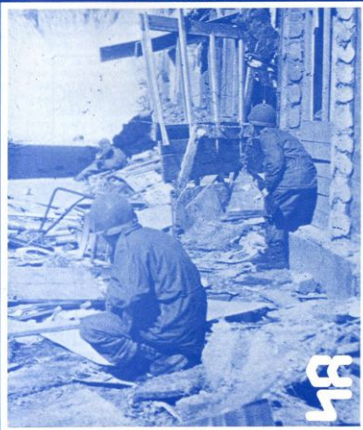


FRONTLINE

By
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IMPORTANT

Before playing **Frontline** for the first time, run the "READ_ME.PRG" program on Disk A. This will give you machine specific information and tell you about any extras your version of the game has.

INTRODUCTION

The Second World War is rightly considered to be the place and time when armoured forces came into their own. Sadly, the prominence achieved by armoured forces has allowed the contribution of the infantry to be overlooked.

As early as the first month of the war, the vulnerability of tanks to determined soldiers was demonstrated in no uncertain fashion. In the suburbs of Warsaw, 4th Panzer Division lost 60 tanks in a single day!

Many of the battles in the Pacific were fought without the benefit of tanks, and most of the fighting in the cities of Europe and Russia was almost exclusively the preserve of the infantry. **Frontline** is a squad level simulation of some of the aspects of these battles. The battles chosen are drawn from different theatres of war, and, if there is a demand, I will produce scenario disks for other battles.

In writing **Frontline** I have tried to produce a game which is playable, doesn't cheat in favour of the computer, tries to give some idea of what the battles were like, and helps give the player an understanding of basic infantry tactics. These objectives are contradictory, and only the player can judge whether the necessary compromises were correct!

Players of board games will recognise many ideas and techniques in **Frontline**, but I have tried to make use of the strengths of the computer, and minimise its weaknesses vis a vis board games. Where there was a clash between playability and simulation, I have usually come down on the side of playability.

The most important factor affecting the performance of squads in **Frontline** is morale. I think it was Napoleon who said that 'in war the spiritual is to the material as three is to one'. And he knew a thing or two about waging war! Thus the concept of morale and leadership is central to the game. Make sure that the squads in the key positions have adequate leadership, and they will be able to hold against the odds!

Alan Lenton

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1.0 SETTING UP

1.1 Choosing the Scenario

The initial screen allows you to select one of the following 6 scenarios:

Assault on Hill 139 (Training)
Clear the Convent (Training)
Pegasus Bridge
Stalingrad
Guadalcanal
Cassino

Select the **GAME** drop-down menu, click on **SCENARIO**, and information about the first scenario will appear. There will be two icons:



Click to move to the next scenario.



Click to select the scenario currently displayed.

Alternatively you can load a saved game; click on **LOAD GAME** and follow the instructions on the screen.

1.2 Choosing Your Side

Once the scenario has loaded you must choose your side. Click on **NEXT** to switch between the two sides and **SELECT** to select your side.

For each side you will be given information about the units. There are two types of unit – an infantry squad, consisting of five or ten men, or an artillery piece and its crew.

For artillery units, you will be given the type of gun and its size.

If the unit is infantry the numbers next to the unit's name refer to its firepower, range and morale – for instance, 4-5-7 means a firepower 4, a range 5 and morale 7.

You will also be told what support weapons each side has available, with the firepower and range for each weapon (where appropriate) – ie 5-11 means a firepower 5 and a range 11.

Finally you are told what leaders are available and the appropriate combat modifier. Units with leaders do better in combat; the lower the combat modifier, the more effective the leader. Leaders can only be allocated to infantry squads – artillery pieces may or may not already have an artillery leader.

1.3 Allocating Leaders

Once you have selected your side you can allocate leaders. Information is shown about each squad. You can call up this information at any time – it is explained fully in the *Information* sections. You will be told whether the unit starts the game off the map. If so, you are told on which turn it appears.



This icon will move you through the available squads. When the chosen squad appears, click on the leader you wish to allocate.



When you have finished allocating leaders, click. If you click before you have finished you can change your mind, but you cannot re-allocate the leaders already assigned. Confirm that you are happy with your allocation, and you will proceed to the next stage.

1.4 Allocating Support Weapons

The next screen allows you to allocate support weapons. You can only allocate support weapons to infantry squads.



Use this icon to display the squad you wish to allocate to, then click on the weapon you wish to give it. There are three types of machine gun – light, medium and heavy – but they all have the same icon.

You are given information about the weapon you have selected – range and firepower, ammunition available, and weight. See the section on *Support Weapons* for more information. The important thing at this

stage is the weight; this affects the movement rate of the squad carrying it. A full squad can carry up to five points; a half squad two. You can allocate more than one item to a squad, as long as it can carry the weight.



Once you have finished click here. You can return to the allocations screen, but you cannot change allocations already made.

Confirm that you have finished allocating and you will be presented with the main game screen.

2.0 THE GAME

2.1 Making Decisions

In *Frontline* both you and the computer make decisions – where to move your units, who to attack, whether to engage in combat.

The computer resolves the decisions and calculates the outcome. This is called 'rolling the dice', by analogy with board games.



If you have the **DISPLAY** option in the **XTRAS** pull-down menu switched on, you roll the dice yourself. If this option is not selected, the computer resolves the decisions and you will only be told the outcome.

If you choose to roll the dice yourself, the computer will show you how it calculates the outcome.

The game uses the equivalent of two six-sided dice rolled simultaneously and added together. Thus, the highest number you can roll is 12 and the lowest 2.

For all dice rolls, the lower the number, the better the result.

The 'raw' dice roll can be altered by various modifiers which are added to it, to take account of the circumstances. Modifiers can be either positive or negative. Since your aim is to roll low numbers it follows that negative modifiers help you and positive modifiers hinder you.

