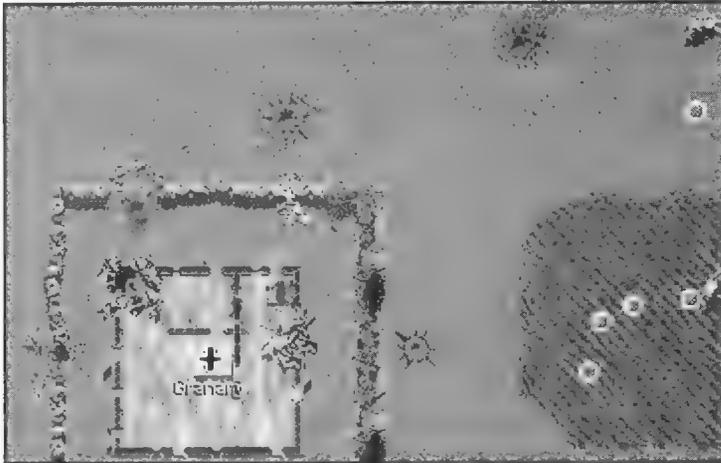


Figure 8-23. *The Americans try a sneak attack on the Granary.*

get one plus a mortar, or you may get no armor at all but more machine guns than you can shake a cabbage at. You'll also draw at least one, and probably two, *Panzerschrecks*.

The Americans might opt for a broad attack along the whole front, or they might use the woods for cover and try to capture both the Granary and the

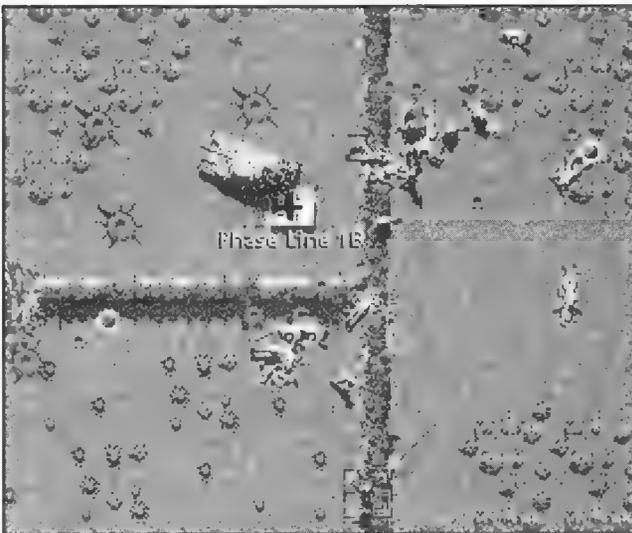


Figure 8-24. *Using the east-west hedgerows for cover, the Germans launch small, sharp counterattacks.*

German Tactics

You've been forced out of the best defensive terrain on this map, but you still control the Granary and the dirt road leading north from the Junction objective.

Order of Battle variations seem especially broad in this battle: you may get two armored vehicles, you may

get one plus a mortar, or you may get no armor at all but more machine guns than you can shake a cabbage at. You'll also draw at least one, and probably two, *Panzerschrecks*. The Americans might opt for a broad attack along the whole front, or they might use the woods for cover and try to capture both the Granary and the Junction. Defending the Granary should be your top priority, so turn it into a fortress. Machine gun teams positioned behind the hedgerow north of the Granary can rake the flank of any American force that attacks from the woods. It also makes sense to hold a couple of teams back as reserves in the field west of the road, in case the Granary is in danger of being overrun.

Enemy tanks may appear in the big field north of the woods, but they'll try to stay out of range of your hand-

CHAPTER EIGHT: HILL 192



held antitank weapons and shell your positions from a safe distance. During several test battles, we were able to counter that tactic by sneaking Recon teams along the hedgerows bordering the field until they got close enough to use their *Panzerfausts*. Once the American armor was neutralized, those same units were able to bring effective fire against several American infantry teams firing from the hedgerow south of Phase Line 1A.

Should the American tanks appear on the road, try to engage them with your own armor (if you have any) or with *Panzerschrecks* hidden on the shoulders of the road, near the Junction.

If you succeed in knocking out all the American tanks, you can counterattack with some degree of confidence, moving your units into the woods or along the east-west axis of the hedgerows. Several battles seemed destined to end in utter stalemate, with both sides just banging away at each other from opposite ends of the big field—until we tried launching counterattacks. These maneuvers seemed to take the computer by surprise and increased the number of enemy casualties until we scored a victory.

In short, your plan should be to hold the Granary at all costs,

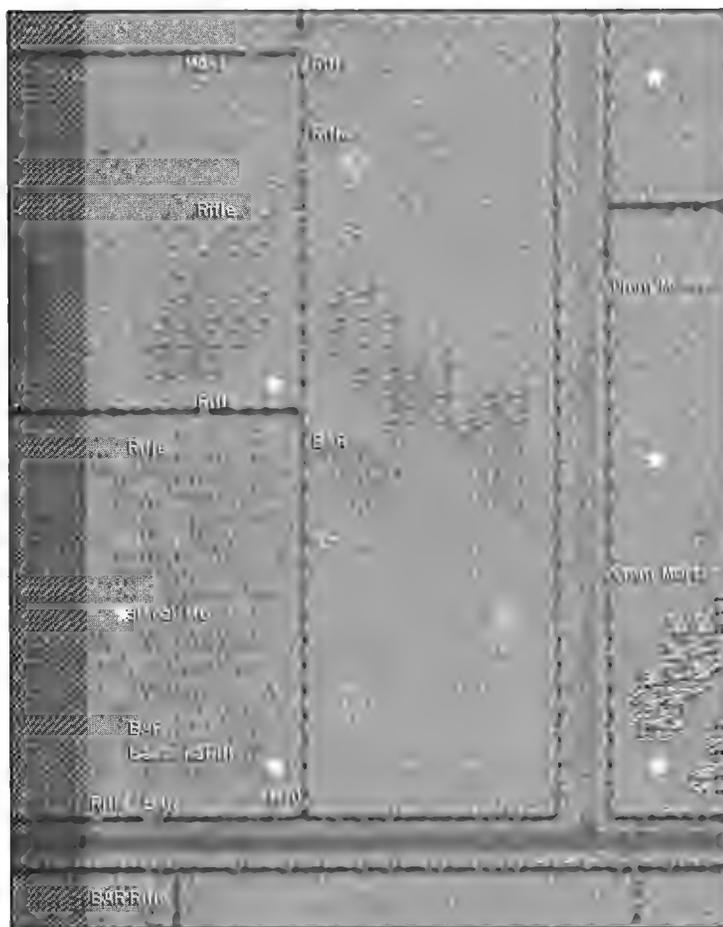


Figure 8-25 Suggested American deployment for Hill 192, Battle Six.

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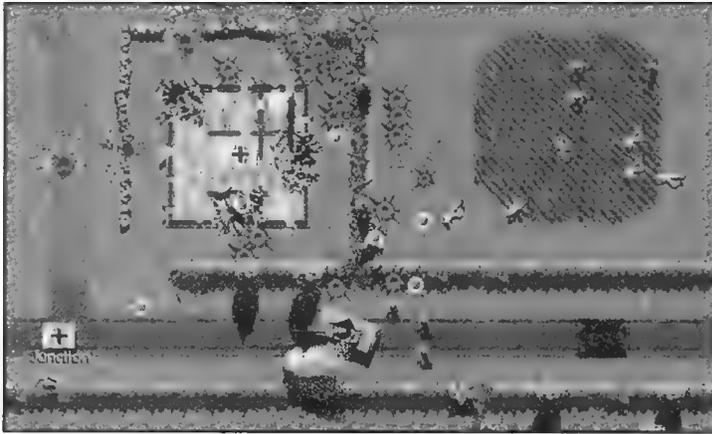


Figure 8-26. *The American attack on the Granary continues.*

infantry resources through the trees and position them for an all-out assault on the Granary. (Seizing that objective will also give you control of the Junction.)

But be sure not to launch your attack prematurely! The Germans know that you'll be coming sooner or later, so you may as well take your time and shell the building heavily with your mortars and tanks. You're bound to cause a lot

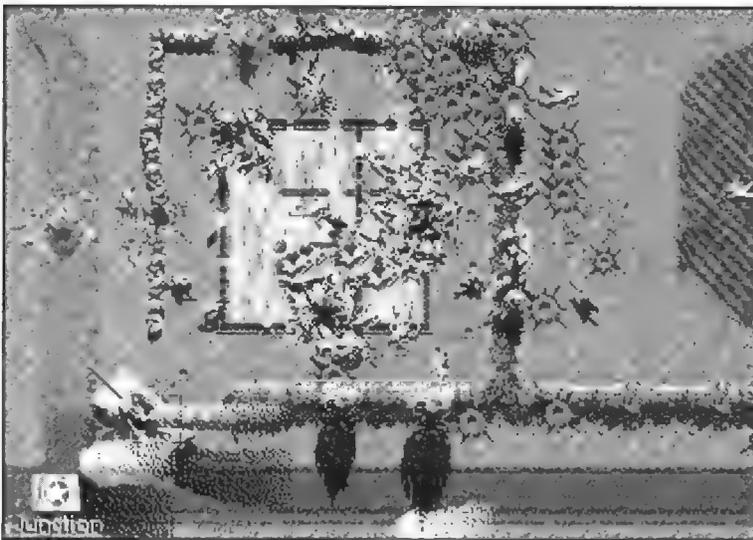


Figure 8-27. *The high cost of victory—and a sure sign of wasteful, if not incompetent, leadership.*

pick off the American tanks using any means available, and then undertake some offensive movements of your own. Be forewarned, however, that losses on both sides are likely to be heavy.

American Tactics

You control the woods on both sides of the highway, so use them. Send about half of your

infantry resources through the trees and position them for an all-out assault on the Granary. (Seizing that objective will also give you control of the Junction.)

But be sure not to launch your attack prematurely! The Germans know that you'll be coming sooner or later, so you may as well take your time and shell the building heavily with your mortars and tanks. You're bound to cause a lot

of casualties because the Germans more or less have to defend the Granary in considerable strength. Be patient; let your mortars pound the target.

When you've used between 80 and 90 percent of your high-explosive shells, switch to smoke and lay down as thick a curtain of it as you can between the



Granary and the stand of trees. Attack from the east and from the south, across the road. You'll encounter furious resistance and suffer heavy casualties, but keep pressing the attack until you gain your objectives.

Proper deployment of your tanks is a bit trickier. Not only are the Germans likely to have a Marder or a Stug (or both, if they get really lucky), but they're also sure to have *Panzerfausts* spread throughout their defenses. Putting your tanks in the big field, west of Phase Line 1A, lets you pick away at the enemy's defenses while remaining relatively safe from anything except a Marder, but it doesn't do much to support your attack on the Granary.

We obtained fairly good results by deploying one tank on the northern side of the big plowed field and one on the road, in direct support of the Granary attack. Eventually, we lost that vehicle (an M10) to a combination of *Panzerschreck* and Marder fire, but not before it blew the Granary defenses wide open and paved the way for a successful, though extremely bloody, infantry assault.

Once you've captured the Granary and the Junction, you've broken the back of the German defense—and that's worth taking some heavy losses. Once you've accomplished that, whatever else happens on this particular battlefield is more or less irrelevant.

This battle is more challenging, for either side, than it appears to be at first glance. Neither side is likely to win a major or decisive victory, and the outcome is often balanced on a razor's edge.

Hill 192, Battle Seven

Victory Locations

Site	Point Value	Site	Point Value
Auberge Fontaine	30	Cooper	30
Jump Point 1	4	Jump Point 2	4
South Guest House	20	North Guest House	20
Wine Shop	20	Inn Keeper's House	20
Storage	20	Phase Line 1A	20
Phase Line 1B	20		

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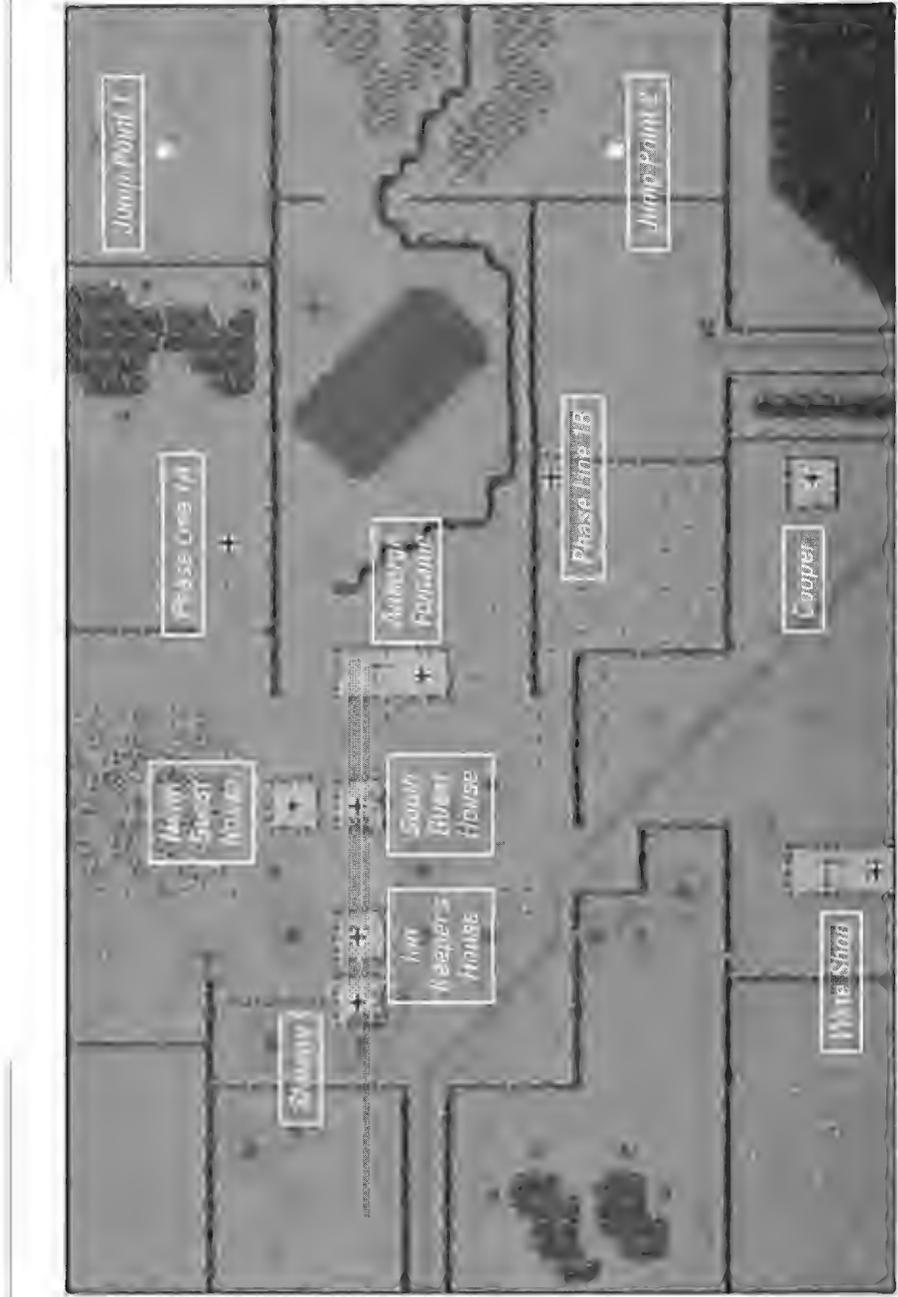


Figure 8-28. Terrain map for Hill 192, Battles Seven and Eight.

CHAPTER EIGHT: HILL 192



Order of Battle Variants for Hill 192, Battle Seven

American Order of Battle

Rifle Squad (5 squads)

BAR and Half Team or
Two Light Rifle or
BAR and Light Rifle or
Two Light Rifle and Recon

Support Squad

Two 60mm Mortar .30-cal. MG and Bazooka or
60mm Mortar and Two .30-cal. MG or
81mm Mortar .50-cal. MG and Bazooka or
Two 81mm Mortar and Bazooka or
Two 81mm Mortar .50-cal. MG and Bazooka

Rifle Squad

BAR Light Rifle and Recon or
BAR and Light Rifle or
Two Light Rifle and Recon or
Two BAR and Bazooka or
BAR Two Light Rifle Recon and Bazooka

Armor Squad

Two Sherman or
Sherman 76 and Stuart or
Sherman and M10 or
Sherman 76 and M10 or
Two Sherman and M10

German Order of Battle

Rifle Squad

Bolt Rifle or
Bolt Rifle and Half Team or
MG 42 and Half Team or
MG 42 Half Team and PzS

Rifle Squad (2 squads)

MG 42 Bolt Rifle and Recon or
MG 42 Bolt Rifle and PzS or
MG 42 Bolt Rifle Recon and PzS

Support Squad

80mm Mortar or
MG 42 and Two Sniper or
MG 42 and PzS or
MG 42 Sniper and PzS or
80mm Mortar Sniper and PzS

Rifle Squad

MG 42 Bolt Rifle and Recon or
MG 42 Bolt Rifle Recon and PzS or
Sturm Bolt Rifle Recon and PzS or
Two Sturm Recon and PzS

Rifle Squad

MG 42 Bolt Rifle and PzS or
MG 42 Bolt Rifle and Recon or
MG 42 Bolt Rifle Recon and PzS or
Sturm Bolt Rifle Recon and PzS

Miscellaneous Squad

Two Sniper or
Sniper or
Kubelwagen

Gun Squad

75mm IG or
50mm AT Gun or
50mm AT Gun and PzS or
50mm AT Gun and 75mm IG or
75mm AT Gun

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German Order of Battle, continued

Armor Squad

Panther and Marder or
Mark IV and Marder or
Two Stug III G and Marder or
Tiger and Panther

German Tactics

This battle definitely favors the defender. The German center is very strong—a cluster of buildings that provide mutually supporting fields of fire—but it also has a potential weakness in the form of a deep gully that snakes its way through the middle of the map. Keep any American units the computer places there pinned down, or they may be able to work their way deep into the middle of your line and storm the buildings from close range.

Both German flanks are somewhat vulnerable. Tanks can maneuver forward on both the north and south sides of the map, and there are extensive

patches of woods that also provide good cover for the attackers. A double-pincers movement could isolate your center unless you've inflicted so many casualties on the Americans that they simply don't have the steam to finish the job.

Fortunately for the Germans, the northern and southern flanks are also suitable for the defender's armor. There is level ground north of the central group of buildings



Figure 8-29. Suggested German deployment for Hill 192, Battle Seven.



and a road the angles southeast from the center to the bottom of the map.

Your ace in the hole is your armor, and you'll usually draw a powerful group. A typical variant might be a Panther, a Marder, a *Kubelwagen*, and either a light AT gun or a 75mm IG weapon. Since the Americans usually start this battle with only two tanks (a Sherman and an M-10 are the most common allotment), you should be able to handle anything they throw at you.

Keep your armor well back at the start, in reserve, until either your center starts to feel pressure or you determine that the attackers have shot their bolt and are wavering. You can advance the Panther fearlessly; the attackers usually only have one Bazooka, and a head-on shot from that weapon will simply bounce off a Panther's armor. The main danger is the American M10, which *can* destroy a Panther. But if you wait until your antitank weapons have dealt with that vehicle, you can more or less mop up the field.

American Tactics

This battle is grim and can easily turn into a disaster. We suggest you simply abort and restart until you get at least one Bazooka team, or set the Americans to Strong. You will most likely be facing a Panther (conceivably a Panther and a MK IV!), and your only hope of knocking out a Panther is to score a hit on the more weakly armored sides or rear.

If you keep your armor hidden until the Germans show theirs, and if your mortars inflict enough damage on the defender's infantry, you might get lucky and take out the Panther. Under no circumstances should you try a general advance until you know that weapon is no longer operational. If you succeed, and if your mortars have sufficiently softened up the buildings in the German center, you might consider a double-envelopment of those buildings.

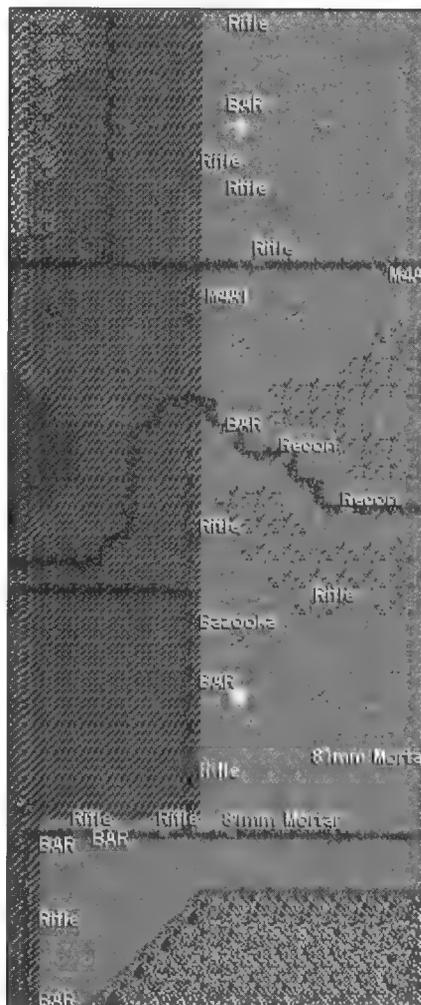


Figure 8-30. Suggested American deployment for Hill 192, Battle Seven.

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But the odds against you are long. If that Panther gets loose among your infantry, you'll face a slaughter (this is one of those times when you'll wish the Americans had *Panzerfausts*). And if you're playing the Campaign version, that could mean a major setback. If you find yourself in that position, the wisest course of action would be to disengage and try again. Otherwise, you might be faced with the spectacle of a Panther running amok in your lines, squashing your veteran troops like so many waterbugs—not a pretty sight.

Hill 192, Battle Eight

Victory Locations

Site	Point Value	Site	Point Value
Auberge Fontaine	30	Cooper	30
Jump Point 1	4	Jump Point 2	4
South Guest House	20	North Guest House	20
Wine Shop	20	Inn Keeper's House	20
Storage	20	Phase Line 1A	20
Phase Line 1B	20		

Order of Battle Variants for Hill 192, Battle Eight

American Order of Battle

Rifle Squad (5 squads)

BAR and Half Team or
Two Light Rifle or
BAR and Light Rifle or
Two Light Rifle and Recon

Support Squad

Two 60mm Mortar .30-cal. MG and Bazooka or
60mm Mortar and Two .30-cal. MG or
81mm Mortar .50-cal. MG and Bazooka or
Two 81mm Mortar and Bazooka or
Two 81mm Mortar .50-cal. MG and Bazooka

German Order of Battle

Rifle Squad

Bolt Rifle or
Bolt Rifle and Half Team or
MG 42 and Half Team or
MG 42 Half Team and PzS

Rifle Squad (2 squads)

MG 42 Bolt Rifle and Recon or
MG 42 Bolt Rifle and PzS or
MG 42 Bolt Rifle Recon and PzS

Support Squad

80mm Mortar or
MG 42 and Two Sniper or
MG 42 Sniper and PzS or
80mm Mortar Sniper and PzS

CHAPTER EIGHT: HILL 192



American Order of Battle, continued

Rifle Squad

BAR Light Rifle and Recon or
BAR and Light Rifle or
Two Light Rifle and Recon or
Two BAR and Bazooka or
BAR Two Light Rifle Recon and Bazooka

Armor Squad

Two Sherman or
Sherman 76 and Stuart or
Sherman and M10 or
Sherman 76 and M10 or
Two Sherman and M10

German Order of Battle, continued

Armor Squad

Panther and Marder or
Mark IV and Marder or
Two Stug IIIG and Marder or
Tiger and Panther

Miscellaneous Squad

Two Sniper or
Sniper or
Kubelwagen

Rifle Squad

MG 42 Bolt Rifle and PzS or
MG 42 Bolt Rifle and Recon or
Two Sturm Recon and PzS or
Sturm Bolt Rifle Recon and PzS

Gun Squad

75mm IG or
50mm AT Gun or
50mm AT Gun and PzS or
50mm AT Gun and 75mm IG or
75mm AT Gun

German Tactics

This is the Germans' last stand outside of St. Lo, and they're appropriately equipped with at least two tanks and plenty of antitank firepower. Moreover, their position is very strong defensively.

In order to make use of their armor, the Americans will have to expose their vehicles before you do. If their tanks appear in the field east of the gully, you can shower them with *Panzerschreck* rockets from Auberge Fontaine; if they appear on the road, you can usually get the drop on them with your armor.

It's possible for the German player to draw a magnificently powerful armored force of a Tiger and a Panther, both of which can outshoot any American tank used in the war. If you're fortunate enough to get both of these, you're already halfway to a decisive victory; simply pick off the attackers' tanks and then methodically wipe out his infantry. You'll soon learn why the Tiger was so feared by those who did battle with it. You'll also learn what that steel monster's weaknesses were: it is incredibly slow and ponderous, and its maneuverability in the hedgerow country is very restricted.

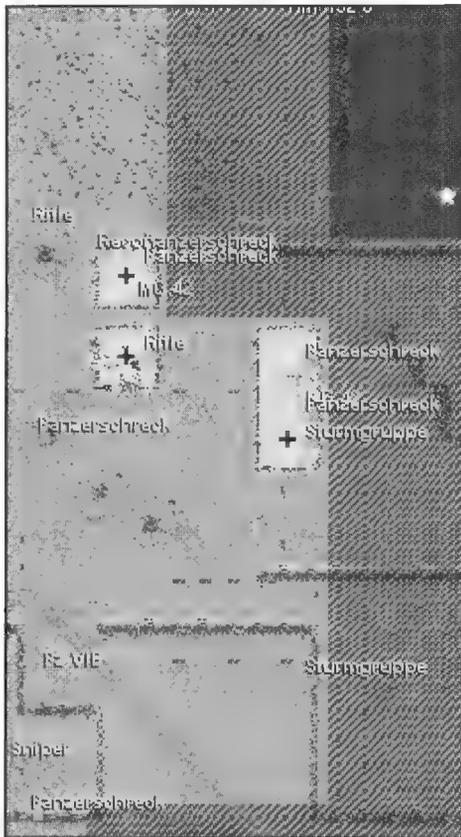


Figure 8-31. Suggested German deployment for Hill 192, Battle Eight.

American Tactics

Frankly, there's almost no chance the American side can win this battle without requisitioning extra strength from the Custom menu. The German position is just too strong, and without massive artillery support (which is outside the scope of the game), only incredible good luck will bring you victory on the Normal setting.

To begin with, there aren't many places where you can set up your armor in safety and still be able to make use of it. Without armor support, your infantry will be hacked to pieces, but if you put your tanks up forward to help the infantry, you'll probably lose them in the first 60 seconds of the battle.

