

MISSION BRIEFING
&
ACC EPSILON
OPERATIONS GUIDE

TOP

SECRET

CARRIER COMMAND MISSION BRIEFING

Copyright © Realtime Games Software Limited 1988

Copyright subsists in all Rainbird software, documentation and artwork. All rights reserved. No part of this software may be copied or transmitted in any form or by any means. This software is sold on the condition that it shall not be hired out without the express written permission of the publisher.



RAINBIRD SOFTWARE

74 NEW OXFORD ST. LONDON WC1A 1PS, ENGLAND

Rainbird and the Rainbird logo are trademarks of British Telecommunications plc.

Rainbird and the Rainbird logo are trademarks of British Telecommunications Plc

INCOMING SUB-ETHA FACSIMILE...**FROM:** FLEET ADMIRAL GEORGE H. WHITTAKER**DATE:** 4th June 2166**TIME:** 15:37**ENTER OFFICIAL IDENTIFICATION SEQUENCE: *****
ACCEPTED.****DOCUMENT PROCEEDS:**

Commander, thank you for making yourself available at such short notice.

The following information is of a highly confidential and sensitive nature and must not fall into the hands of dangerous and irresponsible persons. I am, of course, speaking of politicians and journalists. This document has been prepared by Commander Sherwood, and only he, you and myself are aware of the full extent of this sensitive situation...

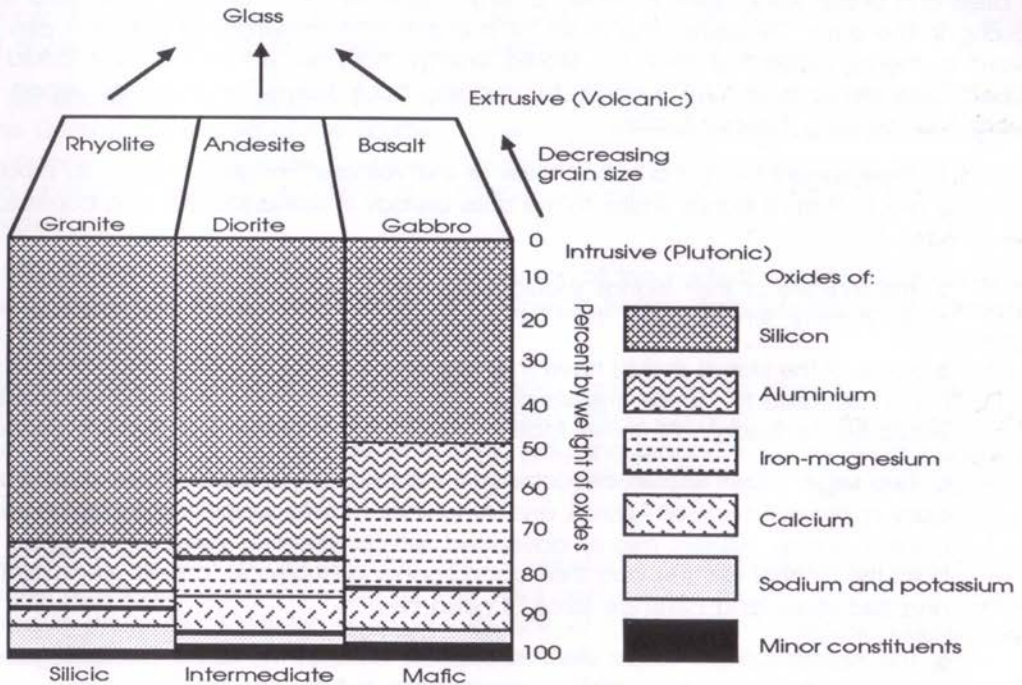
Document received 29 MAY 2166:

It is a little known fact amongst the general populace of this nation that almost three years ago the ship SS Delta made an exciting and economically miraculous discovery whilst on a routine tour of duty in the Southern Ocean.

The Delta is a member of our small fleet of Fuel Hunters - specially designed ships whose sole purpose is to scour the ocean bed, probing the silt and drilling into the rock, searching for the rarest commodities in the modern world - Fossil Fuels and essential industrial metals.

