FCU-70999.02-D

MILOP

MANUAL

Operator-Manual for
MilOp-Combat-Control™
Consoles of the .02-D
Series

1. Preface to Operatives

Operatives!

With this addition to the range of MilOp consoles, the developers have succeeded in creating a new weapons system which retains all the advantages of the old series while at the same time implementing the findings of the latest military research.

The present equipment incorporates a number of changes which officers of all ranks have been demanding for some years. As a result of modifications to the mobile armed forces, you are now able to control the troops under your command much more directly than ever before.

It is now possible, for example, to order Sapper Units to construct or remove roads and rail tracks. The battle modes have been modified to allow greater effectiveness and ease of use. Whereas previously you could only order your troops to attack after they had moved, you can now start fighting as soon as the movement phase is over. You will find that you can employ more effective strategies, as several Units are no longer blocked by a weaker opponent whom you might be able to knock out with a single combat group. In addition, your console's graphic displays have been completely re-designed.

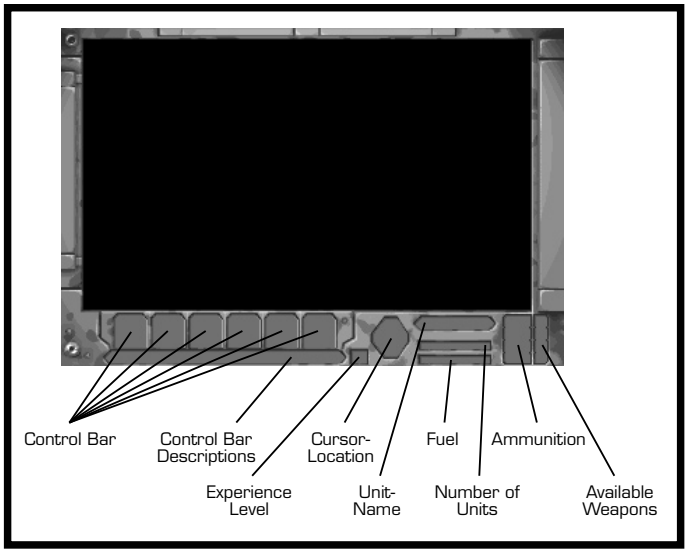
Employing the latest satellite techniques, our scientists have been able to improve the graphic displays to such an extent that, as Commander, you now see the landscape exactly as it is in reality. Thus, for example, the weather conditions are shown in the most realistic way possible. You will also see that the visible area has been enlarged, which is a great advantage to you.

We advise you to become as familiar as possible with the operation of this system. Remember, you

and your system bear the responsibility for the troops under your command. We are sure that, if you take advantage of the many improvements which have been made, victory will be yours.

Analytical Dept. of the ROOM
Technical Staff XVII
ROOM Complex, Hallwa

2. The Battle System



Your battle system is basically your MilOp console which you will see graphically represented on screen. This command centre with all its functions, options and graphic displays is your personal interface with the Units under your command. As you know, your Drullian troops are engaged in a fierce war against Units of the enemy robot empire, Titan-Net. Your task will be to use your command centre to help your troops in the battles which will be shown on your display.

If you are familiar with the old-series MilOp consoles you will see that, in addition to the changes to the visual displays, many new features have been added in the area of mechanised warfare itself. As in the past, scientists from Technical Staff XVII (Blu B. Division) have succeeded in integrating the newly-developed technologies in such a way that they will be of enormous help without hampering or confusing you. You will most probably discover the range of new possibilities by using them in action, without requiring further training in „Using MilOp consoles in the field of mechanised warfare".

Nevertheless, we will now explain in detail all the points which will be of special interest to you.

2.1 Your MilOp console

2.1.1 Options, settings and menus

You will find the following menus and settings if, at the start of the first map displayed, you select the menu symbol.

RETURN

This will take you back to the simulation level.

LOAD

This will show you a selection of the game positions which have been saved, from which you can continue the simulation.

SAVE

This allows you to save the simulation at the current position, and continue from this point later.

SETTINGS

This allows you to access a number of sub-menus, where you can configurate the simulation to suit your requirements.

1) In the first field you can choose the desired level of difficulty (see also 5.2)

2) Map settings takes you into a further sub-menu, where you can alter the screen displays.

2a) Scroll speed: determines how fast the screen is to scroll, depending on the specification

of your computer.

2b) Console windows: determines how the communication windows open. Depending on your computer, it may be advisable to set the windows to open gently according to circumstances, or quickly and immediately.

2c) Autorefill: entering a building automatically refuels a Unit.

2d) Return: this returns you to the menu opened previously.

3) Battle settings takes you into a number of sub-menus which relate to the battle sequences shown.

3a) In the first field you can choose whether or not the spectacular battle scenes are displayed. If you would prefer the battles to be presented as statistics, select OFF. The results of each battle will then appear only as bar charts. You will find more on this point in section 2.5.1.1.

3b) Display speed: determines the speed at which the vector graphic sequences will be shown; this will depend on your computer.

3c) Detail level, Units: determines in what detail the Units are to be shown; directly affects the speed of the computer.

3d) Detail level, terrain: determines in what detail the terrain is to be shown; directly affects the speed of the computer.

3e) Return: this returns you to the menu opened previously.

4) Effects/Music allows you to set the background music and sound effects as you wish.

4a) Music on/off: depending on your computer, you may wish to activate this feature. You can adjust the volume by using the settings LOUD/SOFT/MEDIUM.

4b) Effects on/off: depending again on your computer, you may wish to activate this feature. You can adjust the volume by using the settings LOUD/SOFT/MEDIUM as above.

5) CD-Music allows you to select pieces of music from CD-ROM. The sound quality of the music you will then hear equals that obtained by using high-quality sound cards (e.g. the Roland card).
6) Return: takes you back to the menu accessed previously.

NEW MAP

In this menu you will find further sub-menus which are extremely important to simulation development these are described in more detail in 2.1.3.

It is a good idea to select Single Map Mode if you want to experience and become familiar with certain battle situations. You can also set the number of your fellow combatants. Don't forget, anything you select here will only apply to the next map.

1) Mapname: by using the passwords obtained during the battles you can select individual maps.
2) Alliances: simply click the mouse button to determine who is going to enter into alliances with whom.
3) Player Human/Computer: each player is assigned a colour at the start of the game. With this setting you can decide whether the colour of each bar represents human or computer controlled opponents.
4) Mission Objectives: here you see whether a battle has ended in victory for you, and whether you managed to capture the enemy's headquarters or destroyed all his Units -or both.
5) Start: clicking on this point lets you start the battle which you have planned.

NEW MISSIONS

Once you are in Campaign Mode, there is no turning back - you have started, so you will have to finish. In Campaign Mode, the fate of the Drullian people depends on your actions alone. You start with the first map, and if you have saved a game position you can re-enter the game and take up where you

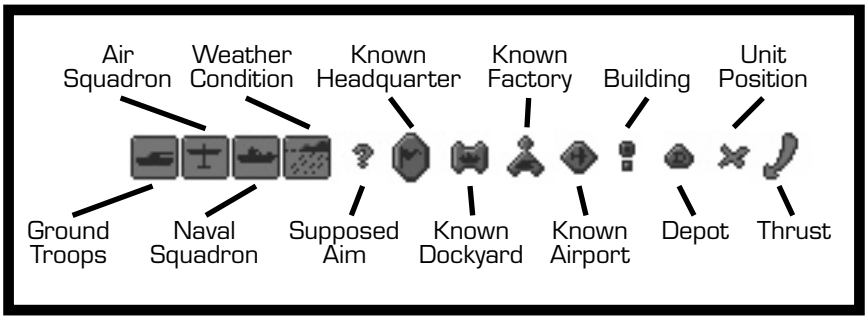
left off. When you save a game position, the console notes all the relevant values and parameters and takes you back to the last point you reached.

A mission named „Siebena“ has been pre-set. Future campaign orders must be started in this field by making the appropriate entry.

INTERRUPT SIMULATION

If absolutely necessary, this gives you the option to leaving the program completely. After a short safety check, you will be returned to your computer's operating system level.

2.1.2 Communication with the command centres



The automatic communication unit is one of the most important elements of your campaign strategy. Before each new battle, animated sequences will give you detailed briefings about the operation objectives. You will be told what the enemy's most vulnerable points are and where your troops are most likely to be successful. The illustration above explains the symbols which will appear on screen.

The Supreme Command of the Drullian Defence Committee will inform you of changes of a general nature and transmit messages from the enemy and other task forces. These may be either weather

reports which should be noted carefully, or messages concerned with your standing with your own troops and the enemy.

2.1.3 Action modes (map mode, campaign mode)

The action is divided into rounds. In each of these rounds, the player whose turn it is makes one move with the complete set of his Units and all their capabilities. These are the all-important „steps".

During one step you can move a Unit once, use it to attack or begin an action. The actions possible depend on the Unit being used, and are described fully in the Weapons Manual.

Player 1 might start the first round by employing all his Units (moving, attacking, actions - these represent the steps). The other players (up to seven) then take it in turns to carry out their steps before leaving the round. The number of steps is only limited by the material or energy available.

You may use two different modes:

In Single Map Mode you can fight individual battles separate from the current progress of the game.

In this mode the weather is generated accidental. To complete this map successfully, you may have to destroy all the enemy Units. The fact that you can enter into alliances with other players is a particularly important feature. You can determine precisely which operative will adopt which colour and how the forces will later line up on the battlefield.

In Campaign mode all alliances are predetermined. Weather and animated sequences accurately reflect the situation, and mission objectives vary accordingly. Your task may be to search out or destroy certain types of Unit, to capture a depot, to reach a certain round and thus hold a position, or to destroy some or all of the enemy Units. Each of these objectives can help you to complete a map successfully, or your opponent may have objectives of his own and you may have to prevent him from achieving them. Animated sequences will give you up-to-the-minute information about the progress of the mission.

Before each map you have to undergo a missions briefing, which will explain your tasks on the following map and give you information about the type of map and the options available to you.

Sticking to the mission objectives is crucial. The military Supreme Command knows which objectives have the highest priority, and will of course inform the Operatives of this. If you do not follow these instructions you run the risk of dissipating your forces and perhaps losing the battle.

Some buildings are particularly important. The fact that every building has a name can help you; if you are looking for a particular building which you must occupy, the names will help you find your bearings.

2.2 Using the Control Bar

The control bar at the bottom of the screen is the key to deploying your Units. You will see six indentations in this strip, in which various symbols will appear depending on the action you have chosen. Don't worry though this part of the console is very easy to use. The function which used to be performed by the on-screen action cursor in the old-style MilOp consoles has now been placed at the edge of the console.

The various symbols always have the same function, but only appear in certain situations. At any moment during the game you are able to see what options are open to you. If you select certain Units with greater capabilities, this will also be indicated by other, new symbols. Like all the others, these special symbols have been standardised as far as possible, so that you always have an excellent overview of the action. The „Rise/Fall" symbol, for example, applies both to aircraft (high-altitude bombers etc.) and to submarines; this will be explained in more detail later.

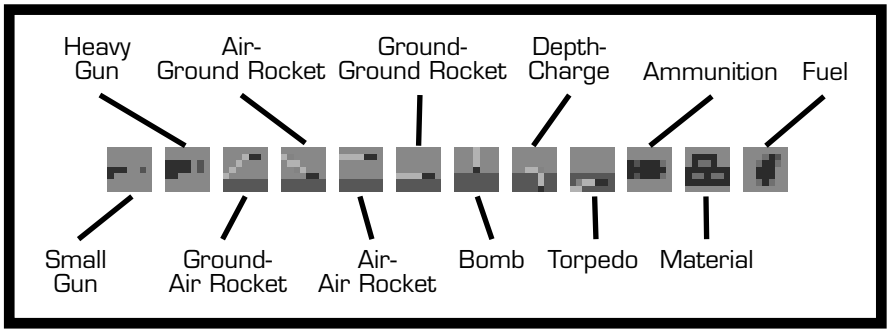
Don't be afraid to try out the various combinations from the start. The symbol labels will help you. This additional information is shown in another small indentation underneath the symbol itself.

Press the SPACE key on your keyboard and activate the cursor keys (labelled with arrows). You will find that you can quickly select the various symbols and see at once what you are dealing with. The icons which are immediately available to you are, from left to right:

MOVEMENT, ATTACK, OVERVIEW MAP, INFORMATION, CHANGE MODE.

If you use these functions correctly as the game progresses, you will always be in control of your Units. Before we move on, take another look at the remaining data fields.

First, look at the field which is parallel control bar on the right-hand edge of the display. You will see some symbols which, provided you have selected a Unit, represent the available weapons systems. This field is easy to understand. During a difficult battle, you can see at a glance which Unit is in theory best suited to a task. The symbols are:



The large field to the left of the weapon symbol shows the remaining of ammunition.

Some people find it quicker and more efficient to carry out some important actions by using keys instead of going through the above procedure. The designers have allowed for this: you can always choose whether to give instructions by going through the procedures described or to speed up the most important things (or all of them, if you want) by pressing certain keys. Just as there are different action modes, which have been described earlier, so there are some keys which only function under certain conditions.

Hot keys for the main screen

M - MOVE prepares a Unit which has been selected with the on-screen cursor to move,
A - ATTACK prepares a Unit selected with the on-screen cursor to attack,
S - open SHOP, opens a shop selected with the cursor (transporter, depot, factory etc.),
V - VIEW automatically activates the overview map mode,
I - INFORMATION supplies important information about a Unit selected with the cursor,
X - puts a selected Unit into action, for example to refill, repair etc.
G - GENERAL takes you into general functions, the menus and the controls.

Functions in the GENERAL menu

F1 - calls up the main menu,

F2 - toggles vector graphics display of the battle mode,

I - INFORMATION, general information about the current mission,

B - BRIEFING gives you another chance to find out about the objectives which have been assigned to you.

Hot keys in attack mode

A - activates and fires weapon A; see the instructions in the Weapons Manual regarding the Unit being used,

B - activates and fires weapon B; see the instructions in the Weapons Manual regarding the Unit being used,

C - activates and fires weapon C; see the instructions in the Weapons Manual regarding the Unit being used,

D - activates and fires weapon D; see the instructions in the Weapons Manual regarding the Unit being used.

Use of keys A-D in the experience menu in campaign mode

You have learned that after completing a map in Campaign Mode, you can share the experience which your Units have gained with the other Units, in other words you can, as it were, train the other Units. You can find out how exactly this happens in section 2.6, „ How Units gain Experience“. We have also listed the relevant keys here.

A - 1 experience point; you assign this amount of experience to the selected Unit,

B - 2 experience points; you assign this amount of experience to the selected Unit,
C - 3 experience points; you assign this amount of experience to the selected Unit,
D - 4 experience points; you assign this amount of experience to the selected Unit.

Key abbreviations to be used in individual shops

Definition: as mentioned previously, shops are all objects capable of containing other Units. Shops may be e.g. transport vehicles, transport ships, transport planes etc., factories, depots, towns or even headquarters.

M - MOVE gives the selected Unit the option to leave its current location,

R - REPAIR Depending on the available supplies of material and energy and the type of location, this key gives the order for a Unit to be repaired,

F - FILL Re-fuels the selected vehicle,

T - TRAIN This key is used to train the selected Unit, i.e. its experience values are increased,

C - CAMPAIGN When this key is pressed, the experience gained in previous battles is assigned to other, possibly less experienced Units - see also section 2.6,

P - PRODUCT The production process can be shortened by using this key - see section 2.7. „Giving production orders to the manufacturing combines".

ESC - ESCAPE Enables you to abort a procedure which you have begun by mistake.

Now let us look at these first symbols in more detail on the following pages:

2.2.1 MOVING

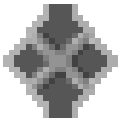
Before we continue with this section, we should explain the players' colours. As a player, you always control the blue Units, and the enemy controls the red ones. The other players control the other colours.

Of course, this symbol only becomes effective if you have selected a Unit which can be moved. (For obvious reasons, this does not include towns). Try it! Move the cursor over a Unit which seems useful or interesting, press SPACE and you will see that the MOVE symbol protrudes a little beyond the others. It is now activated. Release the SPACE key and you will see where and how far the group of vehicles can move. To show this, the surroundings become darker in colour except for the fields which you can move onto. Now select a Unit with a range which allows it to be moved directly next to an enemy Unit. This will lead us nicely on to the next symbol. One more thing: don't worry if you come across a symbol before it has been explained - they will all be described in good time.

2.2.2 ATTACKING

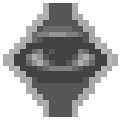
Using the cursor, move to the next symbol to the right and activate it as described above. You will see the Attack symbol. Depending on the range of the Unit you have selected, you can now reach enemy troops next to your vehicle or a long way away. As well as the fact that the enemy forces which you can reach are highlighted, you will also notice that the control bar has changed, and now shows the symbols of the various weapons. For the sake of clarity, we have marked the weapons with the letters A, B, C and D. The Weapons Manual gives detailed information about the Unit you have selected, what weapons the vehicle is armed with, and the purpose to which they are best suited. For example, if you decide to use weapon B, move the cursor onto the Unit you want to attack, activate the symbol with the letter B and release the SPACE key. The MilOp console will now show you a simulated battle which will be an exact replica of the real battle.

Should you decide that your Unit is after all not properly prepared for battle, you can leave the battle



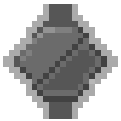
mode and return to the normal situation by selecting the ABORT symbol (the symbol with a capital X).

2.2.3 OVERVIEW MAP



When you activate this symbol, you will see another innovation of this MilOp console, the new overview map, which will enable you to locate your troops quickly. The troops will be shown in the colour allocated to you. Make sure that you have enough reconnaissance Units (vehicles, planes etc.) placed in strategically favourable positions - because of the varying reconnaissance ranges, you can see deep into enemy territory if you position your reconnaissance Units properly. The importance of this map will become obvious if you suddenly discover that the enemy is massing his Units in front of a section which you thought was safe. Without proper reconnaissance your troops will be practically defenceless against surprises of this sort.

You will soon find that the cursor key allows you to move the section of the screen which is displayed. You may not want to check after every such move that the main screen has moved to a different position; but if you do, position the section at the place you want and activate the Selection symbol.

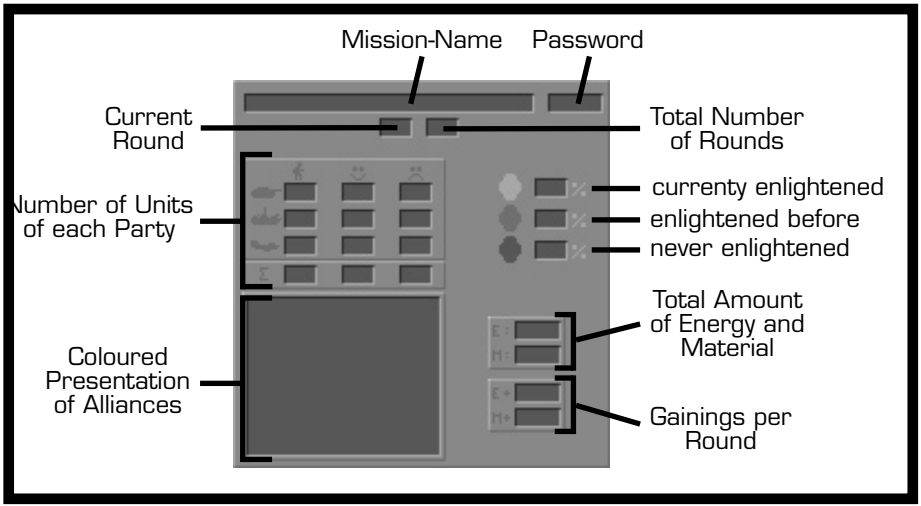


In addition, the overview map can be shown in two versions, as a strategic picture and as a realistic view. Depending which is more useful to you, you can select the topographical view, showing all the geographical features of the landscape, or the strategic view, which shows each separate building.