Secondly, the German-held buildings in the center of the map are perfectly situated for mutual fire support, and they fairly bristle with MGs and hand-held antitank weapons. The linchpin of the complex, Auberge Fontaine, is so ruggedly built that it shrugs off mortar shells like raindrops: we fired 45 rounds at it in one battle and only wounded a couple of the defenders.

Thirdly, that deep-looking gully that meanders up from the southeast isn't nearly as protective as it looks. You'll learn that the first time you try to sneak a couple of infantry teams toward Auberge Fontaine, using the ditch for cover.

So go ahead: go to the Custom menu and set the American side to Strong. America is, after all, the Arsenal of Democracy, and the national debt won't be seriously affected if you give yourself a third tank or an extra mortar. This battle is so tough, in fact, that we can't conceive of a real commander ordering his men to attack such a position without first requisitioning every tank, machine gun, and mortar tube he can get his mitts on.

That said, however, we eventually *did* find a way to crack the German defenses. We even did it a few times on the Normal variant, but only at a very



high cost. Every time we tried leading with our tanks, we got clobbered. After a number of humbling defeats, we began to see a pattern: maybe the trick in this battle is not to lead with your armor at all, but to rely on a single massive infantry attack delivered through the dense woods above the North Guest House—the one comparatively vulnerable place in the whole German setup.

First, of course, we laid down the heaviest possible smoke screen in the clearing above Auberge Fontaine. Then, we rushed fully three-fourths of our infantry from the hedgerow north of Auberge Fontaine into the trees. Once we had crept to the southern edge of the woods, we switched mortars and tanks to suppressive fire with HE, instructed one BAR team to fire at the North Guest House, and then charged the building at close range.

There was fierce fighting inside, and the AI rushed several German teams to counterattack, but by that time we were able to defend the building in strength. Now, when the computer's attention was focused elsewhere, we moved our armor forward in the field north of Auberge Fontaine and on the road near the Wine Shop. We were able to catch several German armored units from behind and either destroy or immobilize them. Our men seemed to take heart at this point and fought with renewed vigor.

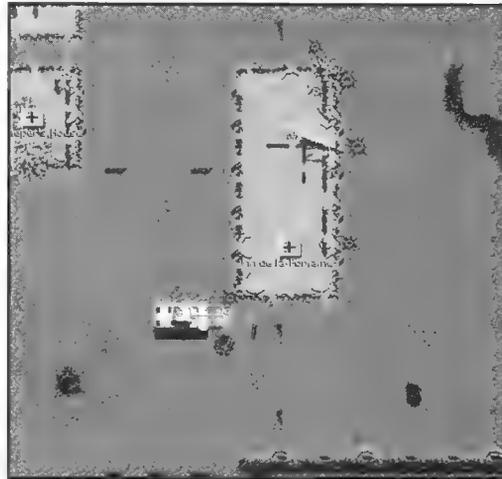


Figure 8-32. *The key to the German defenses is Auberge Fontaine; backed up by a Panther tank, it's virtually impregnable.*

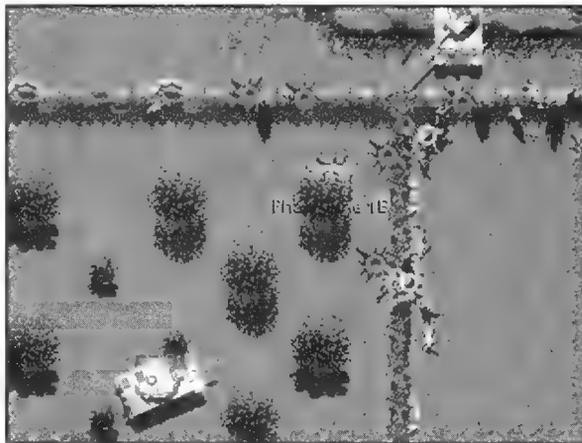


Figure 8-33. *A Panther and a Tiger on the prowl—a nearly unbeatable combination! You'll probably also draw a Kubelwagen, and you can actually make use of it in this battle by sneaking it through the woods north of the North Guest House and having it strafe the American infantry sheltering on the edge of the tree line.*

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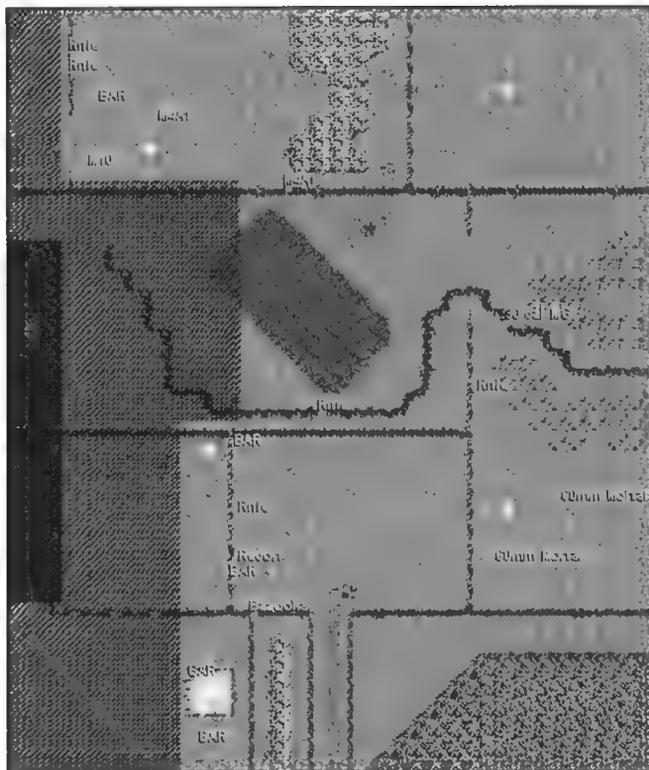


Figure 8-34. Suggested American deployment for Hill 192, Battle Eight (reflecting Strong American Strength setting).

Once the teams in the North Guest House had caught their breath, we assaulted the Innkeeper's House and took it—and at that point the whole tightly interlocked German defense began to crumble. Both sides Force Morale bars turned brown for a time, but a steady pounding from our mortars kept sapping the Germans' strength until they went into the red.

Of several tactical plans we tested that brought us victories, this is the one we are proudest of, coming, as it did, after a series of humiliating defeats. Once again, the lowly infantry proved itself to be the decisive arm.

Chapter Nine



ST. LO

On July 9, 1944, the newly arrived American 35th Division entered the Normandy lines on the right flank of the 29th Division. General Gerhardt was delighted; the arrival of a fresh division shortened the 29th's front from five miles to two and a half, allowing Gerhardt to plan his attack on St. Lo with his maximum force concentrated on a smaller front.

When the 29th contracted its front on July 9, its men bid farewell to the German 352nd Division, whose shattered remnants now fell within the 35th Division's area of operations. From now on, the 29th would be fighting mainly against the elite German 3rd Parachute Division—a much tougher opponent.

Gerhardt planned to open his offensive against St. Lo on July 11, with the 115th Regiment on the right and the 116th on the left; the battle-weary 175th Regiment was placed in reserve, near the forest of the Boi de Bretel. The plan called for a massive frontal attack on the German 3rd Division's front, designed to cause a major breakthrough. Once that had been accomplished, the 29th's regiments were to execute a 90-degree turn to the right (west) and drive straight for St. Lo, only three miles distant.

True to its reputation for aggressiveness, however, the German unit surprised the Americans by launching a battalion-strength spoiling attack at 0130 on July 11. The paratroopers came storming out of the darkness, using hedgerows for cover, firing their "*Schmeisers*" and hurling potato-masher grenades into the foxholes of 1st Battalion, 115th Regiment. It was a wild melee, fought at point-blank range and often hand-to-hand. (The forward observer of the 110th Field Artillery slew his erstwhile German captor with a hunting knife he had concealed in his leggings.)

This audacious German attack inflicted 150 casualties on the 1st Battalion of the 115th Regiment and left its men exhausted. The battalion commander, Major Glover Johns, made desperate efforts to get his men ready for the 0600 jump-off time for the Division's attack, but it was not until after 1000 that Johns' men were in any shape to advance.

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General Gerhardt wasn't going to let the German attack disrupt his timetable. The remaining battalions of the 115th and all the battalions of the 116th jumped off on schedule, behind a tremendous hour-long artillery bombardment. It was the 116th (the so-called "Stonewall Brigade") that cracked the German line, but the cost was fearful. Against the most formidable kind of *bocage* defenses, the Stonewallers advanced 500 yards in five hours. By 1100, the three rifle companies leading the attack were down to about 60 men apiece, less than half their normal complement.

Then the German defense seemed to suddenly evaporate. Although the men of the 116th did not know it, the reason was that elements of the 2nd Division, on their left, had seized the heights of Hill 192, rendering the whole German line east of St. Lo untenable. German losses, too, had been staggering. When the commander of the 9th Parachute Regiment, Major Kurt Stephani, learned the true extent of his unit's casualties, he broke down and wept. (Remember that in *Close Combat*, you get to fight both battles. Hill 192 is covered in Chapter 8, and you fight it as the 29th, before getting to the St. Lo set of battles. In real history, the 29th is engaging the Germans near St. Lo while the 2nd Division is attacking Hill 192.)

As the day waned, the 116th Regiment advanced cautiously along the crest of Martinville Ridge, a thin finger of high ground extending from Hill 192 in the direction of St. Lo. Its objective was the village of Martinville, which lay at the western end of the ridge, only a mile and a half from St. Lo. Gerhardt kept urging the regiment to push on, but after the kind of fighting its men had endured, they didn't have much push left.

When they halted and dug in for the night, they were still 1000 yards short of Martinville.

The 115th Regiment started late, had insufficient armor support, and made much less progress than the 116th. Blocking the 115th's route to St. Lo was Hill 122, a 300-foot-high elevation that was the key to the town's defenses. Gerhardt considered the hill too strongly defended for a direct assault, especially in view of how shaky the 115th's morale had become.

Gerhardt's plan was to bypass the hill altogether and launch a lightning-fast attack on St. Lo from the east, along the Bayeaux-St. Lo highway, with two battalions of the 116th. The bulk of Martinville ridge would shield them from the German artillery observers on Hill 122. Unfortunately, there were other German observers on high ground south of St. Lo who quickly figured out what was going on and responded accordingly.

All during the day of July 12th, the struggling battalions of the 29th were subjected to punishing artillery fire. On the division's far right, a battalion of

CHAPTER NINE: ST. LO



the 115th entered the sinisterly named French village Bourg d'Enfer ("Market Town of Hell") and were stopped cold by curtains of mortar fire, followed by a ferocious German counterattack that ejected the battalion and hurled it back to its starting point.

General Gerhardt promptly sacked the battalion's commander and, in a state of murderous frustration, planned an all-out attack on July 13, figuring that the Germans would break before the 29th ran out of men. The attack would be preceded by massive air strikes.

But the fickle Normandy weather forced cancellation of the aerial bombardment. Gerhardt pressed the attack anyway, but despite heroic efforts, the 29th's regiments gained only a few hundred yards at a cost of more than 200 casualties.

Even Gerhardt knew his men were temporarily finished; he gave them the 14th off and toured the front line in his Jeep, thanking the men for their efforts and assuring them that the "Krauts" were in worse shape than they were. Gerhardt's superior was Major General Charles Corlett, commander of XIX Corps; to give Gerhardt some room, Corlett ordered his only reserve regiment, the 134th Infantry of the 35th Division, into the line with orders to take Hill 122 at any cost. This restructuring allowed Gerhardt to concentrate the full strength of the 29th Division on the capture of St. Lo.

There was no room for maneuvering; the division would simply have to push forward and shoot its way into the city. The offensive began as scheduled on July 15, but it was soon apparent that the Germans were as full of fight as ever. Again, the 29th's battalions measured their advances in yards with the single exception of the 1st Battalion, 116th Regiment, which captured the whole of Martinville ridge.

By the end of July 16th, the 29th Division was a burned-out shell of the unit that had landed at Omaha Beach. Companies were reduced to the size of platoons, and platoons to the size of squads.

But Gerhardt had taken a close look at the increasing number of German prisoners and drawn a typically optimistic conclusion: these men were even hungrier and more exhausted than his own.

So the 29th Division attacked once more, on July 17th. Gerhardt held nothing back: all nine battalions were in the line, and there was nothing in reserve. "We're going to throw the book at them," he informed his staff.

In some sectors, the men were instructed to advance silently, hoping to achieve by surprise what they had not been able to accomplish with brute force. For most of the men involved, it was the first and only time they used

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their bayonets during the whole European campaign. Grim and deadly work it proved to be, but it succeeded in breaking the forward crust of the German line.

For the first time in its attack on St. Lo, the 29th Division received massive and accurate air support. The fighter-bombers broke up several German counterattacks, and numerous German soldiers ran toward American lines waving white flags, preferring to surrender rather than face the devastating aerial onslaught.

While his infantry units were slowly advancing toward St. Lo, Gerhardt formed an all-mechanized task force ("Task Force C," named after the 29th's most popular officer, Brigadier General Norman Cota) and was holding it back for the final dash into the town itself.

On the morning of July 18th, Gerhardt was delighted by reports that his battalions were making steady progress against only sporadic German resistance, so he unleashed General Cota's impromptu armored column. When Cota's men arrived at the brow of a hill overlooking St. Lo at a distance of 1000 yards, they were astounded at the sight of a desolate heap of rubble. *This* was what they had been fighting so desperately hard for?

With the armored cars and machine gun mounting jeeps of the 29th Division's Recon Company leading the attack, Cota's force swept into town with cavalry-charge elan. They first encountered serious resistance at a cemetery on the northern edge of town, but the combination of .50-caliber MG and 75mm tank fire proved too much for the defenders.

After breaking out of the cemetery, Cota's column roared through the rubble-strewn streets, troops whooping like cowboys and responding to German sniper rounds with tremendous volumes of retaliatory fire.

An hour or so later, a battalion of the 115th Regiment followed Cota's soldiers into town and set up defensive positions in the ruins, in anticipation of the customary German counterattacks.

But there weren't any. Although the town was vigorously shelled by German 88s for a few hours, a counterattack never came. Unbeknownst to the Americans, the commander of the German 7th Army had decided on the night of July 17th that both the 352nd Division and the 3rd Parachute Division were too decimated to hold the town and had ordered their withdrawal. The spotty resistance encountered by the 29th in the hills east of St. Lo had been the work of delaying detachments, and the Germans who fought in the town itself were disorganized stragglers more interested in fleeing the place than in offering serious resistance.



General Gerhardt sent the following message to General Corlett: “I have the honor to announce to the corps commander that Task Force C of the 29th Division has secured the city of St. Lo after 42 days of continuous combat from Omaha Beach to St. Lo.”

American Objectives

At last, the goal is within reach: St. Lo, a town whose prewar population was only about 12,000 and whose only military significance was the network of roads that intersected there. This is the climax of the Campaign, both historically and in Close Combat.

Close Combat tweaks with history a bit in this Operation by assuming that the Germans had both the will and the resources to mount a serious defense of the town. Your objective is brutally simple: wrest control of the town from the enemy. You’ll find yourself engaged in a very different sort of fighting in these battles; there’s little room to maneuver and few opportunities for satisfying flanking attacks. It’s house-to-house, room-by-room street fighting, with tanks reduced to the role of mobile artillery and the advantage usually lying with the defender.

You’ll have to develop new tactics and be concerned with seizing one objective at a time. This is warfare of attrition—and the Germans were masters at it. Once they entered the town, it took the real 29th Division less than a day to secure St. Lo. In Close Combat’s simulation of the battle, that’s an impossibility. You won’t be skirmishing with forlorn stragglers, but with fanatically determined defenders who know that every day of time they can buy will give the *Wehrmacht* more time to reorganize and reinforce to meet the inevitable American breakout attempt.

German Objectives

St. Lo has symbolic as well as practical meaning to the German campaign in Normandy. Once the town is in American hands, the road net that passes through its rubble-strewn streets will give the Americans the elbow room they need to make full use of their huge numbers of tanks. Holding or losing St. Lo is a watershed for the entire German effort in Western Europe.

For the German player, the rallying cry should be, “They shall not pass!” The game will give you significant resources to mount a steadfast, block-by-block defense of the town. Every day you deny possession of St. Lo to the



enemy is one more day the German Army has to reform, reinforce, and dig in to prevent the American breakout into the open, rolling fields of central France.

The defensive tactics you perfected during the hedgerow battles must be refined and skillfully adapted to meet the exigencies of urban warfare. Mere courage won't be enough, nor will simple stubbornness. You must make sudden, sharp counterattacks whenever you sense an opportunity, to keep the Americans off balance and drive down their morale. And above all else, you must exact the highest possible toll in blood. After 42 days of continuous combat since D-Day, the morale of the 29th Division has become brittle, and the performance of some American units will reflect that cumulative stress.

In a Campaign game, this is where your most experienced surviving veterans can play a decisive role. Be judicious in placing them and take care to preserve their lives. Regardless of what happened in actual history, the German-side player *can* win the Battle of St. Lo, if he or she mounts a skillful and tenacious defense.

St. Lo, Battle One

Victory Locations

Site	Point Value	Site	Point Value
Jump Point 1A	4	Jump Point 1B	4
Phase Line 1A	20	Phase Line 1B	20
Cemetery	20	Supply Dump 1	20
E. de la St-Croix	20	Livery	20
Supply Dump 2	10	Mayor's Home	10
Office Building	10	Cooper	10
Apartment Building	10	Notre Dame	10
Warehouse	10		

Order of Battle Variants for St. Lo, Battle One

American Order of Battle

Rifle Squad

BAR Assault Recon and Bazooka or
 BAR Two Light Rifle Recon and Bazooka or
 Two BAR Recon and Bazooka

German Order of Battle

Rifle Squad

Bolt Rifle or
 Bolt Rifle and Half Team or
 MG 42 and Half Team or
 MG 42 Half Team and PzS

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American Order of Battle, continued

Rifle Squad (3 squads)

BAR and Half Team or
BAR and Light Rifle or
Two Light Rifle and Recon

Armor Squad

Sherman and M10 or
Sherman 76 and Stuart or
Two Sherman or
Sherman 76 and M10

Rifle Squad

BAR Two Light Rifle Recon and Bazooka or
BAR Light Rifle and Recon or
Two BAR and Bazooka or
Two BAR Recon and Bazooka or
BAR Assault Recon and Bazooka

Armor Squad

Sherman 76 and M10 or
Sherman and M10 or
Two Sherman or
Two Sherman and M10 or
Two Sherman 76

Gun Squad

57mm AT Gun and Bazooka or
57mm AT Gun or
Two Bazooka or
3-inch Howitzer or
57mm AT Gun

Miscellaneous Squad

Recon or
Two Sniper or
Recon and Sniper or
Jeep

German Order of Battle, continued

Rifle Squad

MG 42 Half Team and PzS or
MG 42 and Half Team or
MG 42 and Bolt Rifle or

Rifle Squad

MG 42 or
MG 42 and Sniper or
80mm Mortar

Support Squad

MG 42 and 80mm Mortar or
MG 42 and Two PzS or
Two MG 42 and Two PzS or
Two 80mm Mortar and PzS

Armor Squad

Stug IIIG and Marder or
Mark IV or
Marder and SDKfz 232 or
Mark IV and SDKfz 232 or
Marder and Mark III

Gun Squad

75mm AT Gun or
50mm AT Gun and 75mm IG or
75mm IG or
Flak 88 or
Two 50mm AT Gun

Miscellaneous Squad

Kubelwagen or
Two Sniper or
Kubelwagen and Sniper or
SDKfz 250

Miscellaneous Squad

Sniper or
Two Sniper or
Kubelwagen



Figure 9-2. Suggested German deployment for St. Lo, Battle One.

German Tactics

St. Lo was a big country town, really, rather than a city. But it's the only truly urban landscape in the game, and to succeed, the German defender needs to take advantage of the myriad defensive opportunities inherent in St. Lo's terrain.

When St. Lo Battle One is played as a stand-alone engagement rather than as part of the culminating act in a Campaign, the computer assigns quite a variety of units—enough to mount a concerted defense. A typical force might consist of one mortar, one Marder, one Stug, and two *Kubelwagens*, along with a parsimonious handful of Rifle, MG, and *Panzerschreck* teams. You'll probably also receive an antitank gun: a 50mm, a 75mm, or perhaps even an 88.

First of all, this is one battle in which the *Kubelwagen* comes into its

Tip: Zooming out to the *Farthest* zoom level cuts down on the time it takes to draw Fire lines for mortars because the screen doesn't have to scroll, but after doing so check to make sure the target marker is on the right spot.



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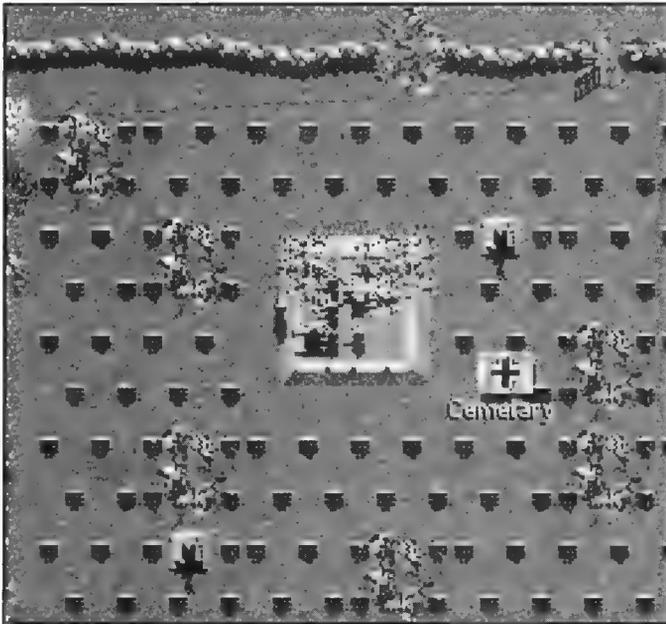


Figure 9-3. *The pillbox in the Cemetery renders the German right flank very strong indeed.*

Tip: Whatever type of antitank gun the German player draws in this battle, the ideal place for it is inside the pillbox in the Cemetery (place an MG 42 with it for protection against infantry assaults). You can anchor the entire German right on that one position.



own. The vehicles are fast and maneuverable, and the city terrain permits them to scoot around rapidly, dart out to fire a few bursts, and then vanish behind a building—only to emerge somewhere else a few minutes later. They can actually be very valuable assets in this battle. Put them in places where they can reach cover quickly—behind the Mayor's Home and behind the Livery, for example.

The computer sites your mortar far behind the front lines, usually somewhere near Notre Dame. Manually deploy it much closer—behind the Livery, for instance. This

battle tends to develop very rapidly, and if the mortar is far away on the left side of the screen, it'll take you longer to retarget.

There's one ideal spot for a Marder: just behind the stone wall at the northwest corner of the Cemetery. From there, you have a good field of fire at any oncoming American armor, without having to expose more than the nose of the Marder to counterfire. If you also

draw a Stug, place it in reserve behind the last of the six wooden buildings in the center of town—from there, you can bring it forward when you see where the enemy's armor is located.

CHAPTER NINE: ST. LO



As for the infantry and MG teams, spread them out as best you can. The stream bed south of the Mayor's Home is a good spot, along with the hedgerow near Phase Line 1A. The computer often tries to deploy a rifle team in the hedgerow north of that spot, but if you leave it there it'll be outflanked and cut to pieces.

At the start of the battle, issue a global Defend command and watch for a major American push from Jump Point 1B. In nearly all the games we played, the computer put at least three out of four American tanks either in the central fields east of Phase Line 1A or in the open terrain around Jump Point 1B, east of the Cemetery and north of the ruined church. But keep an eye on the field at the northeast corner of the map, just in case the Americans put a tank or two there (they usually draw four armor units in this battle).

Your armored unit near the Cemetery can probably get the drop on one or two enemy tanks before getting flamed; with luck and good timing, the Stug hidden behind the row of nameless wooden buildings can pick off another one before being spotted. The pillbox will serve as a steadfast anchor for your right flank. Use the *Kubelwagens* to skirmish with the American infantry in the center and up near the Mayor's Home.

Be advised, however, that even the greenest American units will attack with great energy in this battle because they know that once they take St. Lo, their days in the *bocage* will be over and they can take a real rest for the first time since D-Day. Their superior numbers will make it hard for the German defender to counter every threat, so you must give top priority to the most dangerous maneuvers. But if you stay calm and use your resources wisely, you should be able to score a Major German Victory, if not a decisive one.

American Tactics

St. Lo is the payoff for the entire grueling campaign, and you'll be given fairly strong assets with which to capture the town. A typical American allotment for this battle: three M4 Shermans, an M10, a pair of mortars, a couple of bazooka teams,

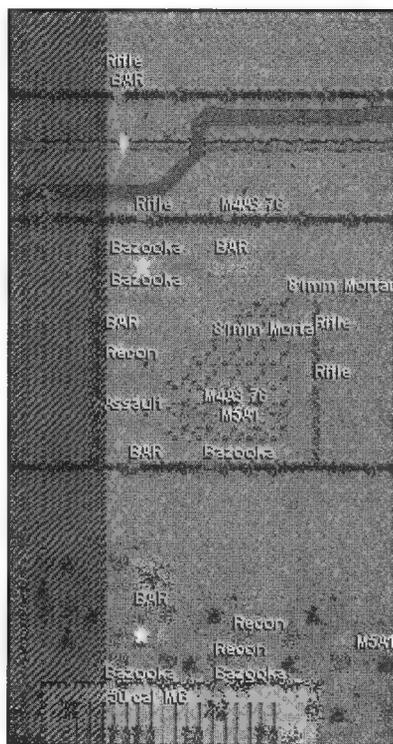


Figure 9-4. Suggested American deployment for St. Lo, Battle One.



Figure 9-5. *American armor can operate near the Cemetery, but on no account should it venture inside that location.*

and a lot of infantry. You may even get a heavy infantry team: an Assault team armed with high-explosive satchel charges. This specialized and very powerful unit will appear only in single battles, if you set the American strength to Strong or Very Strong, or in Campaigns in which the American side is not performing well—in a successful Campaign, you may never see one.

Do not open the battle with any of your armor in the open ground east of the Cemetery! There will almost certainly be either an antitank gun or a Marder positioned to deal with American armor in this area, and you could easily lose a tank within the first 30 seconds of fighting.