After reports of inconsistent air pressure and unpredictable tidal activity in an area 670 miles due west of Gamma Base, Delta discovered that a number of small volcanic islets had emerged from the sea and even more were emerging, due to a huge movement in the

Trellor and Avapola tectonic plates which were not expected to separate for at least another six thousand years. A number of eminent scientists who were sent to investigate the phenomenon reached the conclusion that the movements were probably due to the



Mineral Content of Island Lava Structures

multitude of underground nuclear weapon tests that were carried out in the late twentieth century, but the blame was never officially laid on any nation who had previously entertained a nuclear arsenal.

The press and public were never informed of anything other than a 'minor geological fault' occurring in the area. However, the team of scientists who investigated the fault also put forward a theory suggesting that the stored energy trapped within the fault could be 'tapped' and stored in a form suitable for shipping back home. The scientists' report put forward the following five-point plan:

1. There should be a 'controlled' leak of the volcanic magma energy, to produce a group of small islands similar to the ones already in existence, but of a controllable size.
2. The majority of the islands should be geologically encouraged to develop volcanic activity, which could then be controlled.
3. Some of the islands should have their volcanic activity inhibited, and these islands could be used to house the various Power Stations and Command Centres that would be necessary. All these facilities should be populated by service droids.
4. Two large vessels should be commissioned and developed. These ships would carry a detachment of Aircraft and Amphibious Tanks which would transport the Control Centre Builders (highly advanced self-constructing devices, designed to build the Control Centres and their accompanying buildings), collect raw materials, and also serve as a defence force, if need be.
5. The Aircraft Carriers would start on opposite sides of the island archipelago, and work towards 'populating' all the islands within a two year period.

With the whole planet in the midst of a colossal energy crisis, the government decided to

keep the entire matter secret, whilst proceeding with the simultaneous design and construction of the two Carriers, and the controlled development of the archipelago of islands.

The Carrier commission was given to the giant Draziw Industries Corporation, as they were the only contractor who were in a position to develop the aircraft, tanks, Command Centres, and ancillary service droids necessary for operation within the Carrier.

The first carrier, the ACC Epsilon was completed eighteen months ago and set for sea trials in the Gamma Base area of the Southern Ocean. A number of significant modifications to the original design were made, and it was decided to make the Carrier totally computer and droid controlled, instead of having an onboard supervisory Commander as was originally intended.

Unfortunately, time was of the essence, and many of the agreed modifications could only be incorporated in the second Carrier, ACC Omega before both Carriers were required to start their duties.

Epsilon and Omega both set sail for the archipelago and anchored close to their designated "home islands", which had already been provided with a Command Centre, Power Station, a runway and a web of defensive weaponry, including ground to air missile launchers and high power chemical lasers. It was from the two home islands that the expanding network of occupied islands was to stem.

It was during the final sea trials of the ACC Omega that Draziw Industries' Assistant Chief Engineer was found dead in his office. The initial post-mortem showed that he had died of a massive stroke, but following a tip-off from one of K-16 section's agents, extensive tests showed that he had been injected with a previously undetected poison.

Covert enquiries began amongst the members of the Technical Division at Draziw. Suspicion fell upon one of the programmers working on ACC Omega, and within a week, he had

absconded. The following day, the Fleet Admiral received a document, a transcript of which is detailed below:

"...Whittaker - Your agents managed to discover our fiendish plan, but it's too late to stop it now.

The Control Computer software has been modified, and the ACC Omega is now under the direct control of the STANZA Organisation. Our demands are simple: If we do not receive payment of 15 billion dollars within 72 hours, the ACC Omega will be activated. It is now programmed to occupy and destroy all the islands, methodically..."

Our immediate action was to examine the control software of the ACC Omega. The software had indeed been modified, and the Omega could now be instructed to occupy an island using similar techniques originally developed for the planting of the Command Centre Builders. Once an Island was occupied, the Omega would move on to another island, and gradually spread its network, using the Manta fighter planes and Walrus amphibious assault vehicles to support the Carrier. The software also contained numerous inbuilt time-key encrypted tamper proof routines, so modification of the code was impossible within the given time limit, even with the advanced new Ocran Socrates series of reduced laser-gate computers. The risks were all too apparent.