2.2.4 INFORMATION

This Icon is very important for two reasons. Firstly, you can use it to obtain further information about the general situation in the combat area shown; and secondly, it gives you clues from which you can determine the strength of a Unit more accurately.

Move the cursor to an empty area of terrain and activate the MENU icon. This allows you to select INFORMATION. Data concerning the number of troops deployed by the combatants, the towns and production centres will appear in the right half of the screen. This is also an easy way to judge the strength of your own forces compared to those of the enemy.



The fields above the data contain the mission name and the password; the two numerical values under them show the current round and the total number of rounds to be completed.

The lower left hand corner of the screen is of particular interest. You will see a small statistic showing the number of Units which each player has at his disposal, broken down into land, air and naval forces. However, it is tricky to judge your opponent's strength only on the basis of these figures. You must remember that the accuracy of

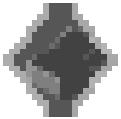
these figures depends on the skill of your Intelligence officers, so that the number which is shown in the enemy's field only refers to the Units which are visible to you; in theory, your opponent could have more than twice as many Units at his disposal.

The percentage values to the right of this statistic show 1) what you have just discovered through reconnaissance, 2) all the reconnaissance information you have ever gathered (this includes areas which you have since lost sight of), and 3) the value corresponding to the areas which you have not yet reconnoitred.

The coloured bars at bottom left show the alliances which have been entered into. As the commander of the blue troops, you will see from a superimposed green field that you have entered into an alliance with the partisans, whose Units will be shown at the top under the heading „Allies".

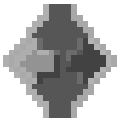
To the right you will see information about the total supplies of energy and materials, marked „E" and „M". Below this is indicated how many Units of energy and material you gain in each round („E+" and „M+").

If the cursor is resting on one of your own Units, you will see presentation pictures (presentation films in the CD-ROM version) which will show you the Units just as they are in reality. You can also see what kinds of weapons are available, what sort of protective armour you have, and what your group strength is; most importantly, you can also find out how much energy you will have to expend to replicate this particular Unit if it should be damaged or even destroyed.



The same thing happens when you call up information about factories or depots. The Info screen will also show you how much energy you have available to repair or replicate Units. To take advantage of this, however, you will need to leave the Info screen and move the cursor on to a building. If you now press SPACE, you will see an icon marked CONTENTS, and this will take you into the interior of the building, where you will be able to take the appropriate decisions. This special icon will be described in more detail in the section about buildings.

2.2.5 CHANGE OF MODE



As the name suggests, by activating this icon you can allow your fellow combatants - who may be computer-controlled - to take their turn. To be exact, when you activate this icon and confirm it, you let your fellow combatants or your computer opponent take over the action, while you plan your future strategy. When it is your turn again, you can take up the battle where you left off - even though by then you may have lost a few Units.

Note: If you just want to position the cursor on a particular point on the map and don't want to call up a Menu of any kind, just move the mouse there and press the right-hand mouse button.

2.3 Graphic displays of battle areas

Thanks to the use of the most advanced satellite technology, the battle regions shown on your display correspond down to the smallest details with the real situation; whatever you can see on the display is actually at just that place in reality. This makes it easier for the Operatives to take far-reaching decisions.

The overview maps and information about Units and buildings, which have been described earlier, are part of the graphic display. You will find more details about the buildings in the relevant section, even when they have already been briefly described.

On the display itself you will see a number of details, some of which are so important that they can sometimes be decisive to the outcome of a battle.

2.3.1. Fortifications

Fortifications are important in defending buildings or narrow passes, as they generally make it more difficult for the enemy to hit your ground troops if they come under direct fire. These trenches offer

good protection, but can also be a severe hindrance if you want to launch an offensive with armoured Units from this point, as large-scale or heavy Units are forced to drive around them. If the network of trenches is such that there are only narrow tracks between them, it is likely that the vehicles will get stuck, which not only holds up the advance but also makes them sitting targets for enemy bombers or artillery. On the other hand, if you order your Sapper Units to make the tracks wider when they are digging trenches, this may encourage the enemy to try to break through at this point. You should always think about the future when you are making plans.

2.3.2 Paths and roads

You can, of course, travel over any available tracks to avoid driving over open ground. These tracks may be simple paths across fields, or well-built roads. Roads constructed by your Sapper Units are an excellent means of transporting newly-manufactured Units from the production combines to the front, or of supporting mass advances. It must be noted of course that the enemy can also move his troops on the same roads right into the heart of your position, unless your reconnaissance troops are on the ball. Remember: if you think that a road has just about served its purpose, you must make sure that your sappers make it impassable as quickly as possible. A well-constructed road network is an open invitation to the enemy to drop in uninvited on you, and maybe bring you an unwanted present.

2.3.3 Railway tracks

What has been said about constructing roads also applies to railway tracks. The large capacity of your goods trains is a great advantage when you want to transport material quickly and without a lot of effort. The enemy can not use his rail vehicles against you without linking up to your rail network. Don't forget, though, that laying railway track uses up a lot of energy which you might have been able to use for other purposes. On the other hand, the armoured battle trains are very effective against advancing Units. Railway tracks can be laid and destroyed by your Sappers.

2.3.4 Mountains

Mountains and hill ranges give you an excellent opportunity to hold your positions for long periods or even extend them with only a small number of Units. Don't make the mistake, though, of advancing too far in these areas; if you need to retreat it may be difficult to get your vehicles through the narrow mountain passes - and the enemy may have his own solution to your transport problems.

2.3.5 Rivers and lakes

The course of some rivers may fit perfectly into your strategy, and you can use them to transport naval Units; together with a few trenches they can form excellent defensive positions. As has been pointed out before, however, it is better to have planned your strategy with foresight than simply to rely on your own strength or on natural barriers.

When advancing, you should be pay particular attention to fords, which are often found at useful points on the river, and can allow light Units to cross. The fords will become visible if the fields within your range are shown in Movement Mode.

2.3.6 Woods

The importance of woods to your position can easily be imagined; you can advance through extensive wooded areas with a small number of Units into enemy territory, or conceal powerful emplacements in them. Since it is difficult to move through them, however, you could waste precious time if you have to make a rapid withdrawal. If you suspect that the enemy is using the woods for his own ends, you will need reconnaissance Units or safe emplacements at the rear. Remember, you can smuggle light Units through wooded areas if your reconnaissance Units are held up; they won't be able to see as far as high-altitude reconnaissance Units, but it is nevertheless better to use them than to wait and worry.

2.3.7 Terrain

Nature-lovers may like the countryside, but it can slow up heavy tanks and other Units. As a rule of thumb, the harder the ground is, the better. Your heavy Units will make better progress on firm ground such as roads, rubble, stony desert or frozen ground than if they have to travel on sand or mud. The prevailing weather is also an important factor; a group of huge tanks is an imposing sight when crossing a dusty plain, but a sudden downpour can quickly transform them into a line of mudcaked giants who find it difficult to make any progress.

2.3.8 Weather

As has already been noted, the weather conditions present a constant challenge to all strategists. Although rain, continuous downpours, frost or heavy snowfalls can hamper an inattentive Commander, more careful Officers will accept these conditions as inevitable and will do their best to turn them to their advantage. You have to take these conditions into account, but the enemy can not afford to ignore them either. Your artillery Units will be happy if they come across enemy Units stuck in the mud, while your light Units are able to cross frozen watercourses without even getting their feet wet (as the weather gets colder, your heavy Units will be able to do the same). However, it must be admitted that changes in the weather can severely test your mechanised Units, and prudent, experienced Officers will always take these changes into account. Your Control Display is able to show five different weather conditions; these are shown by the icons illustrated above and are: normal landscape, Rain 1 (small puddles, precipitation), Rain 2 (heavier precipitation, ground turns into mud), Snow 1 (light snowfalls) and Snow 2 (snowstorms, large amounts of snow).

2.4 Overview functions

Following the instructions above, you can easily access the overview map, on which the visible area is coloured. Thanks to geographical information obtained from satellites, you will be able to recognise roughly the area which is tactically significant to you, although this will only show the geographical features. Any further information about the enemy's progress, the number of troops and the weapon systems in use must be supplied by the members of your Reconnaissance Units; anything which your Reconnaissance Units or forward Infantry Units don't discover will not appear on the overview map.

What happens if your high-altitude reconnaissance aircraft are driven off by enemy fighters? Of course, you will no longer be able to see deep into the enemy's positions, but it will not be as if you had never been there at all.

The various shades of colour illustrate this. Familiar landmarks will still be visible even through the dark colour of the area which has not yet been reconnoitred. If an area has been reconnoitred, you will be able to see the roads, bridges and other things which are in the area, not forgetting the enemy's vehicles and systems. If your Units then have to withdraw, these details will not suddenly disappear; the overview map can save a picture of the reconnoitred area and show it later, this time in a shade which is darker than the area which is visible at the moment but lighter than the areas which you have never seen at all. However, you should not assume that all the roads, bridges and railway tracks will stay where they used to be - only the most recent reconnaissance position will be saved. If the enemy destroys some of the roads or bridges, or extends them or builds new ones, you will only be aware of this when you fly over or travel over the area again. In the worst case scenario, you could suddenly find that several bridges have been built in a position which you thought was safe, and that a large-scale offensive is being prepared there.

2.5 Moving the mechanised Units

Even if all your troops are composed of high-tech robots or systems which are operated by robots, they will still wait until you give them orders via the MilOp console. Even if all the Units have been programmed to carry out your orders in the most efficient manner possible, they will not act at all unless you tell them what to do.

If you want to order a fighter plane to intercept approaching reconnaissance planes, for example, move the cursor with the cursor keys as explained earlier onto the Unit you want to select, press the SPACE key and select the MOVEMENT icon. You will see an illustration showing the maximum range of movement. When you select the place you wish to move to and press the SPACE key again, the Unit will move to the place you have selected. Depending on the Unit you have selected, there are various ways of deploying the system. In the case of the fighter, it may be advisable to order it to climb after moving; reconnaissance planes often fly at very high altitudes, so that the fighter will have to climb to the same altitude if it is to have any chance of reaching the enemy with its weapons. You will find the RISE/FALL icon, if this is available, next to the MOVEMENT icon (You are hardly likely to order a heavy tank to fall - what could it fall into?). Many Units are able to open fire immediately after the movement phase is completed; you will find more information about this, as well as a lot of other important information, in your Weapons Manual.

Thus, you can order your fighter to attack the reconnaissance plane. As already described, you will see a three-dimensional display showing the progress of the battle. With a bit of luck, you will have won your first victory thanks to the enemy's limited range of vision.

The modification to the Battle Consoles has been made in response to repeated inquiries from members of the Officer Corps. They complained that often several Units were blocked by an attack on a single enemy Unit if it was suspected that it might be very difficult to knock it out. Now, if you don't manage to knock the enemy out at the first attempt, you can bring another Unit forward to help, while

the others can carry out other tasks.

2.5.1 Carrying out orders using mobile Units

As we have seen, your mobile Units can often receive and carry out several orders in quick succession. Although the movement itself is, strictly speaking, an order, this has been dealt with earlier and will not be discussed again here. Instead, let us look at the other options which a Unit can carry out.

2.5.1.1 Attacking (all Units equipped with weapons)

Now we have described in detail how a movement is carried out, we will look at how to carry out an attack, which was briefly referred to earlier.

As in the Movement Mode, there are various ways you can react when attacking. Depending on the Unit you want to use for the attack, you are able to activate one of up to four weapon systems. To do this, open the ATTACK icon and activate it. Some more icons will appear on the control bar. A-D represent the various weapons, while the capital X allows you to return to normal mode. The Weapons Manual will tell you which weapon is best suited to attack a particular target. When you activate the weapon, the possible targets will be highlighted. If you select a Unit which has a greater range (over several fields), the number of targets which can be selected will increase accordingly. To launch an attack, move the cursor onto the target with the cursor (arrow) keys, select a weapon and confirm the attack by releasing the SPACE key which you pressed to make the selection. The vector graphic sequence which follows will show you the progress of the battle. This method of selection also applies to the other actions which the Units can carry out, and which will be described later.

When you look at the vector graphic sequences, you will notice some small bars in the bottom quarter of the display. These bars contain statistical information about the outcome of the battle and

are particularly interesting if you are an analytical type of person.

- The first bar shows the current value of the Units, measured according to their theoretical capabilities, as if they were not affected by external factors. This shows the balance of power.
- The second bar shows the effect of the terrain which the unit is on.
- The third bar shows the Units' positions relative to one another and assesses the position of the enemy.
- The fourth bar shows the latest experience level, which is constantly up-dated. A random value is added to arrive at a final value applicable to the current battle.
- The last bar shows the outcome of the battle, which is also reproduced on the screen in the following battle sequence.

2.5.1.2 Refuelling

You will soon find that the ability to refuel Units very quickly is one of the most important and innovative features of the new MilOp consoles; yet this function is just as easy to use as all the others. When you select one of the vehicles described in the Weapons Manual which are able to refuel others (tankers etc.), before approaching the vehicles which are running out of fuel or may already have broken down you can select the REFUEL icon from a number of icons similar to the Battle Mode. If there are several Units in the area or right next to you, you can choose which vehicle is to be refuelled. As described in the section on the MilOp console, you can see how much fuel a vehicle has by selecting the Unit and looking at the brown bar at the

bottom right, next to the weapons shown at the bottom of the Display.

When you have decided to refuel a particular Unit, follow the same procedure as for Attack; activate the appropriate icon, move the cursor onto one of the highlighted Units and start the function. The tank, represented by the bar, should then fill up. Don't forget that supplies of both fuel and ammunition can run low during a battle, and it is therefore advisable to provide for fresh supplies before it is too late. Of course, Units which have run out of fuel and can not move can still defend themselves as long as they still have ammunition; but the enemy is sure to punish them harshly for their negligence. So think ahead how far you intend to travel. To make things even more difficult, aircraft which run out of fuel will inevitably crash unless they can be refuelled in time.

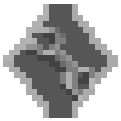
There is one more point which you should note if you intend to deploy all your Units. If one of your vehicles is already in a building, for example, after a change of Mode has been completed, you will not have to use up a move to refuel it; you can thus deploy the Unit immediately after giving the order to refuel. However, if you have to move the Unit into a building to refuel it, it will first be allocated a place and will have to wait until the next change of Mode before being refuelled. So you can refuel and drive out of a building immediately, but you can not drive in and refuel immediately.

2.5.1.3 Replenishing ammunition

No doubt you realise the importance of refuelling and supplying fresh ammunition. Re-arming your Units is just as straightforward as refuelling, as long as you use the Weapons Manual to recognise the vehicles which can carry ammunition and you can identify them on the picture of the battle area. If you are not able to do this, you can read the name of the Unit you have selected at the lower edge of the Display. The procedure for re-arming is similar to that for refuelling; first, locate an ammunition transporter and then proceed as described in the previous section.

The current supply of ammunition will be indicated by numbers next to the weapons reading.

2.5.1.4 Carrying out repairs



It is advisable to carry out repairs for several reasons. Firstly, it requires far less energy to repair a Unit than to manufacture a completely new one; and secondly, if a Unit is repaired, it retains its experience level, which is invaluable. Repairs can be carried out in various ways.

Depending on the Unit, some damaged vehicles can be repaired on the battle field by specialist Units - you will find more details about this in the Weapons Manual. If it is possible to do this, proceed as follows: select a Repair Unit and move it next to the vehicle which is to be repaired. The procedure is then similar to refuelling; select the REPAIR icon, move the cursor on to the highlighted Unit and activate the function. This should then restore the battle capability of the damaged Unit.

Larger, more complicated Units have to reach a depot or production combine before being repaired, as only they have the tools and skill to carry out repairs properly. If this should be necessary, move the Unit to a suitable building and drive it in. The Unit will then disappear from view, so it is advisable to make a note of which Unit has been moved into which building, and when. If you now move the cursor onto the building, an icon marked CONTENTS will appear below in the control bar, next to the ABORT icon. Activating this icon will take you inside the building, where you will see on the right a number of signs which look like icons but are not labelled.

These will later show an illustration of the Unit which either just moved into the building or which has just been manufactured and „parked“ in this position. For the sake of clarity, the control bar is similar to the others. If you go through the lower icons, you will find two marked REPAIR and PRODUCTION. For the moment we are only concerned with repairing Units; a later section will explain how new Units are manufactured.

Use the cursor to select the Unit you have parked in the round before, and give the order to repair it. As this takes some time, you will not be able to deploy the Unit immediately. You will also see that repairing the Unit depletes your supply of energy, so that if energy supplies are low, vital or very powerful Units must take precedence over others. This procedure normally consumes one unit of energy, but

may vary with larger Units. You will find more information on this in section 5.1. If there are other damaged Units in the building, these can be repaired as well, or you may prefer to leave the building by using the ABORT icon and return to the action outside. Please note: units that just moved in, cannot be repaired unless the next round is reached.

2.5.1.5 Building bridges, roads, track and fortifications

Like refuelling or attacking, the building of roads and railway tracks has been completely standardised with the other functions, so that minor differences should not pose any problems.

If it becomes necessary to construct a road or similar feature, move one of the Construction Units next to the place where you are planning to carry out the work. You then proceed just as if you were attacking another Unit: by using the SPACE button you can access the Construction Menu. Depending on the Unit which has been moved you can now select what you want to construct. If you then select the Roads icon, the vehicle will lay a stretch of road in the spot you have indicated. But this is not all the Construction Units can do; if you select the wrong location, for example, you can order the road to be removed again and built on another adjacent field. And once you have built one stretch of road, you can have another stretch built immediately as long as it is within the range of the Unit and you have enough energy and material available.

If you want to cross a river, you also give the order to build a road; your artificial intelligence will automatically realise that a bridge will be needed to cross the river. The same is true of rail routes.

Another important advantage is that you can have fortified emplacements built; to do this, proceed as above. The advantage of fortified emplacements is obvious; troops under attack at the Front will be able to hold out much longer than those who have only trenches to protect them. Similarly, bridgeheads in enemy territory should always be protected by fortified emplacements, ideally on both sides of the river, to hold off surprise advances, at least for a while; the same also applies to railway tracks.

You should also remember that the construction vehicle consumes 1 unit of material to construct or remove a stretch of road.

2.5.1.6 Loading and unloading cargo

You have probably realised by now that you can use the various vehicles to load, unload and transport a wide range of articles. If you are collecting energy, you travel in your transporter (or helicopter or cargo plane) to the place where the aldinium is stored, and it will automatically be loaded into the vehicle. If you then move to a camp, the aldinium will automatically be unloaded.

As you know, aldinium is the raw material on Chromos from which you can extract vital energy; it is thus of the greatest importance.

Transporting objects is done somewhat differently. The Weapons Manual will tell you which vehicles can transport light or heavy Units. If you want to do this, put the Units you want to transport into the vehicles as if you were entering a depot. You should load the most important Units first; otherwise you might use up the load capacity of the vehicle and have to wait for it to return before you can load Units which may be required urgently. After you have moved the transport vehicles near to the Units you want to transport, it is advisable to move the Units into the transporter before moving the vehicle. Remember that vehicles which are driven out of a transporter, depot or factory can not attack, carry out construction work or do anything else; in this round they can only move into the open. Of course, you can capture other buildings from a transporter, as after leaving the vehicle the Units do not have to secure the area first. Thus, if you move out of a Shop, i.e. a transporter, building or similar object, any enemy building within range can be captured.

Another important point to remember: when a vehicle is at altitude level 1 or depth level 1 (for example, a plane which has just climbed or a transport submarine which has dived), it can not load or unload anything.