We enjoyed repeated success in this battle by placing one tank on the road parallel to the stream and the other three in the center of the map, behind the hedgerows east of Phase Line 1A. The German antitank guns or tanks deployed near the Cemetery cannot hit them there, and the Germans won't have enough manpower to stop a methodical, steamroller advance straight across the fields. Use smoke and leapfrog your teams forward in coordination with the tanks. Once your armor has advanced far enough to flank the Cemetery, turn south and advance to or through the breaks in the hedgerow, where you can engage the German armor at favorable odds.

The ruined church below Jump Point 1B is a good location for a heavy machine gun, should you draw one—its fire can help suppress the pillbox in the Cemetery. That's also a good starting location for your heavy infantry Assault unit.



Once your infantry reaches Phase Line 1A, you can angle their advance northwest or southeast if you want to; doing so will bring you within assault range of any German units in the Livery or the Mayor's Home. But we made better headway and lost fewer troops by driving straight into the center of town, into that string of six wooden buildings. The distances between them are small and can be covered in one quick rush. And the farther west you advance, the deeper you penetrate the German center, outflanking the stronger defenses on the northern and southern sides of the map. This will have a decidedly deleterious effect on the defenders' morale, and we scored either a major or a decisive victory whenever we employed this tactic.

St. Lo, Battle Two

Victory Locations

Site	Point Value	Site	Point Value
Jump Point 1A	2	Jump Point 1B	2
Phase Line 1A	4	Phase Line 1B	4
Cemetery	4	Supply Dump 1	20
E. de la St-Croix	20	Livery	10
Supply Dump 2	20	Mayor's Home	30
Office Building	20	Cooper	20
Apartment Building	20	Notre Dame	10
Warehouse	10		

Order of Battle Variants for St. Lo, Battle Two

American Order of Battle

Rifle Squad

BAR Assault Recon and Bazooka or
 BAR Two Light Rifle Recon and Bazooka or
 Two BAR Recon and Bazooka

Rifle Squad (3 squads)

BAR and Half Team or
 Two Light Rifle or
 BAR and Light Rifle or
 Two Light Rifle and Recon

German Order of Battle

Rifle Squad

Bolt Rifle or
 Bolt Rifle and Half Team or
 MG 42 and Half Team or
 MG 42 Half Team and PzS

Rifle Squad

MG 42 Half Team and PzS or
 MG 42 and Bolt Rifle or
 MG 42 Bolt Rifle and PzS

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American Order of Battle, continued

Armor Squad

Sherman and M10 or
Sherman 76 and Stuart or
Two Sherman or
Sherman 76 and M10

Support Squad

Two 81mm Mortar .50-cal. MG and Bazooka or
Two 60mm Mortar .30-cal. MG and Bazooka or
Two 81mm Mortar and Bazooka

Rifle Squad

BAR Two Light Rifle Recon and Bazooka or
BAR Light Rifle and Recon or
Two BAR and Bazooka or
Two BAR Recon and Bazooka or
BAR Assault Recon and Bazooka

Armor Squad

Sherman 76 and M10 or
Sherman and M10 or
Two Sherman or
Two Sherman and M10 or
Two Sherman 76

Gun Squad

57mm AT Gun and Bazooka or
57mm AT Gun or
Two Bazooka or
3-inch Howitzer or
57mm AT Gun

Miscellaneous Squad

Recon or
Two Sniper or
Recon and Sniper or
Jeep

German Order of Battle, continued

Support Squad

MG 42 or
MG 42 and Sniper or
80mm Mortar

Support Squad

MG 42 and 80mm Mortar or
MG 42 and Two PzS or
Two MG 42 and Two PzS or
Two 80mm Mortar and PzS

Armor Squad

Stug IIIG and Marder or
Mark IV or
Marder and SDKfz 232 or
Mark IV and SDKfz 232 or
Marder and Mark III

Gun Squad

75mm AT Gun or
75mm IG or
50mm AT Gun and 75mm IG or
Flak 88 or
Two 50mm AT Gun

Miscellaneous Squad

Kubelwagen or
Two Sniper or
Kubelwagen and Sniper or
SDKfz 250

Miscellaneous Squad

Sniper or
Two Sniper or
Kubelwagen



German Tactics

In this battle, the Germans hold approximately the western half of the previous map: the Mayor's Home, three of the six wooden buildings in the center, E. de la St-Croix, and the unnamed stone building northwest of Supply Dump 1.

As in St. Lo, Battle One, the German Order of Battle will vary quite a bit from game to game, but it will always be fairly strong. A typical draw might be a Marder, a *Kubelwagen*, an SDKfz armored car, a mortar, a 75mm AT gun, a *Panzerschreck*, three MG 42 teams, along with three or four Rifle teams and a couple of Snipers.

The Americans cannot deploy their armor near E. de la St-Croix due to the built-up urban terrain, but you can expect to face five or six tanks or tank destroyers distributed rather evenly along Phase Line 1A. This means that, as limited as your resources are, you can't afford to leave any sector of your front unguarded.

Nevertheless, you have to take some chances. We deployed our Marder in the hedgerow due east of the Mayor's Home; it smoked a Stuart in the open field within the first few seconds of the battle. We were then able to advance it to the hedgerow extending east from the Mayor's Home, parallel to the stream, and it was able to destroy a Sherman and shoot up some infantry before being immobilized by a Bazooka shot.

Whether you draw a 75mm AT gun or an 88, you need to find a place where it's under cover but still has a broad field of fire. The Mayor's Home itself is as good a location as any on the map, but be sure to check the gun's line of sight (LOS) during deployment—the slightest misplacement can mean the difference between a blocked LOS and a deadly field of fire.

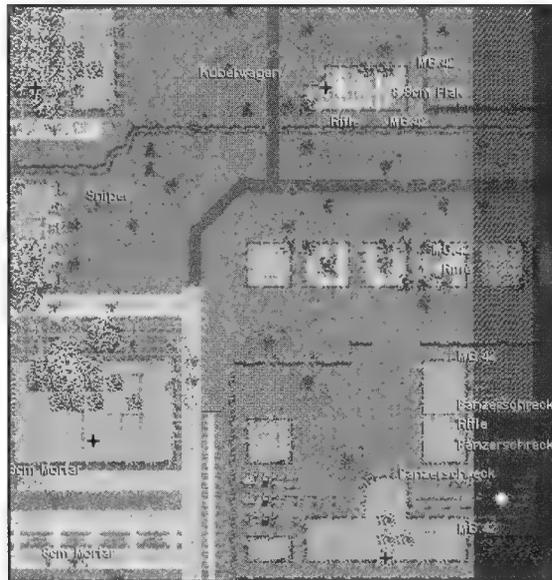


Figure 9-6. Suggested German deployment for St. Lo, Battle Two.

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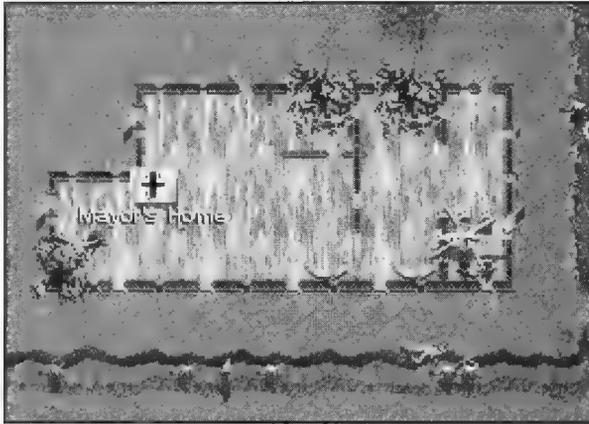


Figure 9-7. *The Mayor's Home is a good location for a German antitank gun.*

As for the armored car, keep it hidden until you've eliminated a substantial portion of the Americans' armor and then bring it forward cautiously to engage their infantry.

Put at least one MG team and one rifle team inside the nameless row of wooden buildings in the center (also a good start point for a *Panzerschreck*, if you draw one); do the same for the stone building northwest of the Livery. E. de la St-Croix can usually be defended adequately with one MG and a Sniper.

The Americans will open a strong attack all along their line, with tanks evenly distributed: usually two on their right flank (in the open terrain east of the Mayor's Home); one or two more in the center, east of the wooden buildings; and another near the Livery.

Within the first minute of combat, our 75mm had smoked a Sherman in the center hedgerow, our Marder had destroyed a Stuart in the field east of the Mayor's Home, and an M10 in front of the Livery caught a *Panzerschreck* rocket. The remaining American tanks were forced to keep their distance because of the antitank gun in the Mayor's Home, and their effectiveness was greatly reduced.

Tip: *A stationary tank can always shoot more accurately than a moving tank, even if the moving tank is equipped with a gyro-stabilizer.*



A strong infantry assault down the line of six wooden structures was stopped cold by our MG, aided by the 75mm cannon firing in an anti-personnel

role. The SDKfz moved up to fire on the strong American force in the Livery and was damaged by a Bazooka rocket from the Cemetary; it continued to fire, however, and effectively suppressed any American attempt to advance beyond the cover of the Livery.

Stymied in the center, the AI laid down smoke and tried an end run attack through the field east of the Mayor's Home. To counter that, we withdrew the



MG team from the stream bed and redeployed it inside the house itself.

On our southern flank, the MG team inside E. de la St-Croix—supported by a Sniper and by accurate mortar fire—held its own, killing several Americans who tried to rush its position.

After a few moments of bloody stalemate, the Americans' Force Morale went brown, and when the flanking attack on the Mayor's Home was repulsed, it went red. Results of this stubborn defense: a Decisive German Victory in which the attackers lost 50 men to our ten. It would be difficult to find a more vivid example of the defensive advantages of urban terrain.

American Tactics

As you might have gathered from reading "German Tactics" above, this is a tough battle for the attacker, despite the American superiority in numbers and firepower. After observing the Germans' victory, we chose to reject the concept of a broad, map-wide American attack. Instead, we fell back on the principle that the AI's defensive schemes are characterized by a certain brittleness—that a strong penetration anywhere along the German line tends to have a ripple effect everywhere by taking the initiative away from the computer. Hence, we elected to mass three tanks and fully half our infantry in the field east of the Mayor's Home, hoping to turn the German left and subsequently attack south, tackling the Germans' strongest positions from the side rather than head on.

Fairly strong forces were deployed along the hedgerow at Phase Line 1A and in the Livery, backed up by two tanks, to hold the enemy's attention.

Tip: *If you can't find armored targets for an antitank weapon, use it in an anti-personnel role. Try to save a few rounds in case enemy tanks appear at a critical point in the battle, though.*

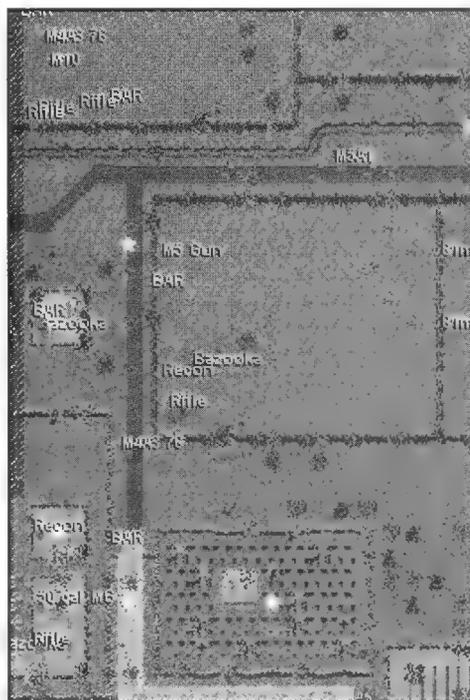


Figure 9-8. *Suggested American deployment for St. Lo, Battle Two.*

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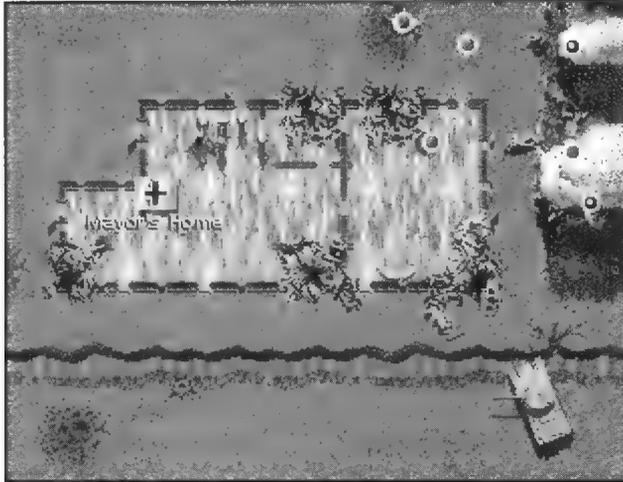


Figure 9-9. A strong attack on the Mayor's Home can give the Americans an opening to turn the German left flank.

The plan went like clockwork. First, we mounted a determined *bocage*-style attack on the hedgerow east of the Mayor's Home: lots of smoke, all the suppressive fire we could bring to bear, and a steady advance of infantry and tanks. Knowing how few infantry teams the Germans have in this battle, we assumed that we could overcome any garrison inside the Mayor's Home, and this proved to be the case, after a brief, sharp firefight.

With the Mayor's Home in our possession, we could now move our tanks south. We lost

one Sherman to either a *Panzerschreck* or a Marder, but our momentum was unstoppable, and the Germans could not redeploy without risking the integrity of their center and right. A doughty little *Kubelwagen* sortied out to strafe our advancing infantry, but our tanks knocked it out with their second shot. (Boy, do those little gun-carrying Volkswagens burn!)

By the time we had cleared out four of the six wooden buildings in the center of the map, the German Force Morale went into the red, giving us a Major American Victory.

St. Lo, Battle Three

Victory Locations

Site	Point Value	Site	Point Value
Jump Point 1A	2	Jump Point 1B	2
Phase Line 1A	4	Phase Line 1B	4
Cemetery	4	Supply Dump 1	10
E. de la St-Croix	10	Livery	4
Supply Dump 2	10	Mayor's Home	10
Office Building	20	Cooper	20
Apartment Building	30	Notre Dame	30
Warehouse	30		

CHAPTER NINE: ST. LO



Order of Battle Variants for St. Lo, Battle Three

American Order of Battle

Rifle Squad

BAR Assault Recon and Bazooka or
BAR Two Light Rifle Recon and Bazooka or
Two BAR Recon and Bazooka

Rifle Squad (3 squads)

BAR and Half Team or
Two Light Rifle or
BAR and Light Rifle or
Two Light Rifle and Recon

Armor Squad

Sherman and M10 or
Sherman 76 and Stuart or
Two Sherman or
Sherman 76 and M10

Support Squad

Two 81mm Mortar .50-cal. MG and Bazooka or
Two 60mm Mortar .30-cal. MG and Bazooka or
Two 81mm Mortar and Bazooka

Rifle Squad

BAR Two Light Rifle Recon and Bazooka or
BAR Light Rifle and Recon or
Two BAR and Bazooka or
Two BAR Recon and Bazooka or
BAR Assault Recon and Bazooka

Armor Squad

Sherman 76 and M10 or
Sherman and M10 or
Two Sherman or
Two Sherman and M10 or
Two Sherman 76

German Order of Battle

Rifle Squad

Bolt Rifle or
Bolt Rifle and Half Team or
MG 42 and Half Team or
MG 42 Half Team and PzS

Rifle Squad

MG 42 Half Team and PzS or
MG 42 and Half Team or
MG 42 and Bolt Rifle

Support Squad

MG 42 or
MG 42 and Sniper or
80mm Mortar

Support Squad

MG 42 and 80mm Mortar or
MG 42 and Two PzS or
Two MG 42 and Two PzS or
Two 80mm Mortar and PzS

Armor Squad

Stug IIIG and Marder or
Mark IV or
Marder and SDKfz 232 or
Mark IV and SDKfz 232 or
Marder and Mark III

Gun Squad

75mm AT Gun or
75mm IG or
50mm AT Gun and 75mm IG or
Flak 88 or
Two 50mm AT Gun

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American Order of Battle, continued

Gun Squad

57mm AT Gun and Bazooka or
57mm AT Gun or
Two Bazooka or
3-inch Howitzer or
57mm AT Gun

Miscellaneous Squad

Recon or
Two Sniper or
Recon and Sniper or
Jeep

German Order of Battle, continued

Miscellaneous Squad

Kubelwagen or
Two Sniper or
Kubelwagen and Sniper or
SDKfz 250

Miscellaneous Squad

Sniper or
Two Sniper or
Kubelwagen

German Tactics

At the start of this battle, all that remains in German hands is the western third of the map. They control the Cooper, Warehouse, Apartment Building, Notre Dame, part of the Office Building, and a small park-like enclave in the southwest corner of the map. It's backs-to-the-wall time for the German defenders.

By far the most important unit available to the defenders is an artillery piece: you have about a 50-50 chance of drawing an 88. If you don't get the 88, you'll receive a 75mm AT gun, or a light AT gun and an Infantry Gun. These weapons are the spine of the defense.

You will also draw enough armor to mount a *serious* counter attack, including a 20 percent chance of a Panther or a MK IV tank in addition to the usual random assortment of Stugs and Marders.

The computer often positions the 88 in the center of the German line, behind the heaps of rubble in the Office Building. If you don't redeploy it, you'll discover to your chagrin that the rubble severely restricts the gun's field of

fire. After many experiments, we concluded that the best place to deploy your heaviest gun is the southeast corner of the Cooper; from there it can cover virtually your entire left flank.

Deploy a Rifle team and a *Panzerschreck* in the Office Building, as far forward as you can. As soon as the game begins, hustle them up to the eastern

Warning! *All those piles of rubble can spoil your artillery's fields of fire. The German player may be better off deploying his heaviest gun in the Cooper, where it can at least cover his left flank.*





side of the building, which is fortified with sandbags—from the rear of the building, they can't shoot at anything.

Because the AI shows a marked propensity for positioning two or three American tanks behind the northwest corner of the stone wall surrounding E. de la St-Croix, you need to have that *Panzerschreck* at the front of the Office Building.

You may also draw a Sniper or two. If so, find a good pile of rubble either in the Cooper or north of the Office so they can pick off individual American soldiers while keeping their own locations hidden for as long as possible.

With an artillery piece in the Cooper and a *Panzerschreck* in the Office Building, we were usually able to destroy three out of four American armored units early in the game—the 88 in particular is deadly accurate and powerful enough to destroy anything it hits with one shot.

Movement is very restricted for your armored units. A good starting location for them is the park-like area in the southwest corner of the map—you can bring the armor forward once you have a visual fix on the Americans' vehicles.

Without their armored support, the American infantry is fairly easy prey for your MG 42s and mortars. Once you've knocked out at least three-fourths of the enemy's tanks, bring your own armor forward and open fire against infantry sheltering in buildings. Even the lowly *Kubelwagen* can lend a hand. Watch out for Bazookas, though, at least one of which will probably be deployed in one of the nameless stone buildings west of E. de la St-Croix.

If the German player can neutralize all or most of the attackers' armor early in the battle, the available machine guns and mortars will usually demoralize the American infantry enough to bring about a victory. The key is the artillery: position it well and try to nail the attackers' armor as early in the battle as possible.

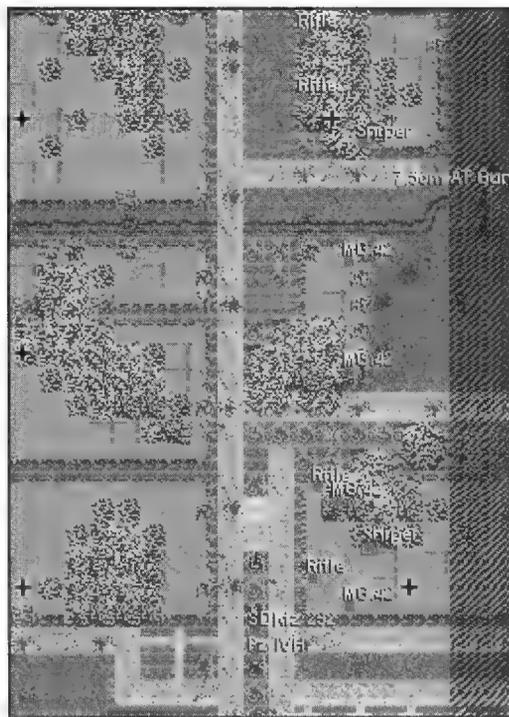


Figure 9-10. Suggested German deployment for St. Lo, Battle Three.

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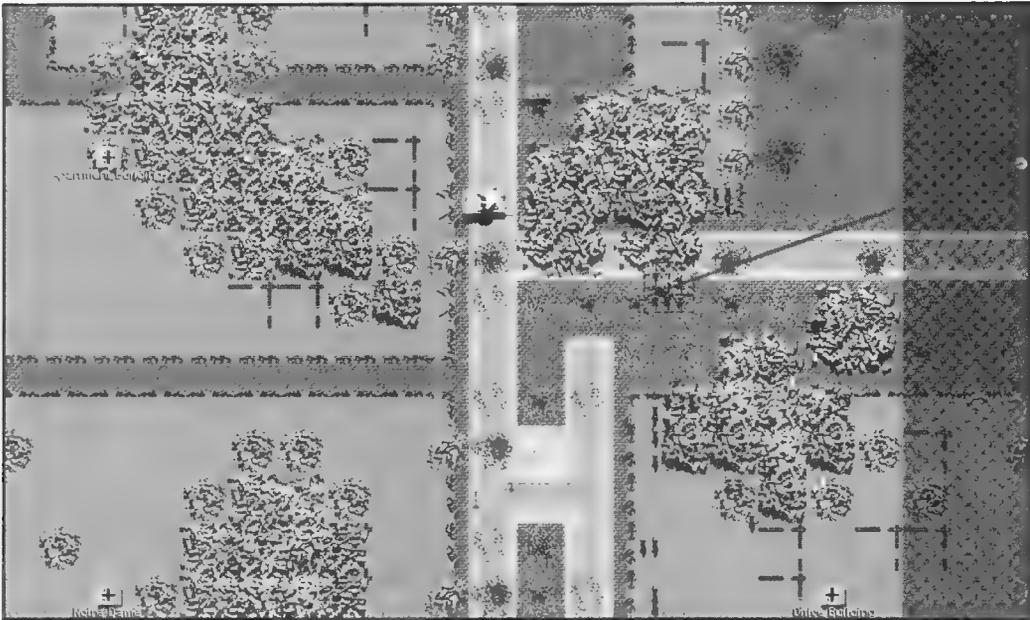


Figure 9-11. Check line of sight when deploying your heaviest gun—rubble piles offer good cover, but they can severely restrict fields of fire.

American Tactics

Piece of cake. Put a machine gun in one of the stone buildings west of E. de la St-Croix, flesh out your left (southern) flank with a couple of BAR teams, put three of your tanks behind the stone wall surrounding that location, garrison the westernmost of the six anonymous wooden buildings, and then mass everything else around the Mayor's Home.

The Cooper and Warehouse are detached from the rest of the German line by the stream. True, it can be crossed, but not quickly or easily. Those two objectives are ripe for the taking. If you capture that entire section of town, you outflank the whole German position.

Lay down a nice, thick, smoke screen between the Office Building and the bridge below the Mayor's Home, and then hit the Cooper with everything you've got (a Stuart light tank is ideal in this role). You'll probably overrun that position without much difficulty; in one battle, we overran the 88 before it could get off more than three or four shots.

We also overwhelmed the German mortars positioned behind the Warehouse—a rare and deeply gratifying occurrence. Once the Cooper and

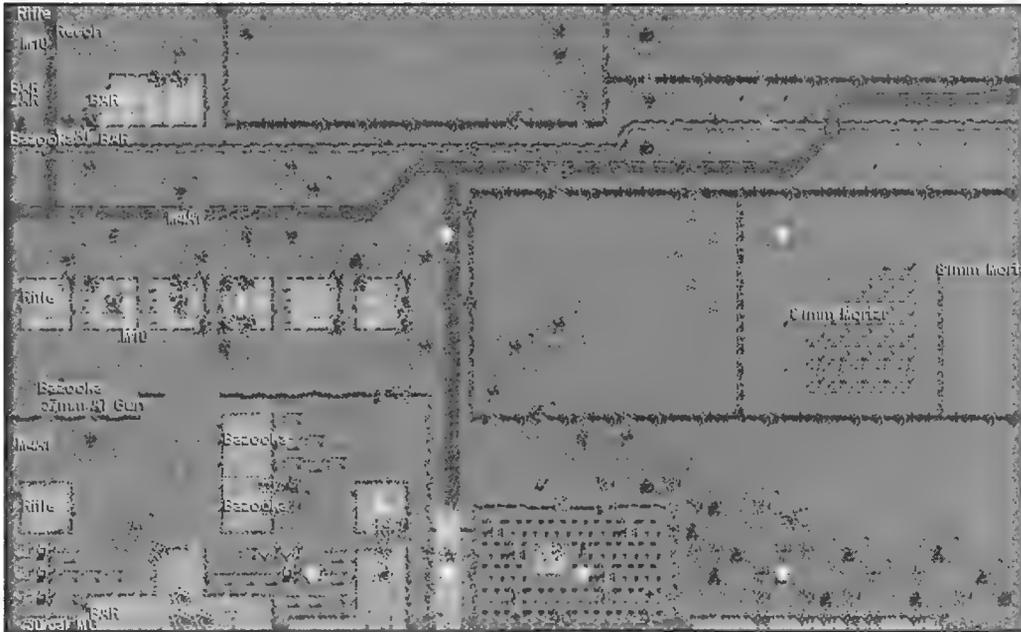


Figure 9-12. Suggested American deployment for St. Lo, Battle Three.

Warehouse are secure, just keep driving south and step up the pressure on the German right from your tanks in the vicinity of Supply Dump 1. Caught between the proverbial rock and a hard place, the Germans will soon be routed, leaving you in possession of half the town.

These tactics worked every time we tried them; few victories were sweeter or simpler. Of course, all of the above optimism is based on the assumption that the Germans do not have a Panther tank (there's only a one-in-five chance that they do). If you do encounter this fearsome engine of war, don't panic. Gang up on it from the sides (even better from behind), where its armor is thin—don't ever try to engage it head-on! Bazooka rockets will bounce off its turret like spitballs, but a close-range shot from the side can immobilize a Panther and turn it into easy prey. The Panther is formidable, yes, but not invincible.