The nuclear solution was rejected, since destroying the Omega would mean risking a greater disturbance of the geological plates, which could result in a major planet-wide catastrophe.

All the available agents in K-12 and K-16 sections were despatched to seek out members of Stanza, and following the capture and subsequent suicide of four Stanza associates, the deadline was cut by 24 hours. We now have until 12:00 tomorrow to either pay the ransom (and hope that control of the ACC Omega will be returned to us) or face the consequences of losing our only hope in the race to provide a source of energy to the people of this nation.

In the event of no solution being found by tomorrow, we may have a possible way of combatting the destructive forces of the Omega:

Our Chief programmer, Dr. Oliver Baird-Onions, believes that it may be possible to redirect the Omega's control system from its occupation task by engaging the Omega with the forces of the ACC Epsilon. It is hoped that the Omega's defensive systems will be activated, resulting in the island occupation slowing as it attempts to defend itself. Furthermore, it is highly likely that by occupying as many islands as possible using the ACC Epsilon, and taking control of Command Centres which have been constructed by the Omega's forces, the Omega will try to recapture islands, slowing its incessant spread.

We have calculated that the only way to actually halt the Omega is to either destroy it (only possible by weakening its resources and power) or occupy all the islands in the complex, including the Omega's heavily defended base island.

By modifying the Remote Reprogramming Pod, we have managed to create what is effectively a computer 'virus', suitable for dropping on Omega controlled Command Centres. The virus program will logically modify the Command Centre's operating system and turn an enemy controlled Command Centre into a friendly one.

It should be possible to actually destroy an Omega controlled Command Centre if you need to resort to totally destructive measures, although this would mean that you would have to build your own Command Centre from scratch, which is obviously more time and resource consuming.

There are three types of Automatic Command Centre Builder, each of which, when successfully deployed, will determine the island type that it develops. You will have to construct an island network which links to your Base Island, and also define a stockpile island to contain the weaponry, resources and equipment that your island network manufactures.

The structure of your network will control the speed at which equipment is shipped to the

stockpile island. It is also important to keep the Carrier relatively close to the stockpile island in order for equipment to be shipped to the Carrier as quickly as possible.

At all times bear in mind the fact that the enemy Carrier will be trying to construct its own island network, and it will also try to break up your own network to prevent weaponry and equipment being supplied to your Carrier.

I will leave the attack strategy entirely up to yourself, but the reports from the programming department indicate that it would be unwise to make an all-out assault upon the Omega, or its home island. The strategy most likely to succeed is based upon the principal of colonising a small group of islands around your home island, to create a 'safe area', then extend your network by creating protective clusters of islands, until you are in an advantageous position from which you can make an assault upon either the ACC Omega, or its home island.

A full Carrier Operations Guide has been included with this document, and I suggest that you read it fully during your journey before you rendezvous with the ACC Epsilon.

Good luck, Commander, and once again, thank you for accepting this challenging and dangerous mission.

...TRANSMISSION ENDS.

OPERATIONS GUIDE

This Operations Guide is split into four main sections - each section relating to one of the four icons which are found on the left of the game screen display. The fifth section (disk and program management) is described in the machine-specific user guide.

For each of the four sections on the left of the screen, a bank of five related icons are displayed on the right hand side of the display. For instance, selecting **Carrier Defence** results in the five icons for the **Laser Turret**, **Decoy Flares**, **Surface-to-Surface Missiles**, **Passive Defence Drones** and **Defence Information** being displayed.

For each of the five icon sections on the right of the display, a specialised control panel is displayed at the bottom of the screen.

Every time a new icon is introduced, it is shown on the page as well as being described in the text.

CARRIER CONTROL



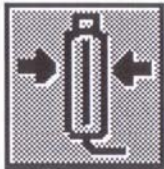
HELM



ROTATING THE CARRIER

The Helm is the Direct Control mode for the Carrier. By moving your control device left and right while in 'Control Mode', you are able to rotate the Carrier.

Click-ing on the **Centre Up** icon will result in the Carrier ceasing to rotate.

