

GAME MANUAL

BATTLEFRONT GAME SYSTEM

Roger Keating
Ian Trout
Danny Stevens
Mark Twigg
Alan Bell



Battlefront

Macintosh, Amiga and Apple IIGS Versions

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PART ONE

THE GAME ROUTINES

1. THE BATTLEFRONT GAME SYSTEM

The *Battlefront Game System* is Strategic Studies Group's award winning land combat simulation system. This manual covers all games that use the *Battlefront* system and is written for mouse driven computer systems. Computer specific information is included in a separate supplement. Scenario details, histories and an introductory tutorial are contained in the Scenario Booklet.

To get started with the game, we recommend that you complete the following steps:

- (i). Read the computer specific supplement for details on installation, memory sizes and other issues.
- (ii). Read Chapters Two and Three of this manual for instructions on how to start playing and an overview of the game system.
- (iii). Play the introductory tutorial included in the Scenario Booklet.
- (iv). Select any scenario and start playing referring to this manual as necessary. You should read the Player's Notes for a particular scenario before playing it for the first time as they contain useful background information.

Note that the illustrations in this manual are taken from the Macintosh version and may vary slightly from other systems or from other games in the series.

This manual contains two major sections. Part One, *The Game Routines* explains the operation of the game system and contains all that you need to know to play a game. Part Two, *WarPlan*TM explains the operations of the scenario design routines, including *WarPaint*TM, SSG's icon and terrain editor. While you do not need to read this section to play the game, it will provide some insights into the deeper workings of the game system. In addition, we would encourage everyone to find out just how easy it is to modify scenarios with *WarPlan*TM.

2. STARTING A SCENARIO

Before going through the introductory tutorial, we recommend that you read the next two chapters which provide an overview to the game process.

After starting the game (consulting the computer specific supplement if necessary) you must choose the scenario you wish to play. Use the Open command from the File menu to do this. You will then be shown a prep screen which will allow you to make choices for the play of that particular scenario. These are as follows.

Choose sides; i.e. whether the game will be played between two human, one human and one computer or two computer players. Players may also be Enhanced. Enhanced players gain

random but powerful benefits. Note the two computer players mode is a very useful tool for historical analysis and for testing original scenarios. You may also edit the names of the opposing commanders at this stage. The game is now ready to play. If you choose Play from the Environment menu the scenario will start.

3. AN OVERVIEW

Each scenario lasts for a set number of turns; up to 99. There are four turns to each day (am, noon, pm and nite) so that the maximum length of a scenario is 25 days.

The military forces at your command are battalion size units. These are your basic fighting men. They are organized into larger formations to reflect a proper military hierarchy. A regiment can have up to four component battalions. A division can have up to four component regiments as well as up to four independent battalions. These independent battalions can be temporarily attached to any of the division's regiments.

Finally, each player can have under his command up to three divisions, for a total of 60 battalions. This is the corps formation that you are commanding. There are fourteen different types of battalions ranging from standard infantry, armour and artillery types to airborne, engineer, anti-air and anti-tank, assault gun and tank destroyer.

The battlefield on which you fight is a field of hexagons up to 40 across and 40 down. The ground scale varies from scenario to scenario, ranging from 500 metres to 8 kms (0.3 to 5 miles). Different types of terrain are represented by different terrain icons. Roads, rivers and cities are shown. Places of special significance are designated as objective hexes, and victory points are awarded for control of these at different times in the game.

It is your job as a Corps Commander to use these forces and these conditions to capture and hold as many of your objectives as you can, to destroy as many of the enemy battalions as you can get your hands on and, of course, to prevent your opponent from doing this to you.

The player who has scored the highest number of points by the end of the game is the winner.

You control the game through the mouse and menu commands. All commands in the game are given through a single command window, which also provides a number of reports. You can also click on the map itself to gain information.

These commands allow you to manoeuvre and deploy your battalions, to send them into battle and to refit and re-organize them when necessary. Although each individual fighting unit is a battalion, battalions are grouped together to receive and carry out orders as regiments. Remember, each regiment consists of up to four battalions and can have a further four battalions attached to it. As corps commander you issue a general order to each regiment. Every battalion attached to that regiment will then execute the order.

Only one battalion can occupy a hex at the end of a turn. This does not prevent them moving through each other when executing your orders.

It is vital to realize the command separation between you and a battalion. From your lofty height in the chain of command, you have little direct control over the location of individual battalions. They will position themselves in order to best carry out your orders.

You can examine a variety of reports which will provide the information to base your decisions on. Air strikes and naval bombardments are represented by a variable amount of support points. These can be allocated to help out any regiment.

All orders are issued before any action takes place. Combat between opposing forces is resolved and described by a short report. Movement orders are then executed.

Each scenario is accompanied by a short briefing which will give you a good idea of what must be accomplished in order to win.

On average you can expect a scenario of ten days length to take 90 minutes to finish in solitaire mode; a little longer if your opponent is human.

4. THE MENU BAR

The commands from the Menu Bar regulate the flow of control and the appearance of the game. They also give access to certain reports. The normal system menus such as File and Edit for each computer will be displayed. Following them will be the game menus, which are described below.

5. ENVIRONMENT

This menu has three items; *Prep Screen*, *WarPlan™* and *Play*.

(i). **Prep Screen.** This is automatically opened at the start of a scenario. From the Prep Screen you can set the number, type and enhancement of players for the scenario. The *Prep Screen* also displays the name of the scenario, the Corps on each side and the names of the commanding Generals. The Generals' names can be edited if desired.

From the *Prep Screen* you must choose either *WarPlan™* or *Play* from the *Environment* menu. You may return to the *Prep Screen* at any time and edit the details at any time in the game.

(ii). **WarPlan™.** Choosing this item enables the *WarPlan™* menu and takes you to the scenario editing environment. It is covered in detail in Section Two of this book.

(iii). **Play.** This item enables the *Play* menu and initiates game play.

You may change between the *Prep Screen*, *WarPlan™* and *Play* at any time. Each time you change you will be asked if you want to save the current changes to disk. Regardless of whether you save to disk, the information remains current. That is to say, in the middle of playing a scenario you may go into *WarPlan™*, edit details to suit yourself and then continue playing the altered scenario.

(iv). **Scenario and Save Games.** A scenario, as distributed exists in a primordial state. Once *Play* is selected it initialises itself and sets certain variables. Once this is done it cannot be undone. Therefore it is vital that you do *not* save a game that has been started over the scenario file that you started from. We will do our best to stop this from happening, but given the peculiarities of various operating systems, if you are not careful we may not be able to prevent this. If you always give your save games a different name to the original scenario then you will be safe.

6. WARPLAN™

See Part Two for a full description of *WarPlan™*. You do *not* need to access this menu at all to play a game. It is the construction set used to build up all of the scenarios in the game and can be used by you to create original scenarios or variants to existing scenarios.

7. PLAY

This is the main menu for controlling the flow of the game. The options are as follows.

(i). **Autosave.** With this item selected the computer will automatically save the game at the point at which orders have been given. The first time it does this you will be prompted for a

save game name. This option is a useful form of insurance against operational errors.

(ii). **Side 1 Orders.** This item allows access to the orders for Side 1. In a scenario the actual name of the side, as defined, is inserted in the menu.

(iii). **Side 2 Orders.** As above but with the Side 2 name.

(iv). **Orders Done.** You use this to tell the computer that you have finished giving orders for a particular turn.

(v). **Run 5.** This command tells the computer to execute the combat and movement routines for the turn.

The operation of the *Orders Done* and *Run 5* commands is determined by the number of human players. If there is only one human player then the computer gives the *Side 1* or *2 Orders* command and opens the command window for you. Similarly, in a one human player game, when you choose *Orders Done* the computer automatically issues the *Run 5* command and turn execution starts.

With two human players, the second player can only access his *Side Orders* after the first has chosen *Orders Done*, and the *Run 5* option is not available until both sides have accessed their respective orders menus.

8. DISPLAY

The first five items on this menu toggle the display of particular information on the map. The last two call up static information displays.

(i). **Objectives.** Objectives are indicated by a target symbol. They are critical to the game so you should keep a close eye on them.

(ii). **Minefields.** This will show you all of your own minefield hexes, and any enemy minefields which you have triggered but not cleared.

(iii). **Control.** This displays the current ownership of all hexes, by showing the location of the front line.

(iv). **Arrival Hexes.** Hexes where reinforcements will arrive are indicated by a small unit stack. This occasionally becomes important as reinforcements cannot come on if another unit occupies their arrival hex.

(v). **Units.** The units themselves can be hidden to facilitate inspection of the map.

(vi). **Victory Points.** This item calls up a dialog displaying the current Victory Points in the game.

(vii). **Objectives.** This will list a table of all of your objectives, the number of turns that you have held them and the points you have earned, as well as the objectives Victory Point value at the end of the game. Clicking on an objective will centre the map on that objective.

9. THE COMMAND WINDOW

The command window is opened when you give the *Side Orders* command in a two human player game, or is opened for you by the computer if you are playing solitaire. Using this window and the mouse, you can give orders to all of your troops and obtain reports on their condition.