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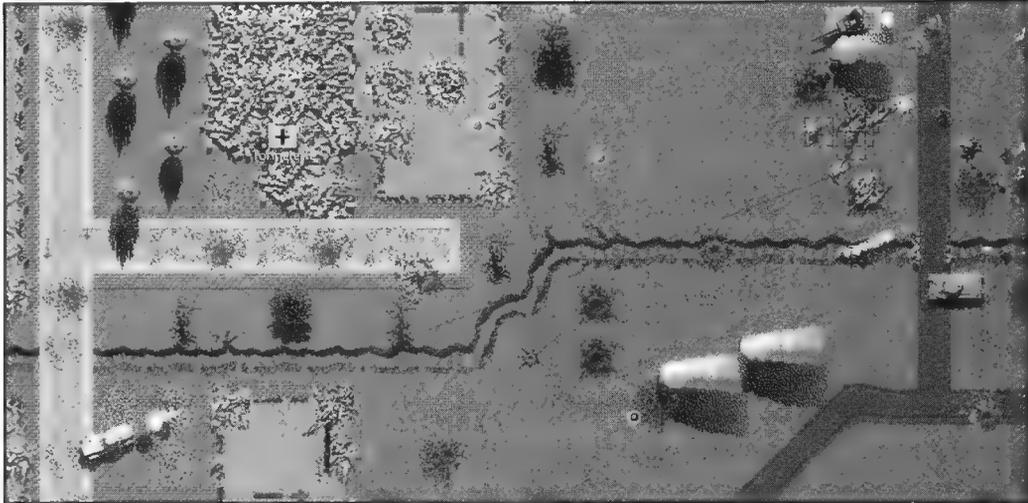


Figure 9-13. A good American tactic in this battle is to seize the Cooper and Warehouse first and then advance south.

St. Lo, Battle Four

Victory Locations

Site	Point Value	Site	Point Value
E. de la St-Croix	20	Town Hall	20
Supply Dump 1	20	Cemetery	20
Saddlemaker	20	Hotel	10
Supply Dump 2	10	Seminary	10
Apartment Building	10	Notre Dame	10
Police Station	10	Champ de Mars	10
Dock Office	10	Port Warehouse	10

Order of Battle Variants for St. Lo, Battle Four

American Order of Battle

Rifle Squad

- BAR Assault Recon and Bazooka or
- BAR Two Light Rifle Recon and Bazooka or
- Two BAR Recon and Bazooka

German Order of Battle

Rifle Squad

- Bolt Rifle or
- Bolt Rifle and Half Team or
- MG 42 and Half Team or
- MG 42 Half Team and PzS

CHAPTER NINE: ST. LO



American Order of Battle, continued

Rifle Squad (3 squads)

BAR and Half Team or
Two Light Rifle or
BAR and Light Rifle or
Two Light Rifle and Recon

Armor Squad

Stuart and M3 Half-track or
Stuart or
Sherman or
Sherman and M3 Half-track or
Sherman 76

Support Squad

Two 81mm Mortar .50-cal. MG and Bazooka or
Two 60mm Mortar .30-cal. MG and Bazooka or
Two 81mm Mortar and Bazooka

Rifle Squad

BAR Two Light Rifle Recon and Bazooka or
BAR Light Rifle and Recon or
Two BAR and Bazooka or
Two BAR Recon and Bazooka or
BAR Assault Recon and Bazooka

Armor Squad

Sherman 76 and M10 or
Sherman and M10 or
Two Sherman or
Two Sherman and M10 or
Two Sherman 76

Gun Squad

57mm AT Gun and Bazooka or
57mm AT Gun or
Two Bazooka or
3-inch Howitzer or
57mm AT Gun

Miscellaneous Squad

Recon or
Two Sniper or
Recon and Sniper or
Jeep

German Order of Battle, continued

Rifle Squad

MG 42 Half Team and PzS or
MG 42 and Half Team or
MG 42 and Bolt Rifle

Rifle Squad (2 squads)

MG 42 Half Team and PzS or
MG 42 and Bolt Rifle or
MG 42 Bolt Rifle and PzS

Support Squad

MG 42 and 80mm Mortar or
MG 42 and Two PzS or
Two MG 42 and Two PzS or
Two 80mm Mortar and PzS

Armor Squad

Mark III and Marder
Mark IV and Marder
Two Stug IIIG
Two Stug IIIG and Marder
Panther and Marder

Miscellaneous Squad

Kubelwagen or
Two Sniper or
Kubelwagen and Sniper or
SDKfz 250

Miscellaneous Squad

Sniper or
Two Sniper or
Kubelwagen

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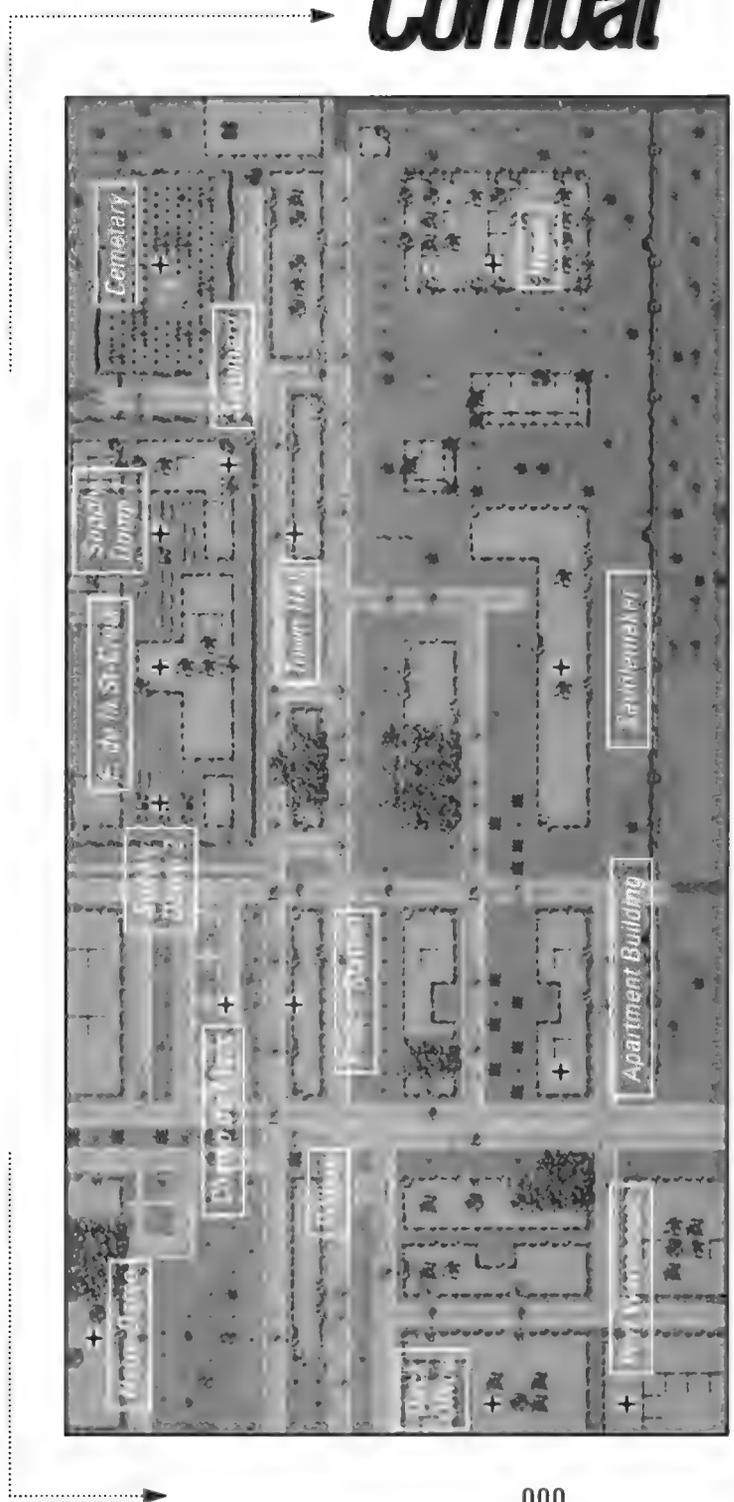


Figure 9-14. Terrain map for St. Lo, Battles Four, Five, and Six.



German Tactics

One glance at the map will tell you that the most critical sector for both sides is the German right flank, the southeast corner of the map—nowhere else is there room to maneuver armor.

American tanks placed up on the German left, near the Cemetery, are boxed in by the terrain and can only sit where they are and act as stationary artillery pieces. Likewise, there's very little maneuvering room on that flank for German armor; the situation is ripe for a stalemate, even before the battle begins.

Therefore, the German player should defend his left lightly: one MG 42, a Sniper or two, and a mortar (if you draw one). The key to this battle is the Hotel. The Germans hold the western side of it; the more vital eastern side is in no man's land when the battle begins. We placed two rifle teams, an MG 42, and our sole *Panzerschreck* in the

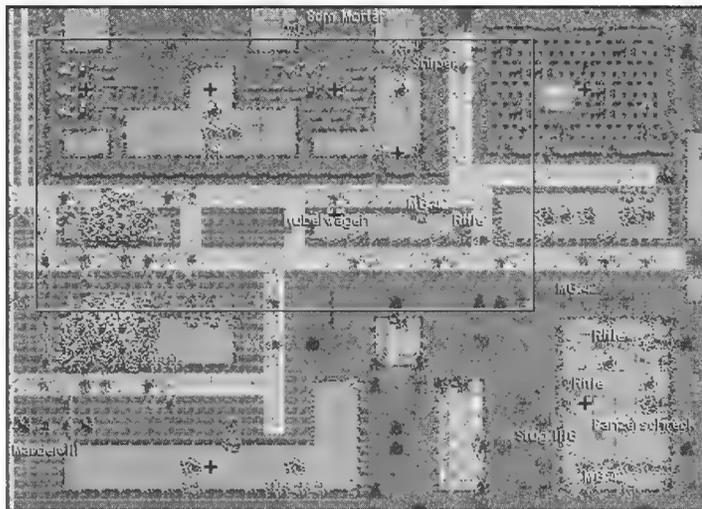


Figure 9-15. Suggested German deployment for St. Lo, Battle Four.

Hotel and ordered them to Move Fast to the front of the building as soon as the battle began.

In every battle we played, the Americans strongly garrisoned the wooden building due east of the Hotel, and deployed strong infantry and armored forces in the open ground southeast of the Hotel. If you can stop this attack, you can win.

Fortunately, the computer will deal you a fairly strong array of firepower (you can draw two Stugs and two MK IVs, for instance, or three Stugs and two AT guns), so you have a good chance of doing just that.

Place the German armor behind cover (behind the Apartment Building and the Saddlemaker), but close enough to the Hotel to intervene at the right moment.

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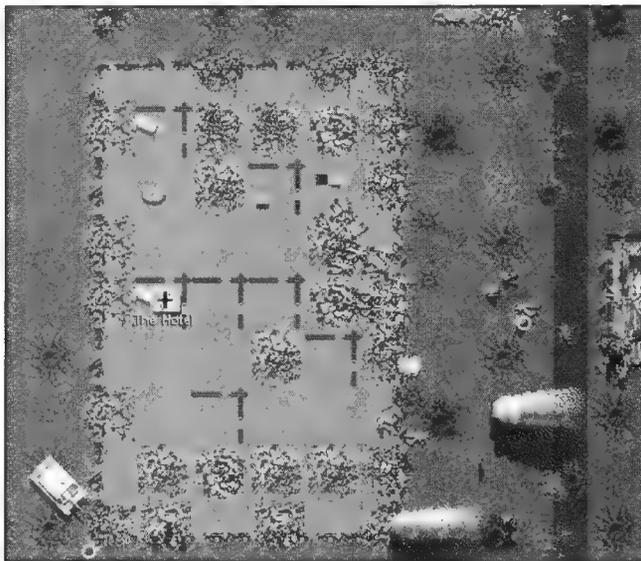


Figure 9-16. *Defend the Hotel vigorously, and the American attack will begin to lose steam.*

Once our teams had advanced to the front of the Hotel, the 'schreck was able to target enemy armor southeast of that location (the roadblock between the Hotel and Town Hall prevents American tanks from advancing on the Hotel from the southeast). Despite the fact that our 'schreck team had only two bars' worth of experience, it managed to destroy two Shermans and a half-track in short order while the strong infantry defense of the Hotel prevented the Americans from generating much momentum with their own ground troops. Mortar fire against the wooden

building east of the Hotel also caused a number of casualties.

Once the American armor was removed from the picture, we brought our own vehicles forward and counterattacked vigorously. Our Stug literally ran over a pinned-down Rifle team southeast of the Hotel; our Marder followed, advancing between the Hotel and the wooden building, firing at any target that came into range.

Completely unexpected was the success of our *Kubelwagen*, which advanced—in concert with our heavier armor—on the street below Town Hall, dodging Bazooka rockets and shooting up several pockets of American troops.

We did lose our Marder to Bazooka fire from the ruined, nameless church east of the Cemetery, but our Stug rolled potently forward around the eastern side of the wooden building in front of the Hotel. In conjunction with this maneuver, our infantry attacked from the interior of the Hotel and swiftly overran the wooden building, from where it was then able to fire on American units in the Town Hall and in the ruined church.

Our Stug kept going and attacked two mortar teams behind E. de la St-Croix, wiping out one and forcing the other to withdraw into E. de la St-Croix. The *Kubelwagen* just kept on truckin', scooting back and forth to avoid Bazooka fire, but maintaining a brisk fire at all times.



At this point, the American attack crumbled. Yes, they still had tanks firing up above the Cemetery, but they were now irrelevant. We had not only turned the enemy's left flank, but we also had a powerful unit in the enemy's rear, firing at will and apparently unstoppable. The Americans' will to fight plummeted.

This was an extremely dramatic victory, due to the fact that the Germans were outnumbered two to one in infantry and three to one in armor at the battle's beginning.

American Tactics

For the Americans as well, the Hotel is the key to victory. The computer will give the Americans either plenty of infantry and some mortars, along with three or four armored units, or it will dispense a *lot* of armor but only a relative handful of infantry.

The variant you want is the armor-heavy lineup. In our best variant, we drew six tanks (four Shermans and two M10s), along with three Bazooka teams. We put one tank up by the Cemetery; all the rest we massed east and southeast of the Hotel. We kept all the tanks back until we had ascertained where the Germans' tanks and antitank units were positioned—and we correctly assumed that at least one of the defenders' armored units would appear in the region of the Saddlemaker and Apartment Building. It did; we were ready; we knocked it out easily.

After that, we poured fire into the Hotel, put smoke around the southeast approaches to that building, and assaulted it with at least half our infantry resources. We lost one Sherman to a rocket fired from Town Hall. But in the act of firing, the *Panzerschreck* revealed its location, and we were able to smother it with suppressive fire for the remainder of the game.



Figure 9-17. Suggested American deployment for St. Lo, Battle Four.

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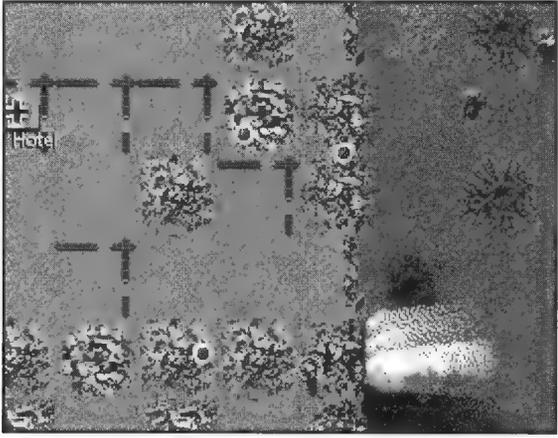


Figure 9-18. *Capturing the Hotel is costly, but it's vital to a successful American strategy.*

Once the Hotel fell after a brief but spirited firefight, we started leap-frogging our armor forward, gradually concentrating all the vehicles north and south of Town Hall. The one tank on our right flank managed to thread its way below the Cemetary and obtain a line of sight on the German mortar northeast of E. de la St-Croix, effectively suppressing that weapon as well.

At this point, the initiative passed entirely to the American attackers. Our tanks gradually pounded the defenders of Town Hall into submission, and when the last German armored unit, a Stug,

appeared, it was fired on by no less than three U.S. tanks. Needless to say, it did not survive for long.

And neither did the Germans' will to resist. If you wait until you draw the armor-heavy variant to the American OOB, you can hardly lose this battle. Just advance methodically, use your tanks cautiously until you've neutralized the German armor and suppressed their *Panzerschrecks*, and then crush what remains.

St. Lo, Battle Five

Victory Locations

Site	Point Value	Site	Point Value
E. de la St-Croix	20	Town Hall	4
Supply Dump 1	4	Cemetary	4
Saddlemaker	20	Hotel	20
Supply Dump 2	20	Seminary	4
Apartment Building	20	Notre Dame	20
Police Station	20	Champ de Mars	20
Dock Office	20	Port Warehouse	10

CHAPTER NINE: ST. LO



Order of Battle Variants for St. Lo, Battle Five

American Order of Battle

Rifle Squad

BAR Assault Recon and Bazooka or
BAR Two Light Rifle Recon and Bazooka or
Two BAR Recon and Bazooka

Rifle Squad (4 squads)

BAR and Half Team or
Two Light Rifle or
BAR and Light Rifle or
Two Light Rifle and Recon

Armor Squad

Stuart and M3 Half-track or
Stuart or
Sherman or
Sherman and M3 Half-track or
Sherman 76

Support Squad

Two 81mm Mortar .50-cal. MG and Bazooka or
Two 60mm Mortar .30-cal. MG and Bazooka or
Two 81mm Mortar and Bazooka

Rifle Squad

BAR Two Light Rifle Recon and Bazooka or
BAR Light Rifle and Recon or
Two BAR and Bazooka or
Two BAR Recon and Bazooka or
BAR Assault Recon and Bazooka

Armor Squad

Sherman 76 and M10 or
Sherman and M10 or
Two Sherman or
Two Sherman and M10 or
Two Sherman 76

Miscellaneous Squad

Recon or
Two Sniper or
Recon and Sniper or
Jeep

German Order of Battle

Rifle Squad

Bolt Rifle or
Bolt Rifle and Half Team or
MG 42 and Half Team or
MG 42 Half Team and PzS

Rifle Squad

MG 42 Half Team and PzS or
MG 42 and Half Team or
MG 42 and Bolt Rifle

Rifle Squad

MG 42 Half Team and PzS or
MG 42 and Bolt Rifle or
MG 42 Bolt Rifle and PzS

Support Squad

MG 42 and 80mm Mortar or
MG 42 and Two PzS or
Two MG 42 and Two PzS or
Two 80mm Mortar and PzS

Miscellaneous Squad

Stug 42 or
Kubelwagen Recon and Sniper or
Kubelwagen and SDKfz 250 or
Stug 42 and SDKfz 250 or
Stug 42 and SDKfz 232

Gun Squad (2 squads)

Flak 88 and 75mm IG or
Two 50mm AT Gun and 75mm IG or
75mm AT Gun 50mm AT Gun and PzS or
Two 75mm AT Gun and 75mm IG or
Flak 88 and 75mm AT Gun

Armor Squad

Mark III and Marder or
Mark IV and Marder or
Two Stug IIIG or
Two Stug IIIG and Marder or
Panther and Marder

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American Order of Battle, continued

Gun Squad

Sherman 105 and Bazooka or
Two 57mm AT Gun and Bazooka or
Two 3-inch Howitzer or
Two 3-inch Howitzer and Bazooka or
Sherman 105 and 57mm AT Gun

German Order of Battle, continued

Miscellaneous Squad

Kubelwagen or
Two Sniper or
Kubelwagen and Sniper or
SDKfz 250

Miscellaneous Squad

Sniper or
Two Sniper or
Kubelwagen

German Tactics

You have a decent chance of drawing an 88 in this battle; the tradeoff is that, if you do draw this puissant weapon, you'll have to take two or three *Kubelwagens* as well. You'll also get a wide assortment of other assets: Stugs and Marders, AT guns, armored cars, infantry guns, and maybe even a Panther.

In short, most German variants for this battle will be strong ones. This gives you an opportunity to set up a defensive line the Americans will have a hard time penetrating.

You can protect your left flank with an MG 42 in the building north of the Supply Dump near E. de la St-Croix; it's also a good idea to place a Sniper in the unnamed building northeast of E. de la St-Croix. You may be tempted to put your Infantry Gun in the pillbox southwest of the Police Station,

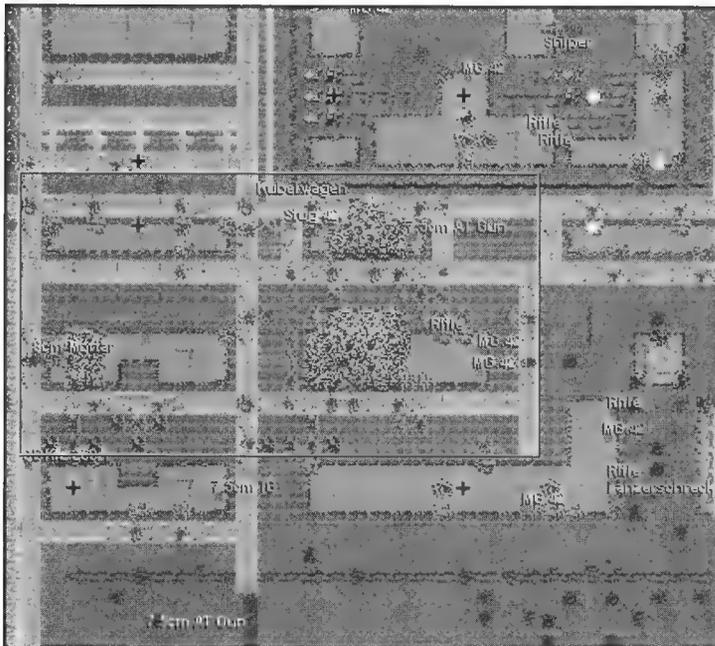
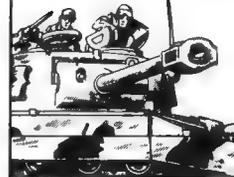


Figure 9-19. Suggested German deployment for St. Lo, Battle Five.



but if you do, its field of fire will be too restricted. A better spot is the Apartment Building, where it can cover the right flank.

As was the case in the previous battle, the Americans are most likely to mass their armor in the southeast section of the map, where it has room to maneuver. The 88 is too large to fit in most of the buildings, so just place it in the open where it can cover the most ground. You should be able to find a suitable pile of rubble that will afford it some cover (be sure to test the gun's line of sight during the Deployment phase when doing so); the 88 also has a large armored shield that will help protect its crew from small arms fire.

The Americans will attack with a large force, including at least four or five tanks, a couple of mortars, and perhaps an armored car or two. The key defensive positions on this map are the Saddlemaker and E. de la St-Croix. Put your *Panzerschreck* in the Saddlemaker, where it has an excellent field of fire. Defend both the Saddlemaker and E. de la St-Croix with at least one MG team and one rifle team—the Americans will concentrate on those two objectives, and if you can make them pay a high price in casualties for them, their attack will eventually run out of steam.

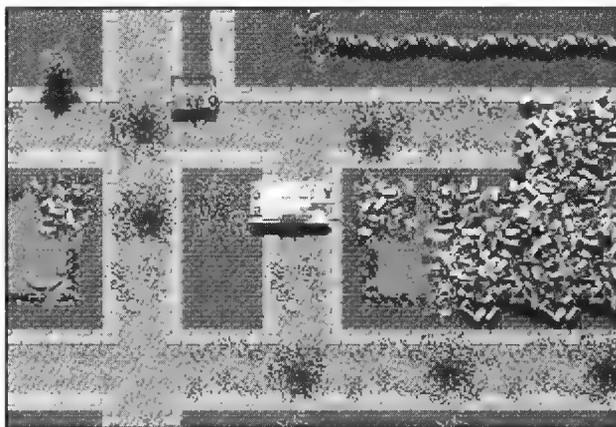


Figure 9-20. A Kubelwagen acting as a mobile sniper—speed is this vehicle's chief asset, so keep it in motion.

As for those *Kubelwagens*, keep them initially out of sight and then use them as mobile Snipers to bring enfilade fire against suppressed infantry teams. If you keep them in motion, they're hard to hit; at the very least, they're a distraction and a nuisance for the Americans.

Unless you're presented with an irresistible target, keep your armor in reserve, bringing it forward when the American infantry attack seems stymied at E. de la St-Croix and the Saddlemaker. Its sudden appearance will have a bad effect on the attackers' morale.

If you can retain possession of the Saddlemaker and the E. de la St-Croix while knocking out most of the attackers' armor, you should win at least a major victory without too much trouble.

American Tactics

In addition to the usual variety of armor (usually four vehicles), the Americans also draw two M5 three-inch guns in this battle—the first time these weapons have appeared since *Across the Aure*, Battle Three. The usual quandary obtains: do you put them dangerously far forward, where they'll have numerous targets and good fields of fire, or do you deploy them farther back, where they'll have less to shoot at but a better chance of surviving?

We compromised, putting one M5 in the small wooden building northeast of the Hotel and one in the western end of the Town Hall. We lost that gun to

(apparently) a *Panzerschreck* rocket, but not before it had flamed a SDKfz and destroyed a couple of machine gun nests—pretty much a fair trade.

The two key locations the defenders must hold are the Saddlemaker and E. de la St-Croix. But for some reason, the computer rarely defends E. de la St-Croix (although it will often place an MG in one of the satellite buildings to the north). Seize this opportunity by

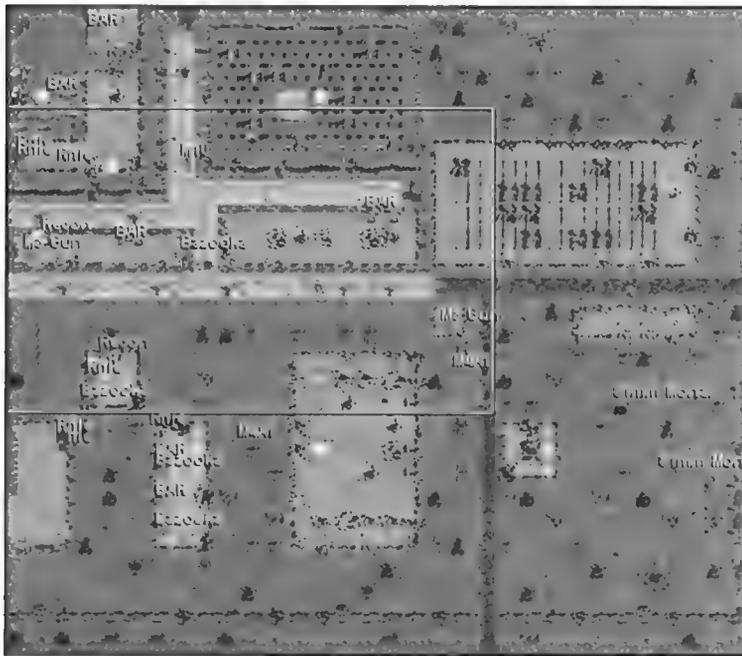


Figure 9-21. Suggested American deployment for St. Lo, Battle Five.

deploying strong infantry forces in the Seminary and one tank in the intersection at the southwest corner of the Cemetary. By occupying E. de la St-Croix, you turn the Germans' left flank. Be sure to include a Bazooka in this force, because there's a good chance a *Kubelwagen* may appear in that part of the map.