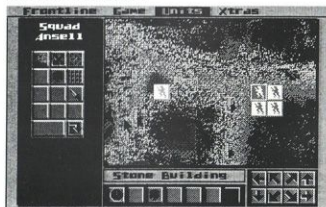
For example, you wish to fire on an enemy unit occupying a crater, providing a cover of +2. You have a leader of -1. You roll a 9 so the result will be $9 + 2 - 1 = 10$ (hands up those who had to reach for a calculator!)

When you roll the dice, click the left mouse button once to start, and once to stop. Then click on CONTINUE and the computer will apply any modifiers to calculate the outcome.

2.2 The Screen/Terrain

The menu bar at the top of the screen and the icons at the bottom will be explained as the game progresses. Just above the icons is a box where information about the progress of the game appears – for example, telling you it is your turn to move.

On the left hand side is a panel where information and selection icons for your units will be displayed.



The main part of the screen is a 'window' showing the part of the map where the action takes place. At the start of all scenarios, the window is placed at the top left hand corner of the map.

The picture gives an indication of the type of terrain; for more detailed information, click on the map and you will be told what the terrain is. The types of terrain found in the different scenarios are:

TERRAIN	HEIGHT	COVER	MOVEMENT COSTS
Barbed Wire	0	0	5
Bridge	variable	+1	2
Clear	0	0	2
Crater	0	+2	3
Deep Crater	-1	+1	3
Jungle	+3	+4	5
Rail Line	0	0	2
Ravine	-1	+1	3
Road	0	0	2
Rubble	+1	+3	4
Sandbags	+1	+3	3
Slit Trench	0	+2	4
Stone Building	+2	+4	3
Swamp/Marsh	0	0	4
Trees	+2	+2	3
Water	0	0	8
Wreckage	1	+2	4

Each of these aspects of the terrain is important for a different reason.

Height

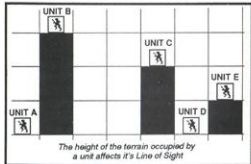
The height of the terrain you are occupying compared to the surrounding terrain affects how much of the area you can see. This is known as 'Line of Sight'. Obviously, to shoot at an enemy unit you must be able to see it! Lines of sight are reciprocal – if you can see an enemy unit, it can see (and shoot at!) you.

When looking at the height of terrain you must take into account the 'base' height and the 'feature' height. For example, a crater has a height of -1, but if the crater is on top of a hill with a height of 3, then the *actual* height is 2.



You can check the Line of Sight for any unit by selecting the unit and then clicking on this icon. All areas of the map the unit cannot see will be greyed out. This only works for the portion of the map displayed on the screen.

So how are lines of sight calculated?



Looking at the diagram, which shows five units occupying different heights of terrain, Unit B and Unit C can see each other, as can Units C and E. E and D are also in each others' line of sight, but D

can't see any unit except E. Unit A is completely hidden from all the others, and therefore can't see them either.

Cover

Cover combines two factors; how much the terrain conceals the occupying unit, and how much protection it offers. For example, a field of wheat hides a unit very well - but doesn't provide much protection. Conversely, a unit occupying a stone bunker will be fairly visible, but several feet of concrete usually stops a bullet adequately!

These two factors are combined to provide the figure for cover. When you fire on a unit, a modifier is added for the cover provided by the terrain.

Movement Cost

Movement simply defines how easy it is to move through the different types of terrain. Each unit has a number of movement points they can use each turn. The movement cost of the terrain they are moving onto is deducted for each move. Moving uphill costs an extra movement point, and carrying unpacked support weapons also increases the cost.

When you move a unit you need to take into account the factors of height, cover and movement cost before deciding which route to take. Obviously, you will be able to move faster on clear ground, but it is more likely you will be hit by enemy fire.

2.3 Your Forces

You scroll the map in the eight compass directions by clicking on the arrows in the lower right hand corner.

Do this until you find your forces. Units are represented by an icon on the map, the colour depending on the nationality:

British and Commonwealth	Blue
German	Grey
German SS	Black
American	Red
Japanese	Light Brown
Soviet	Red



Infantry units are represented by this icon.



Artillery units are represented by this icon.

If you are not sure whether the unit belongs to your side or not, click on it! If it belongs to the enemy, you will be told so. If it is your unit a set of icons comes up in the box on the left of the screen. This is the control panel, which you use to give orders to the selected unit.

A faster way to find your forces is to use the **BRIEFING** option in the **UNITS** menu. This brings up a list of your units in the information panel. If the unit's name is grey, it means it is either dead, off the map, or broken. If it is yellow, it can still make an action that turn; and if white, it is on the map but has finished its action for that turn.

Clicking on the unit's name if it is dead or off the map brings up information about the unit. Otherwise, clicking on the name will centre the map on the unit and bring up the control panel. If the unit is near the edge of the map, the screen will scroll until the unit is as near to the centre as possible.

Whenever you select a unit, either by clicking on it or by using the **BRIEFING** option, the colours of its icon are reversed.

3.0 THE CONTROL PANEL ICONS

When a unit is selected, the control panel appears in the box on the left of the screen. Some of the icons in the control panel can only be used by infantry squads, some only by artillery units. Depending on the state of the game not all of the options will be available to the selected unit, in which case the icon will be blank.

The icons in the control panel are fully explained in the relevant sections of the manual, but briefly they are:



Gives information about the unit.



Allows you to move the unit – **INFANTRY ONLY**.



Instructs the unit to fire on another unit.



Used to rally the troops if the unit is broken.



Gives information about the terrain the unit is occupying.



Brings up a grid over the map, to assist in working out ranges or movements.