A typical command window is illustrated in *Fig 1*. The name of the Corps is contained in the title bar of the window. Underneath that are written the turn and date, the weather forecast

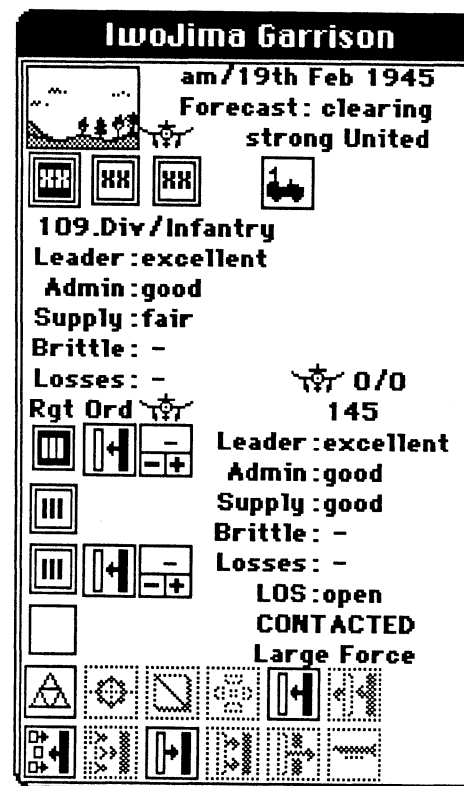


Fig 1. The Command Window

10. THE DIVISION

There are up to three divisions per side each of which controls up to four regiments. You select a division by clicking on its button. As you do so the divisional info changes, as does that of the regiments beneath it. The division exists only to control the units subordinate to it, and is represented on the map by a single unit, the divisional HQ.

This is the only unit that you can move to a particular hex. To do so, click on the jeep button and the map will scroll to indicate the current location of the HQ. Scroll the map to where you want to go and click on the destination hex. The HQ has now been ordered to proceed there. Once it reaches its destination, it will move no further until given a fresh order. HQs cannot be ordered to an enemy controlled hex and are not allowed to move through enemy controlled hexes.

In any subsequent turn, a new objective can be assigned to a divisional HQ. The old objective is voided and the HQ will try to move to the new destination. If your HQ cannot move (i.e it has a movement allowance of 0), the jeep icon will be replaced by a tent icon.

Note that a moon-shaped icon will appear beside the jeep button if that side is night capable.

and the air superiority status. There is also a small icon showing the weather conditions.

Below that are three buttons which select the current division. If a division is present in a scenario its HQ icon will appear in this location. A division is selected by clicking on its HQ button. The currently selected division is highlighted and information about it is printed below the icons. This information includes the divisional name and type, ratings for Admin and Supply and levels for Brittleness and Losses.

Below the division are the regimental buttons, identified by regimental HQ icons. Alongside each regimental icon is its current order and its Off Board Support or OBS box. A regiment is selected by clicking on its HQ icon. To the right of the regiment icon is displayed the available OBS points, regimental name, ratings for Admin, and Supply and levels for Brittleness and Losses for the currently selected regiment.

Below these ratings are the state of the Line Of Supply or LOS (which can be either Open or Cut) the combat state of the regiment and the composition of any enemy force if known.

At the bottom of the dialog is the palette of buttons used to give orders to the regiment.

(i). Divisional Attributes. The divisional attributes of Leadership, Admin and Supply remain fixed throughout the game and are rated as Poor, Fair, Good or Excellent. Leadership is important in combat, and Admin affects supply and movement. Divisional Supply directly reflects the rate at which regiments resupply themselves. A division with only Poor or Fair supply will be slow to resupply and will have its ability for offensive action restricted by supply considerations.

Regiments must be able to trace a Line of Supply (LOS) to their divisional HQs each turn in order to receive supply and replacements. The LOS is Open if the computer can trace a line of friendly controlled hexes from the regimental HQ to the divisional HQ, and is Cut if it cannot.

The divisional HQ is also the focus for units given Reserve orders who will try to get to within 3 hexes of the HQ before deploying. The HQ should be far enough away from the front line so that reserve troops can disentangle themselves from the fighting, generally a minimum of 6 hexes from the front line.

Divisional HQs suffer from the dislocation of moving, unless moves are made at night. They will move involuntarily if they find themselves within two hexes of the enemy and can be shattered and displaced violently to the rear if they are actually attacked.

Therefore, the best location for a HQ is at least 6 hexes from the front line, more if necessary to create room for reserve troops, but in such a position so as to ensure supply to all regiments. All movement should be done at night wherever possible, and the HQ should be preserved at all costs from contact with the enemy.

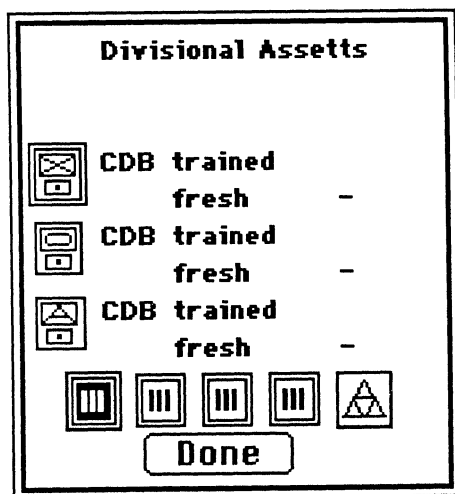


Fig 2. The Assets Window

Note that the assets of one division are not transferable to another division. The type of battalion asset is important when deciding assignments. For example, assault guns, assault engineers and artillery are very useful in attack while anti-tank guns, tank destroyers and the ubiquitous artillery will be of use in defense. Assets assume the supply state of whatever regiment they are attached to.

(ii). Divisional Assets. The division also controls up to four independent battalions, known as divisional assets, which may be allocated to any of the division's regiments or kept in reserve. Double-clicking on the division HQ button will bring up a dialog box which shows the current condition and attachment of these battalions. (See fig 2.) To change the allocation, simply select one of the battalions by clicking on its icon and then click on the icon of the new regiment or the Reserve symbol.

Assets should be allocated to those units which need them the most, either those mounting a major attack or those under the most defensive pressure. They should be checked every turn, especially artillery and allocated for maximum effectiveness. If their losses get too high or they become exhausted they should be Reserved.

11. THE REGIMENT

Each division has up to four regiments subordinate to it. The regiment is the formation to which you actually issue your orders. Each regiment controls its own battalions which act to carry out the regimental order you have issued.

In the command window (see Fig 1 again), the regiments are identified by the regimental HQ buttons and are listed vertically under the division. One regiment will be highlighted, and its details will be listed, starting with its name to the right of the icons. To change to another regiment, simply click on its regimental HQ button.

Each regiment has its regimental HQ, which is notionally located by the computer with one of the regiment's battalions, usually the one furthest away from the enemy. Thus you never see a regimental HQ on the map, as you do with divisional HQs. Nevertheless, they are there and they have attributes just like divisional HQs.

(i). Regimental Attributes. Regimental Leadership does not vary throughout the game. The better it is the better you will fight.

Regimental Admin varies throughout the game. From an administrative point of view, the ideal formation is one that never moves or fights. The more you do of either, the worse the administrative burden. Admin affects resupply, replacements and ease of movement.

Regimental Supply is the most important attribute in the game. If this is only Poor or Fair, your men simply cannot be effective. Supply is expended by combat, slowly if you are defending and very quickly if you are attacking. You must keep a very close watch on your supply situation and you must adapt your actions to its dictates. The act of simply not attacking is usually enough to improve your supply position.

As explained in Chapter 10 (The Division) each regiment must maintain a Line Of Supply (LOS) to its divisional HQ. If this LOS is cut, you must move either the divisional HQ or the regiment so as to connect it. If you cannot do this, you are in big trouble.

Brittleness for regiments is the same concept as for divisions. Once you reach the brittleness level as a regiment your regimental attributes take a nose dive and you begin to take extra losses in combat and your formation will just melt away.

(ii). Regimental State. At every stage of the game, an active regiment (i.e. one with at least one battalion on the map) will be in one of three states. These are READY, CONTACT and ENGAGED. The regimental state is displayed just under the LOS display. In Fig 1, the regiment shown is CONTACTED. The computer determines which state the regiment is currently in. The current state of a regiment determines which actions it may perform.

A regiment in an ENGAGED state is more or less toe to toe with the enemy. As a useful rule of thumb, a regiment will count as engaged whenever two or more of its battalions are within two hexes of the same enemy unit.

A regiment in a CONTACT state is in proximity to enemy units. At least one battalion is within two hexes of an enemy unit.

The enemy unit responsible for triggering an ENGAGED or CONTACT state is identified by the map cursor.

A divisional asset cannot trigger the ENGAGED or CONTACT state unless there are no non-artillery battalions organic to the regiment left.

In all other circumstances, a regiment is in a READY state.

A regiment will keep the same action from turn to turn unless you step in and issue new orders provided the combat state does not change. If the combat state does change (e.g. from

READY to CONTACT), then the default actions for each of the three states are READY (deploy), CONTACT (defend) and ENGAGED (defend). In this circumstance, the computer will select the default action for you if you don't issue an order yourself.

(iii). Regimental Orders. The orders that you can give to a regiment are determined strictly by its Regimental State. As well as showing the current state the command window will adjust the orders palette at the bottom to allow access to only those orders applicable to the current state. A list of states and allowable orders is given below, followed by explanations for each order.

ENGAGED - Reserve, Delay, Defend, Probe, Prepare, Assault, Exploit.

CONTACT - Reserve, Defend, Support, Probe.

READY - Reserve, Objective, Enemy Battalion, Deploy.

Note that the icons can be identified by holding the mouse down on the order icon next to the regimental HQ button. A dialog box will appear containing the name of the icon.