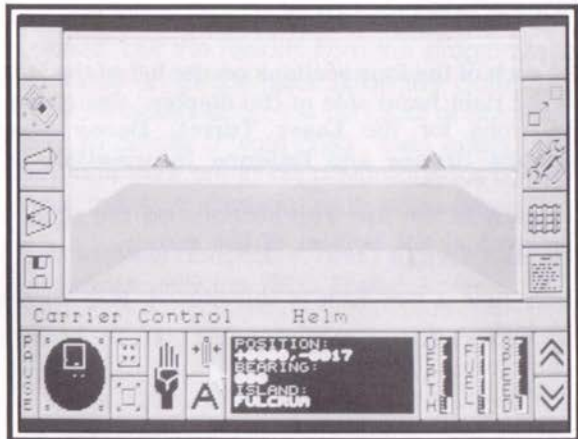


SPEED CONTROL

The Carrier can move both in forward and reverse. The Speed indicator is split into four major divisions - any speed above the first quarter means that the Carrier is moving forward, and anything below this mark represents reverse.



To change the speed, either click the accelerate or decelerate icons situated to the right of the Speed indicator, or directly click on the Speed indicator itself to set the desired speed. Because the Carrier is a very large and heavy vessel, it moves comparatively slowly, and takes time to build up (and decrease) speed. Clicking on the **STOP** icon will bring the Carrier to a halt.



The top speed of the Carrier, when operating on full power with all drones docked, and in deep water is 178 knots. With drones on station, an aircraft landing, or while the Carrier is anchored off an island in shallow water, the top speed of the Carrier will be limited to around 40 knots, and its maximum

speed in reverse is 22 knots. The Carrier's top speed is influenced directly by its damage status.

AUTOPILOT

By clicking on the **AUTOPILOT** icon, the Carrier will be automatically set on course as defined in the Carrier's Map Command section.

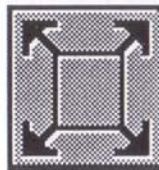


GROUNDING

The Carrier is equipped with an automatic Anti-Grounding computer whose sole purpose is to prevent the Carrier from running aground. If the Carrier is in danger of grounding, its engines will be thrust into reverse to move the Carrier away from the island. Please note that the Anti-Grounding computer will not prevent the Carrier from colliding with other vessels or craft.

RADAR

Positioned in the bottom left-hand corner of the screen is the ship's Short-range scanner display. Quite simply, it shows all tangible ground, sea and air based detail within the proximity of the Carrier, including the shore line of the islands, when within range. To the right of the radar are two icons - these are **ZOOM IN** and **ZOOM OUT**, and they allow you to select the magnification level of the radar from the four available.



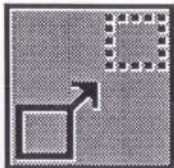
LOCATION STATUS DISPLAY

Situated in the bottom centre of the screen is the Carrier's Location Status Display, which contains information relating to the current position of the Carrier using the standard X,Y coordinates format, the current bearing of the Carrier in degrees, and the island (if any) of which the Carrier is in range.

FUEL USAGE

The Carrier's own fuel usage allows it to travel approximately 420 kilometres (the distance of two map grid squares) on a full complement of fuel. Additional refined fuel will be shipped back to the Carrier via the Resource Network, which will be your only salvation if you run out of fuel.

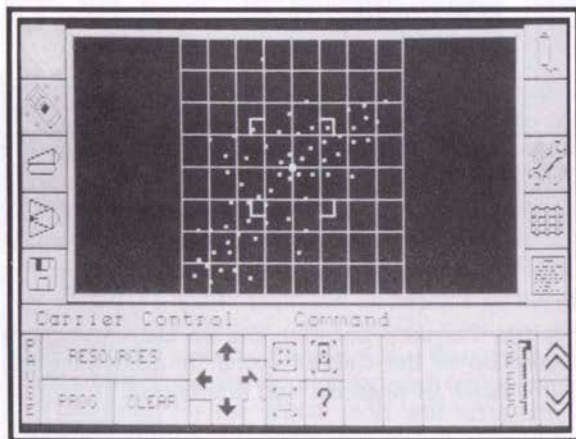
CARRIER NAVIGATION



The Carrier Navigation section is the main map control section within the Carrier environment. From within Carrier Navigation, you can plot and program the course of the Carrier, find out information about the islands, and monitor the Resources network. At the beginning of the conflict, the Carrier is situated at the bottom left of the map, and the enemy Carrier is situated at the top right, both anchored off their Base islands.