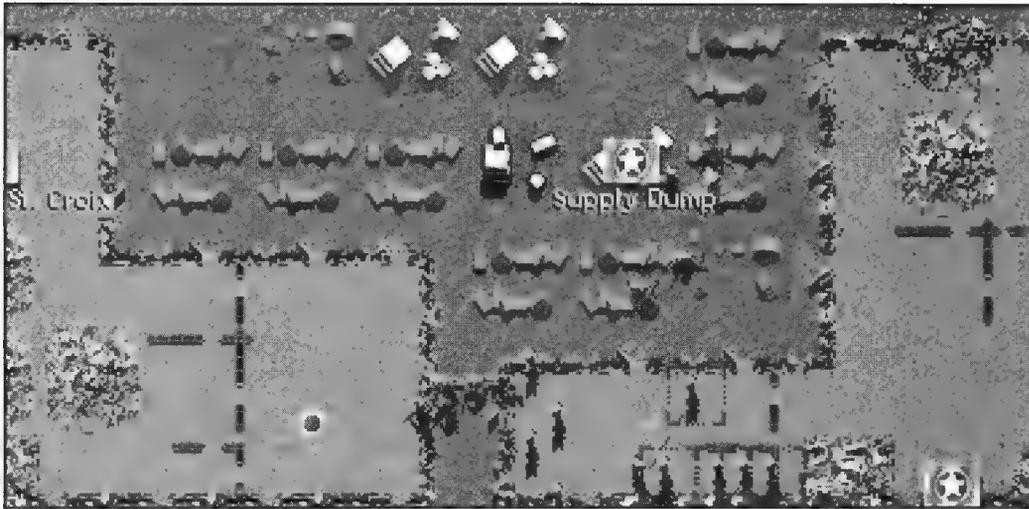


Figure 9-22. *Attacking E. de la St-Croix, using troops massed in the Seminary, will greatly weaken the German left.*

Taking the Saddlemaker is a very different proposition—it will *always* be heavily defended. Put strong forces, including Bazookas, in the two wooden buildings east and northeast; these will function rather well as light artillery, pounding the Saddlemaker with heavy fire. We positioned one tank northeast of the building and one southeast, exposing them just enough to bring their guns to bear on a portion of the defenders. Mortar fire won't hurt, either, but it's only marginally effective, and there are plenty of other targets for your tubes that are more vulnerable.

When you have softened up the Saddlemaker long enough (go to maximum zoom to see what percentage of the defenders have become casualties), put down smoke, bring the tanks forward, and launch a swift assault. Once your men are inside the building, resistance should crumble rapidly.

When we had gained control of the Saddlemaker, we rushed our Bazooka teams to the far wall and destroyed a Marder that was deploying forward. We sent one Sherman along the southern side of the building, where it could bring its machine gun to bear on German stragglers, and then sent it north when it reached the street. It ambushed a Stug that was hiding near the Apartment Building and then continued on its merry way to engage and suppress an Infantry Gun sheltered in the pillbox north of the Dock Office.

Meanwhile, our tank and infantry teams near St-Croix were wiping out machine gun nests in systematic fashion. A spunky *Kubelwagen* appeared but was blown up before it could fire more than a few bursts.

Both German flanks were turned now, and the key position in their center, the Saddlemaker, was firmly in our hands. The defenders' morale bar quickly went from brown to red, yielding a Decisive American Victory.

St. Lo, Battle Six

Victory Locations

Site	Point Value	Site	Point Value
E. de la St-Croix	4	Town Hall	2
Supply Dump 1	2	Cemetery	2
Saddlemaker	4	Hotel	4
Supply Dump 2	4	Seminary	2
Apartment Building	20	Notre Dame	50
Police Station	20	Champ de Mars	20
Dock Office	40	Port Warehouse	30

Order of Battle Variants for St. Lo, Battle Six

American Order of Battle

Rifle Squad

BAR Assault Recon and Bazooka or
BAR Two Light Rifle Recon and Bazooka or
Two BAR Recon and Bazooka

Rifle Squad (4 squads)

BAR and Half Team or
Two Light Rifle or
BAR and Light Rifle or
Two Light Rifle and Recon

Armor Squad

Sherman and Stuart or
Sherman and M 3 Half-track or
Sherman 76 or
Sherman and M10 or
Sherman 76 and Stuart

German Order of Battle

Rifle Squad

Bolt Rifle or
Bolt Rifle and Half Team or
MG 42 and Half Team or
MG 42 Half Team and PzS

Rifle Squad

MG 42 Half Team and PzS or
MG 42 and Half Team or
MG 42 and Bolt Rifle

Support Squad

MG 42 or
MG 42 and Sniper or
80mm Mortar

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American Order of Battle, continued

Support Squad

Two 81mm Mortar .50-cal. MG and Bazooka or
Two 60mm Mortar .30-cal. MG and Bazooka or
Two 81mm Mortar and Bazooka

Rifle Squad

BAR Two Light Rifle Recon and Bazooka or
BAR Light Rifle and Recon or
Two BAR and Bazooka or
Two BAR Recon and Bazooka or
BAR Assault Recon and Bazooka

Armor Squad

Sherman 76 and M10 or
Sherman and M10 or
Two Sherman or
Two Sherman and M10 or
Sherman 76

Miscellaneous Squad

Recon or
Two Sniper or
Recon and Sniper or
Jeep and 75mm AT Gun

Gun Squad

Sherman 105 and Bazooka or
Two 57mm AT Gun and Bazooka or
Two 3-inch Howitzer or
Two 3-inch Howitzer and Bazooka or
Sherman 105 and 57mm AT Gun

German Order of Battle, continued

Support Squad

MG 42 and 80mm Mortar or
MG 42 and Two PzS or
Two MG 42 and Two PzS or
Two 80mm Mortar and PzS

Miscellaneous Squad

Stug 42 or
Kubelwagen Recon and Sniper or
Kubelwagen and SDKfz 250 or
Stug 42 and SDKfz 250 or
Stug 42 and SDKfz 232

Armor Squad

Mark III and Marder or
Mark IV and Marder or
Two Stug IIIG or
Two Stug IIIG and Marder or
Panther and Marder or

Gun Squad

Flak 88 and 75mm IG or
Two 50mm AT Gun and 75mm IG or
75mm AT Gun 50mm AT Gun and PzS or
Two 75mm AT Gun and 75mm IG

Miscellaneous Squad

Kubelwagen or
Two Sniper or
Kubelwagen and Sniper or
SDKfz 250

German Tactics

This is the Germans' last chance to deny St. Lo to the enemy; accordingly, their Order of Battle tends to be quite strong. A typical German lineup might include: a Marder, a pair of 75mm AT guns, an Infantry Gun, an armored car, a half-track, some *Kubelwagens*, and Snipers. There's also a fair chance you'll get an 88.

You only hold the western third of the St. Lo map, but you have enough units to mount a defense-in-depth. Hold the front-line buildings with MG 42 and

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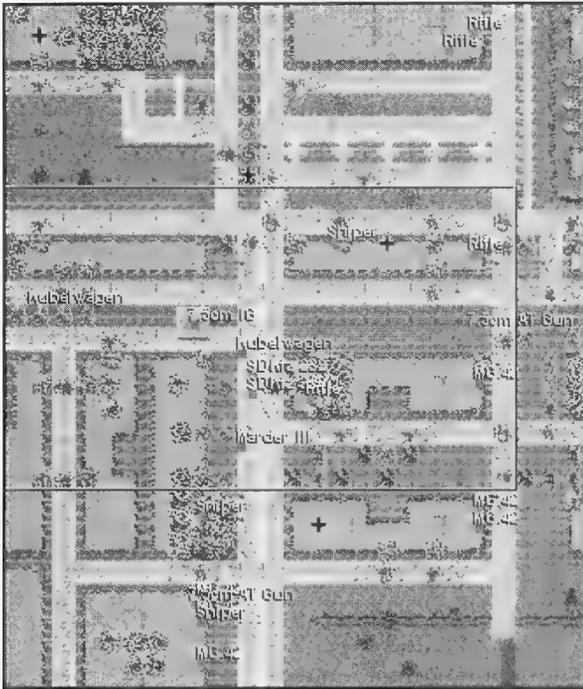


Figure 9-23. Suggested German deployment for St. Lo, Battle Six.

Rifle teams, group your vehicles behind the nameless building north of the Apartment, and make sure to cover the open ground on your right flank (bottom of the map) with one of your antitank guns.

If you have a second AT gun, there are several good locations for it, but none that offers an unobstructed field of fire. Behind one of the trees in the Champ de Mars is a fairly attractive spot, as is the open plaza just north of the pillbox (which is where you should place your Infantry Gun). These spots at least offer clear lanes of fire between the buildings in no man's land, but are far enough back to afford the gun some chance of surviving the first two minutes of the battle.

If you draw an 88, emplace it on your right flank, where it can cover all the open ground south of

the stream as well as some of the buildings the Americans will occupy at the start of the game. With such a powerful weapon holding your right, you'll be free to concentrate more infantry in the center and on your left, where the attackers are likely to make their strongest effort.

You can deploy it closer to the front lines, of course, and it will probably have an American tank in its sights at close range as soon as the game begins. The trouble is that the Americans will also have the AT gun in *their* sights as well. It's your call, Commander.

The distribution of American armor tends to be fairly predictable in this battle: one tank up near the Cemetary, another near the Town Hall, and a couple of units in the streets west of the Saddlemaker. There will also be a couple of three-inch artillery pieces, but the computer deploys them very randomly.

If you have a Stug or a Marder—and you probably will—take advantage of the defender's interior lines of communication to move the weapon back and



forth on side streets, darting out to take a shot, then retreating behind cover.

Overall, this battle favors the defender: virtually any logical deployment will suffice to make the Americans' job a bloody one. We were able to win a major victory repeatedly, even though we never succeeded in wiping out all the attackers' tanks. To win, the Americans *must* capture buildings—they cannot rely on superior firepower to just hammer you from a distance—and to capture buildings, they must launch infantry assaults across open pavement. Even a single machine gun can stave off such an attack, and you've got a lot of machine guns.

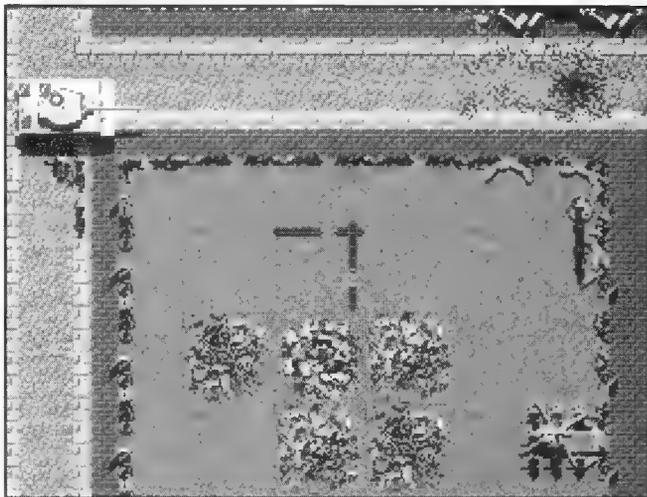


Figure 9-24. *If the German player is lucky enough to receive an 88, he can easily dominate the entire southern side of the map.*

American Tactics

This is a tough battle—but then, as the final battle in the game, it *should* be tough. In fact, it's Stalingrad in miniature. The Germans have enough resources to design a tight, interlocking defense scheme and are positioned inside stout stone buildings and a pillbox.

The key to success is patience—if you try to swamp the defenses early in the battle, chances are you'll be slaughtered. It's better to whittle away at them until you find an opening or a weak spot.

You'll probably once again draw two M5 cannon, and the computer will try to position one in the open terrain south of the Saddlemaker. Better move it into the Saddlemaker itself—leaving it the open is suicide. Another good spot for one of your M5s is the stone building south of the Supply Dump near E. de la St-Croix. (In one game, an M5 we placed there destroyed a MK IV tank and a half-track near the Champ de Mars in the first moments of fighting.)

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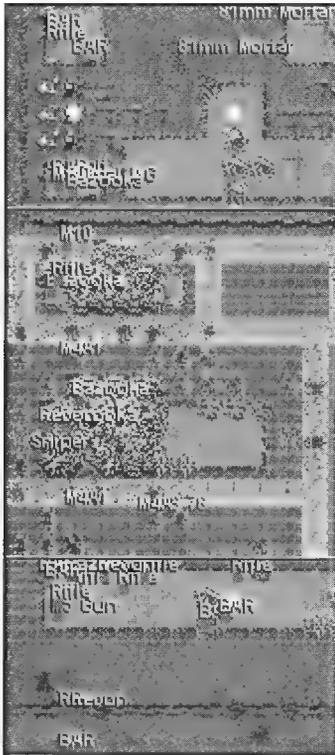


Figure 9-25. *Suggested American deployment for St. Lo, Battle Six.*

Warning! *Don't assault the Apartment Building until you've worked it over thoroughly with artillery, mortars, bazooka, and small-arms' fire. It's always strongly defended at the start—you need to eliminate some of the defenders, or your infantry will meet a withering barrage when they attack.*



Perhaps the easiest way to unlock the German defenses is to attack along the top of the map; unfortunately, the terrain does not give you much maneuvering room for your tanks.

We enjoyed eventual though bloody success by launching our main attack on the Apartment Building, with a secondary attack above the St-Croix churchyard.

Where to put your tanks? We suggest putting one in a corner of the stone wall around E. de la St-Croix, a couple in the street southeast of the Police Station, and a couple more in the plaza north of the Saddlemaker. You can count on losing at least half your armor no matter where you put it, so you may as well get the most out of every vehicle while it's still operational.

Have your tanks hammer the Apartment Building from a range of 80 meters or so (just beyond effective *Panzerfaust* range) and be on guard for sudden attacks by German armor. Eventually, you'll weaken the Apartment defenses sufficiently to risk an assault.

We were also able to drive the small garrison out of the anonymous buildings east of Notre Dame, at the top of the map; redeploying our troops to the south, we were able to "pinch out" the machine gun nest in the eastern half of the Police Station. Bringing up additional forces from Town Hall, we captured the whole of the Police Station, caught our breath, then overran the pillbox (where the Germans had placed their Infantry Gun).

Simultaneously, our attack against the Apartment Building finally gained a foothold. There was fierce hand-to-hand combat in the rubble, and we had to be content with occupying only the eastern half of the building.

At this stage of the battle, we had only two tanks left, but we were able to send them east and then south around the Apartment, where they were able to finally destroy the Germans' 88.

At this point, the defenders went into the red, and we were informed that the Germans had decided to withdraw from St. Lo.

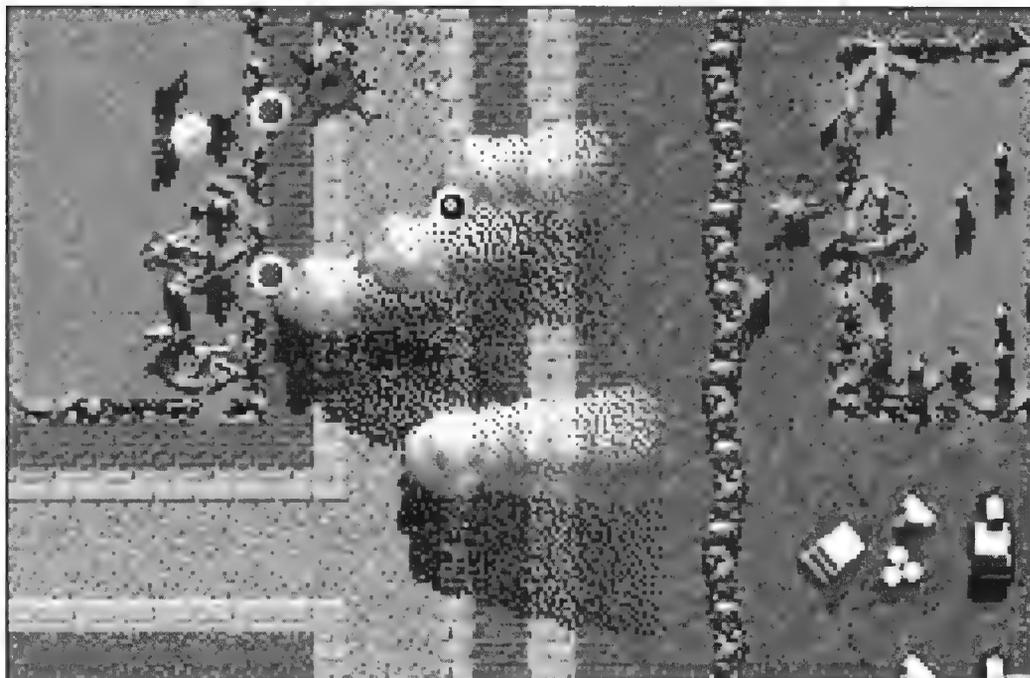


Figure 9-26. *The closest zoom view will aid the American player in determining how effectively his or her fire has softened up a defended building.*

Our casualties were horrendous—more than 60 killed or wounded—but the effort had been worth it. St. Lo was in Allied hands at last, and the terrible hedgerow country was behind us forever.

Chapter Ten



THE CAMPAIGN GAME

The Campaign game in Close Combat seems simple enough: playing only as the Americans or Germans, you must fight battles in all six Operations, beginning with Off the Beach and ending with the climactic St. Lo battles. Historically, the fighting simulated here took 42 days (between June 6 and July 17, 1944). It won't take you that long to complete the Campaign in Close Combat, but rest assured that the intense action and unique attributes of the Campaign game will give you a good idea of just how grueling the prolonged fighting was for both sides.

In Close Combat, the Americans win if they complete the Campaign on or before the historical date of July 17; the Germans win if they delay the completion of the Campaign until after this date.

How the Campaign Game Works

The Campaign begins with the first battle in the first Operation, Off the Beach, but subsequent engagements will be fought according to the logical dynamics of any military campaign—in short, the results of one battle dramatically affect how and where the next battle begins, and what sort of forces each side will be fielding.

Just as when playing each individual battle as a maneuver (by selecting it from the Maneuvers menu), each battle in a Campaign can have six possible outcomes:

- Decisive Victory
- Major Victory
- Minor Victory
- Minor Defeat
- Major Defeat
- Decisive Defeat

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These battle results are a great deal more important in the Campaign game than when playing each battle as an independent Maneuvers. Suffer a decisive defeat in an individual Maneuvers battle, and you can simply load the same battle again and try to better your performance. In the Campaign game, it can require winning two, three, or even more subsequent battles to offset the ramifications of a decisive defeat.

Of course, the opposite is true should you earn a decisive victory. Let's say you're playing as the Americans and you score a decisive victory in Off The Beach, Battle One. Instead of moving to Off the Beach, Battle Two, as you might expect, your second battle will now be Across the Aure, Battle One. If the Americans win a major victory in this battle, the campaign will jump to Hedgerows!, Battle Two.

But let's say you earned only a minor victory in that very first battle. In that case, the next battle in the Campaign will start on the very same map, with your start line a little to the west of where it had been before; this reflects the

limited ground you managed to occupy at the end of the first encounter.

And if the result of the first battle is an American defeat, your troops will have to begin all over again from their original starting point. This will, of course, have deleterious effects on your troops' morale: no unit wants to have to fight twice for possession of the same ground!

It's not uncommon for battles simply to end with both sides in a state of mutual exhaustion. Usually this results in a Minor German Victory because, in a strategic sense, the Germans further their cause if they prevent the Americans from gaining ground. On rare occasions, however, when the Americans have made minor gains but have been unable to advance farther, the computer will award a Minor American Victory if sufficient German losses have been inflicted to affect the overall military balance.

To Hell and Back: Combat Fatigue and Your Troops

Perhaps the most important factor to keep in mind when playing the Campaign version is the cumulative effect of prolonged combat on your troops. The primary difference between Campaign games and individual battles fought as

Tip: *If you find yourself repeatedly re-fighting the same battle, be patient—the program will automatically advance you to the next battle in the campaign tree after the same battle has been fought three times.*



CHAPTER TEN: THE CAMPAIGN GAME



Maneuvers is the accumulation of data about the forces on each side. Some soldiers will become more hardened, more battle-wise, and more effective as they gain experience. Other soldiers will become more physically and mentally stressed as the campaign progresses. For a better understanding of this process, see our interview with combat psychologist Dr. Steven Silver in Chapter Twelve.

While some men might perform reliably throughout the whole campaign, others will eventually reach their breaking point. It may happen gradually, as the result of cumulative stress, exhaustion, and the psychological effect of seeing comrades killed or wounded. But there's also a chance that it will happen quite suddenly: a hitherto reliable man becomes seized with panic and flees from the fray, or becomes paralyzed with fear and refuses to advance or to respond to new orders for the duration of a battle.

In addition to the progressive effect of wear and tear on the men who survive each battle in a campaign, the replacements you receive are likely to be untested rookies, and their addition to your fighting teams might well offset the increased effectiveness of men who've survived several engagements. In other words, the cohesion factor for your teams will be subject to subtle changes from one battle to the next. Keep an eye on the gold bars indicating the effectiveness of teams to get a handle on how well they're holding up.

To learn how each individual soldier is performing, check the Details screen that appears during the Debriefing phase of each battle. You can track how well a soldier performed in the battle just completed and compare it to that soldier's performance to date; as medals or promotions are awarded, you'll see those events displayed as well.

As a general rule, you'll want to adopt more cautious tactics during Campaign play than you would if you were simply playing a sequence of separate Maneuvers. The object of a successful Campaign is *not* to win every battle—indeed, that is almost impossible. Your job as commander is to achieve your strategic goals while still preserving the lives of your men. If those sound like mutually exclusive objectives, that's because to a certain extent they are—but that's what real commanders must deal with in combat, and successful leaders are those who can balance losses against accomplishments without recklessly wasting the lives of their men.

The Rewards of Success?

Campaign play is very different from Maneuver play. If you play a Campaign from the German side and are reasonably successful at delaying the Americans,

(continued on page 260)

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Table 10-1. Campaign Tree: Next Battle in Campaign if this type of victory occurs

Battle Just Fought	German Decisive	German Major	German Minor
Off the Beach 1	Off the Beach 1	Off the Beach 1	Off the Beach 1
Off the Beach 2	Off the Beach 1	Off the Beach 2	Off the Beach 2
Off the Beach 3	Off the Beach 2	Off the Beach 3	Off the Beach 3
Across the Aure 1	Across The Aure 3	Across The Aure 3	Across The Aure 3
Across the Aure 2	Across The Aure 3	Across The Aure 2	Across The Aure 2
Across the Aure 3	Across The Aure 4	Across The Aure 4	Across The Aure 4
Across the Aure 4	Across The Aure 4	Across The Aure 4	Across The Aure 4
Hedgerows 1	Hedgerows 1	Hedgerows 1	Hedgerows 1
Hedgerows 2	Hedgerows 2	Hedgerows 2	Hedgerows 2
Hedgerows 3	Hedgerows 1	Hedgerows 3	Hedgerows 3
Hedgerows 4	Hedgerows 4	Hedgerows 4	Hedgerows 4
Hedgerows 5	Hedgerows 4	Hedgerows 5	Hedgerows 5
Hedgerows 6	Hedgerows 2	Hedgerows 6	Hedgerows 6
Hedgerows 7	Hedgerows 7	Hedgerows 7	Hedgerows 7
Hedgerows 8	Hedgerows 7	Hedgerows 8	Hedgerows 8
Hedgerows 9	Hedgerows 9	Hedgerows 9	Hedgerows 9
Hedgerows 10	Hedgerows 10	Hedgerows 10	Hedgerows 10
Hedgerows 11	Hedgerows 10	Hedgerows 11	Hedgerows 11
Hedgerows 12	Hedgerows 12	Hedgerows 12	Hedgerows 12
Hedgerows 13	Hedgerows 13	Hedgerows 13	Hedgerows 13
Hedgerows 14	Hedgerows 13	Hedgerows 14	Hedgerows 14
Purple Heart Draw 1	Purple Heart Draw 1	Purple Heart Draw 1	Purple Heart Draw 1
Purple Heart Draw 2	Purple Heart Draw 1	Purple Heart Draw 2	Purple Heart Draw 2
Purple Heart Draw 3	Purple Heart Draw 3	Purple Heart Draw 3	Purple Heart Draw 3
Purple Heart Draw 4	Purple Heart Draw 3	Purple Heart Draw 4	Purple Heart Draw 4
Hill 192 1	Hill 192 1	Hill 192 1	Hill 192 1
Hill 192 2	Hill 192 1	Hill 192 2	Hill 192 2
Hill 192 3	Hill 192 3	Hill 192 3	Hill 192 3
Hill 192 4	Hill 192 3	Hill 192 4	Hill 192 4
Hill 192 5	Hill 192 5	Hill 192 5	Hill 192 5
Hill 192 6	Hill 192 5	Hill 192 6	Hill 192 6
Hill 192 7	Hill 192 7	Hill 192 7	Hill 192 7
Hill 192 8	Hill 192 7	Hill 192 8	Hill 192 8
St Lo 1	St. Lo 1	St. Lo 1	St. Lo 1
St Lo 2	St. Lo 1	St. Lo 2	St. Lo 2
St Lo 3	St. Lo 2	St. Lo 3	St. Lo 3
St Lo 4	St. Lo 4	St. Lo 4	St. Lo 4
St Lo 5	St. Lo 4	St. Lo 5	St. Lo 5
St Lo 6	St. Lo 5	St. Lo 6	St. Lo 6

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Next Battle in Campaign if this type of victory occurs

Battle Just Fought	American Decisive	American Major	American Minor
Off the Beach 1	Off the Beach 2	Off the Beach 3	Across The Aure 1
Off the Beach 2	Off the Beach 3	Across The Aure 1	Across The Aure 1
Off the Beach 3	Across The Aure 1	Across The Aure 1	Across The Aure 1
Across the Aure 1	Across The Aure 2	Hedgerows 2	Hedgerows 2
Across the Aure 2	Hedgerows 1	Hedgerows 2	Hedgerows 2
Across the Aure 3	Across The Aure 4	Hedgerows 2	Hedgerows 2
Across the Aure 4	Hedgerows 1	Hedgerows 2	Hedgerows 2
Hedgerows 1	Hedgerows 3	Hedgerows 7	Hedgerows 7
Hedgerows 2	Hedgerows 6	Hedgerows 7	Hedgerows 7
Hedgerows 3	Hedgerows 4	Hedgerows 7	Hedgerows 7
Hedgerows 4	Hedgerows 5	Hedgerows 12	Hedgerows 12
Hedgerows 5	Hedgerows 9	Hedgerows 12	Hedgerows 12
Hedgerows 6	Hedgerows 4	Hedgerows 7	Hedgerows 7
Hedgerows 7	Hedgerows 8	Hedgerows 12	Hedgerows 12
Hedgerows 8	Hedgerows 9	Hedgerows 12	Hedgerows 12
Hedgerows 9	Hedgerows 10	Hedgerows 11	Purple Heart Draw 3
Hedgerows 10	Hedgerows 11	Purple Heart Draw 3	Purple Heart Draw 3
Hedgerows 11	Purple Heart Draw 1	Purple Heart Draw 3	Purple Heart Draw 3
Hedgerows 12	Hedgerows 13	Hedgerows 14	Purple Heart Draw 3
Hedgerows 13	Hedgerows 14	Purple Heart Draw 3	Purple Heart Draw 3
Hedgerows 14	Purple Heart Draw 1	Purple Heart Draw 3	Purple Heart Draw 3
Purple Heart Draw 1	Purple Heart Draw 2	Hill 192 3	Hill 192 3
Purple Heart Draw 2	Hill 192 1	Hill 192 3	Hill 192 3
Purple Heart Draw 3	Purple Heart Draw 4	Hill 192 3	Hill 192 3
Purple Heart Draw 4	Hill 192 1	Hill 192 3	Hill 192 3
Hill 192 1	Hill 192 2	Hill 192 7	Hill 192 7
Hill 192 2	Hill 192 5	Hill 192 7	Hill 192 7
Hill 192 3	Hill 192 4	Hill 192 7	Hill 192 7
Hill 192 4	Hill 192 5	Hill 192 7	Hill 192 7
Hill 192 5	Hill 192 6	St. Lo 4	St. Lo 4
Hill 192 6	St. Lo 1	St. Lo 4	St. Lo 4
Hill 192 7	Hill 192 8	St. Lo 4	St. Lo 4
Hill 192 8	St. Lo 1	St. Lo 4	St. Lo 4
St Lo 1	St. Lo 2	St. Lo 3	St. Lo 3
St Lo 2	St. Lo 3	End	End
St Lo 3	End	End	End
St Lo 4	St. Lo 5	St. Lo 6	St. Lo 6
St Lo 5	St. Lo 6	End	End
St Lo 6	End	End	End

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(continued from page 257)

you'll often feel starved for resources: that's because the computer sends more replacements to the losing side than to the winning side.