A description of the regimental orders follows.

(a). Reserve. A regiment given reserve orders will attempt to move its battalions behind its divisional HQ and deploy them there. A battalion with a deploy instruction will seek out the best defensive terrain in the immediate vicinity.

A regiment in reserve is more likely to recover fatigue, receive replacements, be resupplied and to re-establish its administrative routine than a regiment in any other state. This refitting procedure will be much enhanced when the component battalions of the regiment are more than two hexes from enemy units.

The reserve state is an inefficient formation for fighting so you have to be careful when issuing this order. It is always a bit tricky to rescue a regiment from a tight combat situation.

Selecting a reserve order in the READY state is usually pretty safe. Just make sure your divisional HQ is out of harm's way and 6-10 hexes clear of enemy units.

(b). Objective. When you choose this order, all the objective hexes for your side on the map will be highlighted. Choose an objective by clicking on it. Normal objectives are indicated by a cross-hairs symbol. Possible divisional objectives are indicated by a star, and the current objective by the map cursor.

Once an objective is chosen, the component battalions of the regiment (including any assets) will move towards it, generally selecting the quickest route. This action is the principal means of manoeuvre for uncommitted regiments. Use it to get into position to engage the enemy.

(c). Enemy Battalion. Choose an enemy battalion from the map by clicking on it. Only those enemy battalions within 8 hexes of the friendly regimental HQ battalion can be selected by this action.

Once an enemy battalion is chosen, the component battalions of the regiment (including any assets) will move towards it, following the most direct route. You use this action to send your battalions into battle!

(d). Deploy. This action is chosen in those circumstances where there are no enemy units nearby but nevertheless you wish the regiment to remain in place, presumably to counter a future threat. Individual battalions will seek out the best defensive locations in the immediate vicinity within supporting distance of each other and await your further instructions.

Remember that Deploy is the default order for the READY state. This means that a regiment given a Reserve order while in the CONTACT or ENGAGED state will revert to a Deploy order

if its state changes to READY. You should check on regiments given Reserve orders if you wish them to remain in reserve.

(e). Delay. If the regiment is subjected to a major attack, it will withdraw in the direction of its divisional HQ. This action will minimize losses from full scale assaults at the price of conceding ground. Uncontacted battalions from that regiment will move up to support the engaged battalion/s.

(f). Defend. This action is basically self-explanatory. Battalions within two hexes of enemy units dig in *in situ* while others in the regiment deploy to the best defensive terrain in their immediate vicinity. It is the safest formation and when in danger (or in doubt), select it. Remember that Defend is the default order for the CONTACT and ENGAGED states.

(g). Support. This action is a more vigorous type of defense. Battalions within two hexes of enemy units will dig in as they do with the Defend order; however, all other battalions from the regiment (including assets) will move up to support the contacted battalion/s. This action is chosen either to stiffen the defense of a particular sector or to assemble the regiment's components in preparation for a planned future offensive. Don't select it when you're heavily outnumbered and short of reinforcements/reserves. If you don't want anybody to move, use Defend.

(h). Probe. In the CONTACT state, this is the most aggressive response you can make. Rather than dig in, those battalions within two hexes of enemy units immediately launch a limited attack while the other battalions from the regiment move up into supporting positions in the expectation of contributing to the battle in the next turn.

This action should not be taken when CONTACTED unless you have considerable superiority and a pressing need for some decisive achievement or for concentration of your own men, as you will not have achieved a high concentration of forces.

From the ENGAGED state, Probe is a conservative and exploratory type of attack. It reduces your losses to the minimum while giving you a good idea of your opponent's strength. You won't do much damage to the enemy. Should you experience a simultaneous attack from your opponent, you will be in the best condition (given that you are attacking) to receive it. It has the same effect as a Probe while Contacted, except that as you are engaged, you will be more concentrated and thus more effective.

(i). Prepare. To all intents and purposes, this appears to be another Probe attack. However, it is simply a diversion while the regiment prepares to launch a full scale assault. You will inflict the same level of damage on the enemy as you would with a Probe attack but you are much more vulnerable to a counter-attack. Regiments attacked while executing a Prepare order can get quite badly chewed up.

The value of this order is that it makes a subsequent assault very much more effective. You really must use prepared assaults against tough enemy opposition. A Prepare done on the pm turn may be effective (i.e. assist an Assault) on the following am turn, but this is not certain. A Prepare has no bonus for an Exploit.

(j). Assault. These are full scale attacks using every component of the regiment which is in a condition to participate. They can result in horrendous losses for both sides. Make sure you allocate as much off-board support and as many divisional assets as you can spare. Every little bit helps! These are much more effective if the same regiment has done a Prepare the previous turn.

(k). Exploit. This type of attack should be launched against a weak enemy position. It gives the attacker the greatest opportunity to advance after combat. It will only be truly effective if your opponent is KIA'd or routed. Do not use it against a tough enemy position; your losses could well reach unacceptable levels.

(iv). **Fighting at Night.** Unless you specifically wake them up, your regiments will not do anything at night. To give orders at night, you must first click in the bugle icon at the bottom right of the orders palette. Units attacked at night will wake up and defend normally. Fighting at night causes extra fatigue losses for both attacker and defender.

(v). **The Regimental OB.** Although the regiment's losses are reported in the Orders box, to find out what is really happening you need to look at the component battalions. To do this, double-click on the regimental HQ icon in the command window. A dialog box will open showing the condition of all organic battalions and any assets attached at the time.

(vi). **Allocating Off Board Support.** Just above the regimental ID is the OBS icon, a plane, followed by two numbers. The number to the left of the slash is the amount of OBS currently unallocated, to the right is the total for the turn. OBS is a catch-all category for air support, artillery support by units outside the scope of the game or even naval gunfire.

Adjacent to each regimental order icon is a small box with a plus and minus sign. Clicking in the plus or minus sign allocates or de-allocates OBS points to that regiment. Holding the mouse button down speeds up the process.

In general, regiments with attack orders (especially assault) should get the most support. Regiments in tough/desperate defensive situations also need all the help they can get. However, support points are most effective when assaulting or exploiting, and less effective in all other situations.

Correctly proportioning support to your regiments will have a major effect on the outcome of most battles. Be careful not to forget that you have up to three divisions; don't allocate all your support points to just one of them without good reason.

12. THE BATTALION

The battalion is the unit that actually does all the fighting. There are up to four battalions belonging to each regiment, and divisional assets may be attached to the regiment and thus fight alongside the organic battalions.

Battalions are broadly divided into three types, Armour, Infantry and Artillery. When you see enemy units on the map, they only display generic icons for each of these three types.

Each battalion actually belongs to one of fourteen specific unit types, which are divided among the three generic types. A list of all the specific unit types follows.

Armour - Mechanized Infantry, Tank Destroyer, Armour, Assault Gun.

Infantry - Leg Infantry, Motorized Infantry, Paratroopers, Heavy Weapons, Cavalry, Reconnaissance, Engineer, Anti-Air, Anti-Tank.

Artillery - Artillery

Fig 3 illustrates the military symbols used to identify each type of battalion.

(i). **Battalion Attributes.** Each battalion has three attributes. The first is their level of training which can be Green, Trained, Veteran and Elite. This attribute does not vary. The level of training has a large bearing on the combat performance of a battalion.

Two other attributes determine the day to day state of a battalion. These are the levels of casualties and fatigue. Both occur as a result of combat. Replacements for casualties may occasionally be received while a unit is still in combat, but the process works much better if a unit is in reserve, and a unit will need to be reserved to recover from any significant casualties. Any battalion with casualties over 30% will not be operating with any great effectiveness.

















UNIT SYMBOL CHART			
(VISIBLE ONLY TO CONTROLLING PLAYER)			
	LEG INFANTRY		ENGINEER
	MOTORIZED INFANTRY		ANTI-AIR
	MECHANIZED INFANTRY		ANTI-TANK
	PARACHUTE		TANK DESTROYER
	HEAVY WEAPONS		ARMOUR
	CAVALRY		ASSAULT GUN
	RECONNAISSANCE		ARTILLERY
XX	DIVISION HQ		 DIV HQ (AX/AL)

Fig 3. Battalion Symbols

Fatigue loss is also a result of combat. Fatigue levels are Exhausted, Tired, Fit and Fresh. Tired or Exhausted troops will be unable to fight effectively. Fatigue losses will normally be recovered overnight, unless night fighting takes place.

If levels of fatigue or casualties become too great a battalion can rout. This means that a unit has ceased to operate as an organized military unit. Routed battalions will display a special icon and will retreat towards the divisional HQ as best they can.

13. COMBAT

There are two types of combat in the game. For convenience, they are referred to as *regimental combat* and *minor combat*.

(i). **Regimental Combat.** The effective regimental combat radius of all units is 2 hexes, regardless of type. Certain ranged units can be effective up to 15 hexes from their target. It is quite important to remember that the exact positions of the opposing battalions matter only insofar as battalions must be within 2 hexes or within range of an enemy unit to fight.

A battalion under attack can receive support from friendly battalions within 2 hexes (or range) of itself. Battalions from the same regiment are much more likely to provide support. Try to keep your regiments as concentrated as possible.

As a result of combat, battalions will lose strength points and become fatigued. They may even rout if the battle goes too badly against them. Routing battalions are readily identified on the screen by their distinctive icons. Rout is a general term used here to cover a number of different states. Essentially it means units unable to undertake organized activities within

the normal military framework. For any given combat state, the higher the experience of a unit the less likely it is to rout, and the quicker it is to recover. Elite troops are very durable and reorganize very quickly.