2.6 How Units gain experience

If you were familiar with the old-style MilOp consoles, you may remember that your Units gained experience in battle which they could use in later combat, that is, they became more effective as their experience increased. This is still true today, although the number of experience points has been increased from six to twelve. The current experience level is shown in the small window at the bottom right, next to the control bar's text field.

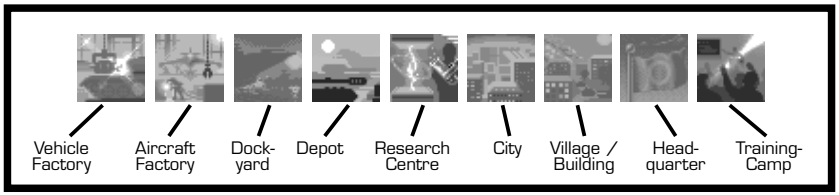
The experience of each Unit is divided into VECOSE (Vehicle Control Sets) which contain a program and save each Unit's experience. This means that each Unit gains in experience in battle, and automatically receives higher attack and defence values. These experience values add up to a maximum of twelve points and are indicated by small military symbols. (((verschiedene Symbole zeigen, evtl. kleine Tabelle)))

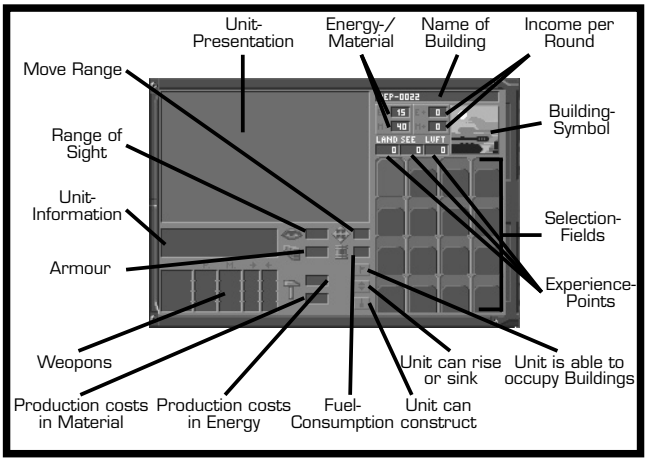
In Campaign Mode, the experience points for air and naval forces are recorded separately. The experience which has been gained in the most recent battle can thus be distributed among the Units in amounts from one to four points. This can be done in headquarters, factories and depots. By using the Campaign Cursor (a small star), you can train the Unit so that, unless it is destroyed, the Unit will carry its experience forward into its next battle.

At the end of each map in Campaign Mode, the program will take you back to an information and interim report screen. You will see three Units representing the Navy, Air Force and Army, and will be able to tell how many experience points each branch has gained in the most recent battles. These numbers are added to your experience points and can later be divided among your Units.

2.7 Giving production orders to the manufacturing combines

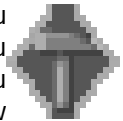
Manufacturing combines are, in the broadest sense, buildings in which you can produce new Units. If you move the cursor on to a building and activate the CONTENTS field, you will see what you can produce in the building.





You are now inside the building. The animated icon at the top right shows what type of building it is. The icons next to the text show you what kinds of buildings are available.

If you are in a factory, you will notice some empty fields on the right. Select one of these fields and press the SPACE key. You should now see a field in the control bar showing a hammer; if you activate this, you will be taken to a menu from which you can select the Units you need for your defensive action. It is now easy to select the Unit you want and order more to be made by activating the construction function. Depending on how much energy and material you have available, you can also order more vehicles to



be manufactured.

The available supplies of energy, ammunition and material are shown by two symbols which you should look at before you finally decide what to have manufactured.

Don't forget that the production process takes some time and you cannot use the vehicles until after a change of action mode. You can leave this mode simply by pressing the ABORT icon.

If you select a Unit in order to find out more about its values, before selecting the next vehicle you have to click on an empty field, so that no other icon remains selected.

2.7.1 Deliveries of material

As you know, our civilization relies on aldinium; it is absolutely vital for obtaining raw materials to manufacture new Units. Be on your guard and watch out for any aldinium deposits, so that you can extract them and transport them before the enemy finds them and feeds them into his own manufacturing plants. Most of your towns were founded a long time ago, usually where aldinium had been discovered. Consequently, almost every town has an aldinium mine, so you should be able to count on a steady supply of aldinium. However, this means that the enemy also has supplies of his own, which makes the undiscovered deposits all the more important.

Incidentally, this is another reason to capture enemy towns; and he will try to capture yours.

You should try to secure mineral deposits as soon as you find them. To do this, position transporters or cargo helicopters where you find the deposits, and they will automatically load the material. Move the vehicles to your factories by the shortest possible route and make sure the enemy has no opportunity of ambushing or destroying the convoys. Of course, you should try to capture or destroy the enemy's convoys if he is transporting aldinium. When the vehicles enter the factory they will automatically unload and the factory will be able to use the aldinium. The mineral indicator at the top of the factory window will

show you by how much the supply has increased. During the later stages of the war it will become increasingly important to ensure regular mineral supplies.

3. Graphic displays of buildings

The following section contains some basic notes on the buildings: to help you locate them, they are illustrated here as they are shown on the battle display.

You should note that not every type of building will be found in every battle region; however, the following buildings can theoretically be found:

3.1 Headquarters:

Your Headquarters occupy a key position in every battle area, as do those of the enemy, but they may not be present in every area; this will be the case if, for example, you have to counter unexpected attacks away from the front lines and your Headquarters are located in the hinterland.

Function: depending on your mission, you may have to capture the enemy Headquarters, or ensure that your own are not captured, as they may contain information or technology vital to the outcome of the war which must on no account fall into the hands of the enemy. Your superior will tell you before you start each mission which is the case. Apart from the importance of the Headquarters described above, they can also be used to repair any vehicle or to replenish fuel supplies.

3.2 Factories:

There are various types of factory in which you may only be able to manufacture certain types of Unit.

Depending on the location, these may be aircraft factories, shipyards or ordinary manufacturing combines, whose production capabilities may vary according to their location. Note right at the start which factory is responsible for which Unit; it is no good losing a factory and then realising too late how important it was. You must also keep a careful eye on your supplies of energy and materials.

Function: As well as carrying out manufacturing work, which has been discussed in some detail earlier, the factories can also be used to repair or refuel damaged Units.

From left to right, you will see the following types of factory:

Vehicle factory, aircraft factory, shipyard.



3.3 Depots:

These are important supply buildings. They are also strategically significant.

Function: Units can be repaired and refuelled here. They can also be used to shelter endangered Units for a short time. Be sure to withdraw such Units, however, if the depot comes under attack, so that they do not fall into the enemy's hands if the depot is captured.

3.4 Training camps:

Important facilities for your troops waiting in the hinterland to be deployed. Weapon systems which have not yet been required can be trained in these camps for the tasks which they will later perform, and can thus safely gain invaluable experience which they would otherwise only be able to gain in battle.

Function: Their chief function is of course to train and strengthen new troops, but they can also be used to carry out repairs or replenish depleted supplies.

3.5 Towns, villages:

Fortified towns and villages are favourite places to withdraw to when Units come under attack, and can play an important defensive role in your general strategy.

Function: In addition to their defensive elements, it should be emphasised again that you can repair and refuel damaged Units here.

The SKULL system of bunkers should also be mentioned here. They are used to strengthen fortified emplacements and shelter light Infantry and Mine Units from heavy attack.

3.5.1 Supplies of energy and materials

No doubt you realise the importance of having adequate supplies of energy and material, but you may be wondering how exactly this is achieved. Thanks to our civilization's advanced technology, this too has been almost completely automated. The details are as follows:

The basic supply of energy is the same everywhere. Underground power lines distribute the energy equally to all the complexes. The actual supply of energy depends on how you have used the raw

materials; unused energy is stored, so that the value gradually increases, but the repair or manufacture of Units depletes the supply, so you should always keep an eye on the relevant values.

To repair or manufacture Units you will also need suitable material, which is obtained from aldinium and is not equally distributed. In other words, material (aldinium) has to be delivered to the plants which need it, and it will be used up. It is no use supplying material to repair plants if at the same time you are planning large-scale building projects where materials are in short supply. You must also remember that when aldinium has been supplied it must be processed at once and can not be transported anywhere else. But there is a way round this; if really necessary, you can reverse the refining process of the aldinium. If you desperately need aldinium somewhere else, you will have to manufacture it as you would a Unit, which is a costly procedure. You therefore need to plan ahead and decide where and when you are going to use this rare material.

4. Strategic instructions

4.1 General

In general, if you follow the advice given above and take advantage of the new modifications which have been made to the Units and the MilOp console, you should have plenty of opportunity to inflict severe damage on the enemy. However, there are a few more tips which you may like to make use of.

4.2. Hemming in enemy Units

If you read the enclosed Weapons Manual you will see that each Unit possesses a particular offensi-

ve and defensive value, a fact which you can use to your advantage, as your opponent's Units have the same technical specifications.

Working on the basis that all the values result from the interaction of all the Units, you can weaken an enemy Unit by hemming it in without even having to open fire on it. It is easy to see hoe this works.

If an enemy Unit is threatened from two or more sides, it is said to be „hemmed in"; its defensive value falls because its defensive capabilities have to be directed in several directions at once, and the Unit becomes vulnerable and weaker.

4.3 Blocking enemy Units

If one of your Units is unfortunate enough to get „hemmed in", you can retaliate by blocking your opponent by moving other Units next to the Unit which is threatened; in this way you may be able to gain tactical superiority and even force your opponent to withdraw again.

You should always pay close attention to the strength of your Units. Trying to block a powerful opponent with weak Units is not likely to be very successful; once more, careful long-range planning is the key to victory.

4.4 Offensive possibilities and topographical prerequisites

The tactical advantages offered by various narrow passes and rivers have already been referred to several times; so now let us see how this works in practice.

If you have read the Weapons Book you may have noticed the transport submarine. Wouldn't it be marvellous to be able to land your Units behind the enemy's lines? Since the enemy is always on the

lookout, however, there are several diversionary manoeuvres which can be used to deflect his attention from your actual plans. What if he has powerful naval forces at his disposal? (or powerful air forces, if you are planning to use transport planes). It would be advisable in that case to collect some of your air, naval or land forces and carry out some attacks, which will hopefully allow your transport vehicle to reach the enemy coast unharmed. Once its cargo is unloaded you can cause more trouble for your opponent on land.

4.5 Defensive possibilities and topographical prerequisites

We are assuming that you have taken the above advice to heart and may already have employed the tactics suggested; but it is nevertheless advisable to make your defences as strong as possible.

In addition to trenches or natural barriers, small fortified structures which can be scattered around the countryside can also be very useful. But what can you do if the enemy is about to launch a large-scale offensive and you do not have the time or the resources to set up special defensive systems?

A common mistake in the past was to assume that the enemy could be weakened by using a large number of „weak“ Units, and then finished off by the „strong“ Units. Always stagger your defensive lines. Your heavy Units and elite infantry should be used right at the beginning of the battle to inflict serious damage on the enemy, supported by long-range weapons and light artillery (more about this later). Position your lighter Units behind the strong front line, where they can block any enemy troops who manage to break through, and behind them position your long-range artillery, where it should be able to cover wide areas of the territory in front of the main battle line. A few fighter planes will help you to keep away enemy high-altitude bombers, which are very dangerous and difficult to engage.

4.6 Effective use of reconnaissance ranges

You are already aware of the vital importance of reconnaissance ranges; here are a few tips about how you can gain valuable information even when the airspace is very crowded.

If the enemy has powerful air forces at his disposal, your reconnaissance craft will have a hard job. If the worst comes to the worst you may even have to send your planes off without an escort. You must try to ensure that they do not get shot down as soon as they set off. Usually you do not need to fly very far beyond your own lines, as high-altitude reconnaissance planes have a very long range. To ensure that you do not fall prey to a surprise attack, it is usually advisable to venture only a few fields into enemy territory and then turn back in the next round.

By doing this you will only be able to take a short „peek“ at the enemy's positions, but this is better than nothing.

4.7 Deployment of long-range ballistic weapons (artillery etc.)

You need long-range weapons to protect important passes or endangered areas, and they are particularly effective at defending a position. Heavy artillery behind the front line can secure the area forward of the line, and can also inflict damage on advancing Units. The same is true of coastal batteries.

Units which are armed with missiles (ships, vehicles etc.) can also attack the enemy from a great distance and may be able to knock him out.

Always take full advantage of these possibilities.

5. Technical Appendix

Much of what you have read so far has probably made you curious about all the information, calculations and data behind your actions. To give you an idea of what it is that makes the program so comprehensive, all the functions will now be described more fully.

5.1 Detailed information on energy and material supplies

The actual energy level is the same in every building. Because the plants are networked, they have a common pool of energy; for example, if the energy level is 15, each building has a supply of 15 units of energy, and this will drop everywhere when any energy is consumed.

The position is different in the case of material. The amount of material you have available in any building is only available in that building; if you want to have large supplies of energy at several locations simultaneously, you will have to use your transporters to deliver the material to these locations.

In the field, material means ammunition, whereas in buildings aldinium used to manufacture or repair Units is also regarded as material. In the field, energy is the units of fuel which have to be distributed.

It is not surprising that manufacturing and repairing Units uses up both material and energy.

When Units are refuelled in Shops, any ammunition they have used is also replenished.

How do the energy and material bars work?

1 point of energy = 100 units of fuel
1 point of material = 100 units of material

As a rule, refuelling and re-arming use up one point each, which means that all stocks will be

completely replenished (this will be done simultaneously if you have selected „Autorefill"). It should be obvious that larger Units such as aircraft carriers will need greater amounts of supplies.

As we have seen, refuelling uses up precious raw materials. What happens if a really large Unit needs to be rearmed, but supplies are running low?

Well, the designers have thought about this problem too. The program has an internal priority list and an allocation gauge. In an emergency, the vehicle tanks and the weapons systems would be refuelled first. This is where the allocation gauge comes into its own; if, for example, there are five ammunition units to be distributed, the weapons will be allocated one point each. A Unit which has two systems might have a value of 3 for weapon A but only 2 for weapon B. All the other tanks, and the tanks of the material and tanker vehicles, will only be refilled after this has been done.

5.2 Differences in levels of difficulty

Hemming in

You already know how hemming in is carried out, but you may be interested in the calculations which the computer makes when this situation arises.

Each Unit has a positive or negative safety figure, which has both advantages and disadvantages. Of course, it is an advantage to hem in an opponent with several of your own Units, because in this way you are able to see your opponent's reactions from various sides, and this increases your attack value.

Similarly, the Unit which is hemmed in has to orientate itself in several directions at once, which drastically reduces its defensive value, as it is directed towards several sides.

Hemming in with weapons

The basic calculations regarding the exploitation of advantages is the same as before, but also

includes the attacking strength of the available weapons. Several attacking Units can concentrate their fire power, while the Unit which is hemmed in is forced to dissipate the power of its own weapons. Please see the Weapons Manual for the attacking strength of the various Units. This is where that value applies.

Random factors

This element makes the result of the war more realistic. Each field and each Unit has chance factors which range from +1 to

-1 and are incorporated into the results of the battles. The results of the battles are never identical, as an example will demonstrate. Imagine that a group of tanks has unexpectedly come under attack. In the real world, the ground is never the same twice; what would happen if one of these tanks suddenly ran into a large boulder or a hole in the ground? What would happen if an attacking bomber came across an air pocket? These factors will come into play if you select a Mode which contains a random factor.

Ballistics

Depending which weapon you are using to repulse attacking forces, ballistics will be of greater or lesser importance. The ballistics calculation shows various values which are explained in the following diagram. Every weapon will achieve an optimal value at some point in its trajectory, depending on its construction.

1) Certain weapons are particularly effective if for example they hit an attacking plane at close or medium range. They will still be able to hit the plane at greater distances, as long as it is still within range, but the effect of the weapons decreases when this imaginary line is crossed. The same applies to ground to ground missiles, which can often achieve good results at medium range.

2) The second type of weapon is most effective when used at very close range. Again, these weapons can damage the enemy on any field within their range, but they are best employed at close range.

3) Some weapons require a certain time to „warm up“ and develop their full capability. These include artillery shells, which have to reach a certain height before they can return to earth at their optimal speed and impact.

Experience

We have already seen that experience is important and can be transferred to other Units in Campaign Mode. But isn't the term „experience“ rather imprecise? We usually use the word to mean passing on one's own knowledge to other intelligent beings. How can this be done with purely mechanised Units?

You have already come across the term VECOSE, Vehicle Control Sets. This is how they work.

Experience is applied to the factor relating to the balance of forces, obtained from the attack value (protective armour, weapons). The VECOSE is an intelligent program unit which is available in various designs for all types of weapon. VECOSE are able to gain knowledge on the battle field, and delete parts of the program which are no longer needed. At first, the programs are very effective and sophisticated, but they need some time to analyse the situation, activate the weapon systems and react. The more often a Unit performs these actions, the more situations it learns to recognise, enabling it to delete parts of the program which have become redundant and superfluous. In effect, the program which controls the artificial intelligence of the Units grows smaller the more things it has learned to recognise.

Coming back to the transmission of experience, in our example the control programming is optimised and reduced after every

battle, and can be stored in other Units.

Terrain

Like almost all the other information in this MilOp console, details about the terrain to be encountered can be evaluated and calculated separately. The terrain is an important factor in a battle, as vehicles must be able to move freely. Armoured Units are much less manoeuvrable in mountain areas than on open plains. The console evaluates the terrain together with the initiative values, which will be explained later, and

calculates the advantages and disadvantages for offensive and defensive manoeuvres.

Initiative

Depending on the terrain, there is a positive or negative initiative figure, shown in the Weapons Manual, which calculates the weight, size, motor power and weapons of each Unit and includes the Unit's experience. These values are then compared to those of the enemy before the two sides commence battle.

Jamming, high strength

It is important to note that mechanised Units have no vision, but are equipped instead with technologically advanced radar systems. Depending on its range, a Unit can „recognise" a certain area. However, you should be aware that almost all Units also have jamming equipment of varying strengths.

„Jamming, high strength" doubles the jamming ability of the enemy Units. If a Unit possesses really powerful jamming equipment - there are rumours that the enemy has such a weapon, called ELOKA - your Unit may be not be able to „see" anything at all, even when it is right in front of the enemy.

Jamming, accumulative

If two Units are positioned at a certain distance from each other, each Unit is enclosed in a „bubble“ of its own jamming power. If these Units are close to each other, their jamming areas overlap, making them incredibly strong. „Accumulative“ jamming is the term applied to this situation and means that in some circumstances, when you are facing a number of Units, you may not be able to recognise anything at all, even though individually the Units do not have particularly powerful jamming equipment.

Jamming, 1 field

This function restricts the jamming equipment to one field.

Jamming, multiple fields

This function allows the Units which are using jamming equipment to protect several fields against other Units' jamming equipment. As an attentive operative you should remember that a Unit which is jamming your transmissions will also prevent you from seeing the area to the rear of your opponent, unless you also position a powerful reconnaissance Unit there.

Block all Units

This function is quite straightforward. You will not normally block Units which can not attack you; thus, a plane can fly over a group of heavily armed tanks without any problem, as long as they do not have any anti-aircraft guns. „Block all Units“ would mean that no planes would be able to fly over your defensive positions, even if you have not yet placed any anti-aircraft weapons there. Everyone blocks everyone else. When this function is activated, armed Units can not be crossed or passed, even if they do not have any ammunition at the time. Your radar will only be able to tell that the weapons are there, but not that they have no ammunition to attack you.

Move always 1 field

When this function is activated, you can always move one field away from the enemy. Even when you are blocked or hemmed in, you always have the possibility of moving backwards one field, as long as there is a field free.