Gives access to the unit's support weapons – **INFANTRY ONLY**.



Instructs the unit to call down a barrage from an off-map artillery battery, providing the unit is carrying a radio – **INFANTRY ONLY**.



Initiates close combat – **INFANTRY ONLY**.



Turns an artillery piece 90° clockwise or anti-clockwise – **ARTILLERY ONLY**.



Attempts to repair a damaged artillery piece – **ARTILLERY ONLY**.



Click on the **END** button when you have finished giving orders to the selected unit.

3.1 Instructing Your Units

Having found one of your units, there are several things you can tell it to do. If it is an infantry squad, it can move, fire at an enemy unit, go into close combat (if it is adjacent to an enemy unit), use a support weapon, or call down a barrage from an off-map artillery battery (if it has a radio).

An artillery piece can turn the barrel of the gun to point in a different direction, or fire on another unit.

Some of these actions take up a whole turn; but others, such as calling down a barrage, allow you to give the unit further orders in the same turn.

You do not have to give a unit all its orders for that turn before instructing another unit; you can come back to it later.

3.2 Information – Infantry



Clicking on this icon brings up information about the selected infantry squad.

Just in case you have forgotten which squad you are dealing with, its name appears at the top of the information box.

The squad is either a full squad (ten men) or a half squad (five men).

The next line refers to the troops' status, which is their ability to fight. It can be **good** or **broken**. The relevance of this is explained in the section on *Morale*.

The movement points limit how far the unit can move each turn – various types of terrain use up different amounts of M-P.

Squad	
Ansell	
Full Sq	
Line Inf	
Good	
Start:	1
Moves:	
Used:	0
Left:	8
Morale:	7
Leader:	0
Fire:	4
Range:	5

Morale is an indicator of how easily the squad will become broken, and is explained fully in the *Morale* section.

The Leadership affects the damage the unit will do when attacking an enemy unit. As in real life, the better the leader (ie the lower the modifier) the more effective the unit will be.

The unit's firepower also affects their fighting ability; the higher the firepower, the better the result in an attack.

Range limits how far the unit can actually fire.

If the squad is carrying support weapons, these will be listed.

3.3 Information – Artillery



Clicking on this icon brings up information about the selected artillery unit.

Again, the unit's name appears at the top of the box, and you are told the type of artillery piece.

You are shown the gun's status – whether it can be used or not. It can be operational; jammed, in which case it needs to be repaired; U/S (unservicable), which in effect means the unit can take no further part in the action; or broken – which refers to the state of the crew – in which case you need to rally the men before they can fire.

The Morale level is an indicator of how easily the unit will break when under enemy fire. See the section on *Morale* for details.

The Leadership modifier will improve the unit's chances of both hitting and damaging the enemy. The lower the number, the better the result.

Mortar	
Heilbron	
Mortar	
Operative	
Morale:	8
Leader:	0
Cal:	120
Range	
Min:	3
Max:	60
Pof:	2
Ammo:	25
Jams:	12
No target	

Calibre is the size of the weapon. The higher the calibre, the higher the firepower will be.

The range of the gun limits what it can fire at. Some artillery units have both a maximum and a minimum range.

The rate of fire indicates how many shots it can have in each turn.

Ammunition refers to the number of shots the gun can make before running out, and acquired targets are explained in the section on *Firing – Artillery*.

3.4 Movement – Infantry



Infantry squads can be moved by clicking on this icon.

The background of the movement arrows in the bottom right hand corner will change colour to red. Clicking on the arrows moves the squad in any of the eight compass directions.

The movement points (M-P) available for the squad will be shown in the information box under the map. Each time you move the squad, the M-P will be reduced according to the terrain they are moving onto. If the squad is moving uphill, the movement cost increases by one. Information on terrain types is displayed in the top right of the screen.



Click on this icon to show the individual squares on the map, which helps you to calculate how far the unit can move in one turn. The computer knows that if you are moving diagonally, it uses more M-P than moving horizontally or vertically!

If the squad is carrying unpacked support weapons, the movement cost is increased by the weight of the unpacked weapon(s). If you wish to move the unit more than a couple of squares before using the weapon, you should pack the support weapon first; however, if you only wish to move the unit a short distance it is not worth losing a turn to pack the weapon, and another to unpack it. See the section on *Support Weapons* for details of how to pack or unpack weapons.

You cannot move a squad into a location containing another unit.



When you have moved the squad as far as you wish (or as far as you can!) click on the **END** button to return to the control panel. If your moves have reduced the squad's M-P to zero or one, you will automatically be returned to the panel.

Having moved a squad, you can do no more with it that turn.

3.5 Movement – Artillery

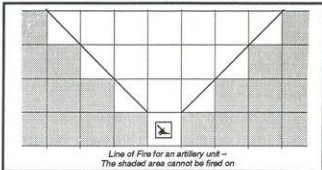
Artillery units are stationery, but if you wish to fire the gun at an enemy unit, you must make sure it is pointing in the right direction! The picture underneath the unit icons shows which way the gun is pointing.



Use these two icons to turn the gun 90° anti-clockwise or clockwise. Traversing the gun takes up a complete turn for the unit.



The diagram shows the line of fire for an artillery unit. Click on this icon under the map and any part of the map not in the line of fire, or not in sight, will be greyed out.



Artillery units have a very long range and can be used to fire right across the map, but the icon only shows you the line of fire for that part of the map displayed on the screen.

3.6 Firing – Infantry



If there is a unit in range, you can instruct your squad to fire at it by clicking on this icon. A grid will come up over the map and you can click on the target. If you change your mind, click on the firing unit and you will be returned to the control panel.



To fire on another unit, the target must be in sight. Clicking on this icon will grey out any part of the map currently on the screen that the unit cannot see.