In any battle, the supply, and to a lesser extent the admin, values of the regimental HQ are reduced in proportion to the intensity of the combat.

In addition each side may have a *brittleness* level set when the scenario was created. If a formation has been flagged as brittle and its losses are greater than or equal to the brittleness level then its supply and admin values will be zeroed and the units themselves will suffer attrition. This is to simulate the total loss of higher organization, even though the men may still be in the field. Naturally units in this condition are more likely to rout.

A brittle division affects divisional supply and admin and any divisional assets. A brittle regiment affects regimental supply and admin and all component battalions.

Whenever a regiment executes an attack order you will receive a report providing you with the details. Losses occur at four levels, Light, Medium, Heavy or Extreme and are indicated by an icon in the report. This represents the strength point loss as a proportion of current strength and is thus a relative measurement. Attackers losses are calculated on the total strength of all attackers.

The combat report also shows the orders for attacker and defender and if OBS is allocated it is shown iconically as Light, Medium or Heavy. (See Fig 4)

Attacker		Defender	
5 Div/RCT 27		109 Div/109 Div	
Assault	■■■	Defend	□
OK		KIA	

Battalions belonging to the attacking regiment are highlighted on the map with different high-lights for those taking part in the battle, those out of range and those too exhausted and/or feeble to participate.

Fig 4. The Combat Report

Fatigue losses are not shown in the combat report but you should check on them through the regimental OB.

(ii). **Combat Bonuses.** Certain units or combinations of units get bonuses in combat. Having two out three ARTillery, ARMour or INFantry types involved in an attack gets a combined arms bonus. Having all three gets a larger bonus. OBS points count as type ART. Units of type ARM are always more effective than otherwise identical units of type INF.

Recon units in an attack reduce the enemy's defence values. Anti tank and Assault guns gain bonuses in attack and defence against units of type ARM. Engineers gain a bonus in defence and can improve the defence of other units in their regiment. In attack, the Engineer unit only treats all terrain as the easiest terrain to attack. Assault gun units are treated as armour units when attacking from a range of 1 or 2 hexes; they are treated as artillery when attacking at greater ranges.

(iii). **Minor Combat.** In addition to the regimental battles displayed in the combat reports referred to above, all opposing units adjacent to each other are subject to minor combat. Battalions may suffer fatigue and/or strength point losses as a result of minor combat. Minor combat ignores the presence of OBS points. The loss of strength points (but not fatigue) is indicated briefly on the screen by a small explosion. The higher the experience level of a battalion, the more damage it can cause and the less it takes from minor combat. Adverse

factors for minor combat are lack of supply, high fatigue and high numbers of adjacent enemy units. Units can be KIA'd in minor combat.

Minor combat does not occur at night, unless a side been flagged as night capable. Night capable battalions meeting the normal minor combat conditions will conduct minor combat at night. This simulates aggressive night patrolling and combat. In all other respects they are identical to normal battalions. Night capable battalions still suffer the normal penalties if they commit a regimental attack at night.

If a side is night capable, a moon symbol will be shown next to the HQ movement button.

14. MINES AND FORTS

Mines and forts affect both movement and combat. A battalion moving onto an enemy minefield or fort cannot move any further that turn. Minefields and forts are automatically cleared at the end of turn, unless the battalion conducts or is the target of a regimental attack, in which case it has a 50% chance of clearing the minefield. A unit on an uncleared mine or fort hex blocks friendly movement through that hex. An enemy fort or minefield will not be removed unless it is cleared by a friendly unit and until it is cleared, an enemy fort or minefield hex will remain enemy controlled.

Minefields (but not forts) cause losses in strength and fatigue, and will continue to cause these losses until cleared. In any turn, a unit on an enemy fort or minefield is also very vulnerable to minor combat, and incapable of inflicting minor combat losses on the enemy.

Friendly minefields have no effect. Friendly forts use the movement and combat effects defined for them in WarPlan™. In a regimental attack on a fort, any engineer battalions (only), treat the terrain as being combat effectiveness (7) i.e. the easiest terrain for combat.

Routed units cannot clear minefields nor do they suffer any extra penalties for being in a minefield. Any enemy minefield or fort hexes occupied but not cleared are automatically cleared at the end of the game. This means you will receive victory points for those hexes.

These routines mean undefended minefields or forts slow movement without doing much damage. Defended minefields, or worse still, minefields with defended forts behind them can cause a lot of grief.

15. SPECIAL UNITS

These are units showing the the parachute, glider or amphibious landing craft icon. While showing this icon parachute or glider units are especially vulnerable to minor combat. They only show the icon on the first turn that they land. Landing craft will suffer special attrition if there was space for them to land at the beginning of the turn and there was an enemy unit within two hexes. If there was no space they are deemed to be keeping a prudent distance off-shore until such a space arises.

16. THE MOVEMENT ROUTINES

Once the last combat report has been displayed, the movement routines are activated. The computer determines in which order the regiments will move. This is based on admin, experience, supply, leadership, current order and a small random component.

If necessary, the movement routine will be divided into a series of *pulses*. This is to ensure that no single battalion moves more than 4 hexes (or 8 along a road) before every battalion

has had a chance to execute its order. Note that mechanized units (i.e. those with a movement allowance higher than the specified mech min for the scenario) cannot cross rivers except at fords or bridges and that static units cannot move at all.

Objectives may have been allocated to a particular division during the creation process. A computer controlled force will attempt to take or re-take those objectives with the specified division. A human player can naturally issue any orders he wishes. However, if an enemy unit is KIA'd, your battalions will move after combat towards a divisional objective, if it exists. Therefore you should either follow your initial orders or remove the divisional objective allocation in *WarPlan™*.

17. THE MAP

The map displays a lot of information to keep you informed. When you are giving orders the battalions belonging to the current division show their specific icons, while the other divisions show their generic icons. The current regiment is further highlighted and its target, if one exists, is indicated by a flashing target symbol. The map will always be scrolled so as to centre on the most important item.

By holding the mouse down on a hex when you have the binocular cursor, you will pop up dialogs with information about the hex and its contents.

18. THE END GAME

The game will end with the completion of the movement routine on the last turn. It is always a pm turn.

The victory screen will appear and summarize the players' performance.

19. TACTICS

Some parts of the game are so vital to playing it properly that they need to be specified in one place rather than scattered throughout the menu explanations. They are *combat* and *supply*.

(i). Combat. There are many factors in the game that are considered in the resolution of combat. The most important of these are the fatigue state, casualty level, and supply state of the troops. Deficiencies in any one of these areas can make a serious difference to combat performance. These are variables that are immediately affected by your command decisions and deserve your closest attention.

Tired or exhausted men cannot fight effectively. A combat result can cause loss of strength, fatigue or both. Thus men can lose fatigue points in combat in both attack and defence. Each attack can cost fatigue points and repeated assaults without a break will cause extra fatigue and supply losses.

Fatigue is recovered best at night by sleeping, and attacking at night will certainly cause fatigue losses and should only be done where really necessary. There are, however, some good reasons for attacking at night. These would include having large amounts of off-board support, the fact that your opponents air power makes attacking during the day very difficult, or having so many men that you can afford to have some attack at night to keep up constant pressure on the enemy. The main point is that troops fighting both day and night will rapidly become exhausted.

Night capable troops will conduct minor combat at night without fatigue loss. Moreover, any

OBS allocated to them for a regimental attack automatically arrives as it does during the day. Non night capable units have only a 50% chance of receiving allocated OBS. Night capable units still receive normal fatigue penalties for regimental night combat.

Regiments in reserve will recover fatigue much faster than regiments in any other state and tired units should be placed in reserve to allow more rapid recovery. Attacking with units that are tired or exhausted invites disaster.

Units lose effectiveness as their casualty level mounts, over and above the actual loss of strength points. Any battalion with over 20% casualties is a definite candidate for reserve, and units with over 50%, even if they remain on the battlefield, are not very useful. If units are brittle you must try to keep casualties below the brittleness level. Brittle units will never recover and will eventually die of attrition, even if they are not in combat.

Casualty levels are not the absolute totals of killed and wounded. Rather they reflect the steady lowering of the number of troops willing and able to effectively fight the enemy. Most of the casualties will not be hurt at all but are out of contact, cut off, confused or leaderless, pinned down or otherwise ineffective.

Putting such a unit in reserve will allow re-organization and replacement and will eventually restore it to a reasonable fighting condition. A unit committed and taking too many casualties may break and rout. A routed unit is no longer effective as a fighting force and will usually retreat towards its divisional HQ.

Any unit suffering overwhelming casualties may cease to exist for game purposes. It is noted as KIA and disappears from the game.

(ii). Supply. The toughest unit is helpless without bullets and useless without food. The regimental supply level is used for combat purposes. Its likelihood of replenishment is related to its current order (reserve is best, assault is worst), the divisional HQ supply value and both HQs' admin values.

The divisional HQ supply and admin values do not change! If these are low you have to be extra careful in selecting an attack philosophy. Although a regiment may start with decent supplies, resupply will be a chancy procedure. Naturally attacks use a lot of supply, so avoid unnecessary combat.

Even if divisional supply is good each regimental HQ must trace a line of friendly controlled hexes to the divisional HQ to establish resupply for each regiment. You will be told if the LOS is open or cut. If it is cut, you may have to move your regiment or your HQ or both. Placement of the divisional HQ is critical.