If you find yourself too frustrated, you can always set your strength to Strong or Very Strong on the Custom menu and then restart the Campaign. (Of course, if you decide to "play fair" and set the enemy's Strength to the same as your own, he'll have more to fight with too!)

The Campaign Tree

The table on pages 258 and 259 shows the six possible Victory outcomes of each battle and the subsequent battle you can expect to encounter next for each given result.

Saving and Exiting During Campaign Play

In Campaign mode, campaigns in progress are automatically saved when the computer ends each component battle. If you're finished playing Hedgerows! Battle Three, for instance, and decide to exit Close Combat, the game saves the results of that battle. When you resume the campaign, you'll be presented with the appropriate next battle—dependent on your performance in Hedgerows! Battle Three.

If you save a Campaign battle as a Replay, however, you'll only be able to watch or refight that one battle—which means you can't use the Replay as insurance against a poor performance. The program will automatically resume the Campaign from the last game played, not from an altered outcome produced by stepping into a Replay and correcting your mistakes.

Campaign Scoring

To win a Campaign as the Americans, you must achieve enough victories in the individual battles so that your advance is speeded up enough to capture St. Lo in less time than it took your real-life counterparts; as the Germans, you must slow the American advance so that they aren't able to claim possession of St. Lo within 43 days. Obviously, you'll make headway toward your goal in some battles and lose it in others; the idea is to make really big gains in the ones you win, and minimize your losses in the ones you don't. At the end of each Campaign game, during the Debriefing phase, you can determine exactly how well you're doing by taking a look at the timeline at the bottom of the

Chapter Eleven



THE REAL SOLDIERS OF D-DAY

In Close Combat, the 29th Division is the American force throughout the game. As we explained in our chapter narratives, history differs only slightly from your game experience. Here's the background on the forces deployed in Close Combat.

The American 29th Division

The American 29th Division was officially activated on February 3, 1941. Its troops were initially drawn from National Guard detachments from Virginia, Maryland, Pennsylvania, and the District of Columbia.

Two of its regiments boasted a remarkable historical lineage. The 116th had been in existence since 1760; fighting as the 2nd Virginia Regiment during the Civil War, it had gained immortality as part of “The Stonewall Brigade,” General Stonewall Jackson’s hard-charging “foot cavalry” renowned for being able to march 20 miles in a day and still be ready for battle.

No less distinguished was the 115th Regiment, descended from the 1st Maryland of Colonial days. It also served with distinction during the Civil War—and fought against its sister regiment in May 1862, in the Battle of Front Royal. As a result of this heritage, the newly activated division adopted a patch which symbolized the outfit’s Civil War legacy—a yin-yang symbol of blue and gray.

The newly activated division’s first headquarters was at Fort George Meade in Maryland, from whence it was relocated to the A.P. Hill Military Reservation in Virginia on September 14, 1941. The division moved to North Carolina in October 1941 and took part in extensive training maneuvers during October and November. Staging preparations were completed at Camp Kilmer, New Jersey, on September 20, 1942.

On October 5, 1942, the 29th departed in a large convoy from the Port of New York, arriving in England on October 11. There followed a long period of training in England, during which the division acquired its highest state of combat readiness.

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The man chosen to lead the 29th into combat, Major General Charles Gerhardt, took command in July 1943. Gerhardt was a West Pointer, a stickler for spit-and-polish (on formal occasions, he dressed in glossy cavalry boots and wore his sidearm in a polished leather holster), and every inch a general. He drove his subordinates hard, and his men even harder. He had an obsession with helmet chin-straps, for example, and woe betide the soldier whose straps were undone when the general drove by.

He was respected and always obeyed, but there was little genuine affection between Gerhardt and the men in the ranks. Like Patton, on whom he modeled himself, Gerhardt was really a sentimentalist at heart, but he ruthlessly suppressed that part of his nature. He waged war with an obsessive single-mindedness that was most obvious during the frustrating days of the campaign for St. Lo. His hard-edged style of leadership probably contributed to the inordinately high casualties his men sustained—but it also contributed to the Germans' ultimate defeat in Normandy.

The unit's 116th Regiment, attached temporarily to the 1st Infantry Division, stormed Omaha Beach on June 6, 1944, suffering heavy losses from dangerous surf conditions and heavy German fire from the high bluffs overlooking the beach. Later on D-Day, the remainder of the division landed, and on June 8 the 116th Regiment relieved the exhausted 2nd Ranger Battalion at Pointe du Hoc. (Neither of these regiments appear in *Close Combat*. For more details see the division organization table at end of this chapter.) On that same day, the division's 175th Regiment captured Isigny (an initial D-Day objective), and the 115th Regiment reached the banks of the Aure River at Longueville.

Although the 115th was successful in forcing a crossing of the Aure, it was compelled to withdraw from the Montmartin-en-Graignes area on June 13. On June 16, the division spearheaded the drive on St. Lo. While the 175th Regiment fought for control of Hills 90 and 97, the 116th and 115th Regiments assaulted Martinville Ridge. A powerful German counterattack drove a wedge between the 116th and the 175th in the Villiers-Fossard area, and the 29th had to be reinforced by the 3rd Armored Division on June 29 in order to reduce the German salient.

On July 12, the 116th Regiment penetrated German lines in front of St. Lo, but were stopped by fierce resistance on Martinville Ridge. The next day the 175th Regiment attacked Martinville Ridge and made significant gains. Vigorous German action succeeded in cutting off and isolating the 116th Regiment along the Bayeaux-St. Lo road for three grim days (July 15-17), but by the end of that period German resistance in St. Lo was crumbling, and the

CHAPTER ELEVEN: THE REAL SOLDIERS OF D-DAY



29th Division gained control of the city on July 18th. Two days later it was relieved by the 35th Infantry Division and given a much-needed week of rest. This is where the action in Close Combat concludes, but the war wasn't over for the 29th.

Back in action on July 29, the 29th attacked east of Percy. Approximately one week later (August 7), the division captured Vire after a hotly contested battle. After that action, the division was moved by truck convoy into the Brittany region and put into the line outside the fortress of Brest.

Brest may have been isolated by that time, but its garrison was well led, heavily dug in, and supported by numerous coastal artillery batteries, most formidably the Graf Spee Battery. Both the 175th and 116th Regiments launched a determined attack on the Le Conquet Peninsula, where the Graf Spee battery was located. On August 29 the division gained the high ground of Hill 103, the most commanding terrain feature on the peninsula, but another week of heavy combat was required before the peninsula could be declared secure.

The 29th played a major role in the all-out assault on Brest that began on September 8. After ten days of ferocious house-to-house fighting, German resistance collapsed on September 18th. The Allies finally had their prized port, but the German engineers had done such a thorough job of demolishing the port facilities that Brest was virtually useless as a supply base for weeks to come.

On September 29, 1944, the division moved to Holland, where the now-veteran 116th Regiment took part in the Uebach Bridgehead fighting on October 5 and the Aachen Gap battle on October 13. The division led off the offensive on the Roer; especially heavy combat took place around the town of Bourheim, which the 175th Regiment captured, then lost, then recaptured and held against determined German counterattacks.

From the first of December through the end of February 1945, the 29th reduced German strong points on the west bank of the Roer, and on February 23 crossed the river itself. With the assistance of flame-throwing tanks, the 29th captured Juelich and its formidable Citadel.

On March 3, the division went into reserve and did not go back into the front lines until April 1, 1945. Advancing methodically against mostly light and disorganized resistance, the 29th overran a large area of ground between the Rhine and the Dortmund-Ems Canal, eventually reaching the Elbe River on April 24. Several days later, its patrols made the historic first contact with Soviet troops advancing from the east.

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On May 6, the 29th Division was redeployed to Bremen for military occupation duties. It was encamped on the outskirts of that city when hostilities officially ended on May 7.

The division lost 3887 men Killed In Action; 15,541 Wounded In Action; and 899 men who died of wounds. Only one other American infantry division suffered higher losses during the campaign in Western Europe.

Typical Organization of the U.S. 29th Division, 1944-45

115th Infantry Regiment
116th Infantry Regiment
175th Infantry Regiment
110th Field Artillery Battalion (105mm)
111th Field Artillery Battalion (105mm)
224th Field Artillery Battalion (105mm)
227th Field Artillery Battalion (155mm)
29th Reconnaissance Troop, Mechanized
743rd Tank Battalion (attached May 17 to June 14, 1944)
744th Tank Battalion (attached September 30 to November 3, 1944)
747th Tank Battalion (attached May 17 to August 17, 1944;
September 28, 1944 to March 6, 1945; March 29 to July 23, 1945)
635th Tank Destroyer Battalion (attached May 15 to June 7, 1944)
803rd Tank Destroyer Battalion (attached June 30 to July 1, 1944;
July 28 to July 30, 1944)
821st Tank Destroyer Battalion (attached June 28 to July 13, 1944)
823rd Tank Destroyer Battalion (attached June 26 to July 3, 1944)
459th Antiaircraft Weapons Battalion (attached June 9 to August 17, 1944;
September 28 to October 29, 1944)
554th Antiaircraft Weapons Battalion (attached August 15 to November 6, 1944)
121st Combat Engineer Battalion
104th Medical Battalion
29th Counter-Intelligence Corps Detachment
Headquarters Special Troops
Headquarters Company, 29th Infantry Division
Military Police Platoon
729th Ordnance Light Maintenance Company
29th Quartermaster Company
29th Signal Company

Commanders

Major General Milton A. Reckord (February, 1941)
Major General Leonard T. Gerow (February, 1942)
Major General Charles H. Gerhardt (July, 1943)



The German 352nd Division

Alarmed by intelligence reports of the huge American buildup taking place in Great Britain, Adolf Hitler took steps in the autumn of 1943 to bolster German strength in the West. In Fuehrer Directive No. 51 (issued on November 3, 1943), he declared: “I can no longer justify the further weakening of the West in favor of other theaters of war.”

To carry out the new plan, Hitler appointed General Irwin Rommel and gave him authority to raise new divisions for service in the west. One of those units was the 352nd Infantry Division, activated on November 5 in the Hanover region of northern Germany.

It was standard German Army practice to “seed” new units with veteran cadres. The core of the 352nd’s veterans were survivors of combat units that had been devastated in the Russian summer offensive of 1943—they imbued the new Hanoverian recruits with *Ostharte*, “The Eastern Front Spirit.” Despite chronic shortages of equipment, the division gradually transformed itself into a first-rate unit.

Its commander was Major General Dietrich Kraiss, a career soldier with 20 months’ experience on the Russian Front and the Knight’s Cross to show for it.

The 352nd Division was organized as follows:

Three Infantry Regiments: 914th, 915th, and 916th. Each regiment had two battalions, which in turn comprised three infantry companies (16 MG 42s and 2 8cm mortars) and one heavy weapons company (12 heavy MGs, 3 light MGs, and four 120mm mortars). Each regiment also had:

- One Infantry Gun company with two 150mm guns and six 75mm guns
- One antitank company with twelve 75mm or 50mm AT guns
- One cavalry platoon
- One engineer platoon
- One HQ staff platoon

Other divisional assets included:

- One fusilier battalion with three companies of medium infantry (16 MGs and two 8cm mortars) and one company of heavy infantry (12 heavy MGs, three light MGs, and four 120 mm mortars)
- One heavy antitank company with four Flak 88s
- One artillery regiment with three battalions of 105mm weapons and one battalion of 150mm guns

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- One engineer battalion with three companies
- One replacement battalion with four companies

In March, 1944, Rommel ordered the division to move from its base at St. Lo to the stretch of Normandy coastline that would come to be known as Omaha Beach. Despite his experience, General Kraiss misread the situation and concentrated most of the Division's strength to the west, near the base of the Cotentin Peninsula. To defend what turned out to be the actual landing site, he positioned only a single regiment—the 916th Infantry—comprising two infantry battalions and one artillery battalion.

The beach-defense troops were organized into *Widerstandsnest* (resistance nests), manned by garrisons of from 30 to 90 men and equipped with several machine guns. Allied intelligence was not aware of the 352nd Division. The Americans of the 29th were told that they were going up against second-rate, out-of-shape garrisons.

Ohama Beach was, of course, a bloody and almost catastrophic shambles. Had General Kraiss defended the beach with so much as another battalion, it is quite possible that the American landing would have failed. By the end of the day, Kraiss had received enough intelligence to realize the gravity of the situation and was rushing reinforcements toward the coast, including one of his Engineer battalions.

By June 8th, Kraiss was commanding a hard-pressed and fragmented division. Half of the 352nd Division was embroiled near Bayeux, fighting the British. Several other fragments of the Division were still fighting American paratroopers near the Vire River, and the rest of the division had been chewed up at Omaha Beach. He therefore ordered a general retreat south of the Aure River.

During the Germans' frantic scramble to pump all available reinforcements into the Normandy sector, the 352nd Division obtained operational control of a bizarre outfit designated the 621st East Battalion—made up of Mongolians, Uzbeks, Tartars, and other ethnic minorities. These men had been captured on the Russian Front and had chosen to enlist in the German Army rather than starve in POW camps. When the American 175th Infantry captured some of them near Isigny, one GI was heard to remark, "Just who the hell are we fighting, anyway?"

By June 9, the fighting strength of the 352nd Division had been reduced to 2500 men—one-third of its nominal strength—and with that scant force Kraiss was supposed to defend a front 30 miles wide. Reduced in size to little more

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than a regiment, the 352nd was attempting to defend a sector that would have required an entire corps.

Kraiss had no choice but to retreat to the Elle River and make a stand in the hedgerow country only seven miles from St. Lo. Reinforcements were on their way, but for several days the 352nd would fight alone, its flanks unprotected.

On June 11, major reinforcements arrived in the form of the 3rd Parachute Division—one of the best-trained and best-equipped German units the Americans would face in Normandy. The Luftwaffe had spared no expense in equipping this elite unit—the 3rd Parachute could deploy 930 MG 42 machine guns, eleven times as many machine guns as the American 29th could muster.

With the paratroopers on hand, General Kraiss was no longer in desperate straits; he used a two-day lull (June 10 and 11) to rest his men and replenish their ammunition.

During the fierce fighting along the Elle, however, the 352nd was once more pushed to the brink of disaster. After 30 hours of continuous pounding by American artillery, the division was reduced to a strength of only 1900, and a front that had, by now, shrunk to five miles wide.

Yet the German division fought surprisingly well, taking full advantage of the hedgerow country's natural defensive strength.

On June 16, for instance, the 352nd stopped cold a major attack by the American 116th Infantry. In analyzing the Americans' performance in the *bocage*, the 352nd's Intelligence officer summarized his conclusions in a report that read, in part: "The reason why the American operational plan, with the objectives laid down for each day after D-Day, was not carried out, could be because the enemy had the intention to preserve his forces...or else it could be found in his inability to attack with traditional soldierlike courage and bravery so as to get it over with quickly and successfully, or to exploit opportunities which came his way beyond the daily objective laid down in the plan—a thing which was never done..."

The soldiers of the 29th Division, who had certainly displayed "traditional soldierlike courage" and had the casualty figures to prove it, would have taken strong exception to this document. Still, there is some truth in the accusation of tactical rigidity, of stubborn adherence to the plan, of a general lack of the improvisational skills that distinguished the German Army on every front.

By July 9, when the 352nd Division confronted a new opponent in the American 35th Division, the 352nd was reduced in strength to that of a weak regiment. As a division, it had practically ceased to exist. Its men had been in

combat for 44 continuous days and had earned the grudging respect of their American counterparts.

After the fall of St. Lo, the remnants of the 352nd participated in the general German pull-back that resulted from General Bradley's breakout. This operation began on the morning of July 25 with the largest aerial bombardment strike ever launched against ground troops up to that time in history. For two and one half hours, B-17s and B-24s dropped thousands of bombs along a 6000-yard front five miles west of St. Lo. German positions were flattened, and the few German soldiers who survived the bombardment were too stunned to offer much resistance when Bradley sent three American infantry divisions forward. Two days later, when the road network beyond St. Lo was firmly under American control, Bradley unleashed his armored divisions. Hundreds of Shermans poured through the gap and fanned out across France.

For the Germans, this blow marked the beginning of the end of the Normandy Campaign. Like every other German unit in the St. Lo sector, the 352nd Division was compelled to withdraw. The 352nd was eventually trapped—between Montgomery's British and Canadian forces advancing from Caen, and Bradley's armor slashing north from the St. Lo gap—in the Falaise Pocket, where it was smashed beyond reconstruction. It was disbanded, and the survivors were used as veteran cadre during the formation of the 581st and 352nd *Volksgrenadier* divisions, which fought on until the war's end.

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Chapter Twelve



MEN AGAINST FIRE

Clearly, the most unique feature of Close Combat is the game's modeling of human behavior under the stress of battle. During the development of the game, Atomic's team consulted with Dr. Steven Silver, a historian and clinical psychologist who specializes in combat-related trauma and who has published numerous papers on the subject. We talked with Dr. Silver about the history behind Close Combat.

The PC Press: Let's start at the beginning: how and when did you become professionally interested in the subject of combat psychology?

Dr. Silver: It goes back quite a bit. I'm a combat veteran of the Vietnam War, and in 1972 I began working as a volunteer in a crisis-intervention agency. Because of my background, when Vietnam vets would call, there was a tendency to refer them to me. Then, when I went back to school to pick up my Ph.D. (after getting a master's in history and a second master's in counseling), I decided to go for a degree in psychology, and I became very interested in traumatic stress reactions.

I did a clinical internship at a Veterans' Administration medical center and was then hired by that same facility to put together a comprehensive combat-stress treatment program. I'm now the director of that program and have been for quite some time.

So I sort of came in through the back door; this wasn't something I had originally planned on as a career choice. But over time, as I experienced greater and greater exposure to the field, I became more and more interested in it. It kind of brought together my interest in psychology and my interest in history. I was originally a history major as an undergraduate and very interested in military history. So it wasn't a very big leap, when I got into psychology, to gravitate towards this specialty. It was a chance to study closely some of the human aspects of war and what happens to people in it.

The PC Press: It all does seem to tie together very well. So when did you first have contact with the guys from Atomic Games?

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Dr. Silver: That goes back, too. I was doing some Beta testing for Three-Sixty Pacific, and I had worked on the Macintosh version of Harpoon. Out of that, when Keith Zabalaoui and the other guys at Atomic started working on the V for Victory games, I became involved in contributing to some of the battle-sets. In the course of that, Keith and I got to know one another through numerous phone conversations about different aspects of the games.

The PC Press: Was this when they had already committed to doing the computer version of Squad Leader?

Dr. Silver: I'm not sure where that project enters into the time line. I do remember that, at that time, Keith was not referring to Close Combat publicly—it was known as “Project X.” They were doing some preliminary studies. They were scanning graphics to get some idea of the visual aspects of the game, and it hadn't really gotten much further than that. But they knew they wanted to design a game in which the player took command of real people who would function in real time.

Knowing something about me and my background, when I started talking about blending into the game a kind of “psychological engine” that would have an effect on people's responses to commands or even people acting on their own initiative, the whole subject readily fit in.

At that time, what I did was basically give them a model of how it might work. I even went so far as to do some programming in BASIC, which I had learned for the old Apple II. I gave them some ideas about how things could work, in terms of the psychological profile of a given individual in the game, then how that profile might be affected by experience and, in turn, how that profile might affect the probability of their reactions to various situations. It was that kind of modeling that we were mostly focusing on.

The PC Press: And, of course, this kind of approach had never been used before in a computer wargame.

Dr. Silver: No. The most that had been done up to that time was to incorporate a sort of generic morale factor into a game—ratings that might reflect various degrees of exhaustion. But really, that was insufficient, because it would not give you a sense of what a given *individual* might do. And at the scale Atomic was talking about, you needed that down on the individual level. What I wanted to do was to model anything from somebody disobeying orders and cowering all the way to the other end of the behavioral spectrum, which is somebody suddenly turning into Audi Murphy and performing acts of reckless heroism.

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The PC Press: Many times, when play-testing the game, we were reminded of Audi Murphy.

Dr. Silver: He was a classic example of an ordinary man suddenly doing extraordinary things because of combat-related stress. That scene where Murphy single-handedly wipes out a whole German platoon in the movie *To Hell and Back*, that really happened. Murphy's closest friend was killed, and Murphy entered into a kind of berserk state: anger fueling heroism.

I wanted to have that possibility in the game, but it had to be only a possibility. You wouldn't be able to predict absolutely what an individual soldier might do because there would always be a random variable in the program. After all, there's a big chunk of human behavior that simply can't be predicted.

I was also interested in the prolonged effects of combat exposure and how this would influence what might happen to, say, the same platoon of people that you might take through an entire campaign. For example, if you were to look generically at infantry in 1939 and rate them on a scale of zero to 100, then a civilian would rate about a five while the average for a trained soldier was probably around 35. But the average German infantryman would be around 50, with some elite units rating higher than that.

What you would see by 1943 is that the German number would be even higher than that, say 65 or 70; but after that time, the Germans would continuously deteriorate. And by the last weeks of the war, they would be close to minimally functional. That was simply a function of the Germans' having to keep people on the line indefinitely, especially on the Russian Front.

The PC Press: Even so, it's amazing how the *Wehrmacht* was still able to pull off some prodigious military feats even as late in the war as 1945—the counteroffensive in Hungary, for example.

Dr. Silver: Right! And what was critical in those last months was the variable of leadership found in the small-unit commanders. The German NCOs and junior officers showed exceptional leadership as well as the ability to improvise effective tactics with what was on hand. And this was one of the factors that had to be incorporated into the game. You can have the most zealous, best-trained soldiers in the world, but if you put them under incompetent leadership, their morale is going to deteriorate very quickly.

So what I was looking for was to build models of real-world functioning, where you could have situations which might arise in which the individual soldiers might do anything from freeze to attack with gusto. The model would be based on what these hypothetical soldiers were like before they went into

combat, what their previous combat experiences had been, what kind of experiences they were currently undergoing, and what their leadership and their peer influences were like.

I used a lot of ideas from Israeli studies as well as American studies. In terms of the overall model, it did hold together. Now, how much of that you can actually incorporate into a game, given the limits of processing power and the number of variables, that's another ball game.

The PC Press: We've played hundreds of games, and we think the behavior model in the game is eminently plausible, especially in the Campaign mode; it's what you would get from any random sample of any army in the world.

Dr. Silver: Right, and that's an important feature. What I tried to do was approach this in a way that would keep the soldiers from turning into cardboard figures. They would come into the game with a variety of individual characteristics—generally grouped around the mean in the kind of distribution you would expect to see because the army recruitment process would already have weeded out the people who had major problems in terms of psychological functioning. But then, as circumstances change in combat, people are going to respond differently; some of their traits will become more pronounced, or less pronounced, depending on their experiences.

The PC Press: Did you draw up different models for the Germans and the Americans, or was it basically variations on the same model?

Dr. Silver: One of the things we've learned is that there's not a whole lot of difference among human beings when they're tossed into war. It's a remarkably nondiscriminatory activity, in that it messes with everybody's head. What we wanted to do was to have a basic human model that you could plug into a variety of variables.

For example, if we're talking about the Germans, in most of their combat experiences in the early part of the war, they're going to find themselves with superior equipment. German armor, German artillery, German machine guns—they're all going to be superior to what they run into with the Russians. Later in the war, especially when the Russian numbers start having an effect, not only are the Germans going to be outnumbered, which in itself exerts a certain psychological effect that can be pretty accurately quantified, they're going to be operating in a situation in which their equipment is no longer superior. That's going to have a major effect on what their morale is like, what their psychological state is like, even before going into a fight.

At the beginning of the war with Russia, the German soldier was probably the best-trained soldier in the world, while his Russian counterparts were often

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thrown in as mere cannon fodder, given perfunctory training at best. But by the end of the war, the Russian soldiers who had survived were among the best in the world: cunning, tough, skilled, deadly opponents with very good leadership at the lower levels.

So at some point in the war, say after Stalingrad, you get this gradual shift in the Germans' profile. That's the sort of thing I hoped Atomic would be able to model in the game.

The PC Press: How closely did you work with Atomic during the initial design phase of the game?

Dr. Silver: What I did was give them a big piece of my mind, along with a lot of notes and so forth. What I proposed, in terms of programming in the psychological engine, was impractical and I knew that when I made the proposal—I just wanted to show, ideally, how it might be done. What Atomic did was to come up with their own version of it that was practical, that could be implemented with existing technology. So they pretty much were off on their own after I gave them my spreadsheets and my notes.