Shop own only

The spy satellites' search beams can recognise everything

and can give rough indications of any features, as can your reconnaissance forces. With this function you can choose to have only those buildings indicated which belong to you, and whose location you are sure of. If your task is to find and/or capture a particular building, it is up to you to find the appropriate shop after activating this function, and then get your bearings.

Sight Alliance

This point shows how willing your allies, if you have any, are to supply you with information. Some allies may be more willing than others to allow you to enter the areas you have reconnoitred. When this function is activated you can see not only the areas which you yourself have reconnoitred, but also everything else which is within your allies' view. If this is not the case, you will have to rely on your own reconnaissance and intelligence skills.

Single Attack

The „Single Attack" function should appeal to your sense of realism. Imagine that a Unit of tanks is on reconnaissance in a wooded area and suddenly comes across advancing enemy Units, three of which are within range. Normally, all the enemy Units would start firing at you. However, if the „Single Attack" function is activated, only the one Unit which you have encountered will engage you.

No Ammunition

This function does not mean that you no longer have any ammunition left and will have to fend for yourself; rather, it means that you can keep on fighting without worrying that you are going to run out of ammunition. When this function is activated you have limitless supplies of ammunition on board every Unit.

No fuel

This function is similar to the one just described, and means that your Units will not need to be refuelled.

Sight All

This function is a great help to new operatives who still have a lot to learn about strategic planning. There are no reconnaissance ranges in this function; instead, every detail of the area of operations is visible from the start.

The following table on the next page explains all the points which have been explained above, together with their levels of difficulty:

	TRAINING	EASY	DIFFICULT	EXPERT
Hemming in			x	x
Hemming in with weapons				x
Random		x	x	x
Ballistics				x
Experience		x	x	x
Terrain			x	x
Initiative				x
Jamming full power			x	x
Jamming accumulative				x
Sight 1 field	x	x	x	x
Sight multiple fields				x
Block all units	x	x		
Shop own only				x
Sight alliance	x	x	x	
Single attack	x	x		
No ammunition	x			
No fuel	x			
Sight all	x			

6. Postscript

Dear Customer,

While reading the Manual you are sure to have noticed the fantastic intricacy of this program, especially if you are familiar with the earlier programs in the BATTLE ISLE SAGA.

We have tried to incorporate our customers' ideas and suggestions into this epic strategic simulation, and we are sure that, with its incredible number of functions and possibilities, it will challenge you and keep you occupied and entertained for months on end.

We have done our best to standardise all the new functions so that they will not confuse or hamper you, but will open up new avenues and possibilities which will give you months of fun.

If we have succeeded in doing this, all our efforts will have been worthwhile.

Your Blue Byte Team, February 1994.

7. Index

The following index contains page references to the sections dealing with specific topics:

8. Credits

Producer:	Thomas Hertzler
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	Ralf J. Kraft
	Patrick Lagny
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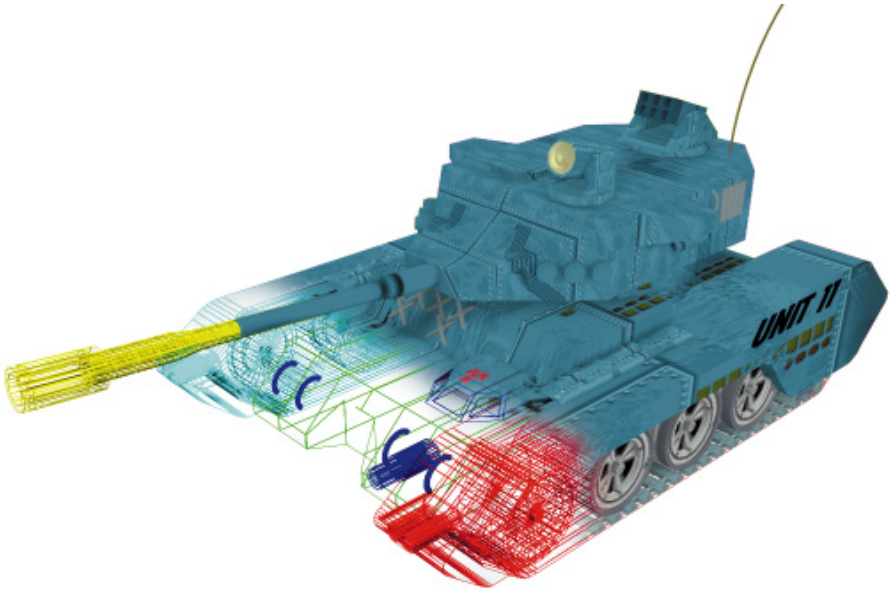
Ray Tracing:	Andre Rainer
Vector Graphics:	Rainer Reber
Music and Sound Effects:	Haiko Ruttmann
Manual Text and Layout:	Stefan Piasecki
Weapons Manual:	Thorsten Knop
In-game Text:	Stefan Piasecki
Quality Control:	Arnd Beenen
	Rolf Neumann
	Blue Byte Team
English Version:	Polylang Ltd., Sheffield

WEAPONS SYSTEMS

SYSTEMS MANUAL

MILOP-Battle Consoles

Rev. 1-94



VS-for official use only
VNo. 1980507-373840

FOREWORD

Armed Forces Department
Technical Section, Software and Training
38.04.195 (new calendar)

This Manual contains clear descriptions of all presently known weapons systems. It is designed both as a training manual for new recruits and as a reference manual for MILOP operators on active service. This document is top secret in accordance with §28.b of the Military Council Legal Code. Any contravention will constitute treason or war crime as per Article 9.

By order of GL Ph. Shoenfelt

GLORY TO THE ROOM

Name: .....
Personal ID: .....
Rank: .....
Unit: .....
.....
Home Address: .....
.....
.....

KEY TO SYMBOLS

A,B Schematic representation of Unit on MILOP Console

C Weight of Unit at maximum troop strength
D Maximum tank capacity
E Fuel consumption per field crossed
F,G Production costs per complete Unit (Energy/Material)
H(I) Maximum group strength. If this is equivalent to one, the number in brackets indicates the number of hit points.

J1 Power of weapon against high-flying aerial targets
J2 Power of weapon against normal aerial targets
J3 Power of weapon against ground targets
J4 Power of weapon against ships
J5 Power of weapon against submarines
J6 Power of weapon against roads/fortifications

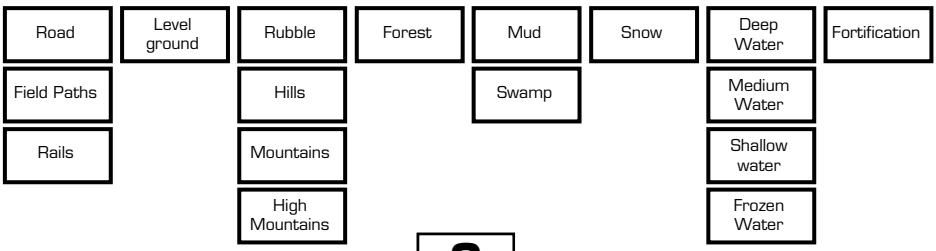
K Maximum range of movement (on roads)
L Armour
M Attack initiation value
N Reconnaissance range

SPECIAL CAPABILITIES OF INDIVIDUAL UNITS

O Range of unit's destructive equipment
P Unit is able to occupy enemy camp
Q Unit is able to withdraw after attacking
R In order to attack, unit requires one move rest after moving
S Unit is able to change altitude (e.g. submarine can dive)

T Maximum load capacity of transporting Unit

EFFECTIVE RANGE OF UNITS:
It is not possible to drive on modules with crosses on them. The radius of the Units decreases on difficult terrain.



Identification example

Name

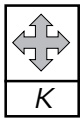
Technical description

Weight:	*C*
Tank volume:	*D*
Consumption:	*E*
Construction costs:	*F/G*
Max. Group strength:	*H (I)*

A **B**

Action Ports:

	Specification	#	Range						
A	Type of weapon/load	Number	Range	*J1*	*J2*	*J3*	*J4*	*J5*	*J6*
B									
C									
D									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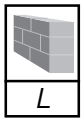
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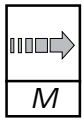
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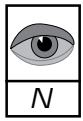
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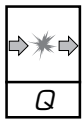
P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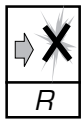
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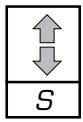

S

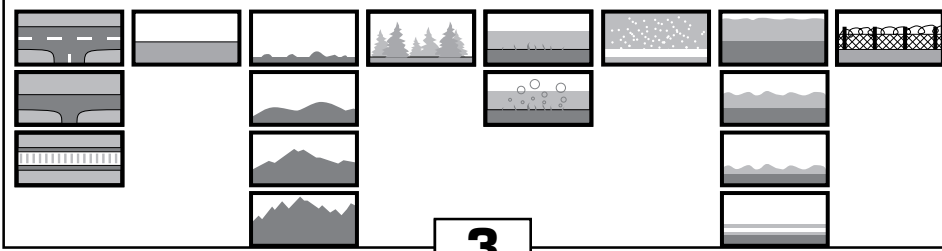
Description:

Contains details of the Unit's special characteristics.

TRANSPORTER

Max.load capacity: *T*
Possible load type

Deployment



DEMON I31

Light Battle Robot

Weight:	2
Tank volume:	50
Consumption:	1
Costs (e/m):	3/2
Max.Group strength:	10

Action Ports:

	Specification	#	Range						
A	9 mm MG	6	1			280			
B									
C									
D									

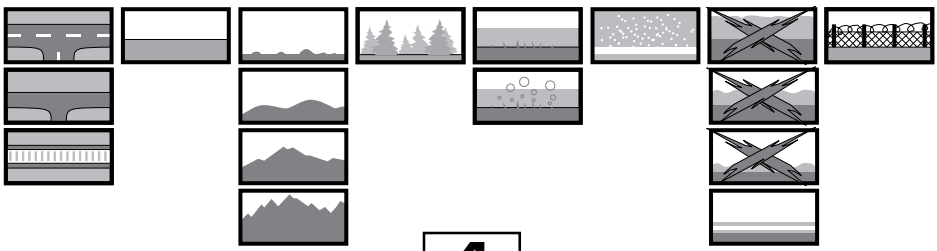
4	150	80	2,25

2	V

Description:

As the standard Battle Robot of the Armed Forces, the DEMON 131 is widely deployed in almost all systems and vehicles. The DEMON 131 has undergone many modifications, and the present model completely replaces previous models. The most significant modifications are those which were made during Operation RACE, which considerably improved its battle strength and resistance capability; these modifications have been largely retained.

Deployment



TROLL 142

Elite Battle Robot

Weight:	3
Tank volume:	40
Consumption:	1
Costs (e/m):	4/2
Max. Group strength:	10

Action Ports:

	Specification	#	Range						
A	Tank gun fist	2	1			590			590
B	12 mm MG	4	1		300	300			
C									
D									

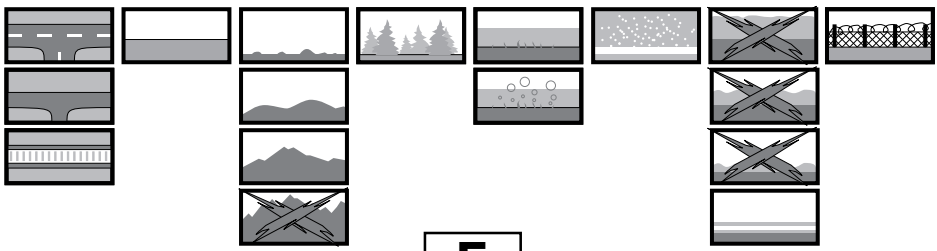
3,25	200	200	2

2,5	V

Description:

The TROLL 142 represents the state of the art in the development of mechanical motorised battle robots. It is considerably heavier than the DEMON 131, but has a far greater fighting strength and is equipped with more powerful anti-tank weapons. Even a small number of these Units greatly increase the ability to engage the enemy.

Deployment



RANGER

Reconnaissance Patrol

Weight:	3
Tank volume:	38
Consumption:	1
Costs (e/m):	4/3
Max.Group strength:	10

Action Ports:

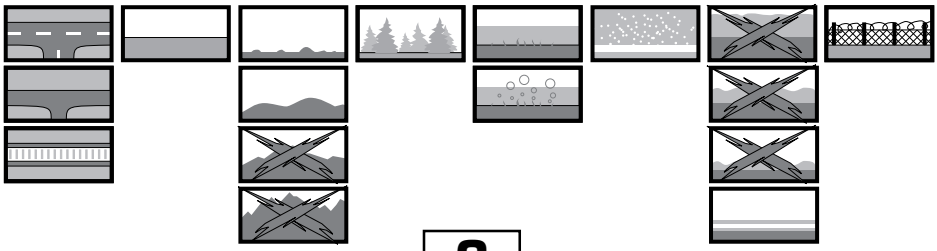
	Specification	#	Range						
A	9 mm MG	6	1			290			
B									
C									
D									

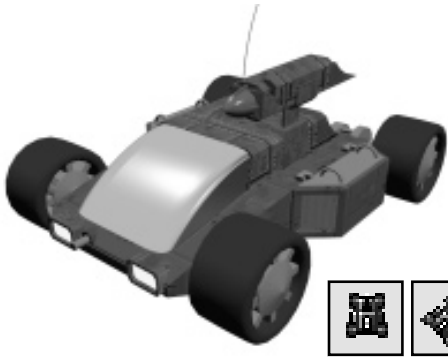
10	130	600	5,5
2,5	MF	V	

Description:

RANGER Units are a favourite way of spying out enemy positions which cannot be seen by other reconnaissance vehicles. They are particularly valuable for carrying out forward thrusts and then rapidly withdrawing. Officers should be aware that, although RANGER Units have sufficient motor power for such operations, they are not under any circumstances to be regarded as offensive weapons; their strength lies in rapid and safe reconnaissance.

Deployment





BUGGY

Reconnaissance Vehicle

Weight:	4
Tank volume:	74
Consumption:	1
Costs (e/m):	6/4
Max. Group strength:	10

Action Ports:

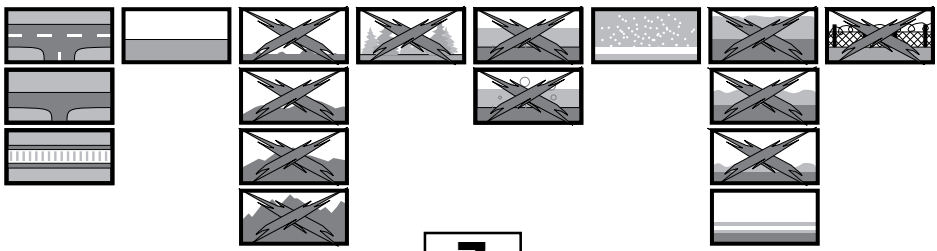
	Specification	#	Range						
A	SS missiles	2	2			370			
B	9 mm MG	5	1			290			
C									
D									

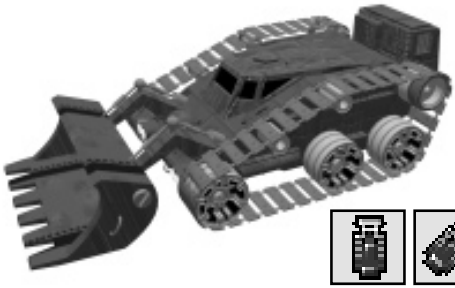
10	125	530	5,5
2	MF		

Description:

With a tank capacity almost double that of ordinary RANGERS, this system can remain in action for much longer, but also consumes more energy. In addition, it has tried and tested surface-to-surface missiles. Having discovered enemy Units making a surprise attack, the BUGGY can keep them at bay until reinforcements arrive. Well trained Buggy systems are the eyes of every Benun section.

Deployment





PLANUM 5

Construction veh.	Road/Rail
Weight:	9
Tank volume:	34
Consumption:	1
Costs (e/m):	7/4
Max.Group strength:	10

Action Ports:

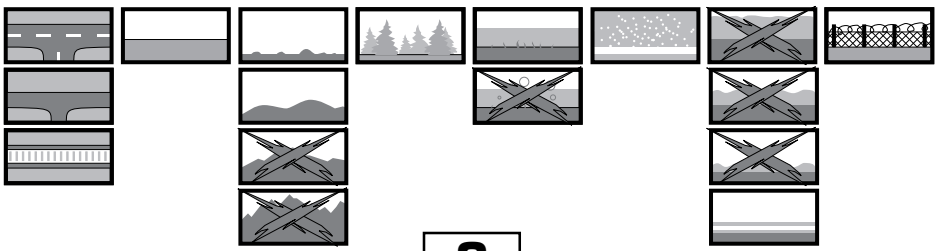
	Specification	#	Range						
A	Constr. materials	20	1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
B									
C									
D									

4	100	72	1

Description:

The PLANUM 5 is an essential part of every construction Unit, making rapid thrusts possible and ensuring an effective infrastructure. The PLANUM 5 supports the attacking Units by laying roads and railway tracks and constructing temporary bridges, and helps the Operators to guarantee their troops' mobility. When it is necessary to make tactical withdrawals, the PLANUM 5 carries out essential work by destroying roads etc., thus slowing up the enemy's offensive movements.

Deployment



REGIO

Construction veh.	Fortifications
Weight:	10
Tank volume:	34
Consumption:	1
Costs (e/m):	8/4
Max. Group strength:	10

Action Ports:

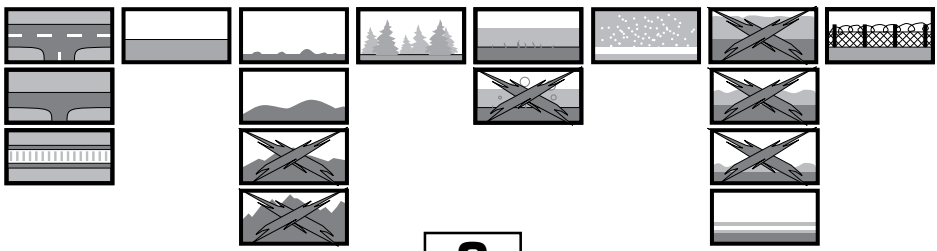
	Specification	#	Range						
A	Fortification	1	1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
B	Fortification	6	1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C									
D									

4	100	71	1

Description:

The REGIO system is absolutely essential to secure fortified positions. The REGIO'S ability to erect fortifications is particularly useful when it is necessary to defend important emplacements against enemy attack. Because the REGIO has no defensive weapons of its own, it must be protected by other weapons systems.

Deployment



SNAKE

Armoured Car

Weight:	6
Tank volume:	90
Consumption:	2
Costs (e/m):	6/5
Max.Group strength:	10

Action Ports:

	Specification	#	Range						
A	Twin 20 mm MG	8	1		320	320			
B									
C									
D									

8,5	285	510	3,5

1

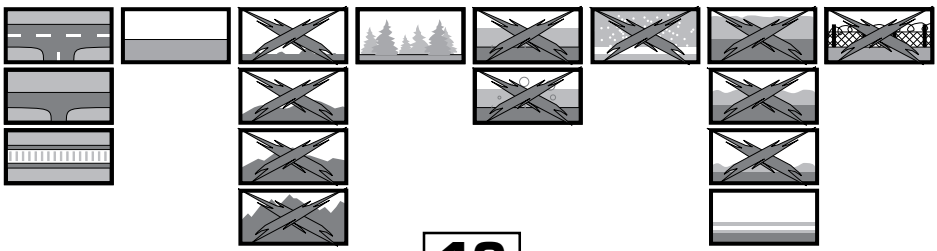
TRANSPORTER

Max. load capacity: 6
Infantry
Crystals

Description:

This armoured car is of only limited use in offensive actions. Its strengths lie in its ability to load and transport light equipment and energy. The twin 20mm machine gun is excellent for repulsing surprise attacks by enemy Units and can also be used against low-flying jet fighters.