As a special concession to amphibious operations, regimental HQs can trace supply to divisional HQs located off-shore, i.e. showing the special landing craft icon. Once the HQ has landed the normal rules apply. Terrain prohibited to mech units and the presence of enemy units may also block supply. If your LOS is blocked you cannot afford to wait too long before unblocking it.

(iii). Management. There is no such thing as a lucky turn. A good technique can overcome most reverses. Bad play turns reverse into disaster. A few principles to help you avoid disaster are set out below.

Keep a reserve. Your div HQ has to be at least 6 hexes away from the enemy to make this possible. If you don't have that room, fight like crazy to create it. Don't commit your reserve until you have made provision for a replacement.

Use the right men for the job. Historically, the best formations got more than their share of tough jobs, for very good reasons. You will find those reasons equally compelling.

Give the right job for the men. Even inferior troops who are strategically on the defensive can and should attack, at least occasionally. Judicious use of probes will cause extra fatigue and supply losses to the attackers. They will probably win anyway but be in worse shape after the victory than if a purely passive defense had been maintained. If your probe catches an attacker during a prepare he will certainly suffer.

Manage your assets. In one sense all your troops are assets and your job is to use them correctly. The divisional assets provide a useful illustration of this. They should be checked every turn to ensure that they are being used in the most efficient manner possible. The techniques for managing them successfully apply to the rest of your troops. Apply those consistently and you'll be hard to beat.



PART TWO

WARPLAN™

1. INTRODUCTION

The following notes are meant as a guide to *WarPlan™*. The information they contain will also provide some insights into how the game works, and should be read at some stage even if you never construct your own scenarios.

Varying an existing scenario is fairly straight-forward and we provide an example of how to do this in Chapter 4. Variations are the easiest way to get the most out of your game. All of the scenarios in the game come with suggested variations which can be easily implemented. However, designing a full scenario will require a reasonable degree of familiarity with the game itself.

All games in the *Battlefront Game System* use the same design routines. We publish complete scenarios for the *Battlefront Game System* in our magazine *Run 5*. These contain all the information required to create entire new games using the construction kit. Information describing our *Run 5* magazine is included with the game materials.

2. USING THE DESIGN MENUS

In the *Battlefront Game System* there is no distinction for editing purposes between a scenario and a game in progress. A game in progress can be saved to disk, edited as you see fit and then restarted.

This is a feature to be used with restraint. While you can change sides with the computer, for instance, it will generally take until the end of the next game turn for the computer to readjust.

3. VARYING A SCENARIO

Varying a scenario is a way of exploring historical options. It is much easier than creating a new scenario from scratch and is a good way to become familiar with the design mechanics. Consult the Scenario Manual for a simple tutorial. The following chapters explain in detail the mechanics of this powerful construction set.

4. THE WARPLAN™ DESIGN MENUS

This section describes the various items in the *WarPlan™* menu together with explanations of their functions. The order in which they are presented represents a convenient sequence for the creation of a new scenario.

(i). Map Size. The map size in the *Battlefront Game System* is variable. Each map can be up to 40 hexes across and down. At a suggested ground scale of 1 kilometre per hex, this represents an area of a little over 1,600 square kilometres.

In creating a scenario, map size *must* be set before anything else. Select the smallest map size that can comfortably support the action you wish to represent. Apart from being less work, smaller maps will mean faster games.

(ii). Equipment. There are 31 equipment types that can be defined. This facility makes the identification of friendly units much easier. The name itself is not used by the program but is simply displayed as a mechanism to increase the recognition level of a battalion.

(iii). Terrain. There are sixteen basic terrain types in the *Battlefront Game System*. The names and the effects on both combat and movement for any terrain type are defined here. It is possible to represent the ground conditions of any battlefield by judicious use of names and combat/movement effects. See *fig 5*.

	Terrain	Move Cost		Combat		
		Mech	Non Mech	Arm	Art	Inf
8	Plateau	7	4	6	5	5
9	Broken	6	4	6	5	6
10	Bluffs	20	9	5	3	4
11	Hilltop	0	9	3	1	3
12	Cliff	24	12	4	2	3
13	Mt Suribachi	0	9	3	1	3
14	Gully	10	6	6	4	5
15	Airfield	6	1	6	6	7

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Examine any (or all) of the game scenarios to see how it's done. For each terrain type you wish to use, choose an appropriate name.

The movement section of the terrain display is used to determine how many movement points each terrain type will cost when a battalion enters a hex of that type.

Mechanized battalions are those primarily moved by tracked or wheeled vehicles. Non-mechanized battalions primarily move on foot. Enter a number between 0 and 31. Note that 0 signifies the hex is impassable to that type of battalion.

Fig 5. Terrain Creation

Terrain affects combat by reducing the effectiveness with which an enemy battalion will attack into a particular hex type. Since armoured, artillery and infantry units play a different role in combat, there is a separate effect for each type. Enter a value between 0 and 7. A value of 7 means that the terrain has no adverse effect on combat. A value of 0 means an incredibly tough position to assault.

(iv). Features. Roads, Forts, Bridges, Rivers and Cities must have their movement and combat effects defined in the same way as terrain types. Note that forts and cities cannot affect movement and roads cannot affect combat. Mechanized units cannot cross rivers except at bridges. Notice how Forts, as defined, can severely reduce the combat effectiveness of all three troop types.

(v). Briefing. Enter a name for the scenario. There are also up to three lines you can use for a sub-title to the scenario.

Enter the turn, day, month, year and century that the scenario begins.

Enter the number of days the scenario will last. The maximum is 25. Every game ends on a pm turn.

Enter the initial weather. 0 = precipitation (rain or snow as appropriate), 1 = heavy overcast, 2 = light overcast, 3 = clear. Note that this is atmospheric weather only. To reflect the effect of mud or snow on ground movement, you must make appropriate provision in the terrain effects routine.

Enter the current weather forecast. 0, 1 = stormy, 2, 3 = building, 4, 5 = stable, 6, 7 = clearing.

Enter the climate. This sets the basic parameters on which the weather forecast will operate to produce the weather. The default type 0 is European. The other climates are Arid, (suitable for desert battles), Monsoon, Tropical, Arctic (clear only 25% of the time, cloudy or precipitation the rest) and Temperate (perfect weather, just like Sydney).

Enter the Mech Min. All battalions with a movement allowance greater than or equal to this number pay mechanized terrain costs. All others use the non-mechanized values.

(vi). Corps. For each nationality you must enter a name for the Side, the Corps and the Commander.

Support points are assigned in two categories; those available in daylight turns and those available at night. Each point of air support is equivalent to 1 SP of artillery. Reliability measures how likely the support points are to be available for use each turn. 0 = unlikely, 3 = almost certain. Rating is a measure of the effectiveness of the support. Sixteen inch naval shells deserve the highest rating, 25lb WWI surplus bombs the lowest.

Air superiority is measured on a scale of 0-7. 0 = strong Axis, 7 = strong Allied. Reliability measures how likely this air superiority is to remain throughout the scenario. A low reliability means the air superiority condition could fluctuate frequently throughout the scenario. A reliability of 7 means there is little chance of any change to the air superiority condition.

Enter the separate casualty levels at which units of each side become brittle (if so designated). These are percentage casualties in increments of 10%.

Enter for each side whether it is night capable. Night capable units conduct minor combat at night and always receive their allocated OBS points.

(vii). Misc. Factors. Every hex on the map is controlled either by the Axis or Allied player. This is set when the scenario is created. Control then changes when a battalion enters an enemy controlled hex. This change is automatic except for enemy forts, cities and minefields. They take a variable amount of time to demolish/clear and until rendered ineffective they will function as normal for their original owners.

In essence, you do not really control a fort or minefield hex until you have cleared that hex. Hexes occupied but uncleared at the end of the game are automatically cleared and will earn victory points. Progress is always slower when moving in enemy territory. Just how much slower is determined by the values entered for adjacent enemy controlled hexes. The parameters from (1) to (6) are the number of surrounding hexes which are enemy controlled. The values underneath each parameter which may range from 0 to 15 specify the movement point penalty, for entering a hex surrounded by any particular number of enemy hexes.

Note that the penalty is specified for each side. Thus the AXIS line specifies the penalties for Axis units in Allied controlled hexes and vice versa.

The size of a battalion is measured in strength points as described in the Troop Creation routines. Each player receives victory points for destroying enemy battalion strength points. A value between 0 and 15 must be entered for both the mech and non-mech categories. The AXIS line reflects the number of VPs earned by the Allies for killing Axis strength points in each category.

(viii). Minor Combat. This item allows you to increase or decrease the effectiveness of minor

combat for one or both sides. It is especially useful as a balancing factor in customized scenarios. There are three categories which can be edited.

(a). Fort Enhancement. Troops defending a fortification can be made tougher or weaker by changing the minor combat value. Increase the value to toughen the battalion. Decrease the value to weaken the battalion. A value of 15 will make the defender almost immune to the effects of minor combat. The default value is 2.

(b). City Enhancement. Troops defending a city can be made tougher or weaker by changing the minor combat value. Increase the value to toughen the battalion. Decrease the value to weaken the battalion. A value of 15 will make the defender almost immune to the effects of minor combat. The default value is 0.