Then I was pretty much out of the loop, until they got back in touch with me and showed me what they had thus far.

The PC Press: So what was your first impression?

Dr. Silver: Well, I'm a big wargamer, so I cut right to the heart of the matter: what do the graphics look like, and are there any tanks! If you've got sexy-looking tanks, you can sell me. I began to play through some of the battles. I remember noticing on my big map that one of my BAR men was hanging back. So I went on down to the farmhouse where he was and found him just sort of staggering around. I looked at the farmhouse and saw that about half the squad was dead or wounded, that he and his team, as a result of my commands—which were made somewhat arbitrarily, which is one of the advantages of being "God"—had been forced to make a 200-yard sprint across open terrain to reach their objective, where they'd undergone a short but brutal firefight. They'd had the hell kicked out of them, and this guy was showing the results. All I could finally get him to do was to take up a defensive position.

It seemed very realistic to me.

The PC Press: Just out of curiosity, what do you predict the response will be to this game?

Dr. Silver: You know, I've come to believe that many wargamers, their protests to the contrary, actually don't like realism. And there's a certain kind of gamer who will resist the fact that now, for the first time, you have a game

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that accurately models what really happens in combat. These are the gamers who prefer to work with robots, who always want to move their little cardboard pieces just the way they want them to move. In this game, the “cardboard pieces” may eventually turn around and tell you, “No, we can’t do that.”

On the other hand, I think that people who have really tried to play war “simulations,” as opposed to “games,” are going to find this game a tremendous step forward. Never before, for example, has there been such an accurate representation of the shock members of a unit of soldiers feel when they realize they’ve been flanked. In most previous games, it’s been a matter of: “Oh, yeah, there they are. I’ll just turn my unit to face them and that’s that.” Whereas in reality, the response is: “Good Lord, they’re coming at us from the flank—let’s get out of here!”

I would really love to see this system applied to a Civil War simulation or, for that matter, to a fantasy role-playing game in which the characters undergo real human changes instead of mechanically accumulating skill points.

I think that what Atomic has done is to define a new direction for computer gaming as a whole, toward a higher degree of real-world realism, and I think it can be applied to gaming across the board, not just wargames. So whether or not Close Combat becomes a monster hit or a cult classic, I think it will be recognized as a watershed game—a defining moment in the history of PC gaming.

The PC Press: Dr. Silver, we thank you very much for taking the time to share your insights with us. It’s been a rare pleasure talking to you.

Chapter Thirteen



THE TWO-PLAYER GAME

It's easy to become wrapped up in your own private war, whether you're struggling to find a winning American strategy against incredible odds in the final battle of Hill 192, or trying to keep your best men alive to defend the Fatherland in the climactic battles that comprise the St. Lo Operation. Even so, there's bound to come a time when you've finally learned how to beat your computer-controlled opponent on a fairly regular basis, and you might start to think about putting the game away and moving on to something new and more challenging.

That's where Close Combat's two-player game comes in. In one-player mode, Close Combat pits a human opponent against a tough and calculating strategic artificial intelligence program, with both you and the computer utilizing the second level: the tactical artificial intelligence. In two-player games, the strategic artificial intelligence is replaced by an even tougher and more calculating foe: your human opponent. Once you've tested your skills against a living, breathing player, there's a good chance that the two-player mode will be your first choice of game type from that point on.

In this chapter, we'll explain the different ways you can connect with another player for a two-player game. Because many of you will be using the Internet for connecting to your opponent, we'll also look at some of the resources related to Close Combat that you'll find online—not only on the Internet, but also on popular online services such as The Microsoft Network, America Online, and CompuServe.

Why a Human Opponent?

Why indeed, after the outstanding job by the team at Atomic Games on developing Close Combat's realistic artificial intelligence programs?

The answer is simple: No computer program can match a human opponent in terms of creativity and deviousness, nor will it attempt things which its logic tells it are unlikely to succeed—something that people tend to do quite often.

Microsoft *Close* **Combat**

Despite the huge advances in artificial intelligence programming—the recent success of a chess program against world champion Garry Kasparov comes to mind—we’re still a long way from true “thinking” machines. So as good as Close Combat’s AI is, there are still many human opponents who’ll put up a better fight.

But the real attraction for playing against another person is much simpler: we like to play games together more than playing alone. There’s nothing quite like scoring a decisive victory against a human opponent then meeting online to discuss how the battle played out from both perspectives.

Making the Connection

Close Combat has one of the most user-friendly two-player games ever designed. If you’ve ever tried to connect via modem for a game of Doom only to be frustrated by learning that your modem initialization strings are incorrect, you’ll really appreciate the simplicity of the Close Combat system.

Essentially, you and your opponent each need two things to play:

- A copy of Close Combat
- A TCP/IP connection to a network

Of course, you know you already meet at least one of these requirements! And there’s no need to be alarmed by the TCP/IP part—you probably already have such a connection, whether you realize it or not.

Dial-Up Connections

TCP/IP stands for Transmission Control Protocol over Internet Protocol. Simply put, it’s a standard (two standards, actually, but we won’t get too technical here) that was created to allow different types of computers using different operating systems to “talk” to one another. If you access the Internet through a dedicated Internet Service Provider (ISP), then you’re establishing a TCP/IP connection to a network—the Internet—every time you log on.

You can also establish a TCP/IP connection to the Internet through The Microsoft Network if you’re dialing into one of their Internet numbers. To find the MSN Internet numbers for your area, select Categories from the MSN Central menu; in the Categories Window double-click on Internet Center and then on Getting On The Internet. Click on the blue bar that says Setup

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Instructions, and you'll be shown a window with a phone icon labeled Internet Phone Number List.

But Close Combat owners who access the Internet through America Online and CompuServe, or MSN users who've chosen The Microsoft Network as their Service type, will *not* be able to connect to another player through those services. (To find out what Service type you're using on The Microsoft Network, click on Settings on the MSN Sign In Screen; if the Service type is "Internet and the Microsoft Network" or "ISDN access to the Internet and MSN," you'll be able to play Close Combat by connecting to MSN, but if it says "The Microsoft Network," you won't.) That's because when your modem connects to an ISP—be it a dedicated Internet provider or MSN via an Internet phone number—your computer is assigned something called an IP

address, which appears as a series of numbers separated by periods. It's how a TCP/IP network knows whose computer is whose and where it's located; it's also how Close Combat finds your opponent. Without an IP address, you can't start a two-player game. And neither America Online, or CompuServe assign your computer an IP address when you log on directly to their services.

Keep in mind, though, that online services are constantly changing their access methods, and what's true today may not be true a week from now. Check with the customer service or technical support departments of your online service for updates on true TCP/IP connections.

On the Close Combat CD itself, you'll find two sources of additional information and assistance. After you've installed the game, click Start, choose Microsoft Games, and then select the Close Combat folder. You'll see shortcuts to three documents called Network How-To, Close Combat Read Me, and Troubleshooting. The Network How-To contains very thorough information on setting up Windows 95's Dial-Up Networking and the Dial-Up Networking Adapter, creating connections for specific service providers, explanations of how to make SLIP (Serial Line Internet Protocol) and PPP (Point-to-Point Protocol) connections, and other Internet basics.

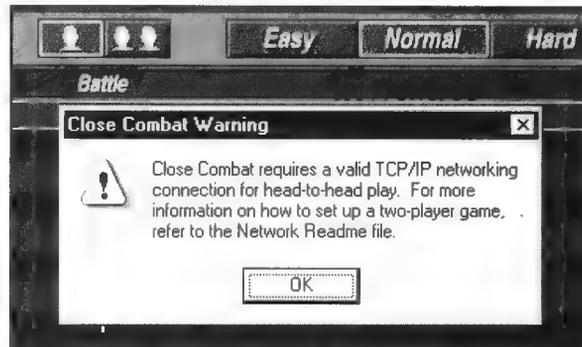


Figure 13-1. Unless you have a TCP/IP connection established, Close Combat will not let you set up a two-player game.

Microsoft
**Close
Combat**

Local Area Networks

You can also play Close Combat over a Local Area Network, or LAN. The deciding factor is whether or not the LAN uses the TCP/IP protocol; if the network doesn't support TCP/IP, then even though your machines are linked, you won't be able to play. Remember: Close Combat requires that your computer have an IP address before it will allow you to start a two-player game, and you won't have an IP address unless the network you're connected to supports the TCP/IP protocol.

Not sure if your LAN is a TCP/IP network? Then consult your network administrator. And don't despair if your network isn't compatible with Close Combat. There are a lot more people to play on the Internet than in your office—the only problem is finding them. We'll tell you how to do that a little later on, but first let's assume that you've found an opponent and know his or her IP address (or that he or she knows yours).

Starting a Two-Player Game

Accessing a two-player game couldn't be much simpler than in Close Combat. After you've established your own TCP/IP connection, start Close Combat and click on the Two-Player Button on the upper-left side of the Command Screen. (Note: MSN users should make sure their automatic disconnect feature is set to

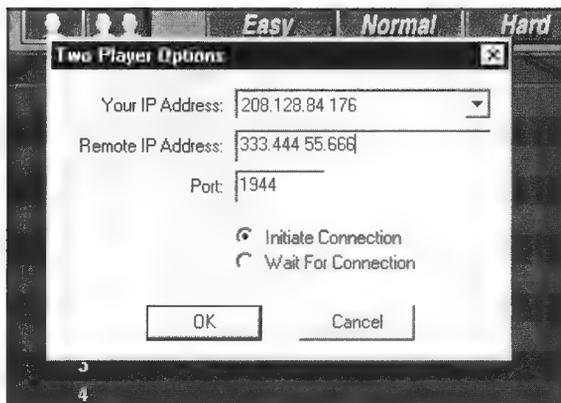


Figure 13-2. When you click on the Two-Player Button, Close Combat automatically detects your IP address for you and enters it in the appropriate text box of the Two Player Options screen.

at least 30 minutes before starting a game; in MSN Central, click the View menu, and then click Options to set the number of minutes MSN can be idle before you're automatically disconnected.) This brings up the Two Player Options screen, which has two text boxes—one for your IP address and one for your opponent's IP address. (You can also get to the Two Player Options screen by clicking on Campaign and then selecting a two-player Campaign you've already begun.) If you've already established a TCP/IP connection, your IP address will

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appear automatically in the top box. The box for your opponent's IP address—the Remote IP Address—will be blank. At this point, one of the players needs to select the Initiate Connection option and the other the Wait For Connection option. To initiate the connection, select the Initiate

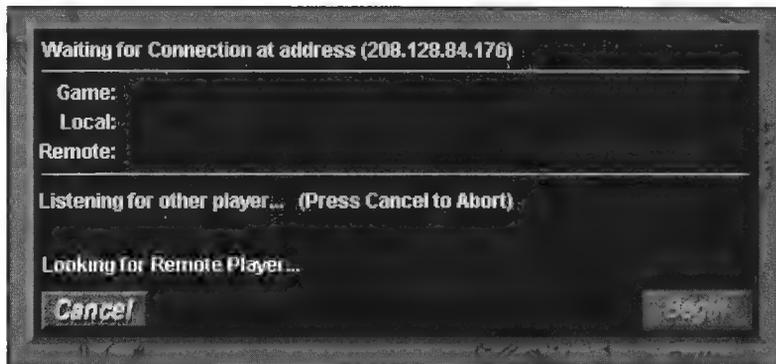


Figure 13-3. Connecting to an opponent may take a few seconds, but sit tight—it's worth the wait!

Connection option, type in your opponent's IP address, and click the OK button to return to the Command screen. Make sure that you've selected the side and battle you wish to play, then click Begin. The game will immediately begin searching for your opponent at the IP address you specified.

The Wait For Connection option is much simpler (assuming your opponent knows your IP address, of course!). Just click the Wait For Connection selection and then click OK; at that point Close Combat will begin “listening” for connection from your opponent. Note that choosing Wait For Connection means you no longer have control over any of the starting battle parameters.

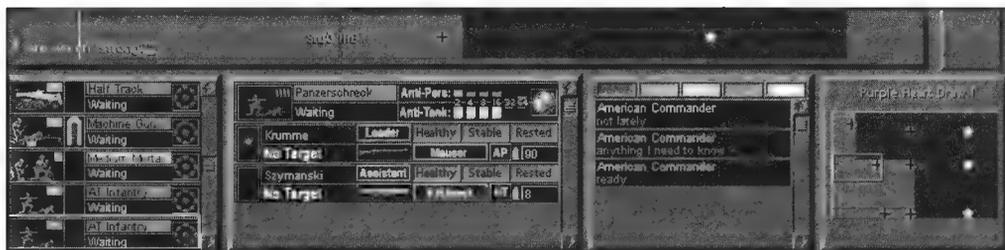


Figure 13-4. To send a message to your opponent, press Shift-tilde. (The tilde key is the squiggly line on the upper-left corner of your keyboard which looks something like ~.) A small blue cursor will appear on screen just above the Team monitor indicating you can start typing your message. When you press Enter, your message will be sent and will appear in your opponent's Message monitor as well as in your own.

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Once a connection is established and both players have clicked Begin, game play proceeds normally. You and your opponent deploy your forces (one player will inevitably wind up waiting on the other), and once the last player clicks Begin, the action begins to unfold just as in a one-player game.

Well, *almost* as in a one-player game: when playing against a human opponent, Close Combat players tend to be more cautious than an AI-controlled opponent; two or three minutes might elapse before you spot the enemy. Rest assured, however, that the enemy's troops are indeed there; if you make a rash advance, you'll likely find yourself in the middle of an ambush or crossfire.

An especially nice feature of the two-player game is that you can play a Campaign as well as an individual battle from one of the Operations. Your Campaign game is saved just as in the one-player game; resuming the saved game from the Campaign menu simply brings up the Two Player Options screen asking if you'd like to Initiate Connection or Wait For Connection.

Knowing Your Opponent's IP Address

You don't need to worry about how to find out your own IP address: Close Combat automatically detects it for you. But how do you know the correct IP address, to use in the Remote Player slot? Most Internet users' IP addresses change every time they log on, and there's no way to know exactly what it will be in advance.

There are several ways to approach this problem. If you have two phone lines, you can log on and find out your own IP address (by clicking the Two-Player Button or by using the Winipcfg tool described in the Network How-To file) and then call your opponent with the information. Another way is through email: After setting up a time to meet online and agreeing who'll initiate the connection, log on to your Internet Service Provider, find out your assigned IP address, and then email it to the player who's initiating. All you need to do is minimize Close Combat, which automatically pauses the game, then switch to your email program and send the information.

Perhaps the best way is through chatting while you're logged on. Through a system known as Internet Relay Chat (IRC), thousands of people from all over the world engage in real-time chats; MSN users can also use the Chat areas of that network. As we go to press, there's already a Close Combat "channel"—a chat area dedicated to a specific topic—on the IRC network known as EFNET, and the chances are good that other IRC networks will have channels where Close Combat players can meet while they're online and set up

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Campaign Name	Opponent	Operation	Battle	Side	US Strength	GR Strength
New Campaign...	(Double-click to create a campaign game)					
Blaster	Computer	Off the Beach	1	+	Average	Average
German	Computer	Hedgerows	1	+	Average	Average
JollyGreen	Ogre	Off the Beach	1	+	Average	Average
Stiv	Stiv	Off the Beach	1	+	Average	Average
Warrastrong	Computer	Off the Beach	1	+	Very Strong	Very Strong

Figure 13-5. To resume a two-player Campaign, double-click on the Campaign name—the Two Player Options screen will appear automatically.

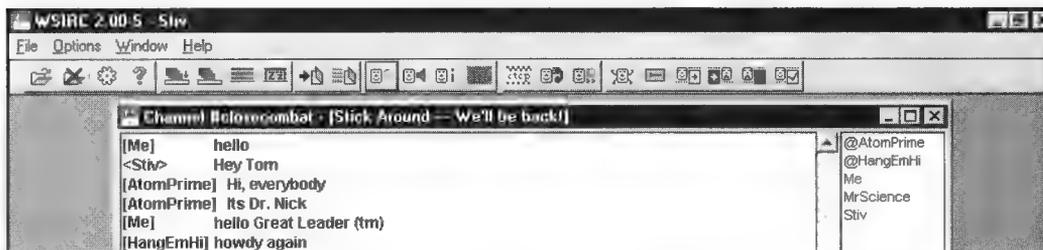


Figure 13-6. The #closecombat channel on the IRC network known as EFNET is a good place to meet Close Combat fans in order to set up two-player games.

games. Like email, you can use IRC at the same time Close Combat is running—just minimize the game and switch to your IRC application.

Information on how to use IRC, where to get IRC software for downloading and installation, and lists of EFNET servers (as well as lists of servers on other networks, such as the Undernet) are easily found on the Internet. A good starting place would be a newsgroup such as alt.irc or alt.irc.questions; you could also use an Internet search engine such as WebCrawler, Yahoo, or Lycos to find out more information on IRC.

Online Resources

Even though you can't use America Online or CompuServe as a TCP/IP connection to play Close Combat, you'll still find these services have something to offer Close Combat players. Each has areas dedicated to wargames, and these are great places to meet with other Close Combat players to discuss strategies and set up two-player games (but only through a true TCP/IP connection, of course).

Microsoft *Close Combat*

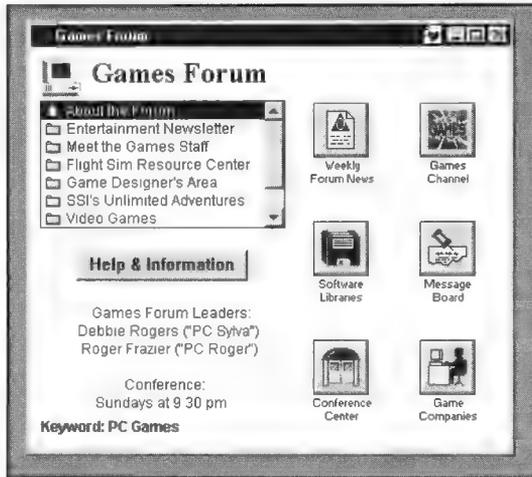


Figure 13-7. The Message Board of America Online's Games Forum features comments on a wide variety of games. For comments on Close Combat, try the Strategy and Other Sims section.

Let's examine what these services—along with The Microsoft Network and the Internet—have to offer the dedicated Close Combat fan.

America Online

The best place in AOL to discuss Close Combat is in the Games Forum. To get to the Games Forum message area, where you can post your own comments about Close Combat or just read what other people are saying, use keyword PC GAMES, choose Message Board, and then choose List Categories. Wargames like Close Combat are usually found in the Strategy and Other Sims category.

To find possible Close Combat opponents, you could post a message with your email address and correspond to set up a time to go online for a game. The Games Forum also has a chat area called the Conference Center; you could always hop into a chat and invite someone to play, but most of the discussions here center more on arcade-style games. It's worth a look every now and then, though.

CompuServe

The Gamers' Forum (GO GAMERS) is similar to America Online's Games Forum, except it's not as busy, and the postings tend to be a little more sophisticated. To post or read messages about Close Combat, if you're using the WinCIM software, select Messages on the menu bar and then choose either Browse Messages or Search Messages from the drop-down menu. If you decide to choose Browse Messages, click the category labeled Strategy/War (A-G); if you choose to Search Messages, type the words *Close Combat* in the Subject slot of the "Search for messages matching" dialog box.

To find an opponent, you could post a message here just as you would in the Games Forum on AOL, or you could try going to the Modem-to-Modem Game Support area (GO MODEM GAMES) and entering the Modem Games

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Forum. There's a category called Internet/Nets/BBS—perfect for posting challenges for games over the Internet.

You also might scare up an opponent in the Conference area of The Gamers' Forum. Select Conference from the menu bar and then choose Enter Room from the drop-down menu; you'll see a list of "rooms"

corresponding to the categories in the Message area. Just click on the Strategy/War (A-G) section, and you'll be able to enter an existing conference or start one of your own.



Figure 13-8. CompuServe's Modem Games Forum has a Message category called Internet/Nets/BBS that is an ideal spot for finding someone to play over the Internet.

The Microsoft Network

The Microsoft Network (MSN) is a good place to look for resources and opponents for Close Combat—and the best part is that not only can you find an opponent here, but you can also use the service to establish the TCP/IP connection required by the game. Should you find an opponent online at the same time as you, you could immediately start a game instead of having to sign off and start a new connection.



Figure 13-9. The Microsoft Networks Computer Games Forum provides lots of gaming news and resources. Close Combat fans should explore the Computer Games BBS—categories on Wargames and Internet Games will be of special interest.

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To access MSN's Computer Games Forum quickly, use the Go word CompGames. Once there, you might want to check out the Forum Shortcuts and Nickel Tour; it's a good way to become familiar with all the forum has to offer. Just double-click on the camera icon.

Your first stop should be the Computer Games BBS, which features discussions on a huge variety of games. Of particular interest to Close Combat players will be the Wargames section—and the Computer Games Forum Manager thoughtfully created a folder for Close Combat shortly after its release was announced.

Other sections where Close Combat discussion might crop up are Strategy and Win95 games, as well as the Internet Games folder.

To drum up an opponent, post requests in the various forums where Close Combat is being discussed. Where you'll have the most luck, though, will be in the Internet Games section: there's a folder called Opponents & Challenges devoted solely to matching players for games on the Net.

And don't forget to visit the Computer Games Chat Area, located in the Computer Games Forum. If you find an opponent who's already online chatting, you can be up and playing in just a few minutes.

The Internet

The Internet is vast, and there are several places where you can meet fellow fans for chats and games. But before you start searching for them all, you should probably drop in on the Atomic Diner, Atomic Games' World Wide Web site.

In addition to the usual press releases and company information, the Atomic Diner is also home to a mailing list where users can exchange comments on various products from Atomic Games, issue challenges, and talk computer wargaming. While Atomic has considered the possibility of expanding its site to facilitate two-player matchups of Close Combat, nothing has been decided as we go to press. Check the site from time to time for updates. You'll find them at <http://www.atomic.com>.

As we go to press, Microsoft is busy working on a World Wide Web site for Close Combat that will feature a downloadable trial version of the game (both Windows 95 and Mac versions), screen shots from the game, a bevy of historical information, and a "leadership test" designed by Dr. Steven Silver. Microsoft's Close Combat site will be located at <http://www.microsoft.com/games/kickbutt>. If you're looking for wargame fans who don't mind saying, in no uncertain terms, what's on their minds, you'll want to head to the USENET



Latency: The Internet Bugaboo

Playing games over the Internet is nothing new. Games such as blackjack, chess, reversi, hangman, and many others have been enjoyed by countless thousands of people for years, not to mention all the gamers who've used the Internet's email capabilities for Play By Email (known as PBEM).

There's a big difference, though, between playing Close Combat over the Internet and playing a simple card game online. When you're playing a game of blackjack on the Internet, for example, very little information is passing between your computer and the computer running the blackjack program—perhaps a single character for “hit” or “double down” from your system, and a few characters from the blackjack computer telling the result of your action. And aside from inconvenience to you, it doesn't really matter if it takes one second or five for the information to pass back and forth between the two computers.

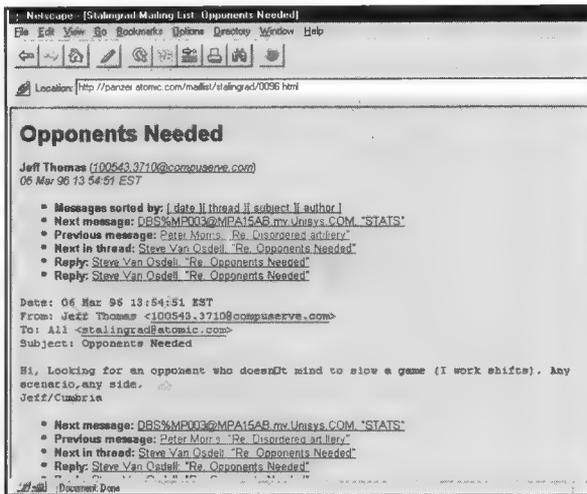
When you're playing Close Combat online, the amount of information traveling between your computer and your opponent's computer isn't all that great, relatively speaking—you receive much more data on a per-second basis by accessing an image-heavy site on the World Wide Web. But the amount of time it takes for that information to be sent back and forth can determine the quality of your gaming experience. That delay—known as “latency” or “lag”—can cause both players to have to sit and wait as the crucial data affecting game play is exchanged between machines.

What causes long lag times in data transfer? Well, it's usually the fault of one of the player's Internet Service Providers: their system is either overloaded or outdated, and it takes longer to send data along its way. Then again, it might not be the fault of either player's ISP, but a slow system the data is passing through as it travels between computers. Anything you send through the Internet can pass through several computers—and if one of them is bogged down, the data you're sending will take longer to reach its destination.

The good news is that Close Combat isn't very sensitive to latency. Unless the lag time is very high in telecommunication terms—say a second and a half for data to be received, processed, updated, and sent back to the other computer—then you shouldn't experience any problems during play. If you should run into a large lag time, the program will inform you with a message that network lag has caused the game to halt momentarily. Close Combat's two-player game screen has a colored bar labelled Network that displays latency times, but it tends to exaggerate the latency. If the bar says 800 milliseconds, real latency is probably 400 to 500 milliseconds.

The main thing to keep in mind is that in a two-player game, the program will perform only as well as it does on the slowest machine. But if the game plays well on both machines in one-player mode, you should experience only intermittent problems, at the very worst, when playing over the Internet. While we were testing the game, we achieved good results even when one computer was in the U.S. and the other in Europe.

Microsoft Close Combat



Figures 13-10, 13-11. Atomic Games runs the Atomic Diner, a World Wide Web site where owners of products developed by Atomic can meet to exchange strategies and arrange two-player games.

newsgroup comp.sys.ibm.pc.games.strategy. Here, wargame aficionados post in-depth messages on every product imaginable, and you can be sure Close Combat will be a hot topic.

While it might seem slightly scary to post messages that will be read by some very critical people, don't worry—the great majority of the users are friendly and understanding and are glad to offer technical assistance, suggest tactical tips, and just talk about their favorite games.

There's no real way of enumerating the many sites on the Internet devoted to computer wargaming, real warfare, and historical combat. To find other wargame areas that might be of interest to you, use a search engine such as Lycos (<http://www.lycos.com>), Alta Vista (<http://www.altavista.digital.com>), Yahoo (<http://gnn.yahoo.com>), or WebCrawler (<http://webcrawler.com>). All of these search engines also have information organized by category. And don't forget to check IRC channels for opponents—if you're chatting with them on an IRC channel, you're only seconds away from a two-player game.