Deployment



TECHNOTRAX

Light Tank

Weight:	8
Tank volume:	64
Consumption:	2
Costs (e/m):	6/6
Max. Group strength:	10

Action Ports:

	Specification	#	Range						
A	80 mm cannon	5	1			500			
B	9 mm MG	12	1			270			
C									
D									

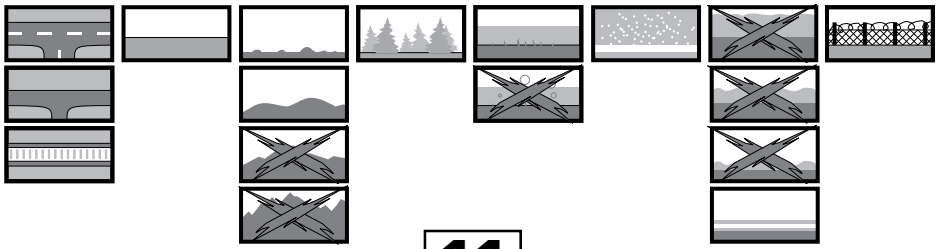
7,25	320	425	3

1

Description:

A development of the now legendary Scorpion Units, the TECHNOTRAX is light and manoeuvrable. It is indispensable for supporting heavy offensive Units. With its 80mm cannon it can cause damage which can seriously weaken the enemy.

Deployment



STING

Rocket Tank

Weight:	6
Tank volume:	46
Consumption:	2
Costs (e/m):	7/5
Max.Group strength:	10

Action Ports:

	Specification	#	Range						
A	SS missiles	4	1-2			495	495		
B									
C									
D									

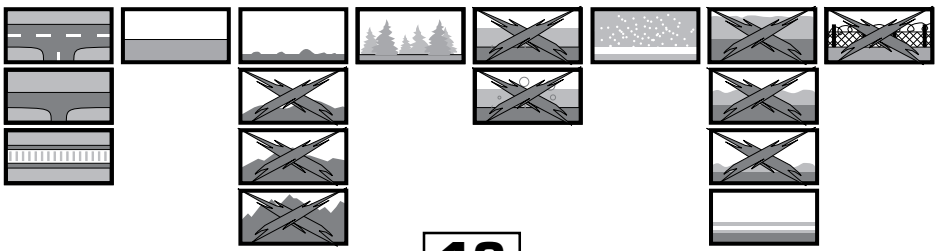
8,25	268	480	3,25

1,5

Description:

Equipped with standard surface-to-surface missiles, the STING can be used to support offensive Units and to repulse enemy attacks on defensive lines. The long-range guns are suitable against armoured Units and even against ships.

Deployment



COMET FP-42

Anti-aircraft tank

Weight:	7
Tank volume:	50
Consumption:	2
Costs (e/m):	7/5
Max. Group strength:	10

Action Ports:

	Specification	#	Range						
A	35 mm twin cannon	8	1		380	380			
B									
C									
D									

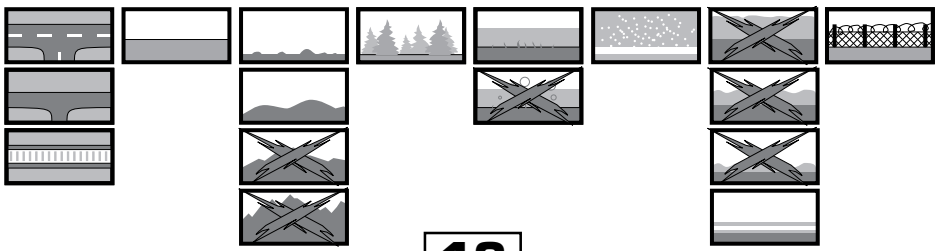
8	305	815	3,5

1,5

Description:

With its large fuel tank and above-average range, the COMET FP-42 can be used both against armoured Units and planes, and is also valuable for carrying out reconnaissance work.

Deployment



PULSAR A3

Artilleriy

Weight:	11
Tank volume:	60
Consumption:	2
Costs (e/m):	13/5
Max.Group strength:	10

Action Ports:

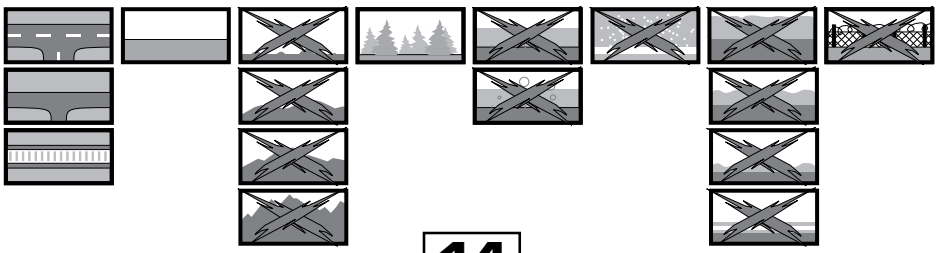
	Specification	#	Range						
A	80 mm cannon	8	2-5			530			530
B									
C									
D									

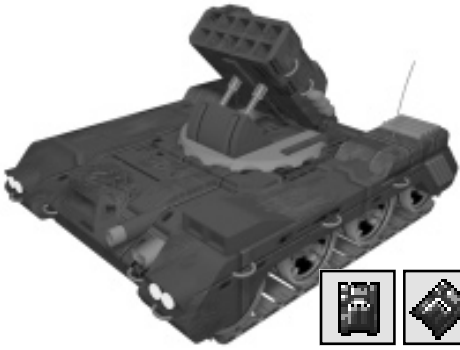
2	110	950	1
1	1		

Description:

This artillery piece is vital for destroying the enemy's fortifications. It can also be deployed as a superior backup system for your own attacks and as a first line defence against advancing enemy Units. It has enormous fire power; however, as with all long range weapons, its accuracy decreases in proportion to its distance from the target.

Deployment





ARCHIMEDES

Rocket launcher

Weight:	9
Tank volume:	70
Consumption:	2
Costs (e/m):	11/5
Max. Group strength:	10

Action Ports:

	Specification	#	Range						
A	SS missiles	6	3-5			380	380		
B									
C									
D									

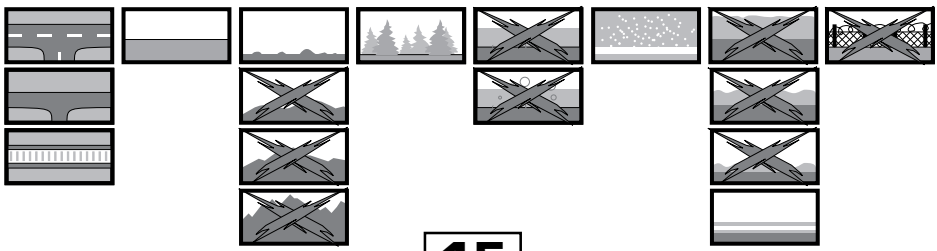
4	135	910	2

1

Description:

The ARCHIMEDES is twice as fast as the PULSAR A3, but is not as powerful. Its armour plating is thinner and it is helpless against direct fire. It should always be used behind the front line or be positioned in a well-hidden, inaccessible position. Rocket launchers are particularly effective against large groups of enemy troops.

Deployment



SAMURAI-2

Main battle tank

Weight:	10
Tank volume:	90
Consumption:	3
Costs (e/m):	9/8
Max.Group strength:	10

Action Ports:

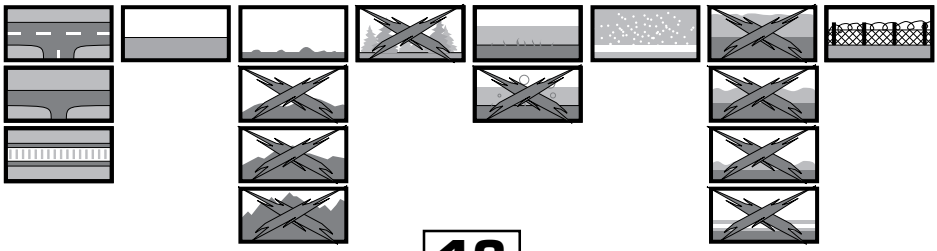
	Specification	#	Range						
A	100 mm cannon	6	1			560	560		
B	20 mm MG	8	1		310	310			
C									
D									

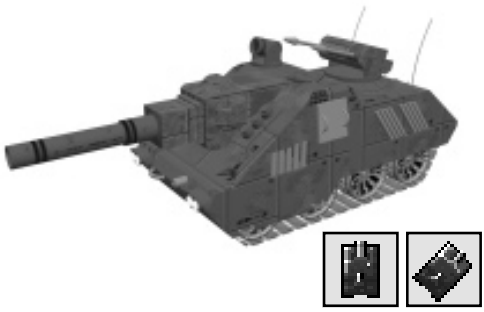
5	450	420	2

Description:

The Army's heaviest tank and the latest trump card from the Weapons Research Centre. The SAMURAI-2 is a development of the T7 CRUSADER and its successor, the T-9b BLADE, developed for Operation RACE. It has heavier weapons and better armour plating than its predecessors; its 20mm MG is equally effective against armoured forces and planes, while the penetrative power of its 100mm cannon can cause serious damage even to enemy naval craft.

Deployment





NASHORN

Assault tank

Weight:	12
Tank volume:	52
Consumption:	2
Costs (e/m):	9/8
Max. Group strength:	10

Action Ports:

	Specification	#	Range						
A	100 mm cannon	8	1			580	580		
B	30 mm cannon	2	1		360				
C									
D									

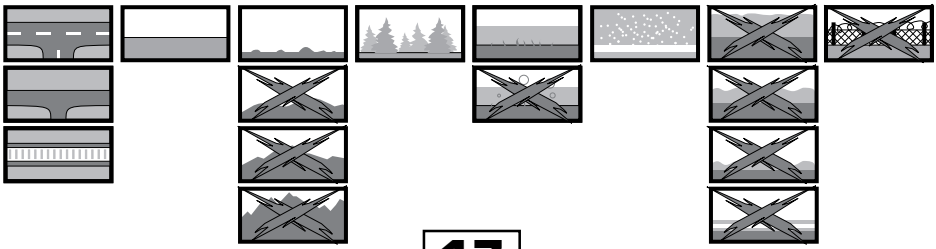
6	550	500	3

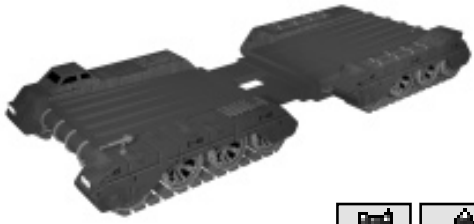
1	1

Description:

The NASHORN has extremely strong armour plating, especially at the front of the vehicle. Its main weapon is a 100mm cannon which fires special armour-piercing shells and has a superior fire power even to the SAMURAI. The ultimate weapon against enemy air superiority. After a move, it requires a fairly long repair period and is therefore mainly used as a defensive weapon.

Deployment





SPRING 1

Transport tank

Weight:	14
Tank volume:	40
Consumption:	2
Costs (e/m):	7/8
Max.Group strength:	10

Action Ports:

	Specification	#	Range						
A	9 mm MG	10	1			270			
B									
C									
D									

4,5	600	78	1

1

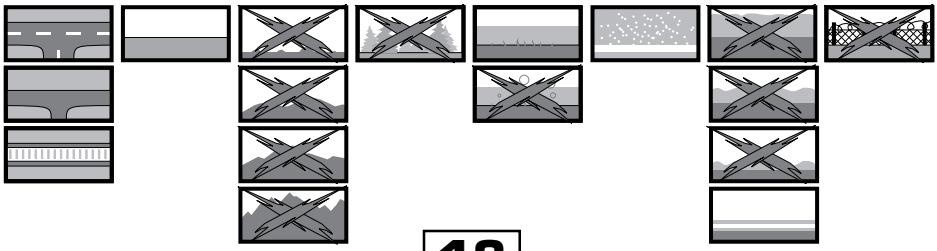
TRANSPORTER

Max.load capacity: 6
Infantry
Mines

Description:

An extremely important, but lightly armed Sappers' vehicle, which is only useful for defence. Its maximum load capacity is not particularly great, but it is capable of transporting a small number of Infantry Units or mines. It has very strong armour plating and is ideal for transporting infantry through enemy fire.

Deployment



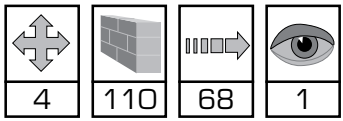
SINUS

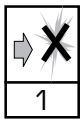
Repair vehicle

Weight:	10
Tank volume:	30
Consumption:	1
Costs (e/m):	5/4
Max. Group strength:	10

Action Ports:

	Specification	#	Range						
A	9 mm MG	3	1			270			
B	Materials	24	1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C	Fuel	24	1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
D									

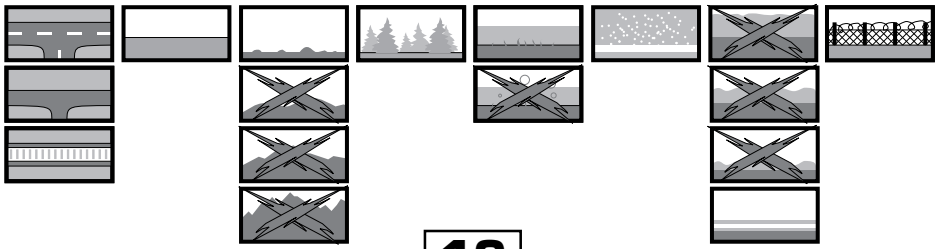




Description:

SINUS is an innovative vehicle, introduced as a repair station for Units damaged in battle. Working under protection, SINUS Units can repair large numbers of Units quickly and effectively in the field. SINUS can only be moved on solid ground. Some Units can not be repaired on the battlefield, and this particularly applies to stationary weapons systems such as bunkers, gun towers or construction vehicles.

Deployment



ORION OR-3

Radar vehicle

Weight:	8
Tank volume:	80
Consumption:	3
Costs (e/m):	12/7
Max.Group strength:	10

Action Ports:

	Specification	#	Range						
A									
B									
C									
D									

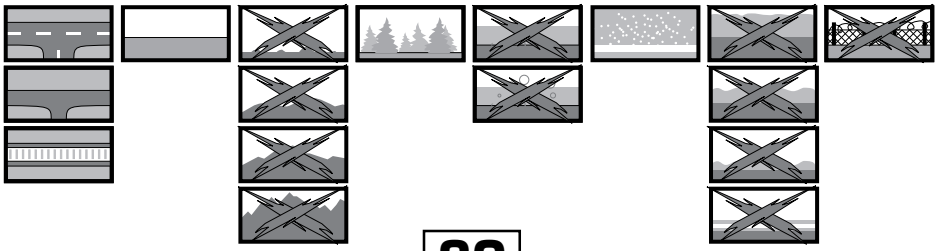
5,5	200	70	8

0,75

Description:

Although the ORION System does not carry any weapons, thanks to the range of its radar it is a cornerstone of military strategy. It goes without saying that this vital system requires the greatest possible protection. Radar Units are the eyes of all fighting forces, and the further they can see, the more quickly the enemy's movements can be worked out.

Deployment



ATLAS

Transport vehicle

Weight:	7
Tank volume:	30
Consumption:	1
Costs (e/m):	5/6
Max. Group strength:	10

Action Ports:

	Specification	#	Range						
A									
B									
C									
D									

7,25	60	90	1

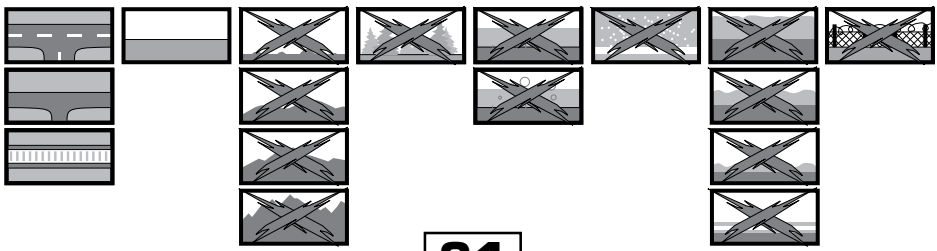
Description:

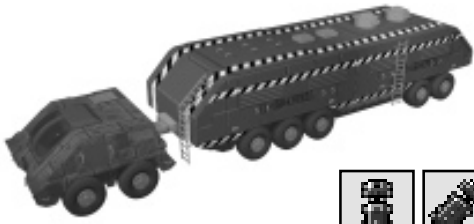
A simple, unarmed transporter which can also be used to transport small Units. Its range and loading capacity make this System indispensable. Although an important part of any military convoy, the ATLAS has very little armour plating, and therefore contact with the enemy must be avoided at all costs.

TRANSPORTER

Max.load capacity: 19
small vehicles
Infantry
Crystals

Deployment





ALGOL

Tanker vehicle

Weight:	7
Tank volume:	80
Consumption:	1
Costs (e/m):	5/4
Max.Group strength:	10

Action Ports:

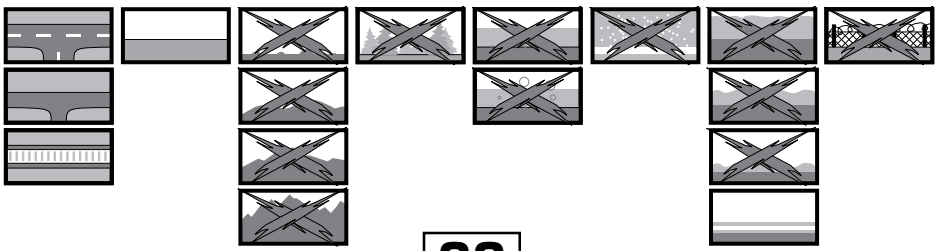
	Specification	#	Range						
A	Fuel	240	2-5	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
B									
C									
D									

7,5	85	78	1

Description:

Unarmed fuel transporter. The ALGOL is fast, has a large range and can carry large stocks of fuel, making it extremely important to those Systems which run short of fuel during battle.

Deployment



ALCOR

Ammunition transporter

Weight:	8
Tank volume:	56
Consumption:	2
Costs (e/m):	5/5
Max. Group strength:	10

Action Ports:

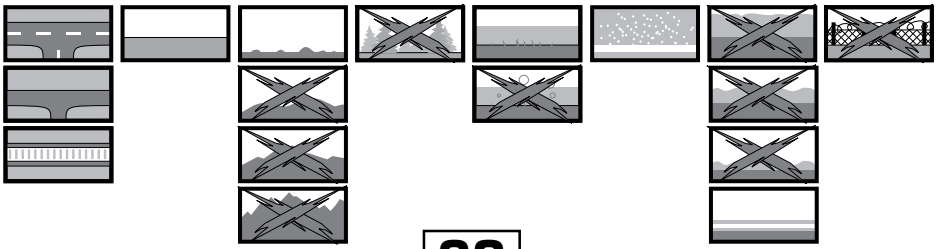
	Specification	#	Range						
A	9 mm MG	4	1			275			
B	Ammunition	50	1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C									
D									

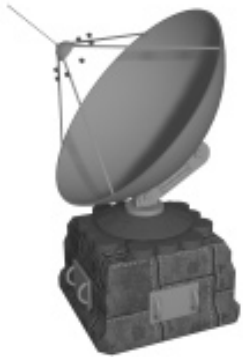
5,5	400	64	1

Description:

A lightly-armed addition to the ALGOL System, the ALCOR is much heavier than similar Systems, because of its strong armour plating. The ALCOR plays an important support role in battle. Units in action can quickly replenish their supplies of ammunition just behind their own lines, and within minutes can be ready to be deployed once more.