(c). General Enhancement. Troops defending in other terrain can be made tougher or weaker by changing the minor combat value. Increase the value to toughen the battalion. Decrease the value to weaken the battalion. A value of 15 will make the defender almost immune to the effects of minor combat. The default value is 5.

5. THE TOOLS PALETTE

To the left of the map window is the tools palette. Most of the work in creating a scenario is done through this palette. The two main tasks are unit creation and map creation. See *fig 6*.

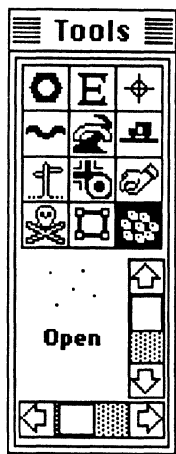


Fig 6. Tools

(i). Map Creation. There are 16 basic terrain types which should be defined first in the *Terrain* menu item. These 16 types are all that the movement and combat routines understand. The *WarPaint™* editor will allow you to define many more icons which much be related to a basic terrain type.

Regardless of the number of icons, the process of creating the map is the same. There is a section of the tools window, with scrolling controls, which displays the current terrain icon. There is a horizontal scroll bar and a vertical scroll bar. The horizontal scroll bar fixes the terrain type (as defined in the terrain dialog box) for that hex icon. The vertical scroll bar selects hex icons. Use the controls to select the icon you want and then click on that hex. When you move the cursor to the map, click to place the current icon on the map. If you hold down the mouse button and move the mouse you can 'paint' the current icon as it follows the cursor.

Other map features can be added simply by selecting their icon from the palette and painting them on the map. River and bridge hex-sides and roads, cities, forts and minefields can be added to a hex in any combination. To remove a feature, simply click on it a second time.

Each hex in the game is always controlled by one side or the other. To set the control, choose the control tool from the tools palette and paint the front lines on the map. You don't have to paint every hex as the computer will work out the borders as you draw. The control symbols will not continue to be displayed once you have finished painting unless you have set the display option for control to 'on'. The default value is Axis.

An ersatz road is not treated by the computer as a road for movement choices. They should be used to stop the computer becoming confused by dead-ends. A hidden road will be masked

from view by the terrain type in the hex. Use hidden roads where no real road exists but you wish to create a channel for troop movement. Another use is when the terrain type is particularly significant or unique and you wish it to be displayed. A unit traveling on an ersatz road will pay road movement costs. A unit traveling on a hidden road will pay normal terrain costs.

We suggest you keep the map size as small as possible for your first original scenario.

All maps are compromises between the actuality of the terrain and its representation. Do not feel afraid to be creative with terrain to make the map work properly within the game system.

(ii). Objectives. Each side can have up to 30 objectives created for a scenario. To create an objective click on the objective symbol from the tools palette and then click on the map at the location chosen for the objective. A dialog box will open and the objective details can be assigned. See *fig 7*.

Fig 7. Objective Dialog

Each objective must be given a name. An objective may have a division, numbered 1 to 3, assigned to it. If a side is computer controlled, the computer will attempt to take an objective with a regiment from the nominated division. This regiment will be assigned divisional assets and will head for the objective at every opportunity. If a number of objectives are given to one division it will attempt the closest and work its way through the others as they arise. In this way a line of advance may be specified for a division.

This control is only valid for the turns that an objective is earning points. If an objective is in friendly territory, i.e. already controlled, then it is ignored and the division will seek enemy controlled divisional objectives or follow the normal rules. However, if such an objective is taken by the enemy, then the computer will make a concerted effort to recapture it.

The ability to control troops conferred by the divisional objective is very useful. Scenario creators have a lot of power at their disposal.

Objectives which have a division assigned to them may be designated as defensive objectives. Only the specified division will be affected by this condition and it operates only while the objective is under friendly control. A regiment from the specified division will be despatched to the objective and will defend it as long as the time reference (as explained below) applies.

Victory points can be awarded for the possession of an objective on a turn by turn basis throughout the game and/or at the end of the game. When awarding points throughout the game, you must select the turn that point scoring will begin and the turn on which it will end.

If you wish to create an objective simply as a signpost for the direction of your troops, assign just 1 VP for its occupation at the end of the game. The Objective or Enemy Battalion commands are the only way to move men freely around the map. If you want troops to be able to go somewhere, put in an objective.

(iii). Unit Creation. Examine the blank division roster in Appendix A. One of these should be prepared for each division in the game. Do not attempt to edit the screen until these rosters have been completed.

To create units, double-click on the hand icon to get the Order of Battle (OB) window. See *fig 8*. Select which side you want to edit by clicking the correct radio button. You will see the division HQ buttons across the top of the window and the regiment HQ buttons along the side,

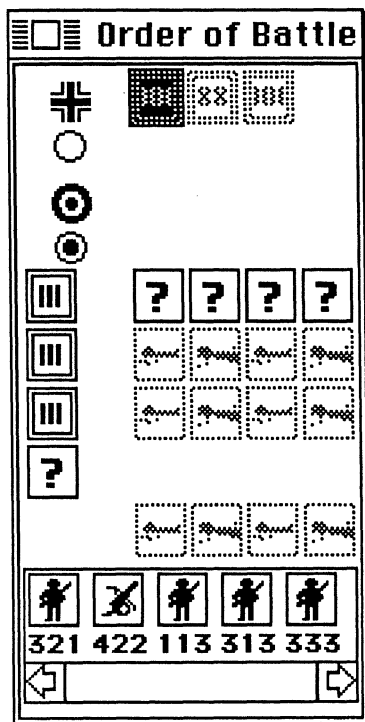


Fig 8. OB Window

just as they are in the command window. To create a division or regiment, double-click on its button and fill in the details (explained below) in the dialog box. See *fig 9*.

The following notes will explain the factors which must be valued or rated. A design perspective is attempted in the Design Overview at the end of this section.

Next to the Unit I.D. is a unit designation generated by the computer. It takes the form Battalion/Regiment/Division where each is numbered. Thus the first battalion of the second regiment of the third division is numbered 1 2 3. Where a unit is an asset and belongs permanently only to a division, the regiment number is replaced by an A. Thus 2 A 1 is the second asset of the first division.

(a). Headquarters

HQ I.D. You must enter a name to identify the division or regiment.

UNIT TYPE. Enter a name to describe the type of division or regiment.

HQ ADMIN. Enter a value between 0 and 7. Admin affects the efficiency of every function the HQ carries out. The higher the value, the better. Divisional HQ admin never varies in the course of a game. Regimental HQ admin rises and falls in response to the current situation.

LEADERSHIP. Enter a value between 0 and 7. Leadership is always important in battle. The higher the value, the better. Neither divisional HQ leadership nor regimental HQ leadership will change in the course of a game. Both are important to the effectiveness of a formation.

HQ SUPPLY. Enter a value between 0 and 7. Divisional HQ supply is fixed in each scenario and represents the overall supply status of the formation. Regimental HQ supply usage is dependent upon combat while resupply is dependent upon the divisional supply value.

Rgt HQ ID	<input type="text"/>	1	1	Ally
Rgt HQ Type	<input type="text"/>			
Admin	<input type="text" value="0"/>	Supply	<input type="text" value="0"/>	
Leadership	<input type="text" value="0"/>	Brittle	<input type="text" value="0"/>	
<input type="button" value="Rgt"/>		<input type="button" value="Div"/>	<input type="button" value="Side"/>	<input type="button" value="Done"/>

Fig 9. Regiment HQ Dialog

The more fighting, especially assaulting or exploiting that a unit does the greater the supply consumption. An adequate regimental HQ supply level is vital for effective combat. Values between 4 and 7 are satisfactory for all purposes, values of 2 or 3 will result in certain penalties in combat while values of 0 and 1 are disastrous. Thus a unit with very low divisional supply will be severely restricted in the amount of effective combat it can undertake.

BRITTLE. Enter a value of 1 if the HQ is brittle. Brittleness is a factor for divisional and/or regimental HQs. A unit suffers the effects of brittleness only if the regiment or division is designated as brittle and its casualty figure reaches the brittleness level set in the scenario briefing. Once this happens then the divisional or regimental HQs supply and admin values are set to zero and attached battalions suffer attrition each turn. For divisional HQs the affected battalions are the divisional assets, while for regimental HQs they are the regular battalions of that regiment.

HQ MOVEMENT. Enter a value between 0 and 31. Regular divisions with the usual provision of wheeled or horse-drawn vehicles should be given a movement allowance at least equal to the mech. min. value, even if they are basically leg infantry divisions. Only those divisions such as airborne and marine which arrive by an air or amphibious route should have a movement allowance lower than the mech. min. Resupply by XX HQs with a movement allowance lower than the mech. min. will not be as good as their conventional brethren in most circumstances. Resupply across rivers is less restricted for XX HQs with a movement allowance lower than the mech. min. If a unit was tied to a single supply source (such as Airborne divisions and their drop zones), consideration should be given to using a zero movement point HQ to reflect this.

ARRIVAL (XX HQ ONLY). Enter a number between 0 and 99. This is the turn that the divisional HQ will arrive on the map. An arrival number of 0 means the HQ begins the game deployed on the map. Units without a divisional HQ will have no line of supply. Delaying the arrival of a HQ beyond that of its battalions is a very useful way of restricting the operations of units until an appropriate time.

(b). Battalions

UNIT I.D. You must enter a 1-3 character name to identify the battalion. Units without a name are ignored by *WarPlan*™.