MAP MANIPULATION

The Carrier's Advanced Navigation Computer is accessible from three sections of the Carrier's control system - Carrier Command, AAV Command, and Aircraft Command.

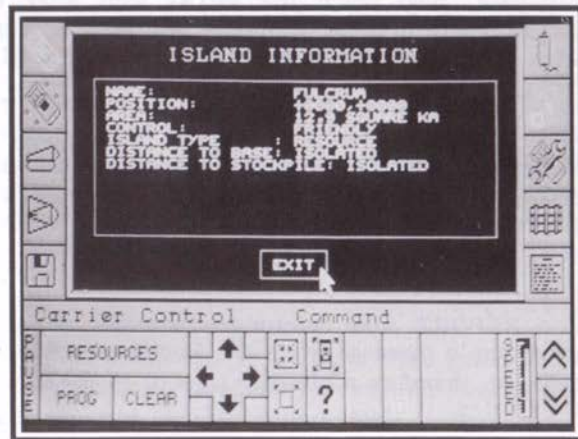
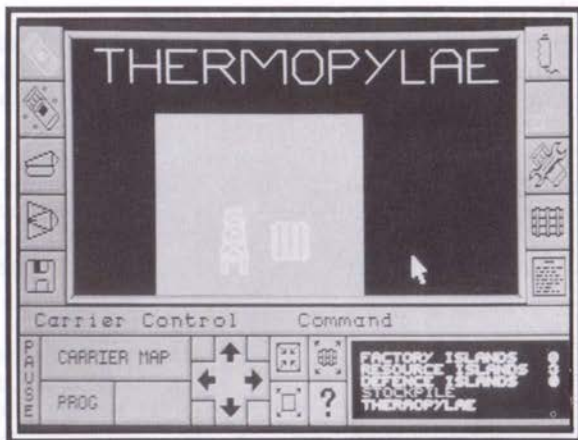


There are three 'alignments' for each island, which are Neutral, Friendly, and Enemy. These are depicted by use of different colours. For a list of these colours, please refer to the machine specific User Guide.

You can scroll the map in four directions by clicking on the four directional arrow icons. The map has eleven different levels of resolution - at the lowest level of resolution, the whole map can be viewed, and at the highest level, surface detail on individual islands can be seen. To change the magnification level, click on the **ZOOM IN** and **ZOOM OUT** icons, situated to the right of the arrow cluster. Alternatively, you can position the pointer anywhere on the map and click on the right-hand mouse button (or the SPACE BAR for joystick users, and those with a one-button mouse) - in effect this will centre the map display at the pointer position, and zoom in by one level of magnification.



If the map is centred on an island, you can click on the **INFORMATION** icon, which displays details about the island's name, position, size, who is currently occupying the island, etc



SETTING THE CARRIER'S COURSE

To set the destination for the Carrier, firstly utilise the map manipulation icons to zoom in to the required resolution, and then click on your chosen destination point. A small flashing diagonal cross-hair marker will be plotted at this point.

Next, you should select the speed at which you wish the Carrier to travel, by clicking on the **SPEED** icons situated at the bottom right of the screen. To program these settings into the



Navigation Computer, click on the **PROG** icon - a small disc with the letter **C** in the centre will appear to show the Carrier's destination point. Provided the Carrier is on Autopilot, and not on a collision course for an

island, it will immediately change its course and head for the programmed destination. If the Carrier is not already on Autopilot, hold down the **PROG** icon after the course is programmed, and the Autopilot will also be engaged. If you wish to clear a course program, click on the **CLEAR** icon.



Clicking on the **CENTRE ON CARRIER** icon will jump to the second highest resolution (unless you are at the highest resolution), and centre the display on the Carrier.