If you're interested in learning more about these topics, find a book that discusses using the Internet. Be sure that the one you buy is of recent vintage—things on the Internet change quickly.

Chapter Fourteen



OPTIMIZING GAME PLAY

The German MG 34 was notoriously susceptible to dust and dirt. The gunner who wanted to avoid constant jams kept his MG 34 cleaner than the plate he ate on (assuming he had the luxury of eating on a plate). Mortars on both sides of the conflict could be dozens of meters off in accuracy, just because calibration might be off a small fraction of an inch. And it's conjectured that a major reason behind the German defeat on the Eastern Front earlier in the war was a simple logistical blunder of not having the correct weight oil in German tanks. But if these weapons had been properly optimized, all of them would have functioned at peak efficiency—and the same is true of your computer.

We're not suggesting that you field-strip and clean your computer, unless those dust bunnies hiding under the power supply are really driving you crazy. But there are a number of things you can do for your machine that will greatly improve its performance with Close Combat—or any other application, for that matter.

Tanks for the Memory

The admonition to have as much memory as you can possibly afford—and we're referring to RAM, not hard-drive storage space—has long since entered the Computer Cliche Hall of Fame. The funny thing about cliches, though, is that the reason they become cliches is because they're usually true. Whether you're playing on a Macintosh or PC, the fact remains: increasing the amount of RAM in your system is the single most important thing you can do to improve your computer's performance.

And the introduction of Windows 95 on the PC and System 7.5.x on the Mac have only served to turn the obvious into the very obvious. These two operating systems are real memory and drive-space munchers, but the good news is that their appetites can be tamed with a few simple tricks.

As long as we have your attention, we'll hit you over the head with the first point once more—*buy more memory*. There's never been a better time to

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do so, as prices for RAM drop have been dropping right through the floor. The deal isn't quite as sweet for the Mac side yet, but *all* memory prices should soon be mere shadows of their former selves.

The most important thing to remember when buying RAM is to not be seduced by such low prices that you wind up with inferior RAM modules. There are some very inexpensive RAM chips available on the PC side, but if you're getting RAM too cheaply there's always the possibility that the chips are of inferior quality. Because of Apple's tighter control over its suppliers and licensees, Mac users needn't worry quite as much about the quality of memory chips they're buying.

If you've got some RAM lying around from another computer, you might want to look into one of the RAM adapters that so many retailers and discount houses are offering. These allow you to combine either 30-pin or 72-pin RAM chips on a single mini-board, which is then inserted in one of your computer's open memory banks. While these might work, they're not as efficient as a single chip. Also, depending on your computer, there might be space problems using these adapters. Some of the "low-profile" computers—the ones that are physically smaller—are pretty tight on space inside, and these adapters usually protrude about one to one-and-a-half inches above the circuit board. Check out how much room you have before investing in one of these products.

Double Your Pleasure

RAM doubling software has been, to put it mildly, controversial. For every benchmark test that says a particular package effectively doubles the amount of RAM on your system, there are at least two that say the opposite. To further confuse matters, some reports have concluded that doublers may actually *decrease* system performance. Judging from all the newsgroup traffic on the Internet, even users can't seem to agree on whether these doublers work.

For PC users playing Close Combat, there doesn't seem to be much difference in performance with or without a RAM doubler. Systems that barely meet Close Combat's minimum system requirements might benefit slightly from a RAM doubler, but the effect would be nowhere near what an extra eight megabytes of physical RAM can accomplish.

The PowerMac may be a different story, however. The minimum configuration for Close Combat on the Macintosh platform specifies 12 megabytes of RAM on a PowerMac for satisfactory performance. But Close Combat will load and run, after a fashion, on a machine with eight megabytes if virtual memory is activated. Unfortunately, you'll find it terminally slow and



the game will eventually lock up from the cumulative effects of memory access. But a memory doubler such as Connectix RAMDoubler will allow you to play the game smoothly on an eight-megabyte system. In fact, a machine with eight megabytes of RAM and RAMDoubler runs slightly better than a normal configuration with 12 megabytes.

Relieving System Overhead

If buying extra RAM or RAM doubling software doesn't fit your plans, you can make some improvements in game speed just by relieving your computer of some of its burdens. The first and most obvious approach—making sure that no other programs are running at the same time as *Close Combat*—sounds simple enough, but you may have some unnecessary programs loaded in memory without even knowing it. (The only exception to this rule is when you're playing a two-player game—you'll need some type of software loaded into memory to establish a TCP/IP connection. For more on two-player games, see Chapter Thirteen.)

The Mac's System 7.5.x, for example, loads from its default configuration a fairly sizable array of extension files upon boot-up. Many of these such as memory management and foreign file access are essential, but several others can be turned off, freeing up more system resources. It's fairly easy to experiment with your setup, since the computer will tell you on boot-up whether a particular configuration is "legal." System 7.5.x allows you to save several different boot configurations, including the optimized game setup you finally settle on. Of course, should all else fail you can boot up your Mac without any extensions by holding down the Shift key as you turn on the computer. This technique, however, prevents the computer from loading the sound and video extensions you'll need to completely enjoy the *Close Combat* experience.

In Windows 95, check out your StartUp folder to see if any resource-gobbling programs are loading unbeknownst to you. This is particularly important if you're running a suite program like Microsoft Office or Perfect Office. Even with no applications actually running, the background utilities of these suites can soak up valuable resources. Even if you decide to prevent these programs from loading on boot up, you can still access them, although some of their multitasking features might not be available. Be sure to consult the program's manual for more details on this. While you're at it, go into the Display Properties for Windows 95 by right-button clicking anywhere on the Windows 95 desktop and selecting Properties from the pop-up menu. A

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Display Properties menu will appear with tabs labeled Background and Screen Saver; click these to access screens where you can remove elaborate screen patterns of wallpaper and to deactivate any screen savers you may have running. It may seem trivial, but doing this does free up some system resources.

You might even notice times when you start Close Combat and it seems to run more slowly than it did the last time you played. It may not be your imagination; some programs continue to hold on to resources even after you exit them, so if you've run Word, Excel, and Internet Explorer they may have decreased your system's performance even if they've all been closed. To maximize your computer's resources after running several large programs, just restart your computer before starting a game of Close Combat (by selecting Shut Down from the Start menu, then choosing the Restart the computer option, and clicking OK).

Mac owners can try purging the Mac's PRAM (Parameter RAM) because, just as with the PC, Mac memory can retain vestiges of previous programs in its RAM. To clear the PRAM in any Mac using System 7 and above, simply hold down the key combination Command-Option-P-R while rebooting (you can release the keys after you see the Welcome to Macintosh screen). A better method is to obtain a copy of TechTool, a freeware program available on the World Wide Web that does a more complete job of clearing PRAM while also letting you save your previous settings, should something go wrong. Zap! and MacOS Purge are also good programs to clear out Ram. Regardless of how you purge the PRAM, you should check the preferences in your Control Panels after doing it. Zapping your PRAM clears the Parameter RAM, but it also reloads default settings into some Control Panels, so you may need to reset some of your preferences.

Getting Things in Order: Hard Drive Optimization

After memory and system allocation considerations, the major factors determining good performance are your drives, both hard disk and CD-ROM. The approaches to optimizing these two data sources are different, however. Before doing anything else, make sure that your hard drive is giving you the best performance that it can.

The prime factor in determining a given hard drive's performance is seek time: how long it takes for the drive's read head to find the physical location of the data required by the program. Of course, some hard drives are faster than others, but all other things being equal, the cause of long seeks is usually a



fragmented file structure. When you're constantly installing and removing programs from your hard disk, as game players frequently do, you eventually turn your disk into the equivalent of electromagnetic swiss cheese. That is, there are gaps in the disk structure where a program's files once resided. As new programs are installed, the computer places the files wherever it can find room, even if that means breaking up larger files into two or more separate chunks. It's pretty obvious that requiring the drive read head to jump around to gather up the bits and pieces of a large data file will seriously affect access times.

There are a number of programs available, called disk defragmenters, that optimize your hard disk by rearranging the files so that a drive's read head travels as short a distance as possible when searching for data. Such a utility—Disk Defragmenter—is included in Windows 95. To access it, click on Start, then move the cursor to Programs, then Accessories, then System Tools.

This and other popular defragmenters—Norton Speed Disk, for example—are essentially foolproof, and you have little reason to worry about the integrity of your data. Even so, it's still a good idea to back up your hard drive prior to defragmenting. Unless your hard disk is very fragmented (on the order of 10% fragmentation or more) you may not notice any dramatic difference in performance, but keeping your hard drive organized is always a good idea.

Spin the Silver Disc

CD-ROM drives have their own unique set of problems. At present, they're significantly slower than even the slowest hard drives. They're getting faster, but they still lag far behind the speed of magnetic storage devices (such as your hard drive). Also, you can't always take the manufacturers' specs as gospel, particularly concerning absolute transfer rates.

Fortunately, the Windows 95 version of *Close Combat* comes with a handy utility called *Msinfo32* that quantifies the exact performance of your system. When you insert the *Close Combat* CD and the *AutoRun* menu appears, choose *Explore CD*. Double-click the *Goodies* folder, then double-click the *MSinfo* folder; the *MSinfo32* utility is represented by a magnifying glass over a computer.

Two of the most pertinent items you'll get from running *MSinfo32* are *Data Transfer Rate* (how quickly data is transferred from your CD to your system), and *CPU Util@300Kbs* (how much of your CPU capacity, at a 2X benchmark rate, is consumed by transferring data from the CD). On a 166MHz Pentium system with a 256 KB cache and a 6X CD, our numbers came in at a

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916Kbs Data Transfer Rate and 2 percent CPU Util. If you discover that your CPU Util is much higher than that (say 10 percent or more), you'll know why game play may be slowing down for you. CPU utilization rates that high means the CPU is being overtaxed by either its own relative processing speed or, more likely, by having to assume some of the burden of an underperforming peripheral, most likely the CD-ROM drive or the video card. You can improve these numbers with any combination of a faster CPU, a faster CD-ROM drive, a faster video board, and increased cache memory. If these sorts of investments aren't in your immediate future, there are few other options you can try to improve play.

But you can help the process along by using a caching program such as Speedway or Lightning; Windows 95 has a built-in cache for CD-ROM that you can adjust by right-clicking the My Computer icon, clicking Properties, then Performance, then File System, and finally CD-ROM. Like their hard-drive counterparts, these programs use your computer's RAM—the fastest type of memory—to store frequently accessed programs so that they're available more quickly than they would be directly from the CD-ROM.

While most of these CD-ROM programs are expressly for the PC, you can find a few out there for the Mac as well. FWB CD-ROM Toolkit has the best performance of any that we've tried.

The VRAM Is Quicker Than the Eye

Unlike many 3D arcade games and flight simulators, Close Combat doesn't place really intense demands on a computer's graphic capabilities. There aren't any mad dashes down eerie passages that require quick screen redraws of shaded, texture-mapped graphics—the most difficult kind of images for a video card to update rapidly. On the other hand, there can be a great deal of minute on-screen action in Close Combat; much of this action is easily attended to by your computer's microprocessor, but if the CPU is juggling too many responsibilities things can bog down very quickly. You can take some of the load off your poor chip by giving it some help in the form of a new video board. Boards older than a couple of years are one of the biggest bottlenecks in an otherwise up-to-date system. (Note that because models of the Macintosh have video incorporated directly onto the motherboard, some Mac users may not have an option to upgrade to a faster video card.)

Improvements in video processor chips are primarily the cause for the dramatic speedup, with all new boards boasting 64-bit processing. This means that the data flow among the video board, main CPU, and monitor has a wider



digital path so that more instructions can be passed around in a given time interval. If you have an older 32-bit video board you may want to consider upgrading to the 64-bit variety, not just for the increased data flow but for other recent enhancements such as MPEG decoding (for full-screen video) and 3D graphics processing.

If you're not ready to take the upgrade route but still want quick response from *Close Combat*, try lowering your screen resolution to 640 x 480. At this resolution you can't use some of the viewing options in the game, but overall game response will be much quicker.

Hark the Sound

One of the most exciting features of *Close Combat* is its array of sound effects. Gunfire, explosions, screams, the whoosh of mortars—all these make you feel as if you're really in the middle of a firefight. But if that guy who yells "I can't take it!!!" starts to wear on your nerves a bit, you'll be happy to know you can do something about it—if you're playing the Windows 95 version of the game, that is. Sorry, Mac fans, you won't be able to do anything about the sounds (except turn them off!).

Because all the game's sound effects are stored on the hard drive in WAV format, you can use either the Sound Recorder in Windows 95 (click Start, Programs, Accessories, and Multimedia to access the Sound Recorder) or a third-party sound-editing utility (most sound cards come with such a program) to record your own sounds or modify existing ones by adding reverb, echo, or other effects. The sound files are located in the Sounds folder inside the *Close Combat* folder. Using your sound-editing utility, open a file to preview it (it's not always clear from the file names what the sound is). Now you can either apply effects to the original sound file, or you can erase the sound and record a new one. You'll need to plug a microphone or other audio device into the input jack on your sound card; consult the manual that came with your sound card or select the Help option in Sound Recorder. Whether you simply modify the sound or record over it, be sure to save the file with its original name.

Don't worry if you want to change back to the old sounds: all the sound files are located on the CD-ROM. Just copy the files on the CD-ROM that correspond to the ones you altered into the Sounds folder on the hard drive, and everything will be back to normal.

Appendix



Selected Elements Regarding Armor Penetration at 100 and 500 Meter Distances

Penetration (mm) Kill % vs. Armor (mm) 100m

		10	15	20	30	40	50	60	70	80	90	100	110	120	130	140	150	
Machine Gun	12	0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
50 Caliber	18	1.00	0.68	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
20mm Light Gun	32	1.00	1.00	0.96	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
37mm Light Gun	62	1.00	1.00	1.00	1.00	0.93	0.71	0.53	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
75mm Inf. Gun	96	1.00	1.00	1.00	1.00	1.00	1.00	0.96	0.81	0.68	0.56	0.39	0.13	0.00	0.00	0.00	0.00	
Bazooka	100	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.85	0.72	0.61	0.50	0.24	0.00	0.00	0.00	0.00	
75mm Gun	115	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.86	0.74	0.64	0.54	0.38	0.16	0.00	0.00	
57mm AT Gun	120	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	0.79	0.68	0.59	0.50	0.28	0.08	0.00	
3 Inch Gun	122	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.92	0.80	0.70	0.60	0.52	0.33	0.12	0.00	
105 Heavy Gun	124	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.82	0.71	0.62	0.53	0.37	0.17	0.00	
50mm AT Gun	159	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.96	0.86	0.78	0.70	0.63	0.56	
76.2mm AT Gun	165	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.90	0.82	0.74	0.66	0.60	
75mm AT Gun	174	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.87	0.79	0.72	0.65	
88mm AT Gun	206	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.88	0.81	
90mm AT Gun	210	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.90	0.83	
75mm AT Gun	233	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.93	
Panzerfaust	210	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.90	0.83	
Flak 88	283	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Panzerschreck	240	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.96	
500m																		
75mm Inf. Gun	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Machine Gun	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
50 Caliber	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
20mm Light Gun	32	1.00	1.00	0.96	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
37mm Light Gun	55	1.00	1.00	1.00	1.00	0.82	0.60	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
57mm AT Gun	81	1.00	1.00	1.00	1.00	1.00	0.97	0.80	0.65	0.51	0.21	0.00	0.00	0.00	0.00	0.00	0.00	
75mm AT Gun	82	1.00	1.00	1.00	1.00	1.00	0.98	0.81	0.66	0.52	0.24	0.00	0.00	0.00	0.00	0.00	0.00	
50mm AT Gun	92	1.00	1.00	1.00	1.00	1.00	1.00	0.92	0.77	0.64	0.52	0.27	0.00	0.00	0.00	0.00	0.00	
3 Inch Gun	113	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.84	0.73	0.62	0.53	0.33	0.12	0.00	0.00	
76.2mm AT Gun	116	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.87	0.75	0.65	0.55	0.41	0.19	0.00	0.00	
75mm AT Gun	120	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	0.79	0.68	0.59	0.50	0.28	0.08	0.00	
105 Heavy Gun	124	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.82	0.71	0.62	0.53	0.37	0.17	0.00	
88mm AT Gun	189	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.87	0.80	0.73	
75mm AT Gun	210	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.90	0.83	
Flak 88	260	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
90mm AT Gun	192	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.96	0.89	0.81	0.75	

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Vehicle Characteristics

Featured below are some of the more important vehicle characteristics. Take special note of the firing angles (or field of fire) for both the hull and turret weapons as well as the armor ratings for each vehicle.

A	B	C	D	E	F	G	H	I	J	K	L	M	N
M4 A1	US	AFV	47	37	F	360	112	101	38	59	38	16	19
Pz IVH	GE	AFV	44	38	F	360	84	78	30	40	21	10	12
M4 A3	US	AFV	47	37	F	360	92	89	38	59	38	16	19
StuG IIIG	GE	AFV	-1	38	0	360	90	81	30	66	52	16	17
88mm PaK43	GE	Gun	18	-1	F	0	20	20	20	20	20	6	6
Jeep 50cal	US	Truck	-1	-1	0	0	4	4	4	4	4	4	4
Kubel MG34	GE	Truck	-1	-1	0	0	4	4	4	4	4	4	4
SDKfz 232	GE	AC	-1	-1	0	0	39	36	22	32	17	5	5
Jagd Panther	GE	AFV	44	36	F	360	135	115	40	75	50	25	16
M10	US	AFV	-1	37	0	360	76	64	19	32	19	5	10
M36	US	AFV	-1	37	0	360	76	64	19	32	19	5	10
M5 A1	US	AFV	47	-1	F	0	112	92	28	37	19	13	13
StuG 42	GE	AFV	-1	38	0	360	90	81	30	66	52	16	17
SDKfz 250/1	GE	HT	-1	-1	0	0	17	30	18	42	32	10	5
75mm PaK40	GE	Gun	15	-1	F	0	21	21	20	20	20	6	6
50mm PaK38	GE	Gun	22	-1	F	0	21	21	20	20	20	6	6
M1 57mm	US	Gun	32	-1	F	0	16	29	20	20	20	6	6
M3 HT	US	HT	-1	-1	0	0	10	16	6	14	6	6	10
2&1/2	US	Truck	-1	-1	0	0	2	2	2	2	2	2	2
Opel Blitz	GE	Truck	-1	-1	0	0	3	2	2	2	2	2	2
Pz IIIM	GE	AFV	44	38	F	360	58	63	30	66	51	16	16
Marder III	GE	AFV	44	-1	F	0	55	49	15	29	18	10	8
Pz VG	GE	AFV	44	36	F	360	135	115	40	75	55	40	16
Pz VIE	GE	AFV	44	36	F	360	115	121	60	108	81	26	10
M4 A3 (105)	US	AFV	47	37	F	360	112	101	38	59	38	16	19
75mm IG18	GE	Gun	34	-1	F	0	26	26	20	20	20	6	6
M5 Gun	US	Gun	39	-1	F	0	24	29	20	20	20	6	6

(-1 Value = 0)

- | | | | |
|---|---|---|-----------------------------------|
| A | Name | H | Hull Armor/Front (in millimeters) |
| B | Nationality | I | Hull Armor/Front Side |
| C | Vehicle Type (AFV = Armored Fighting Vehicle;
AC = Armored Carrier; HT = Half-Track) | J | Hull Armor/Side |
| D | Hull Gun Type/Primary Weapon (0 = Cannot Fire; F = Front;
FA = Front Arc; FS = Front and Sides; 360 = 360 Degrees) | K | Hull Armor/Side Rear |
| E | Hull Gun Type/Secondary Weapon | L | Hull Armor/Rear |
| F | Hull Gun Firing Angle/Primary Weapon | M | Hull Armor/Top |
| G | Hull Gun Firing Angle/Secondary Weapon | N | Hull Armor/Bottom |
| | | O | Turret Gun Type/Primary Weapon |

APPENDIX



A	B	C	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD
M4 A1	US	AFV	16	48	49	F	F	360	83	84	38	59	38	22	19	5	YES	NO
Pz IVH	GE	AFV	15	45	-1	F	F	0	52	68	40	56	33	15	12	4	NO	YES
M4 A3	US	AFV	27	48	49	F	F	360	78	91	49	74	49	22	19	5	YES	NO
StuG IIIG	GE	AFV	15	45	-1	F	F	0	82	79	32	48	30	11	16	4	NO	YES
88mm PaK43	GE	Gun	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	7	NO	NO
Jeep 50cal	US	Truck	49	-1	-1	360	0	0	1	1	0	0	0	0	2	2	NO	NO
Kubel MG34	GE	Truck	46	-1	-1	360	0	0	1	1	0	0	0	0	2	2	NO	NO
SDKfz 232	GE	AC	24	45	-1	F	F	0	20	32	18	31	18	6	5	4	NO	NO
Jagd Panther	GE	AFV	21	-1	-1	F	0	0	170	158	67	95	61	25	16	5	NO	NO
M10	US	AFV	39	49	-1	F	360	0	25	40	24	36	20	0	10	5	NO	NO
M36	US	AFV	28	49	-1	F	360	0	25	40	24	36	20	0	10	5	NO	NO
M5 A1	US	AFV	23	48	50	F	F	360	40	55	32	50	32	13	13	4	YES	NO
StuG 42	GE	AFV	40	45	-1	F	F	0	82	79	32	48	30	11	16	4	NO	YES
SDKfz 250/1	GE	HT	46	-1	-1	FS	0	0	21	35	22	27	11	0	16	2	NO	NO
75mm PaK40	GE	Gun	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	4	NO	NO
50mm PaK38	GE	Gun	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	4	NO	NO
M1 57mm	US	Gun	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	5	NO	NO
M3 HT	US	HT	49	-1	-1	360	0	0	17	20	6	14	6	0	10	2	NO	NO
2&1/2	US	Truck	-1	-1	-1	0	0	0	2	2	2	2	2	0	2	1	NO	NO
Opel Blitz	GE	Truck	-1	-1	-1	0	0	0	2	2	2	2	2	0	2	1	NO	NO
Pz IIIM	GE	AFV	22	48	-1	F	F	0	61	73	39	55	32	10	16	5	NO	YES
Marder III	GE	AFV	15	-1	-1	F	0	0	22	29	13	12	0	0	10	4	NO	NO
Pz VG	GE	AFV	25	48	-1	F	F	0	132	141	72	108	72	15	20	5	NO	NO
Pz VIE	GE	AFV	26	48	38	F	F	FA	102	130	80	118	80	26	20	5	NO	NO
M4 A3 (105)	US	AFV	33	48	49	F	F	360	83	84	38	59	38	22	19	5	YES	NO
75mm IG18	GE	Gun	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	3	NO	NO
M5 Gun	US	Gun	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	5	NO	NO

(-1 Value = 0)

P Turret Gun Type/Secondary Weapon
 Q Turret Gun Type/Tertiary Weapon
 R Turret Firing Angle/Primary Weapon
 S Turret Firing Angle/Secondary Weapon
 T Turret Firing Angle/Tertiary Weapon
 U Turret Armor/Front
 V Turret Armor/Front Side
 W Turret Armor/Side

X Turret Armor/Side Rear
 Y Turret Armor/Rear
 Z Turret Armor/Top
 AA Turret Armor/Bottom
 AB Number in Crew
 AC Gyrostabilizer?
 AD Schurzen?

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Armor Effectiveness for Various Vehicles

The armor ratings for the front, side and rear of an armored vehicle includes values for armor thickness (in millimeters) and armor slope (in degrees from perpendicular). A formula uses these values to calculate an Effective Armor value for each vehicle dimension (front, side and rear). The results are further combined to calculate values for Front Side and Rear Side Effective armor. The significance of the Front Side and Rear Side Effective Armor ratings lies in the fact that a corner shot (a shot angled from around 30 to 60 degrees relative to the vehicle centerline) involves a more complex deflection factor. The additional deflection angle means that a corner shot could be less effective against a particular armor than a more straight on shot.

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
M3 Half-Track	6	20	10	16	6	0	6	14	6	0	6	12	20	17	20	6	0	6	14	6	0	6
SDKfz250/1	15	12	17	30	8	30	18	42	8	45	32	10	30	21	35	8	35	22	27	8	17	11
SDK 232	22	35	39	46	8	35	22	32	10	25	17	15	20	20	32	8	30	18	31	8	30	18
Marder III	50	16	55	49	15	0	15	29	15	16	18	11	31	22	29	11	12	13	12	0	0	0
PZ III M	50	21	58	63	30	0	30	66	50	9	51	57	15	61	73	30	25	39	55	30	12	32
M36	38	46	76	64	19	0	19	32	19	0	19	19	22	25	40	19	20	24	36	19	10	20
M10	38	46	76	64	19	0	19	32	19	0	19	19	22	25	40	19	20	24	36	19	10	20
Pz IVH	80	14	84	78	30	0	30	40	20	8	21	50	10	52	68	30	26	40	56	30	15	33
STUG III G	80	21	90	81	30	0	30	66	50	10	52	80	10	82	79	30	11	32	48	30	0	30
M4 A3 (76)	49	46	92	89	38	0	38	59	38	0	38	76	10	78	91	49	0	49	74	49	0	49
M4 A1 (75)	63	46	112	101	38	0	38	59	38	0	38	81	10	83	84	38	0	38	59	38	0	38
M5	38	60	112	92	28	0	28	37	19	0	19	38	10	40	55	32	0	32	50	32	0	32
Tiger	100	24	115	121	60	0	60	108	80	8	81	100	8	102	130	80	0	80	118	80	0	80
Panther	60	55	135	115	40	0	40	75	40	30	55	120	20	132	141	60	25	72	108	60	25	72
Jagd Panther	60	55	135	115	40	0	40	70	40	25	50	80	55	170	158	50	30	67	95	40	35	61

A	Name	G	Slope	M	Turret Front Armor	S	Effective Armor
B	Hull Front Armor	H	Effective Armor	N	Slope	T	Side Rear Effective Armor
C	Slope	I	Side Rear Effective Armor	O	Effective Armor	U	Rear Armor
D	Effective Armor	J	Rear Armor	P	Front Side Effective Armor	V	Slope
E	Front Side Effective Armor	K	Slope	Q	Side Armor	W	Effective Armor
F	Side Armor	L	Effective Armor	R	Slope		

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William R. Trotter has been a senior writer and reviewer for *PC Gamer* magazine since 1987. He has published hundreds of articles and reviews on personal computer gaming, has written the *PC Gamer* column "The Desktop General" since 1989, and is a contributor to *The Whole PC Family Encyclopedia*. His book, *A Frozen Hell*, based on the Russo-Finnish War, won the 1993 Finlandia Foundation Arts and Letters Award.

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