CLASS. Enter a number between 0 and 13. These 14 numbers correspond to the fourteen different types of battalions you may create. The types are. 0 = leg infantry, 1 = motorized infantry, 2 = mechanized infantry, 3 = paratroopers (airborne infantry), 4 = heavy weapons or mortars, 5 = cavalry, 6 = reconnaissance, 7 = engineer, 8 = anti-air, 9 = anti-tank, 10 = tank destroyer, 11 = armour, 12 = assault gun, 13 = artillery.

Numbers 0-1, 3-9 are INFantry types, 2, 10-12 are ARMour types and 13 is an ARTillery type. These are the three types of units defined by the combat routines.

MODE. Enter a number between 0 and 3. This number determines the mode of entry of a battalion. 0 = normal; the battalion begins on the board or arrives as a reinforcement in the normal fashion. 1 = airborne; the battalion begins the game just landed by air drop or arrives as a reinforcement by air drop. 2 = air landing; the battalion begins the game just landed by air transport or arrives as a reinforcement by air transport. 3 = amphibious; the battalion begins the game at sea adjacent to a beach-head or arrives as a reinforcement in an ocean hex.

Units in normal mode will start or arrive on their designated entry hex. If it is blocked by another unit, they will not arrive until the hex is vacated. Units in parachute mode will arrive

on any hex within a 1 hex radius of their designated entry hex. If there is no vacant hex inside this radius, they are destroyed. Units in air landing mode will start or arrive on their designated entry hex. If it is blocked by another unit, they will not arrive that turn. On subsequent turns they may arrive if that hex, or an adjacent hex, is vacant. Units in amphibious mode will arrive on any coastal hex within 2 hexes of their designated entry hex. If there is no vacant hex inside this radius, they will wait off-shore until there is one.

EQUIPMENT. In the Equipment menu item you are asked to describe the types of equipment/troops used by your corps. This facility makes the identification of friendly units much easier. The name itself is not used by the program; it is simply a mechanism to increase the recognition level of a battalion. There is space to list 31 items of equipment and/or troop types. Enter the number corresponding to the appropriate equipment.

MOVEMENT. Enter a number between 0 and 31. This is the number of movement points the battalion will have available for each turn. Note that you must co-ordinate this number with the mechanized minimum value from the *Briefing* menu item. All battalions with a movement allowance greater than or equal to the chosen mechanized minimum value will be treated as mechanized units; all others will be treated as non-mechanized.

ARRIVAL. Enter a number between 0 and 99. This is the turn that the battalion will arrive on the map. An arrival number of 0 means the battalion begins the game deployed on the map.

MAXIMUM STRENGTH. Enter a number between 1 and 15. This is the maximum strength of the unit. For infantry and armour types, a full strength company is equal to 3 strength points (SPs). A depleted company is worth 2 SPs and a remnant company worth 1 SP. Look to make a typical battalion at full strength between 9 and 12 SPs, and adjust all other units relative to this benchmark. For artillery types, 3 tubes is equal to 1 SP.

CURRENT STRENGTH. This must be less than or equal to the initial strength. For various reasons it is often desirable to start a unit understrength. This allows you to do just that. The normal game processes for replacements will tend to bring a unit's strength back to its maximum strength.

RATING. Enter a number between 0 and 15. This number is a subjective evaluation of the quality of the equipment and organization of the battalion. For example, the rating of a tiger tank battalion would be 12-15 depending on the scenario while a Matilda tank would be lucky to rate 1 in any circumstances.

Infantry, armour and artillery type battalions should be rated on separate scales. The combat mechanics take care of the inter-relationships. If you don't like the ratings of your favourite hardware or unit, change them.

RANGE. All direct attack types of infantry battalions should have a range of 0. All supporting types of infantry battalions should have a range of 1. All armour type battalions (except mechanized infantry) should have a range of 1. All artillery type battalions should have a range equal to the effective distance at which they could engage the enemy. The maximum range is 15.

FATIGUE. Enter a number between 0 and 7. 0 = totally exhausted, 7 = bright-eyed and bushy-tailed.

EXPERIENCE. Enter a number between 0 and 7. 0 = green and pretty well useless, 7 = elite troops of the highest quality. The average regular battalion should have an experience between 3 and 5.

ATTACHMENT (XX ASSETS ONLY). Enter a number between 0 and 4. This number will identify which regiment of the division has currently been assigned the particular asset battalion. A number of 0 indicates that the asset is in reserve.

Note that all asset battalions which are intended as reinforcements should be assigned to a regiment when created and *not* placed in reserve. This will stop them from clogging up a reinforcement hex while they get their bearings.

(iv). Unit Placement. To place troops on the map, simply drag their icon from the OB window, move the cursor to the map, and release to place them in the desired location. Units can be picked up and moved around the map or removed from it. A quick way to un-define a unit is to edit out its name. Units without a name do not exist.

When more than one unit is placed in a hex, or the unit is scheduled as a reinforcement, the stacking icon will be displayed. Use the target cursor to select a reinforcement hex and all units scheduled to arrive there will be displayed in a list at the bottom of the OB window. These units may be double-clicked or dragged like any other unit.

6. A DESIGN OVERVIEW

(i). Units. The process of creating a scenario should be regarded as an art rather than a science. While some armies came close to fighting with a homogeneous organization, a lot didn't. The circumstances of war usually bear little relation to paper organizations. Do not be afraid to combine units and manipulate strengths and ratings to get the desired affect. A scenario is much more than the sum of its parts.

(ii). Combat. The various battalion types, as defined by the CLASS entry under Battalions, have different effects in the combat routines. Choice of the CLASS for a unit should bear these in mind. The types are listed below.

0 = leg infantry, 1 = motorized infantry, 2 = mechanized infantry, 3 = paratroopers (airborne infantry), 4 = heavy weapons or mortars, 5 = cavalry, 6 = reconnaissance, 7 = engineer, 8 = anti-air, 9 = anti-tank, 10 = tank destroyer, 11 = armour, 12 = assault gun, 13 = artillery.

Numbers 0-1,3-9 are INFantry types, 2 and 10-12 are ARMour types and 13 is an ARTillery type.

Any combat having both the INF types 0-3,5-7 and ARM types 11-12 gains a combined arms bonus. When defending, there is an additional bonus for the presence of an anti-tank type unit (8-10).

Any unit with a range greater than zero gains a bonus when used in conjunction with a 0 range unit. For example, a US infantry regiment usually mustered three infantry battalions and an artillery battalion. The heavy weapons and mortars were in separate companies organic to the infantry battalions. To represent the supporting fire of these companies, enter a range value of 1 for one of the infantry battalions. This will ensure that the combined arms bonus is realized. Note that the artillery bonus is in addition to the above.

The presence of ART or OBS also confers a bonus, irrespective of the actual effectiveness of those points. ART and OBS points work with full effectiveness only in <ASSAULT> or <EXPLOIT>. All other orders are only 50% effective.

Engineer units ignore terrain when they attack, and are hence extremely useful for attacking forts.

(iii). Supply. Supply consumption is dependent on the level of fighting a unit engages in. Normal resupply depends on regimental and divisional admin and divisional supply. There must also be a Line of Supply (LOS) between the regimental and divisional HQs and the Div HQ must not be adjacent to any enemy unit. If there is no LOS then resupply can still occur but at much reduced levels.

APPENDIX A

7. WARPAINT™

WarPaint™ is used to draw the game map. Colour machines (such as Mac II, Amiga and IIGS support full-colour graphics; back and white machines (such as Mac Plus and Mac SE) use monochrome graphics.

The WarPaint™ window allows you to create three types of icons. These are terrain icons (hex shaped patterns which fit together like a honeycomb to build up the map), unit icons (square shapes which represent the military units in the game) and feature icons (variably shaped symbols which represent certain game functions. Click on the appropriate radio button to select which type of icon you wish to create.

You have access to 250 terrain icons, 47 unit icons and 7 feature icons.

The colour palette varies from computer to computer. The vertical scroll bar to the right of the palette will be active if the palette can be varied; it will be inactive otherwise. The larger square to the left of the palette defines the colour currently selected. Click on the palette to change the colour.

Above the palette are mask and brush buttons. The mask button is only active when editing features. All drawing is done using the brush. The mask defines the area of a feature which will be transparent.

The horizontal scroll bar directly under the enlarged icon image is used to select icons.

Select the desired icon, paint it just as you would with any typical paint program and then click Apply to register the change. The standard copy, cut and paste commands are all active.

You may also access the map directly while the WarPaint™ window is open. Click in any map hex and the chosen terrain icon will appear there.

Have a look at one of the scenarios in the game to see how it all fits together. With a little experimentation, you'll find this tool very easy to use.

Furthermore, Issue 14 of our house journal, Run 5, will include an article on the use of WarPaint™ for various computers.