Deployment





RUNE

Radar emplacement

Weight:	18
Tank volume:	10
Consumption:	1
Costs (e/m):	11/30
Max.Group strength:	1(5)

Action Ports:

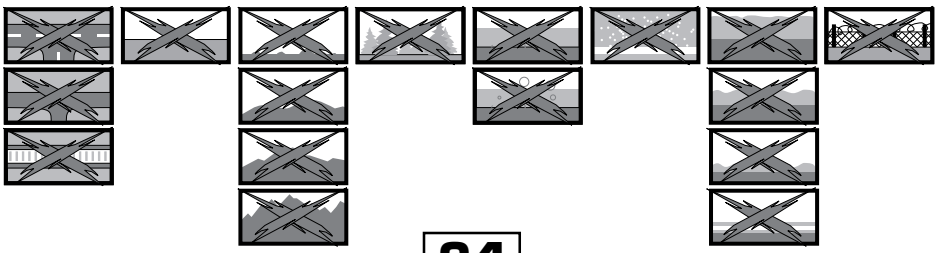
	Specification	#	Range						
A									
B									
C									
D									

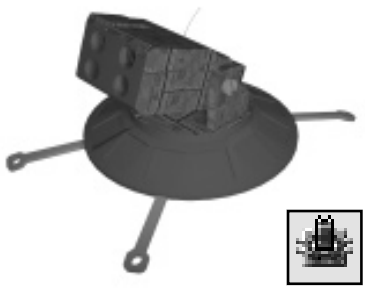
1,25	300	0	10

Description:

Unarmed immobile radar emplacement. Because RUNE has no defences of its own, it must be carefully protected, since its beams probe far into enemy territory, thus making it an attractive target for low-flying enemy aircraft. It is advisable to have some COMET Units near to the RUNE emplacement.

Deployment





MEDUSA

Anti-aircraft gun emplacement

Weight:	14
Tank volume:	80
Consumption:	1
Costs (e/m):	13/6
Max. Group strength:	1(5)

Action Ports:

	Specification	#	Range						
A	SA missiles	10	2-6	430	430				
B									
C									
D									

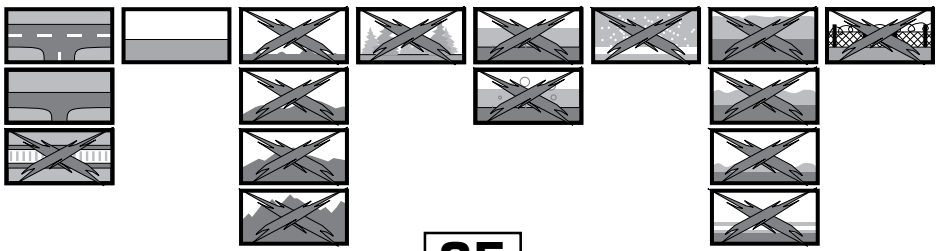
2,25	160	990	4

1

Description:

An anti-aircraft rocket launcher, difficult to move but with enormous fire power. The MEDUSA'S beam-powered missiles chase everything which comes into range with incredible speed and pursue their targets to the highest altitudes. MUST BE PROTECTED WITH PARTICULAR CARE!!!

Deployment



SKULL

Bunker

Weight:	92
Tank volume:	120
Consumption:	3
Costs (e/m):	20/35
Max.Group strength:	1(5)

Action Ports:

	Specification	#	Range						
A	90 mm twin cannon	16	1-3			550	550		
B	20 mm MG	20	1		315	315			
C									
D									

1,25	600	502	3

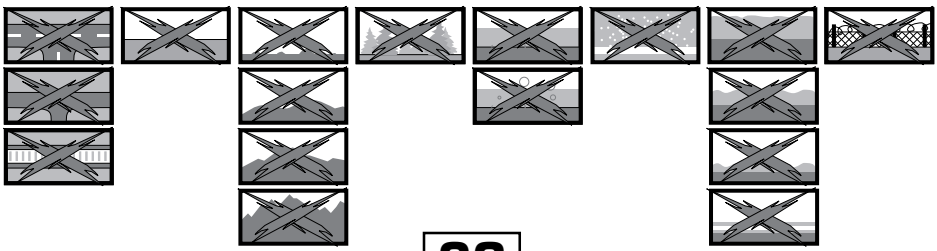
Description:

Weapons system permanently fixed in a bunker. Capable of taking in a small number of infantry or mine Units. The guns can be used against armoured targets, low-flying aircraft and ships, which makes SKULL particularly useful as a coastal battery.

TRANSPORTER

Max.load capacity: 5
Infantry
Mines
Crystals

Deployment



IONSTAR

Gun tower

Weight:	117
Tank volume:	0
Consumption:	0
Costs (e/m):	n.a.
Max. Group strength:	1(5)

Action Ports:

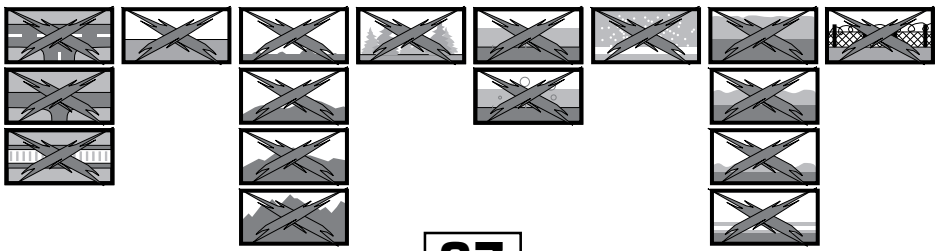
	Specification	#	Range						
A	120 mm cannon	12	2-6			620	620		620
B									
C									
D									

0	580	478	3

Description:

Especially suitable for use as a coastal battery, where the IONSTAR could be used to guard coastal straits or river estuaries. The IONSTAR'S large range makes it difficult for armoured forces to approach by land or water.

Deployment



SUPER VIRUS

Mine

Weight:	1
Tank volume:	4
Consumption:	1
Costs (e/m):	1/1
Max.Group strength:	10

Action Ports:

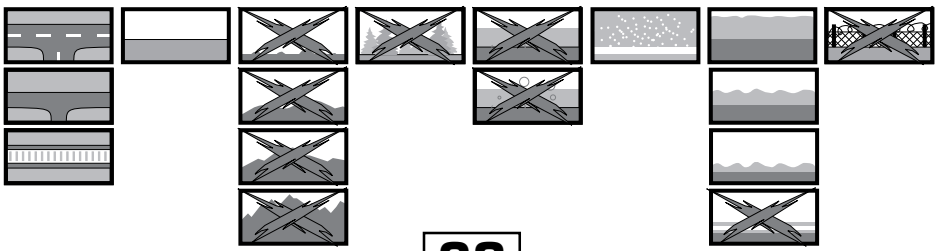
	Specification	#	Range						
A									
B									
C									
D									

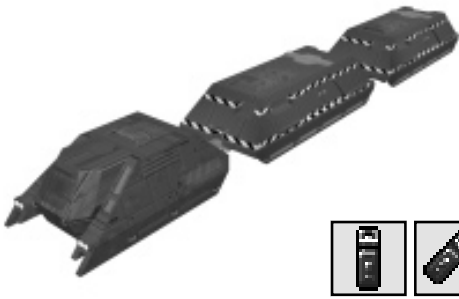
3,5	450	0	1

Description:

The function of this immobile mine is to block all kinds of ground forces and it is particularly well suited to the defence of other emplacements. When the enemy makes contact with theSUPER VIRUS, a massive explosive force is unleashed.

Deployment





DOLMEN Z1

Transport train

Weight:	32
Tank capacity:	100
Consumption:	2
Costs (e/m):	12/13
Max. group strength:	1(4)

Action Ports:

	Specification	#	Range						
A									
B									
C									
D									

11	120	200	2

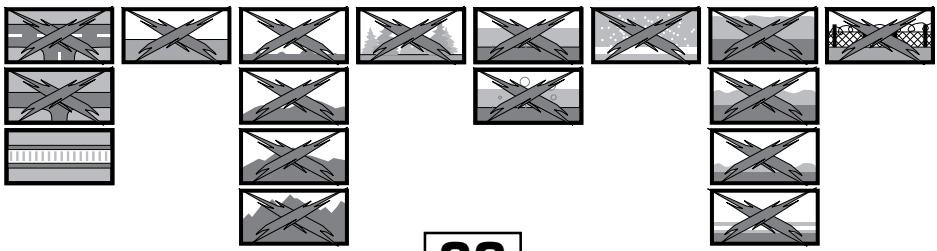
Description:

This transport train can carry a large amount of very heavy material. It is unarmed and does not have strong armour plating, but it is very fast, and is particularly well suited for transporting newly manufactured materials to the front line.

TRANSPORTER

Max.load capacity: 30
Heavy material
Light vehicles
Infantry
Mines
Crystals

Deployment



ANACONDA Z2

Armoured train

Weight:	36
Tank capacity:	80
Consumption:	2
Costs (e/m):	18/16
Max.Group strength:	1(5)

Action Ports:

	Specification	#	Range						
A	90 mm cannon	8	1-2			550	550		
B	30 mm cannon	12	1		360				
C	9 mm MG	18	1			270			
D									

13	484	600	3

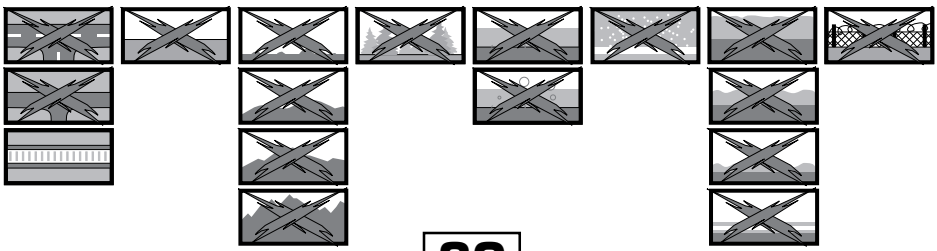
Description:

Important armoured train, deployed in areas close to the front line. Can attack armoured land vehicles, ships and low-flying aircraft, while at the same time transporting light goods. Is particularly useful when small tank Units have to be transported quickly to a number of destinations.

TRANSPORTER

Max.load capacity: 8
Light vehicles
Infantry
Crystals

Deployment



EXCALIBUR Z3

Rail-mounted gun

Weight:	38
Tank capacity:	90
Consumption:	3
Costs (e/m):	22/16
Max. group strength:	1(3)

Action Ports:

	Specification	#	Range						
A	200 mm cannon	3	4-8			900	900		900
B	9 mm MG	4	1			270			
C									
D									

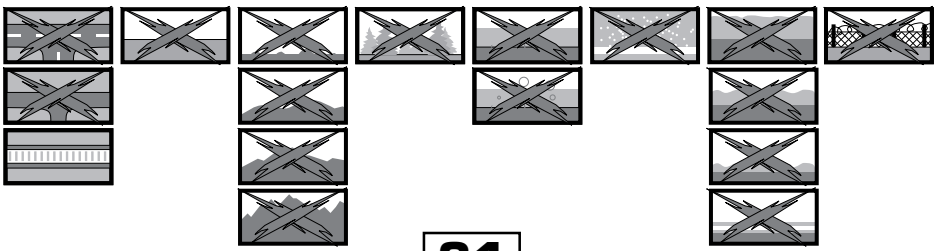
10	154	710	2

1

Description:

Powerful rail gun with a wide range of artillery and close-range weapons. Capable of protecting transports over unguarded track. Because of its speed, this vehicle can answer calls for help in areas near to rail lines. The main task of the EXCALIBUR Z3, however, is the destruction of bridges, track and roads from deep behind the front line.

Deployment



MENHIR Z4

Fast train

Weight:	21
Tank capacity:	126
Consumption:	3
Costs (e/m):	14/10
Max.Group strength:	1(4)

Action Ports:

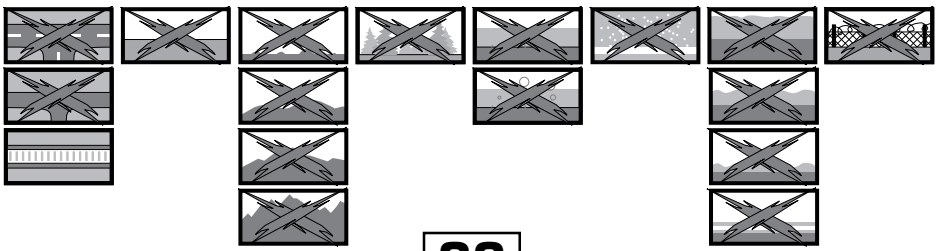
	Specification	#	Range						
A	80 mm cannon	2	1			500			
B	SA missiles	6	2-5		430				
C	20 mm MG	8	1		310				
D									

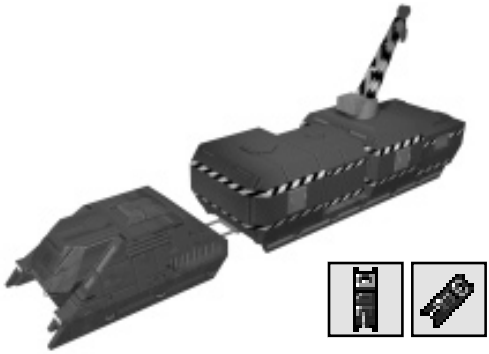
16	300	816	5

Description:

High speed battle train. Its guns only have a limited range when engaging ground targets; however, the MENHIR is equipped with long-range ground-to-air missiles and can thus repulse low-flying attacking aircraft before they have a chance to penetrate very far.

Deployment





MONOLITH Z6

Repair train

Weight:	32
Tank capacity:	160
Consumption:	2
Costs (e/m):	10/11
Max. group strength:	1(3)

Action Ports:

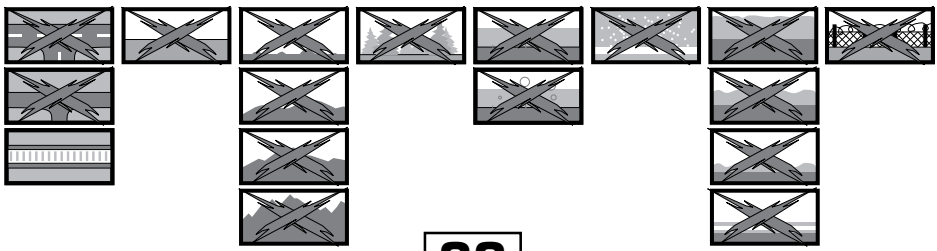
	Specification	#	Range						
A	20 mm MG	4	1		310	310			
B	Fuel	360	1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C	Ammunition	200	1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
D									

12	160	320	2

Description:

This repair train has only limited defensive capabilities and can only defend itself at close quarters. Its most important feature is its constructive capability; it can repair damaged track and at the same time supply Units with ammunition and fuel.

Deployment



MÖWE SX-1

Speedboat

Weight:	8
Tank capacity:	120
Consumption:	3
Costs (e/m):	16/15
Max.Group strength:	5

Aktion Ports:

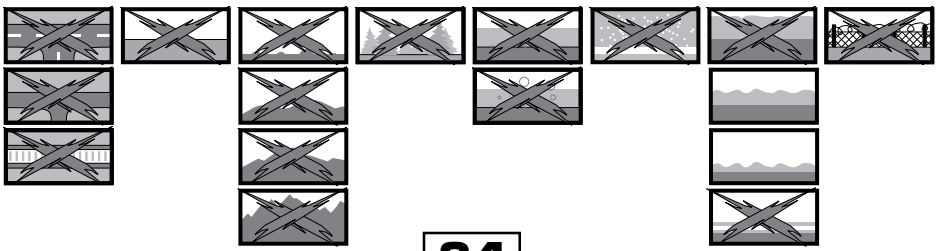
	Specification	#	Range						
A	2 X 30 mm cannon	8	1		365		365		
B									
C									
D									

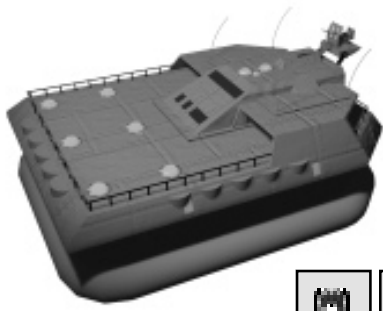
10	190	820	7

Description:

Extremely fast boat which, however, cannot operate on the open sea. Its capabilities against ships and aircraft make it useful against attacks with naval support. The MÖWE may be regarded as a marine anti-aircraft tank.

Deployment





VADER D-1

Landing boat

Weight:	6
Tank capacity:	50
Consumption:	1
Costs (e/m):	14/8
Max.group strength:	10

Action Ports:

	Specification	#	Range						
A	20 mm MG	5	1			270			
B									
C									
D									

6	112	400	4

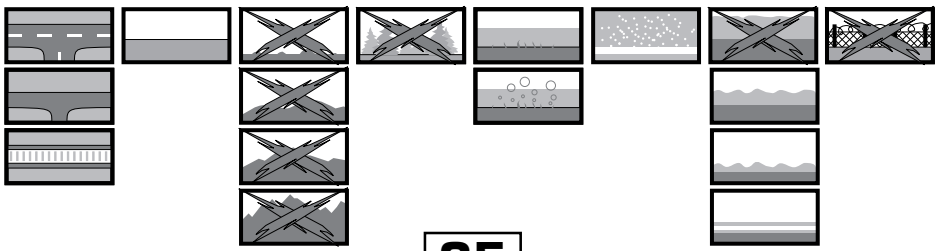
Description:

Moderately armoured landing craft for light vehicles etc. Thanks to its armaments it can be used for a short time to repel enemy armoured vehicles. Because of its size the VADER is not very fast, but it enables large-scale landing operations to be made from the sea.

TRANSPORTER

Max.load capacity: 16
Light vehicles
Infantry
Mines
Crystals

Deployment



PATRIX

Patrol boat

Weight:	10
Tank capacity:	110
Consumption:	2
Costs (e/m):	20/20
Max.Group strength:	5

Aktion Ports:

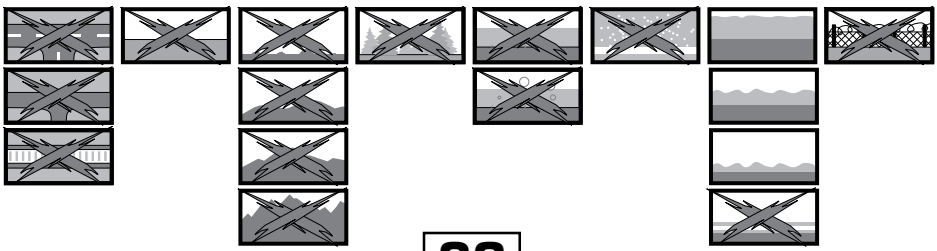
	Specification	#	Range						
A	40 mm cannon	10	1			375	375		
B	20 mm MG	8	1		270				
C									
D									

8	210	700	6

Description:

A well-armoured coastal boat, designed for coastal areas where it is difficult to gain an overall view of the area. Can be used against ships and land Units. Best used in conjunction with coastal batteries.

Deployment



HYDRA

Torpedo boat

Weight:	40
Tank capacity:	146
Consumption:	3
Costs (e/m):	40/40
Max.group strength:	1(5)

Action Ports:

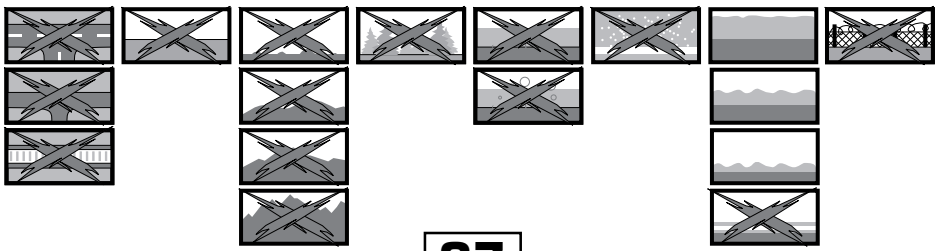
	Specification	#	Range						
A	90 mm cannon	8	1-2			550	550		
B	30 mm cannon	6	1		360		360		
C	Depth charges	4	1					385	
D	Torpedoes	2	1-2				420		

7	320	750	6

Description:

All-purpose torpedo boat for use against large ships and submarines, as well as against low-flying invading aircraft and land-borne Units. Very good for supporting large naval Units.