As in real life, it is perfectly possible to fire on your own side!

If you have **DISPLAY** selected, a box appears giving the firing details. At the top, the squad's firepower is shown. This is the inherent firepower of the squad. If the squad is carrying a machine gun, it is possible to add the firepower of the gun to the inherent firepower – see the section on *Support Weapons*.

If the squad is firing at point blank range – ie the target is in an adjacent square – the firepower is doubled. Any modifiers for leadership or terrain are indicated – having a leader increases the likely damage the unit does to its target, but the better the cover provided by the terrain the enemy occupies, the less damage it will sustain.

Possible outcomes of firing or being fired upon are:

---- No effect

MC – Unit's morale is checked (you do not see the result of an enemy unit's morale check)

L_KIA – Unit's leader is killed

KIA – The unit is wiped out

HALF – The unit is reduced in size to a half squad (half squads won't reduce to quarter squads; they are either wiped out or they survive intact)

3.7 Firing – Artillery



Clicking on this icon puts a grid over the map and allows you to select your target – use the arrows to scroll the map until you find the target.

There are two stages to firing an artillery unit. The first determines whether you hit your target or not. You are shown the basic roll for the weapon (which is different for each type of weapon) and any modifiers that will affect the outcome – leadership, barrel size (the longer the barrel the more accurate the weapon), and range (some types of gun are particularly accurate at certain ranges – and some particularly *inaccurate*!)

A modifier is also used for an acquired target. If the weapon has already succeeded in hitting the target it has a better chance of hitting it a second time, and is considered to have acquired a target. The target refers to the square on the map, not the unit occupying it. So if you kill a unit and another unit moves into the same square, the modifier still applies. Acquired targets are carried over from turn to turn.

The information about the unit tells you whether it has an acquired target or not; however, it does not tell you where the target is, it is up to you to remember!

The modifier for size refers to the size of the target – obviously, the bigger the target, the easier it is to hit.

The final result which you need to roll in order to hit the target is shown in the red box at the top of the screen.

If you miss, you just have to try again. Some artillery can be fired more than once in a turn – this is shown as *rate of fire* in the information about the unit.

If you hit, the dice are rolled again to calculate the damage, with modifiers taken into account for leadership and terrain.

If while firing an artillery unit, you roll a number greater than or equal to that shown for its jamming possibility, the weapon is damaged and

will need to be repaired on your next turn. Click on this icon and roll the dice to try and fix it. The result will be:

No effect at all, in which case you have to try and repair it again next turn

Success, in which case it is usable next turn

The weapon is irreparable.

Attempting a repair uses up a whole turn.

3.8 Under Fire

If the computer fires on one of your units, you will be told that your unit is under fire and the map will centre on the affected unit. The computer will resolve the combat and tell you the outcome.

You won't be told who is firing on you – as in real life, you will have to work it out for yourself.

The possible outcomes of enemy fire are:

Your unit is wiped out completely

Your unit is reduced to a half squad, and will lose any support weapons it can no longer carry (if the unit is an artillery unit it is assumed to have a five-man crew so won't reduce in size)

You will need to check the morale of your unit (see the section on *Morale*)

Or your unit will escape unscathed.

3.9 Support Weapons



You may have allocated support weapons to an infantry squad, and clicking on this icon will bring up information about the weapon, and the weapon's icons which you use to control the support weapons.

The weight of the weapon when it is operational will restrict the movement of the squad (this does not apply to demolition charges). Firepower, range and ammunition are self-explanatory.

The jamming number shown refers to the likelihood of the weapon breaking down. If, when firing it, your unmodified roll is greater than or equal to this number the weapon jams and you will have to repair before you can use it again.

The weapon can be packed or operational, and you are told whether the weapon has already been used in that turn – and if it is jammed.



This option is only available to machine guns. Clicking on this icon adds the firepower of the weapon to the inherent firepower of the squad.

This results in a much greater firepower, although the range will only be that of the unit itself, which may be lower than that of the gun on its own. Clicking on this icon doesn't actually fire the weapon; to do that, exit the weapons icons and use the fire button in the unit's control panel.



This icon instructs the squad to pack or set up the weapon. Obviously a weapon can't be used while it is packed, but if it is unpacked it restricts movement (unless it is a demolition charge) – the weapon's weight is added to the movement costs of the terrain for each move. Packing or setting up a weapon uses one turn.



This icon fires the weapon separately from the squad's inherent firepower. All weapons except machine guns must be fired in this manner. The range will be that of the weapon itself (mortars have a *minimum* range of 2).



If the support weapon is fired first, the squad can then move, which it cannot do if the weapon is added to the inherent firepower.

Alternatively, having used the support weapon on its own the squad can then use its inherent firepower separately – in effect getting two shots in one turn. Again, the support weapon must be fired first. The squad need not fire its inherent fire power at the same target as the support weapon.



If a support weapon jams you will need to repair it before it can be used again. Clicking on this icon attempts the repair, which takes a full turn. Depending on the roll of the dice, the outcome will be:

- A successful repair meaning the weapon can be used next turn
- A failure in which case you have to try again next turn
- A complete disaster which puts the weapon right out of commission!



If the squad has more than one weapon, click on this icon to see the next.



Click on the END button to return to the control panel.

Although radios are counted as support weapons, and you can get information on them using the support weapon's icon (and repair them if they become damaged!) you don't actually use them with this icon. See the next section for details of how you *do* use them.

3.10 Barrage



If the squad has a radio, it can call in a barrage from an off-map artillery battery using this icon. Information about the battery available will be displayed – its calibre (the higher the calibre, the higher the firepower) and the number of salvos available.

NOTE: the off-map artillery is separate from any artillery on the map.