BRIEFING

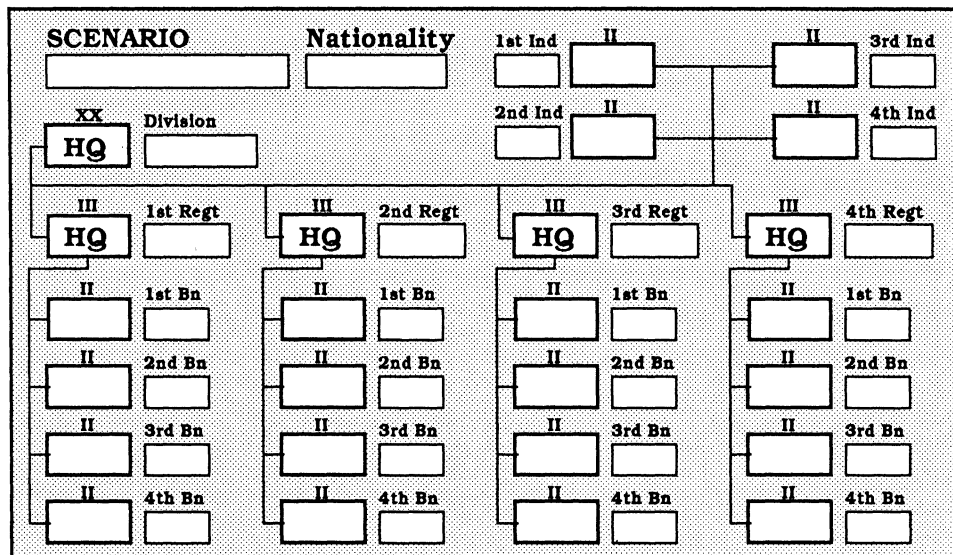
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SIDE [16]		SIDE [16]		BRIEFING [26]	
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COMMANDER [16]		COMMANDER [16]		[]	
DAY	NIGHT	SUPPORT	DAY	NIGHT	
QUANTITY (0-99)					
RELIABILITY (0-3)					
RATING (0-15)					
AIR SUPERIORITY (0-7)					
STATUS = <input type="checkbox"/>			[]		
RELIABILITY = <input type="checkbox"/>			[]		
(0-3)	START =	<input type="checkbox"/>	[]		
(1-31)	DATE =	<input type="checkbox"/>	[]		
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(0-20)	CENTURY =	<input type="checkbox"/>	[]		
(1-16)	LENGTH =	<input type="checkbox"/>	[]		
(0-3)	WEATHER =	<input type="checkbox"/>	[]		
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(0-7)	CLIMATE =	<input type="checkbox"/>	[]		
(0-31)	MECH MIN =	<input type="checkbox"/>	[]		
BRITTLINESS			NIGHT CAPABLE		
(0-9)	AXIS =	<input type="checkbox"/>	% (0-1)	AXIS =	<input type="checkbox"/>
(0-9)	ALLIED =	<input type="checkbox"/>	% (0-1)	ALLIED =	<input type="checkbox"/>

TERRAIN EFFECTS CHART

TERRAIN CODE (T0-T15)	TERRAIN NAME [10]	TERRAIN COSTS PER HEX		ATTACK EFFECTS		
		MECH (0-31)	NON-MECH (0-31)	ARM (0-7)	ART (0-7)	INF (0-7)
T0						
T1(RET)						
T2						
T3						
T4						
T5						
T6						
T7						
T8						
T9						
T10						
T11						
T12						
T13						
T14						
T15						
-	ROAD					
-	FORT					
-	CITY					
-	BRIDGE					
-	RIVER					

APPENDIX A

DIVISION ROSTER



HEADQUARTERS DATA

FORMATION		XX HQ	1/RHQ	2/RHQ	3/RHQ	4/RHQ
HQ I.D.	[8]					
UNIT TYPE	[8]					
HQ ADMIN	0-7					
LEADERSHIP	0-7					
HQ SUPPLY	0-7					
BRITTLE	0-1					
MOVEMENT	0-31		N/A	N/A	N/A	N/A
ARRIVAL	0-99		N/A	N/A	N/A	N/A
LOCATION	(x,y)		N/A	N/A	N/A	N/A

BATTALION DATA

FORMATION	II/III	1/1	2/1	3/1	4/1	1/2	2/2	3/2	4/2	1/3	2/3	3/3	4/3	1/4	2/4	3/4	4/4	1/-	2/-	3/-	4/-	
UNIT I.D.	[3]																					
LOCATION	(x,y)																					
CLASS	0-13																					
MODE	0-3																					
EQUIPMT	0-31																					
MOVEMENT	0-31																					
ARRIVAL	0-99																					
MAX STREN.	0-15																					
INIT. STREN.	0-15																					
RATING	0-15																					
RANGE	0-15																					
FATIGUE	0-7																					
EXPERIENCE	0-7																					
ATTACHMT	0-4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

APPENDIX A

OBJECTIVES AND MISC. FACTORS

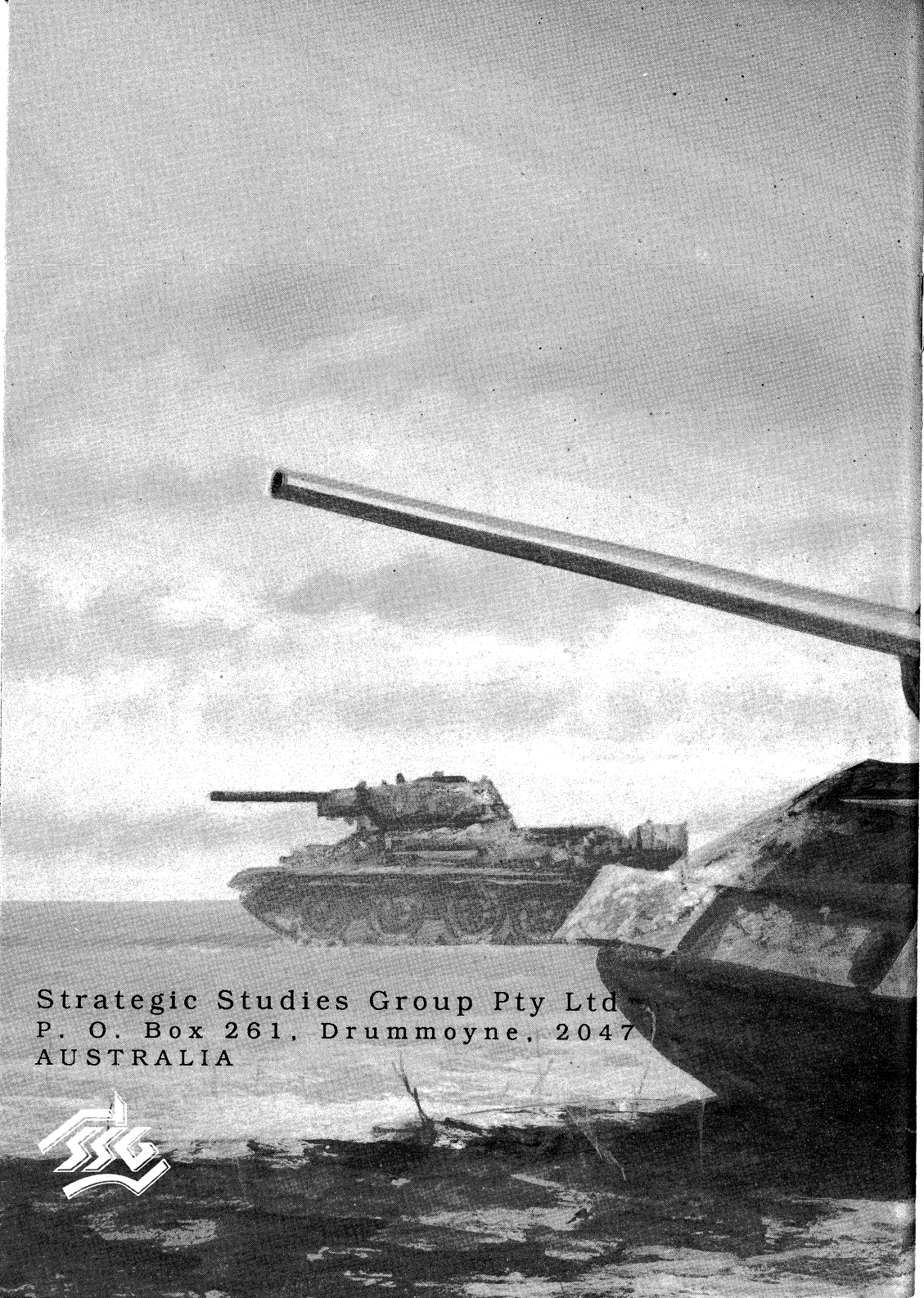
I.D.	Name [11]	Map Loc [x,y]	Div. (0-3)	Start (1-99)	End (1-99)	Pts/Turn (0-30)	Pts/End (0-255)
1(AX)							
2(AX)							
3(AX)							
4(AX)							
5(AX)							
6(AX)							
7(AX)							
8(AX)							
9(AX)							
10(AX)							
11(AX)							
12(AX)							
1(AL)							
2(AL)							
3(AL)							
4(AL)							
5(AL)							
6(AL)							
7(AL)							
8(AL)							
9(AL)							
10(AL)							
11(AL)							
12(AL)							

ADJACENT ENEMY HEX PENALTY (AXIS/ALLIED) (0-15)			
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2nd Hex =	<input type="text"/>	5th Hex =	<input type="text"/>
3rd Hex =	<input type="text"/>	6th Hex =	<input type="text"/>

VICTORY POINTS PER STRENGTH POINT ELIM. (0-15)			
	NON MECH	MECH	
AXIS	<input type="text"/>	<input type="text"/>	
ALLIED	<input type="text"/>	<input type="text"/>	

MAP SIZE	
ACROSS (0-2)	<input type="text"/>
DOWN (0-3)	<input type="text"/>

NOTES



Strategic Studies Group Pty Ltd
P. O. Box 261, Drummoynne, 2047
AUSTRALIA