Deployment



POLAR C-6

Cruiser

Weight:	92
Tank capacity:	288
Consumption:	4
Costs (e/m):	80/70
Max.Group strength:	1(6)

Aktion Ports:

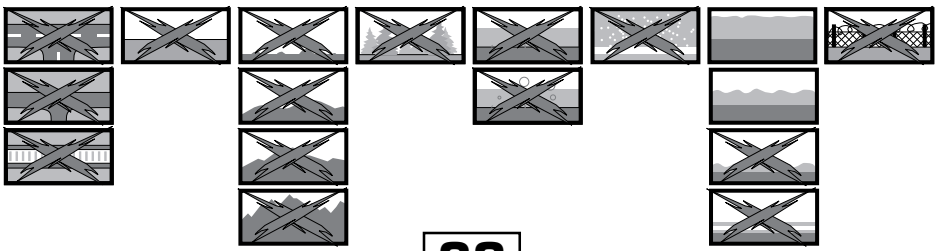
	Specification	#	Range						
A	2 X 120 mm cannon	14	1-4			630	630		
B	3 X 50 mm cannon	10	1-3		390	390	390		
C	Depth charges	6	1					365	
D	2 X 20 mm MG	16	1		260				

6	580	820	5

Description:

Large cruiser, armed against any kind of attack from air, land or sea. A group of these cruisers present a serious threat to any attacker; the quality of its armour plating means that these Units can also be used singly.

Deployment



ZENIT MBS-19

Battleship

Weight:	120
Tank capacity:	365
Consumption:	5
Costs (e/m):	110/90
Max.group strength:	1(8)

Action Ports:

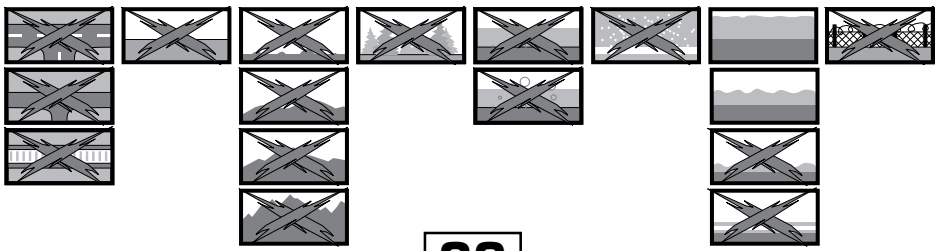
	Specification	#	Range						
A	2 X 220 mm cannon	16	3-8			980	980		980
B	2 X 120 mm cannon	14	1-4			620	620		
C	2 X 50 mm cannon	12	1-3		380	380	380		
D	2 X 30 mm cannon	16	1		370				

5	750	851	4

Description:

Very well armoured battleship with a large draught, which means it is not particularly fast. It has powerful long-range weapons for use against ships, aircraft and production plants and can engage several enemy Units at once. The ZENITH, when combined with other Units, probably constitutes the most powerful naval force which can be established. ZENITH Units are, however, susceptible to attack by enemy submarines.

Deployment



REX

Repair & transport ship

Weight:	123
Tank capacity:	480
Consumption:	5
Costs (e/m):	50/50
Max.Group strength:	1(5)

Aktion Ports:

	Specification	#	Range						
A	2 X 30 mm cannon	4	1		370		370		
B	Fuel	990	1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C	Ammunition	800	1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
D	Material	14	1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

4	202	12	3

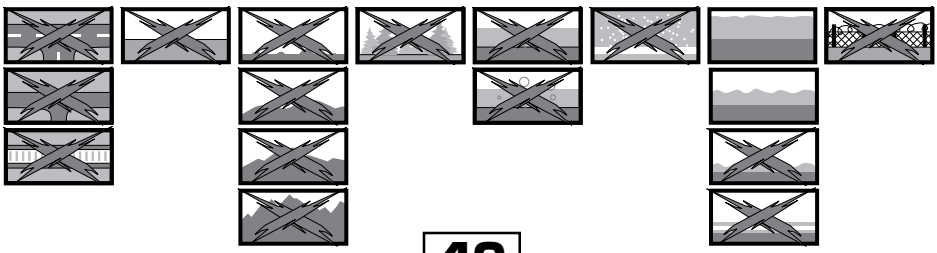
Description:

All-purpose Unit designed for carrying out repairs to boats, but also useful as a transport and supply ship. Has only moderate armaments and armour plating, which give it poor defensive capabilities against attackers; it must therefore be accompanied by a protective escort.

TRANSPORTER

Max.load capacity: 76
Heavy Equipment
Light vehicles
Infantry
Mines
Crystals

Deployment



TITAN N2

Aircraft carrier

Weight:	126
Tank capacity:	460
Consumption:	6
Costs (e/m):	120/100
Max.group strength:	1(6)

Action Ports:

	Specification	#	Range						
A	Fuel	980	1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
B	SA missiles	14	2-6	440	440				
C	50 mm cannon	20	1-3		380	380	380		
D	Ammunition	540	1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

5	440	815	4

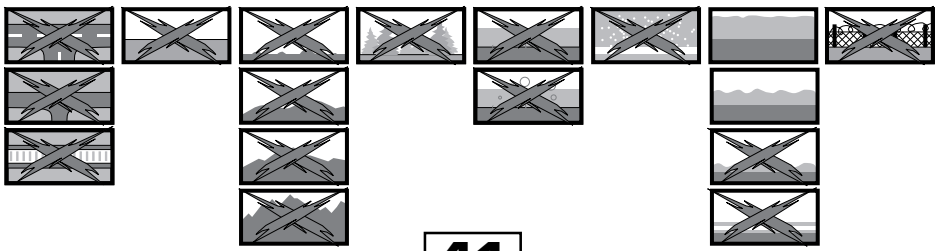
Description:

This newest development in aircraft carriers offers great protection against aircraft but only moderate safety against ships and land forces. The TITAN is defenceless against submarines and thus requires a protective escort. As a sea-borne base for surprise air attacks the TITAN is a very important Unit. Because of its great size it is not very fast.

TRANSPORTER

Max.load capacity: 110
Infantry
Airplanes

Deployment



ORCA U7

Hunting submarine

Weight:	26
Tank capacity:	260
Consumption:	2
Costs (e/m):	50/30
Max.Group strength:	1(7)

Aktion Ports:

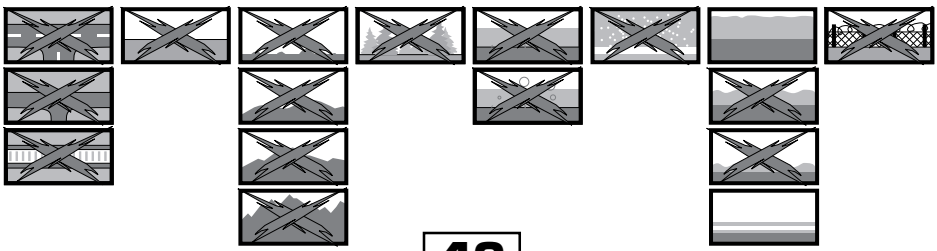
	Specification	#	Range						
A	Torpedoes	6	1-2				470	470	
B									
C									
D									

6	315	860	3
3	MF	H	

Description:

A new series hunting submarine, extremely effective in secret actions against enemy supply convoys. On the surface near the coast the 50mm cannon can be used against Units on land.

Deployment



SHELL S3

Transport Submarine

Weight:	58
Tank capacity:	200
Consumption:	4
Costs (e/m):	42/35
Max.group strength:	1(5)

Action Ports:

	Specification	#	Range						
A	Torpedoes	2	1-2				420		
B									
C									
D									

5	210	300	3

2	H

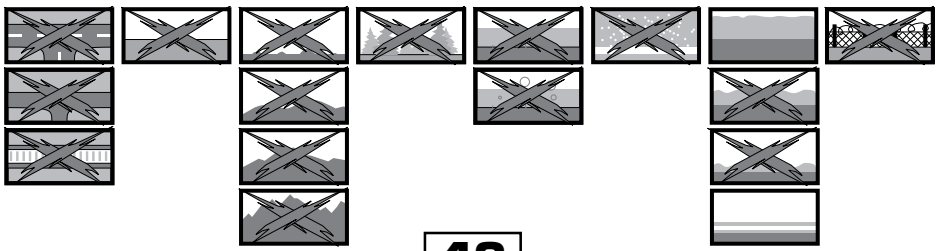
TRANSPORTER

Max.load capacity: 26
Light vehicles
Infantry
Mines
Crystals

Description:

A Transport Submarine which has become very important over the years. Not very fast and not very well protected, but unbeatable in its ability to land several Units in enemy territory and building a beachhead. Has good attack capabilities against enemy warships.

Deployment



U.H.U. R-51

Reconnaissance plane	
Weight:	34
Tank capacity:	328
Consumption:	6
Costs (e/m):	30/22
Max.Group strength:	10

Action Ports:

	Specification	#	Range						
A									
B									
C									
D									

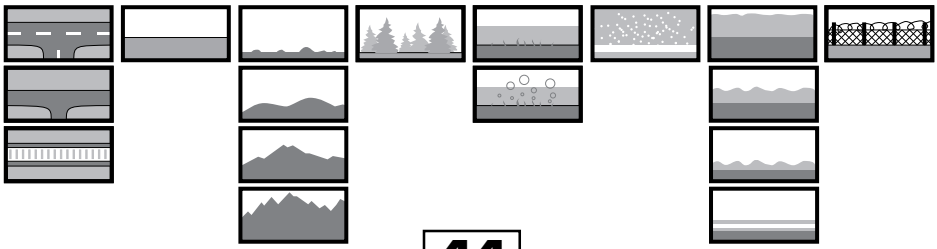
13	200	700	9

H

Description:

The U.H.U. R-51 is a reconnaissance plane with a good range and excellent ability to seek out the enemy. It has a large fuel tank and is thus able to stay in the air for long periods. It has no weapons systems of its own and is therefore incapable of defending itself; interceptor planes must always accompany the U.H.U. R-51, particularly over enemy territory.

Deployment



GHOST FB-3

Stealth fighter

Weight:	19
Tank capacity:	190
Consumption:	4
Costs (e/m):	23/15
Max. group strength:	10

Action Ports:

	Specification	#	Range						
A	AA missiles	4	1	460	460				
B	AG missiles	2	2			400	400		
C	20 mm MG	4	1	240	240				
D	AA missiles	1	1	530	530				

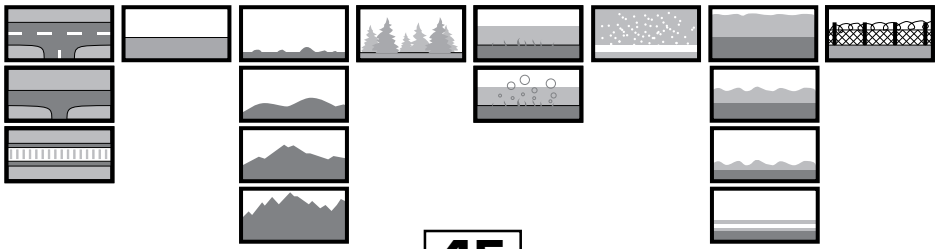
17	220	860	4

3	H

Description:

Modern fighter bomber, famous for its ability to reflect very few radar waves and thus become almost „invisible“. More powerful in aerial battles than the ExTERMINATOR, it can attack ground targets with its air-to-ground missiles, and also has normal air-to-air missiles. Because of its wide reconnaissance range, the GHOST is often used for small-scale strategic aerial operations.

Deployment



STORMBRINGER

High altitude bomber

Weight:	38
Tank capacity:	420
Consumption:	6
Costs (e/m):	32/24
Max.Group strength:	10

Action Ports:

	Specification	#	Range						
A	1,8t bombs	6	1						950
B	20 mm MG	10	1	240	240				
C									
D									

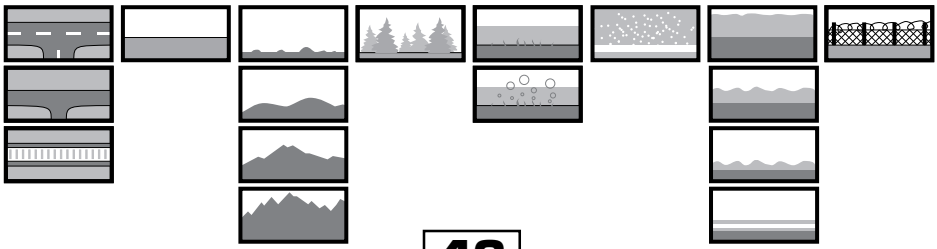
11	200	700	4

H

Description:

Specially developed to bomb buildings and bridges, the STORMBRINGER can fly long distances and at high altitude, carrying out its tasks with deadly precision. However, it has only standard weapons to defend itself against enemy fighters. Excellent at carrying out fast, „surgical“ strikes against the enemy.

Deployment



GENOM J1

Fighter plane

Weight:	16
Tank capacity:	170
Consumption:	5
Costs (e/m):	18/13
Max. group strength:	10

Action Ports:

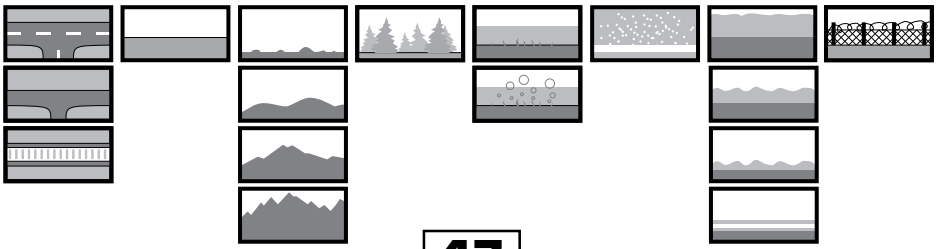
	Specification	#	Range						
A	AA missiles	6	1		460				
B	20 mm MG	4	1		265				
C									
D									

17	190	850	3,5

Description:

A reliable plane, built in large numbers, which forms the backbone of the Drullian aerial defences. The GENOM is fast, manoeuvrable and extremely effective when engaging approaching enemy aircraft. A planned successor to the GENOM has not materialised, and it is rumoured that the enemy has made a secret deal with the plane's manufacturer, EXOTRANS; this may explain why delivery of the plane has become unreliable.

Deployment



EXTERMINATOR

Fighter bomber

Weight:	18
Tank capacity:	245
Consumption:	4
Costs (e/m):	20/15
Max.Group strength:	10

Action Ports:

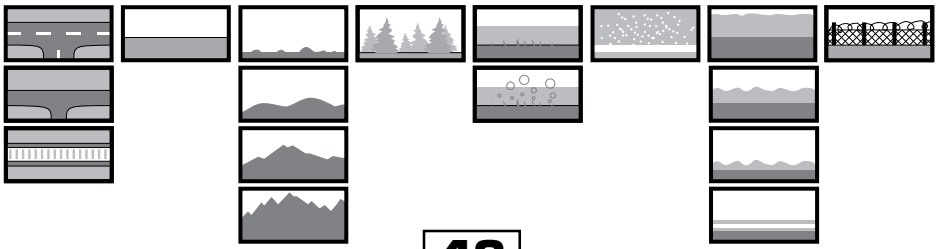
	Specification	#	Range						
A	AA missiles	2	1		400				
B	AG missiles	4	1			400	400		
C	20 mm MG	4	1		310	310			
D	250 kg bombs	2	1			290	290		

16	215	810	4,5

Description:

The Air Force's standard fighter bomber. Because of its very large range and powerful weapons against ground targets, the EXTERMINATOR is very effective against enemy aerial attack and armoured land Units.

Deployment



SPERBER TB-4

Sea plane

Weight:	19
Tank capacity:	162
Consumption:	4
Costs (e/m):	21/16
Max. group strength:	10

Action Ports:

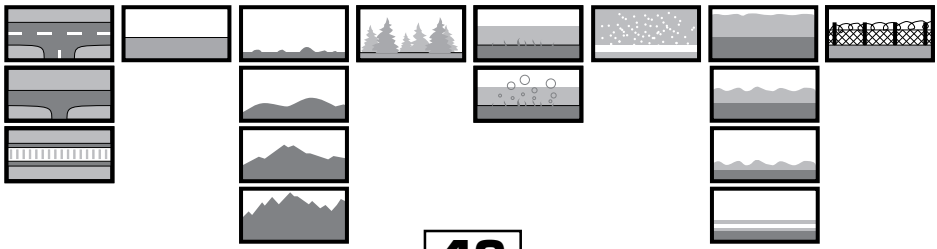
	Specification	#	Range						
A	22 mm MG	6	1		270	270	270		
B	Torpedoes	4	1-2				465		
C	Depth charges	2	1					365	
D	AG missiles	1	1			400	400		

15	220	760	5,25

Description:

The SPERBER TB-4 is very effective against land attacks, air offensives and naval Units. Its wide range and strong armour plating give it good protection against most forms of enemy attack. Enemy naval supremacy can, however, place the SPERBER in danger. It is the only plane which is capable of attacking submerged submarines.

Deployment



SPECTRUM

Tanker plane

Weight:	32
Tank capacity:	430
Consumption:	5
Costs (e/m):	24/20
Max.Group strength:	10

Action Ports:

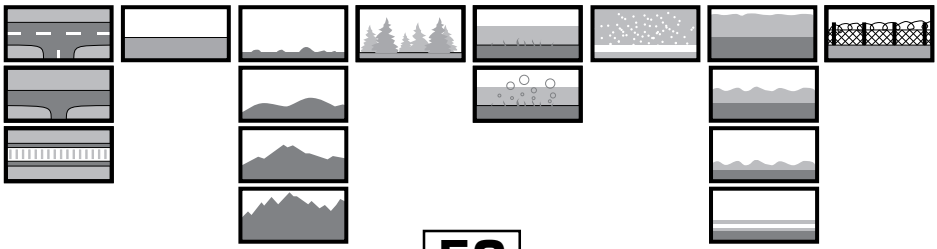
	Specification	#	Range						
A	20 mm MG	6	1		240				
B	Fuel	380	1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C									
D									

10	185	690	4

Description:

Small, manoeuvrable tanker plane used to supply airborne forces in action. It has only limited capability to defend itself, and must therefore be protected if possible.
Obviously, only aircraft can be refuelled from the SPECTRUM.

Deployment



CRUX

Transport plane

Weight:	36
Tank capacity:	200
Consumption:	6
Costs (e/m):	22/20
Max. group strength:	10

Action Ports:

	Specification	#	Range						
A									
B									
C									
D									

10	185	650	3,25

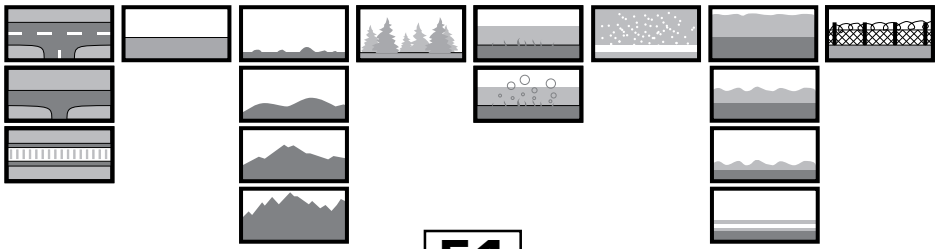
Description:

Transport plane with large load capacity. Since it has only an average range and no weapons, it should always be accompanied by a fighter escort. Capable of landing or evacuating several Units at once.