Using an artillery battery involves three stages, and the current stage is shown in the status. Each of these stages takes one turn – however, you can go on and give the squad further instructions, such as moving or fighting, in the same turn, *as long as you use the barrage first*.

First you have to contact the battery by radio. The dice roll decides whether you succeed in making contact. If you fail, you have to try again on your next turn. If the radio breaks down, it must be repaired before you can use it again.

If the unit is in contact with the artillery, you can select the target by clicking on the map. A spotting round is sent in (there is no limit to the number of spotting rounds available). Unfortunately there's no guarantee the spotting round will land where you expect it - it can even land out of sight, in which case you have to call down another on your next turn.

A barrage will cover an area of nine squares, centred around the square where the spotting round lands. It is a good idea to centre the map on your intended target before calling in the spotting round - you have a better chance of seeing where it lands.

It's also worth using the line of sight icon to check how much of the surrounding terrain is visible.

If a spotting round lands on the same square as an enemy unit (or one of your units!) the computer will resolve the decision and tell you the result.

On your third turn, you can call down the barrage if you wish. You are presented with four icons.



These two icons are either/or icons – one of them is always selected and you toggle between the two. They determine whether the barrage or the spotting round is moved if you decide to change the target.



This icon takes you back to stage 2, allowing you to select a new target for a spotting round. You should use this if the spotting round landed way off target.



This icon allows you to move the barrage or the spotting round (whichever has been selected) by one square. If barrage is selected it will move the target in the chosen direction, then bring down a barrage; if the spotting round is selected it simply moves the target.



This icon brings down the barrage on the current target – no matter whether the barrage icon or the spotting round icon are selected, the barrage will commence!

For each unit that the barrage hits – including your own – the computer will resolve the conflict.

It is sometimes worth bringing down a barrage on your own head, particularly if your unit is well protected but is surrounded by enemy units in the open.

3.11 Close Combat



If an infantry squad is adjacent to an enemy unit, it can engage in close combat. In close combat, the defender is always given the first bash.

Artillery units cannot initiate close combat but they can defend themselves if attacked, in which case they use their inherent firepower, which is 2, and have five men.

In close combat, the firepower used to resolve each attack is the unit's inherent firepower plus 1. As the troops are killed or wounded the firepower is reduced proportionally. If the defending unit is broken, its firepower is halved.

Support weapons cannot be used in close combat – you could use a support weapon to 'soften up' the enemy before engaging in close combat, but you can't bring it into play once the fight is in progress.

The information box on the left of the screen shows the result of each attack – the dice rolled, the modifiers for leadership and close combat (this reduces by one each round of the combat as the squads locate the enemy dispositions, but will never go below -9) and the result.

Each round of close combat can result in either no effect, or a number of the troops being killed. If the number of men remaining falls to five or below, the unit becomes a half squad, with a consequent loss of firepower and support weapons. If the number killed is greater than the number remaining, the unit is wiped out.

In each round of the close combat, both you and the computer have the option to attack or retreat – although artillery units cannot retreat, they must fight or die!

If the defending unit retreats it will move out of the occupied square and the attacker will move in. If the defending unit is completely surrounded it has no choice but to surrender. If the attacking squad retreats, it will not move but will simply stop attacking – but the defender is then able to attack on its turn, if it wishes!

The close combat continues until one unit either retreats or is wiped out.

3.12 Morale

A unit is broken when the troops are more concerned with their personal survival than with achieving their objective. Rather than attacking, they will (very sensibly) be running for cover.

If a unit is broken, it can do nothing that turn, except a single attempt to rally the troops. Some units start the game cowering in a state of panic and you must rally them before they will be of any use!



Clicking on this icon attempts to rally the troops. You must roll less than or equal to their morale level. Modifiers are used for leadership – a good leader stands more chance of bucking the troops up – and the fact that the unit is already broken, which makes it harder to persuade them to stand up and fight.

If you successfully rally the squad, it can then proceed with the turn – moving, fighting, or whatever. If you fail, it can do no more and you must try again on your next turn.

If you roll an unmodified 2, the troops are rallied so successfully that the unit's leadership is permanently improved by 1, but if you roll an unmodified 12 the troops are not impressed by your hollow rhetoric and the morale level is permanently reduced by 1!

One of the possible outcomes of being under fire is that the morale of the troops will be checked to see if they break. This is handled in exactly the same way as when you attempt to rally them, except that there may be extra modifiers from the morale check result.

4.0 GAME PROGRESS

Depending upon which side you have chosen to play, either you or the computer will get first turn. In all scenarios, the side that was displayed first gets the first turn.

 On your turn, you instruct each of your units to move, unpack their weapons, fire, or whatever may be necessary. Each time you finish with a particular unit, click on the END button for that unit.

 When you have finished all your instructions for that turn, click on this button in the row of icons below the map.

The computer will make its moves, and the name of each unit it is dealing with will appear in the box under the map. You can turn this option off by de-selecting the INFO option in the XTRAS menu.

If the computer's moves involve combat against one of your units you will be shown the outcome and have to take any action necessary, such as checking morale. Once the computer has finished its turn, control is returned to you.

 Each scenario has a limited number of turns available. You can see how many turns have passed out of the total by clicking on this icon.

 This icon is a toggle. When active, units are removed from view allowing you to check the terrain they occupy.

 This icon shows the line of sight for a selected unit. Any part of the map that the squad cannot see will be greyed out. Lines of sight are reciprocal – if you can see an enemy unit, it can see (and shoot at!) you.

 If the selected unit is an artillery unit, clicking on this icon will show the line of fire. Not only must the unit be able to see the target, it must also have its weapon pointing in the right direction!

 Clicking on this icon will centre the map on the currently selected unit.

FL Menu

Frontline Gives information about the game.

Game Menu

Scenario Lets you choose which scenario you wish to play. This is only available at the start of the game.

Load Game Loads a previously saved game from disk.

Save Game Saves your current position to disk.

Surrender Ends the current game, giving you the option to start a new game, load a saved game, or exit to the desktop.

Quit Leaves the game and resets the machine.

Units Menu

Briefing Lists your units, allowing you to find them immediately. If the unit's name is grey it is dead, broken or off the map; if yellow it can still carry out actions that turn; if white it has finished its actions for that turn.

Print Status Prints out the details of all your units, including their support weapons, providing you have a printer online. Do this at the start of the game in order to see exactly what forces you have available. *Warning: If you do not have a printer online, the machine may lock up.*

Xtras Menu

- Info** If this option is selected, you will be told the name of each enemy unit as the computer deals with it. Using this option slows the game a little.
- Display** If this option is turned off, you will not see any dice rolls or calculation tables; you will just be told the outcome.
- Sound FX** This turns the sound effects on or off.
- Time** If this option is turned off, there is no time limit on the game.

5.0 THE SCENARIOS

5.1 Introductory Scenarios

1. The Assault on Hill 193

This special introductory scenario forms part of the operations covered by the Cassino scenario. This scenario only uses a small number of squads, and no artillery. It is designed to allow you to become familiar with the way the game works.

It is the task of the Allied side to take out the bunker located on the hill at the top right of the map. From this bunker the Germans have a commanding view of the operations in the town and, if they had a radio would be ideally placed to direct artillery fire onto the Allied forces.

The nature of the terrain is such that the infantry can expect little support from tanks, and so must take out the bunker on their own. To do this they will need to take advantage of any cover available.

The German forces will need to deploy to cover as much of the hill as possible, not just the bunker. The scenario shows the need for 'interval troops' to protect strongpoints – try playing the game just using a squad in the bunker if you don't believe it!

To win the Allies must eliminate ALL the German forces on the map. The Germans win if the Allies fail.

2. Clear the Convent

The second introductory scenario also comes from Cassino. It introduces the use of on-map artillery pieces into the game – in this case a 120mm mortar and crew.

Allied Weaponry

Sten Mark 2 Sub-Machine Gun

Ammunition: 9mm
Cyclic: 550RPM
Magazine: 32 Round Box
Muzzle Velocity: 1250 Feet Per Second

The Sten was noted for its unreliability in the early models. Its great weakness was the magazine which often led to stoppages due to no round in the breech – or even two! Its cost of £2.95 to produce earned it the nickname "The Woolworth Gun". The Mark 2 was the work horse with over 2,000,000 made in three years.

One of the few relatively undamaged buildings in the town was the convent. It is the task of the Allied forces to clear the Germans out of the building and go on to deal with the 120mm mortar. The approaches to the latter are covered by the German troops in the convent, so they will probably have to be dealt with first.

The Germans aim to frustrate the Allies by hanging on to the building. They are waiting for nightfall, when reinforcements will be able to slip into the town.

The convent is in the left centre of the map.

To win the Allies must clear the map area of Germans – the Germans win if the Allies fail.

5.2 Pegasus Bridge

On 6th June 1944 the Allies opened the much awaited Second Front by invading Normandy. The operation was one of the largest seaborne operations ever carried out. The task of securing the flanks of the invasion and preventing the movement of enemy reinforcements was allocated to the airborne divisions.

The securing of the Caen Canal bridge at Benouville was one of the objectives allocated to the British 6th Airborne Division. To achieve this objective it was decided to land three gliders in a field next to the bridge and seize it by a coup de main.

At 00:16 on 6th June the first glider landed, closely followed by the other two – the first Allied troops to land on French soil. The troops staggered out of the gliders, having achieved complete surprise, the sentries assuming that the crashes were bomber wreckage hitting the ground.

Part of the force began to clear out pill boxes on the eastern bank of the canal, while the rest of the small force rushed the bridge. Once over the bridge the German forces on the far side were dealt with rapidly, and the crossing was secured.

The small force then held the bridge for the next two hours until linking up with the main airborne force who had been dropped further east.

In honour of the men who took the bridge it was later renamed 'Pegasus Bridge' after the insignia of the airborne troops.

The scenario depicts the seizing of the bridge. The task of the Allies is to take the bridge and clear the surrounding area of German forces. The aim of the Germans is to frustrate the Allies.

5.3 The End at Stalingrad

The Russian November offensive of 1943 smashed in the weak forces holding the flanks of Army Group South. By the end of the month the German Sixth Army in Stalingrad was firmly surrounded, and the trapped men settled down to wait for relief to reach them.

Allied Weaponry Bren Mark I Light Machine Gun

Ammunition: .303 Inch
Cyclic: 500RPM
Magazine: 30 round Box or 100 round Drum
Muzzle Velocity: 2440 Feet Per Second
Of simplistic design and rugged construction, this was the best Allied LMG of WWII. It only had one real fault and that was stoppages due to rimmed cartridges and the magazine. The rate of fire could be varied by means of an adjustable plug and it had a barrel that could be changed in a manner of seconds.

The relief operations were entrusted to Manstein – one of Germany's finest commanders – and he was given a motley force to accomplish the task. By 12th December the relief forces were only 30 miles from Stalingrad, but could make no further headway.

Hitler, however, refused to allow the Sixth Army to break out and so the fate of the Sixth army was sealed... With negligible supplies the besieged fought on for another six weeks, until starving and out of ammunition they could resist no longer.

On 31st January 1943, Paulus surrendered the German Sixth Army at Stalingrad in defiance of Hitler's orders to hold out to the end. In the northern industrial sector the remnants of XI Corps refused to surrender and continued to hold out.