TRANSPORTER

Max.load capacity: 32
Heavy equipment
Light vehicles
Transporters
Infantry
Crystals

Deployment



DRAGON H1

Battle helicopter

Weight:	17
Tank capacity:	144
Consumption:	4
Costs (e/m):	18/15
Max.Group strength:	10

Action Ports:

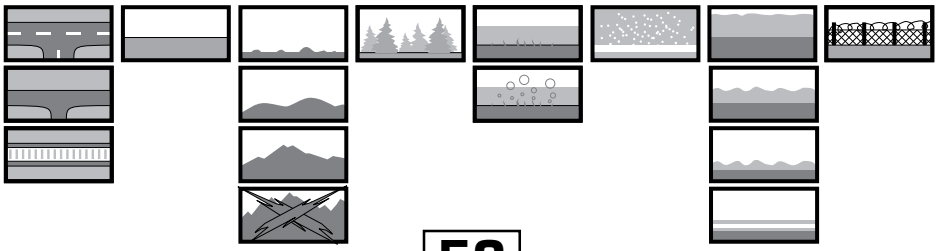
	Specification	#	Range						
A	AA missiles	2	1		320				
B	AG missiles	4	1			400	400		
C	30 mm cannon	6	1			360	360		
D	20 mm MG	2	1		240				

10	200	650	3

Description:

Well armoured helicopter effective against both ground and air attacks. The DRAGON'S specification makes it an excellent offensive weapon.

Deployment



GUPPI H2

Transport helicopter

Weight:	20
Tank capacity:	160
Consumption:	5
Costs (e/m):	20/16
Max. group strength:	10

Action Ports:

	Specification	#	Range						
A	30 mm cannon	8	1		300	300	300		
B									
C									
D									

8	260	600	3

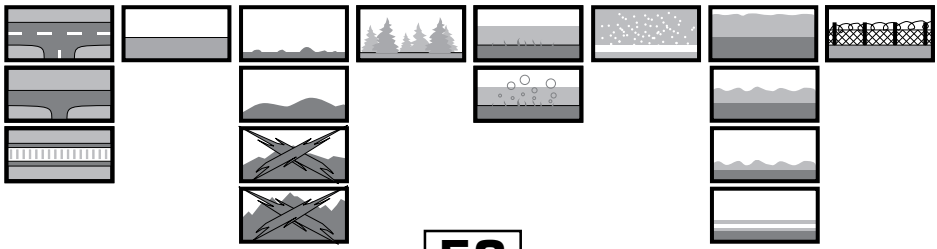
Description:

All purpose helicopter whose main task is to transport small numbers of troops. Its armour and weaponry mean it can be used against surprise attacks by enemy forces. NOTE: PERMISSION MUST BE OBTAINED BEFORE DOING THIS!!!

TRANSPORTER

Max.load capacity: 12
Infantry
Crystals

Deployment



ALDINIUM

Crystal

Weight:	32
Material:	5
Max. group strength:	1

Description:

Most important energy source on Chromos. Operators are ordered to collect as many of these crystals as possible and to transport them to the energy plants. To collect crystals, a suitable transporter (eg SNAKE or ATLAS) must move to the appropriate field. One crystal yields 10t of material when processed.

ALDINIUM IS VITAL TO THE OUTCOME OF THE WAR!!!

Intelligence Reports

Armed Forces Department
Technical Section, Software and Training
12.05.196 (new calendar)

There are indications that TITAN NET is now developing new weapons systems. It is therefore a matter of the highest priority that all reports of unidentified systems must be investigated. ALL DATA MUST BE COMMUNICATED IN WRITING TO YOUR DIRECT SUPERIOR AND THE ARMED FORCES DEPARTMENT AT ONCE. The enclosed blank forms must be used for this purpose.

by Order of GL Ph. Shoenfelt

Weight:

Tank volume:

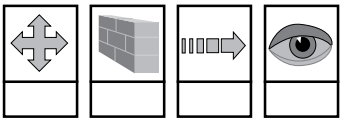
Consumption:

Costs (e/m):

Max.Group strength:

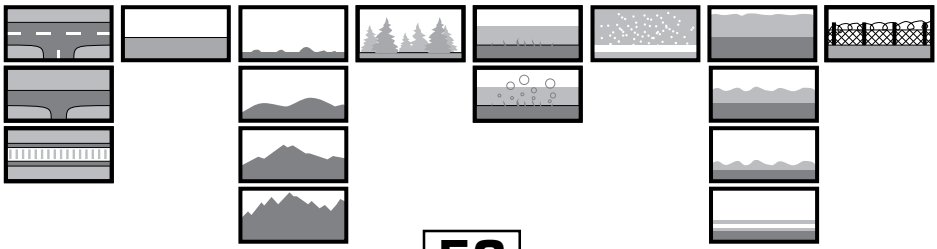
Action Ports:

	Specification	#	Range						
A									
B									
C									
D									



Description:

Deployment



Weight:

Tank capacity:

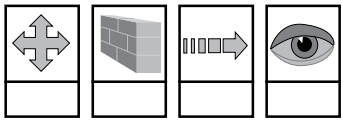
Consumption:

Costs (e/m):

Max.Group strength:

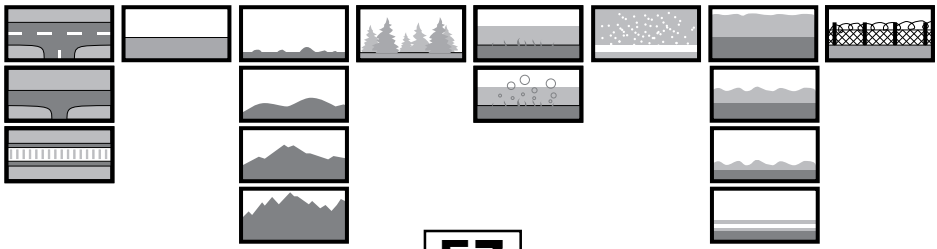
Action Ports:

	Specification	#	Range						
A									
B									
C									
D									



Description:

Deployment



Weight:

Tank volume:

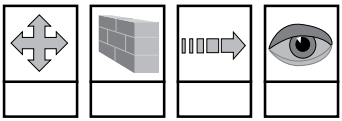
Consumption:

Costs (e/m):

Max.Group strength:

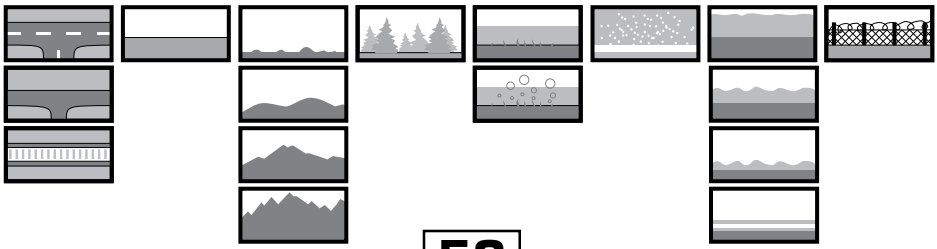
Action Ports:

	Specification	#	Range						
A									
B									
C									
D									



Description:

Deployment



Weight:

Tank capacity:

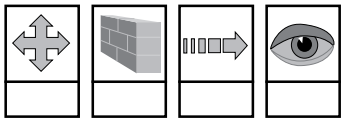
Consumption:

Costs (e/m):

Max.Group strength:

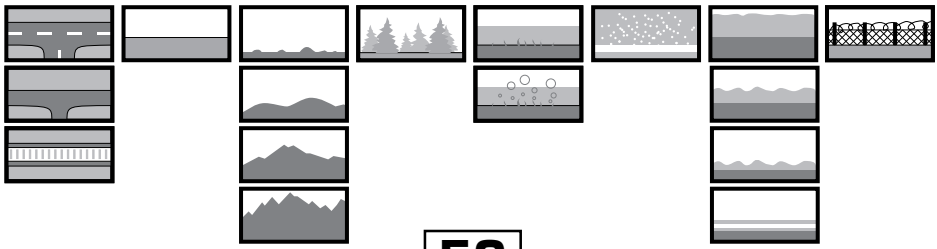
Action Ports:

	Specification	#	Range						
A									
B									
C									
D									



Description:

Deployment



Weight:

Tank volume:

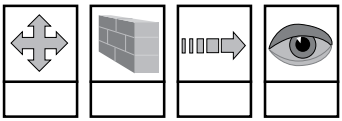
Consumption:

Costs (e/m):

Max.Group strength:

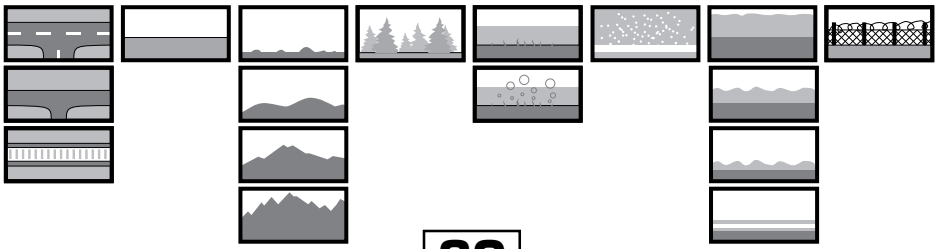
Action Ports:

	Specification	#	Range						
A									
B									
C									
D									



Description:

Deployment



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1.) Hardware Requirements

In order to play Battle Isle you need the following hardware:
A 100% IBM(TM)-compatible 386, 486 or Pentium(TM)-computer;
A VGA compatible graphics system;
At least 4 MB memory, or more precisely:
- 2.3 MB free EMS memory;
- 580 K free DOS memory.

If you have bought the CD version you will need to have at least 6 MB free disk space on your hard drive, as well as a CD-ROM drive.

If you are playing the disk version you will need 12 MB of hard disc space, as well as a 3.5" HD drive.

Optional Hardware Support

BATTLE ISLE 2 supports the following optional hardware:

A mouse.

If you have more than 4 MB of memory available, you should use the extra amount for SMARTDRIVE. We generally recommend allocating as much memory as possible to SMARTDRIVE.

The following sound cards (all TM) are supported:
- AdLib music synthesizer card
- Adlib Gold music synthesizer card
- Creative Labs Soundblaster
- Creative Labs Soundblaster Pro
- IBM internal speaker
- Media Vision Pro Audio Spectrum B
- Media Vision Pro Audio Spectrum Plus / 1B
- Roland MT 32 and compatibles
- General Midi
- Tandy 3 Voice internal sound.

2.) Software Requirements

In order to play BATTLE ISLE 2 you need to have the following software installed in your computer:
- MS DOS version 5.0 or a 100% compatible operating system. We strongly recommend MS DOS 6.2.
- If you are using the CD-ROM version, you will also need the MSCDEX driver or one that is 100% compatible.

Optional Software Support

SMARTDIVE is supported and recommended.

3.) Getting ready to install the game

Before installing BATTLE ISLE 2 please make sure that you are running your operating system under the configuration described below. In this context <path> stands for the full path name in your DOS directory, e.g. C:\DOS.

The CONFIG.SYS file

The following lines must be included in your CONFIG.SYS file:

```
DEVICE=<path>\HIMEM.SYS
dos=high,umb
files=40
DEVICE=<path>\EMM386.EXE aaaa ram D=64
```

These lines configure your EMS memory, and 'aaaa' stands for the size in kilobytes of the configured EMS memory. The lowest figure which can be entered here is 2300.

There is also a line here which loads the CD-ROM driver most appropriate for your computer. This line is specific to your drive and is inserted by the installation software. You should not attempt to change this line in any way.

Your mouse driver will be loaded either here or in AUTOEXEC.BAT.

The AUTOEXEC.BAT file

All resident programs should be loaded into high memory (with LH).

If you have not loaded a mouse driver in your CONFIG.SYS file you must do so here.

The Microsoft CD-ROM MSCDEX interface will also be loaded here. The appropriate line will have been added by the installation program which came with your drive and should not be altered in any way.

The following prompt will load the drive cache program, SMARTDRIVE:

```
LH C:\DOS\SMARTDRV.EXE <DRIVES> aaaa
```

<DRIVES> stands for all the drives which are to be buffered. You should indicate here the drive on which the installed game is stored. If you have MS DOS 6.2, then please remember that from this version onwards the buffering of CD-ROM drives is supported. Your CD-ROM should therefore

be part of the list.

'aaaa' indicates the amount of memory in kilobytes which is available for SMARTDRIVE. If you have more than 4 MB available then any amount above that should be allocated to SMARTDRIVE. If you have just 4 MB available allocate 512 k to SMARTDRIVE.

4.) Installation

In all of the following text <RETURN> means that the RETURN key must be pressed.

Installing the game to hard disk

Insert the BATTLE ISLE 2 CD in your CD-ROM drive.

Make sure that your CD drive is the current drive. Should its designation be 'E', then type E: followed by <RETURN>.

Type INSTALL <RETURN>.

After the installation program has started you will be asked where you want to install BATTLE ISLE 2. Press <RETURN> if you wish to go ahead with the suggested path or enter a different path, followed by <RETURN>.

When the menu has appeared, press <1> to start the installation or <ESCAPE> to cancel.

The installation program will inform you how much room there is on your hard disk and how much space BATTLE ISLE 2 will need. Press <RETURN> and answer the question which follows with <y> (Yes).

Should you wish to install a floppy version of the game, you will be asked from time to time to insert the next disk into your drive. Always confirm that you have inserted a disk by pressing <RETURN>.

Configuring to your hardware

After all the required files have been copied onto your hard drive the SETUP screen appears automatically. Here you will be asked to provide information about your hardware configuration.

At the top of the screen you should first indicate the sound card used by your machine. BATTLE ISLE 2 supports separate cards for FM (music) and for FX (sound effects), although one card will in fact support both (this is the normal case).

The card for music (FM) is set up in the left half of the screen and the one creating effects (FX) on the right. Go to the large dialogue box in the top left of the screen, using your cursor keys.

By repeatedly pressing the <RETURN> key you can then scroll through

all the sound cards supported by BATTLE ISLE 2. Keep pressing until your sound card appears.

Should the settings for your sound card be different from the standard ones indicated, you merely have to enter the correct values into the appropriate boxes. To help you in this please consult the manual which came with your sound card.

Next choose the "Action“ button below and press <RETURN> so that ON appears. Your sound card has now been activated. If at some later stage you prefer to play without sound or music, you can, at any time, switch the action button to OFF.

Now repeat this process on the right hand side for your FX output.

The next step is to enter the path for your CD-ROM drive via the large dialogue box in the lower half of the screen. Highlight the uppermost of the two boxes there, the one labelled CD PATH. If you are installing a CD version of the game, the name of your CD-ROM drive must be entered here. If, on the other hand, you are installing a disk version, then this box should remain empty. The second box, "NETWORK PATH“, is intended for future extensions to the game and should be left empty.

Once you have entered all the information correctly, highlight the OK button at the bottom of the screen and press <RETURN>. The setup information is now stored. If, on the other hand, you have changed your mind about any of the information, simply choose ABORT and press <RETURN>. The configuration will then be cancelled and your entries deleted.

If you have chosen ‘OK’, the installation program will then check to see that your entries for the sound cards are correct. It is unfortunately possible, that due to incorrect information having been entered, some sound cards will cause the installation program to block at this point. If this happens, then please read the section entitled „Installation Program blocked“.

If all the installations are correct, you will receive a message confirming this. Otherwise you will be prompted to start the installation afresh and enter the correct values.

The program will then check to see whether your CD drive is accessible. Should you receive an error message at this point then please read the section entitled „Path not accessible“.

You will now be presented with the main menu of the installation program. Choose <1> if you want to change any of the information you have entered or press <ESCAPE> to quit the installation program.

5.) Starting the Game

First you must switch to the drive and the directory which contain the installed game (i.e. not the CD).
For example:

C: <RETURN>
CD\BLUEBYTE\BI2 <RETURN>

Next type BI2 in the command line and press <RETURN>. If you want to skip the credits and go directly to the program then type BI2 FAST <RETURN>.

If you have General Midi sound hardware and want BATTLE ISLE 2 to use this with optimum effect, then start the program with BI2 GM or BI2 GM FAST.

6.) Subsequent changes in configuration

You can change your hardware configuration any time you wish. To do so, go into the directory where the game is installed (i.e. not the CD, but, for example C:\BLUEBYTE\BI2). Then enter the following:

C: <RETURN>
CD\BLUEBYTE\BI2 <RETURN>
INSTALL <RETURN>

The by now familiar installation program will then appear. Choose <1> to indicate that you wish to make changes to your configuration or <ESCAPE> to quit the program.

7.) Problems

Installation program blocked

This can happen if you have entered wrong parameters during the SET-UP sequence, i.e. the values you have entered do not match those on your sound card. Normally, the installation program will spot this and give you a warning, but should your system cease up, then simply reboot your machine, start the installation program afresh and enter the correct values after you have consulted the manual for your sound card.

Path not accessible

This message appears when you have entered a non-existing path name during the SETUP sequence. Check to see if your entry has been typed correctly.

The message may also appear if you have entered the correct information, but there is no CD in the drive. In such cases the message should be ignored.

Installation program does not show path name automatically

Normally, the installation program will recognise your CD drive from the previously loaded driver.

Should the dialogue box remain empty, even though a CD drive is connected, then you should check if a CD driver has been included in your CONFIG.SYS and Microsoft MSCDEX in your AUTOEXEC.BAT files.

No sound, no music

Start the installation program and make sure that the appropriate card has been activated (Status Button should be ON). Also check that the settings entered during the installation sequence correspond to the hardware settings of your sound card.

If in doubt, use the settings for "Creative Labs Soundblaster“ for both the music and FX, since many sound cards are compatible with these settings.

Game starts, but crashes almost immediately

First you should check that the CD path name has been entered correctly during installation.

You should also turn off both music and sound effects, using the installation program.

If the game still does not start, check that you have enough DOS and EMS memory. To do this go into DOS, type MEM and press <RETURN>. Look at the lines "Maximum executable memory for program“ and "Free extended memory“. The values shown must be at least as big as those indicated under "Hardware requirements“. If one of the entries is a smaller figure, then please read the next section.

Too little DOS memory

Remove all resident programs, all unnecessary drivers and anything else you do not require from your CONFIG.SYS and AUTOEXEC.BAT files.

For example, you do not need a keyboard driver or keyboard stacker in

order to play BATTLE ISLE 2. Only those drivers and programs mentioned in the chapter "Getting ready to install“ should be loaded.

You can also try to reduce the memory requirement of the MSCDEX program by going into AUTOEXEC.BAT and reducing the number behind the parameter /M. This figure indicates the size of the buffer used by MSCDEX. If you have more than 4 MB of accessible memory you can also try to use the parameter /E as an alternative. This value determines the buffer in extended memory and can also be used to release DOS memory.

Too little EMS memory

Check if resident programs which use EMS memory have been loaded, e.g. SMARTDRIVE. If you have 4 MB of memory, you should not allocate more than 512K to SMARTDRIVE. If you have more than 4Mb you should allocate 4 MB to SMARTDRIVE and the rest to BATTLE ISLE 2.

BATTLE ISLE 2 requires at least 2.3 MB EMS memory for itself!

You should also check whether AUTOEXEC.BAT contains the parameter /E which is the trigger for the MSCDEX program. If you leave out this parameter, MSCDEX will not use any extended memory and use DOS memory instead for its buffer.

The game runs slowly or jerkily

This problem can occur when the FX software clashes with the way some sound cards react with the sound output device. Run the installation program, choose SETUP and set the "Action“ button on the right , i.e. the FX, to OFF.

Hardware and software incompatibilities

If other memory managers than EMM386 are used, problems can arise. In such cases use Microsoft’s EMM386.