They held out for a further two days, fighting in the rubble of the Tractor Factory until 8:40 on 2nd February when they transmitted their last message to the outside world. Half an hour later they were finally overrun by the Russians, and the fighting at Stalingrad was over.

The scenario depicts the last of the fighting in the factory's fitting shop. The aim of the Russians is to completely eliminate the German forces – allowing the investing troops to be allocated to other operations. The aim of the Germans is to delay the Russians by surviving to the end of the allocated time. (During this period the Russians were desperate to finish off the Germans in Stalingrad so they could re-deploy the troops to operations designed to cut off German forces in the Caucasus.)

German Weaponry MP 38/40 Sub-Machine Gun

Length: 832mm
(629mm Stock Folded)
Ammunition: 9mm
Cyclic: 500RPM
Magazine: 32 Round Box
Muzzle Velocity: 1250 Feet Per Second

Incorrectly known as the "Schmeisser", the MP38/40 was in fact prototyped by the Erma factory, which is still in existence today. Whilst the MP38 was expensive to produce it was soon superseded by the MP40 which used sheet steel stampings and was brazed or spot welded together.

5.4 Guadalcanal

In the Summer of 1942, the island of Guadalcanal suddenly assumed a major strategic importance, when it was found the Japanese were building an airfield. From this position they could threaten the US/Australia lines of communication.

The 1st Division of the US Marine Corps was hurriedly given the task of taking the island. Given little time to prepare, the 19,000-strong Division sailed.

The Marines landed and fought their way inland to the half built airfield, securing it within 36 hours. Menaced by the Japanese fleet, the US transports and warships withdrew before unloading was complete. Stretching their rations as best they could, strengthening their defences with captured weaponry, and fighting off both Japanese counter-attacks and the problems of the intense heat and tropical disease, the Marines completed building the airfield.

The Japanese were determined to re-take the island. Several battalions under the command of Major-General Kiyotaki Kawaguchi were landed, and on the nights of 12th and 13th September they attempted to storm the ridge separating them from the captured airfield, making an all-out attempt to dislodge the Marines.

The US forces were well dug in. In spite of being surprised they fought back calling in supporting fire from artillery to break up Japanese concentrations.

The fighting was intense. By the morning of the 14th Japanese corpses littered the slopes – 600 dead and 600 wounded.

American Weaponry Thompson Model 1928A1 Sub-Machine Gun

Ammunition: .45 Inch
Cycle: 725RPM
Magazine: 20-30 Round
 Staggered Box
Muzzle Velocity: 920 Feet Per Second

The main drawback to this weapon was its complicated and precise manufacture. This led to it not being as reliable in the field as it should and also to a high production cost. Later models were fitted without a compensator on the muzzle. It's nickname was "The Tommy Gun".

The Marines lost 40 of their 700 men, with 103 wounded. Not for nothing was the battlefield named 'Bloody Ridge'.

Five days later major US reinforcements landed, and the battle-weary Marines were able to withdraw. The fighting continued for another four months before the Japanese finally withdrew, leaving Guadalcanal secure in American hands.

The scenario depicts part of the last Japanese attack on the ridge. To win the Japanese must clear the sector of US Marines. The US Marines must survive to win.

5.5 Cassino

The Allies landed in Italy in September 1943 but the advance soon slowed and finally stalled in front of the Gustav Line. Stretching across Italy, it was dominated by Monte Cassino, 1,700 ft high and blocking the main road to Rome.

Showing a quality of generalship reminiscent of the First World War, head-on attacks were launched on the Cassino massif. Bad weather and the strong German opposition inflicted considerable losses on the Allied forces.

Undeterred, higher command decided to continue the battering ram attacks and brought up reinforcements in the form of the New Zealand Corps. Battles continued to rage until the weather brought a halt to the fighting.

Three weeks later the attack was renewed. The plan was for the 4th Indian Division to ascend the Eastern slopes of Monastery Hill while

Japanese Weaponry Type 99 Rifle

Ammunition: 7.7mm
Length: 1143mm
Magazine: 5 Round Internal Box
Muzzle Velocity: 2400 Feet Per Second

Replacing the 38th Year Type in 1939, it was noticeable for the inclusion of a flimsy wire monopod and folding lead bars on the rear sight. This was so the soldier could use it against aircraft! A Type 99 7.7mm Parachutist Rifle was also introduced in 1940 but was not a success and was superseded by the Type 2 7.7mm in 1942.

the 2nd New Zealand Division and the 4th Armoured Brigade entered the town.

On 15th March more than 1,000 tons of bombs were dropped on the narrow streets of Cassino, following by a 200,000 round barrage. The town was reduced to rubble. The generals were convinced that the Germans had been wiped out.

They were wrong. Soldiers of the German 1st Parachute Division survived. Rubble and huge craters stopped tanks entering the town, and the infantry were on their own.

They fought their way 250 yards into the town, but under cover of night the Germans brought in reserves. A week later, on 23rd March the disastrous assault was called off. Not until May did the Allies take Cassino, and then only when the Germans withdrew. The way was clear – at a cost of 105,000 casualties.

The scenario depicts the start of the assault on the town. The task of the New Zealand forces is to clear the sector represented by the map of German forces. The German aim is to survive...

German Weaponry
MG42 Machine Gun

Ammunition: 7.92mm
Cyclic: 1200
Magazine: Belt Fed
Muzzle Velocity: 2480 Feet Per Second

The MG42 superseded the MH34, and increased its firing rate dramatically, it also only fired on automatic. It was so well thought of by the Allies that the Americans considered a version of it as a replacement for the BAR. The MG42 had a distinctive sound when in use because the exposures run so close together, likened to cloth tearing.

6.0 ORDER OF BATTLE

The Assault on Hill 193

Allied
7 x Line infantry squads 4-5-7
1 x -2 Leader
1 x -1 Leader
2 x Light machine gun

German
3 x Elite infantry squads 5-4-8
1 x -2 Leader
2 x -1 Leader
3 x Heavy machine gun

Clear the Convent

Allied
7 x Line infantry squads 4-5-7
2 x -1 Leaders
2 x Light machine guns

German
2 x Elite infantry squads 5-4-8
1 x Elite infantry half squad 3-4-8
1 x 120mm mortar & crew (morale 8)
1 x -2 Leader
1 x -1 Leader
1 x Heavy machine gun
1 x Light machine gun
1 x Light mortar

Pegasus Bridge

Allied
Elements 6th British Airborne Division
5 x Elite infantry squads 6-3-8
2 x Elite infantry squads 4-5-8
1 x -3 Leader
2 x -1 Leaders
3 x Light machine gun
2 x Demolition charges

German
Elements of 346th Infantry Division
9 x Line infantry squads 4-6-7
3 x -1 Leaders
3 x Heavy machine gun
2 x Medium machine gun

The End at Stalingrad

Russian
Elements of the 62nd Army
4 x Elite infantry squads 6-2-8
8 x Line infantry squads 4-4-7
4 x -1 Leaders
2 x Flame throwers
4 x Demolition charges
1 x Heavy machine gun

German
Elements of XI Corps
5 x Line infantry 4-6-7
1 x -3 Leader
2 x -1 Leaders
3 x Heavy machine guns
1 x Light mortar

Guadalcanal

Allied
 Elements of the US 1st Marine
 Division
 4 x Elite infantry squads 5-4-8
 2 x Elite infantry half squads 3-4-8
 1 x -3 Leader
 2 x -1 Leader
 1 x Radio (access to 155mm
 off-map battery)
 4 x Heavy machine gun
 2 x Light machine gun

Cassino

Allied
 Elements of 25th New Zealand
 Battalion
 10 x Line infantry squads 4-5-7
 1 x -2 Leader
 4 x -1 Leader
 4 x Light machine gun
 1 x Heavy machine gun
 1 x Light mortar

Japanese

Elements of Japanese Kawaguchi Force
 10 x Line infantry squads 4-5-7
 4 x Line infantry half squads 2-5-7
 1 x -2 Leader
 1 x -1 Leader
 3 x Light machine gun
 1 x Light mortar

German

Elements of 2/5 and 2/1 Para
 (1st Parachute Division)
 6 x Elite infantry squads 5-4-8
 1 x Elite infantry half squad 3-4-8
 1 x 120mm mortar and crew (morale 8)
 1 x -2 leader
 2 x -1 leader
 1 x Radio (access to 155mm
 off-map battery)
 1 x Light machine gun
 2 x Medium machine gun
 3 x Heavy machine gun
 2 x Light mortar

APPENDIX A

Infantry Fire Combat Results Table

Result	Firepower...										
	1	2	4	6	8	12	16	20	24	30	36
≤0	KIA	KIA	KIA	KIA	KIA	KIA	KIA	KIA	KIA	KIA	KIA
1	HALF	KIA	KIA	KIA	KIA	KIA	KIA	KIA	KIA	KIA	KIA
2	MC_1	HALF	HALF	KIA	KIA	KIA	KIA	KIA	KIA	KIA	KIA
3	MC_1	MC_1	MC_2	HALF	HALF	L_KIA	KIA	KIA	KIA	KIA	KIA
4	MC_0	MC_1	MC_1	MC_2	MC_2	MC_3	L_KIA	L_KIA	KIA	KIA	KIA
5	OK	MC_0	MC_1	MC_1	MC_2	MC_2	MC_3	MC_4	L_KIA	KIA	KIA
6	OK	OK	MC_0	MC_1	MC_1	MC_2	MC_2	MC_3	MC_4	L_KIA	KIA
7	OK	OK	OK	MC_0	MC_1	MC_1	MC_2	MC_2	MC_3	MC_4	L_KIA
8	OK	OK	OK	OK	MC_0	MC_1	MC_1	MC_2	MC_2	MC_3	MC_4
9	OK	OK	OK	OK	OK	MC_0	MC_1	MC_1	MC_2	MC_2	MC_3
10	OK	OK	OK	OK	OK	OK	MC_0	MC_1	MC_1	MC_2	MC_2
11	OK	OK	OK	OK	OK	OK	OK	MC_0	MC_0	MC_1	MC_1
12	OK	OK	OK	OK	OK	OK	OK	OK	MC_0	MC_0	MC_1
13	OK	OK	OK	OK	OK	OK	OK	OK	OK	MC_0	MC_1
≥14	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	MC_0

SYMBOLS:

KIA Killed in action
 HALF Full squad reduced to half squad
 Half squad killed in action
 L_KIA Leader killed in action
 MC_# Morale Check required with a modifier of +#
 OK No effect

APPENDIX B

Gun Calibre/Fire Power Equivalents

Calibre	20	30	40	50	60	70	85	100	125	150	200
Firepower	1	2	4	6	8	12	16	20	24	30	36

APPENDIX C

Artillery To Hit Table

Range	<6	7-12	13-18	19-24	25-30	31-36	37-42	43-48	49-54	>54
Result	8	7	6	5	4	3	2	1	0	-1

APPENDIX D

Gun Barrel Modifiers

Mod	Range...									
	<6	7-12	13-18	19-24	25-30	31-36	37-42	43-48	49-54	>54
-1	0	0	+1	+1	+1	+1	+1	+1	+1	+1
0	0	0	0	0	0	0	0	0	0	0
+1	0	0	-1	-1	-1	-1	-1	-1	-1	-1
+2	0	0	-1	-1	-2	-2	-2	-2	-2	-2