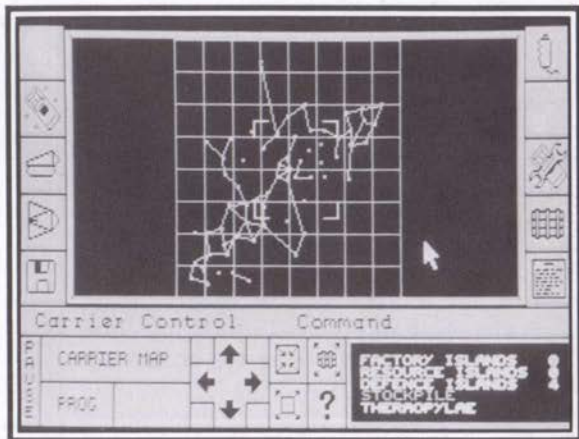
The **REPORT** icon determines whether or not the Navigation Computer generates a message when the Carrier reaches its destination. It is usually selected, therefore a message is sent to the message line and the Messaging Computer.

RESOURCE NETWORK

Clicking on the **RESOURCES** icon puts you in Resource Network mode. The main



map screen will show the network links between all the islands. It is this network that determines the speed at which raw materials are shipped to Factory islands, where weaponry and other equipment are constructed, and then shipped to the Stockpile island via a fleet of submersible cargo drones. The larger and more comprehensive the network, the more efficient the production and shipping of resources.



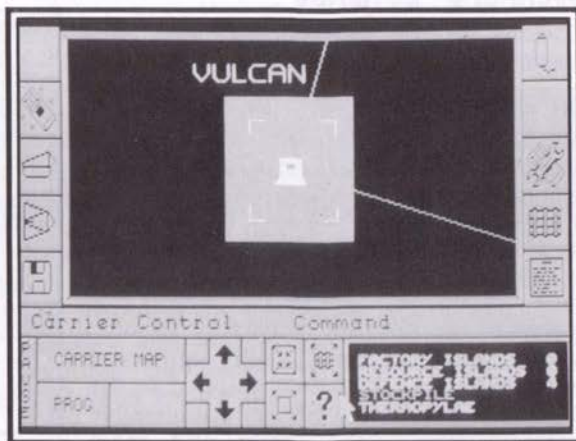
As you take control of a number of islands your network will spread across the map, and solid lines the colour of your forces will show the network links between each island. Owing to volcanic ridges and other geological features, the network can only maintain itself between certain islands, so if you take control of two islands close to each other, the network may not link them directly together. However, the network will show all links between islands captured by your forces and any other islands that it is possible to link up to by depicting them in the same colour as neutral islands (refer to your machine-specific user guide for this information).

NETWORK STATUS DISPLAY

Situated at the bottom right of the screen is the Network Status Display. This panel keeps track of how many islands are active in your network (i.e. how many Defensive, Factory and Resource islands) as well as showing which island is the Stockpile island.

THE BASE ISLAND

The Base island is where the Carrier is initially anchored when the conflict breaks out. This island is very important to you, as it is from here that you build up the Resource Network which serves your Carrier and other forces throughout the rest of the battle. The Base island already has a Command Centre constructed on it, and some defensive forces, as well as a runway. It is also capable of producing resources and equipment itself, at one quarter of the rate of a Resource or Factory island.



The Base island is also initially designated as the Stockpile island (see later in this Operations Guide for more information). Most importantly, the Base island controls the flow of supplies throughout the whole network. If the Base island is taken over by the enemy, the whole network will 'freeze' - no new supplies will be shipped around the network, although supplies already on their way will try to reach their destination.

Unless other islands under your control are networked to the Base island, they will not construct anything once their ACCB has been built, neither will the ACCB be able to repair anything on the island that has been damaged.

RESOURCE ISLAND

Resource islands are constructed by planting Resource ACCB's (Automatic Command Centre Builders - see the AAV Direct Control section for more information) on unoccupied islands. Once the Command Centre has been built, it then constructs mines, rigs, fuel dumps and ancillary buildings to store the mined raw materials. These raw resources are then shipped via the Resource Network to Factory islands, where they are used to

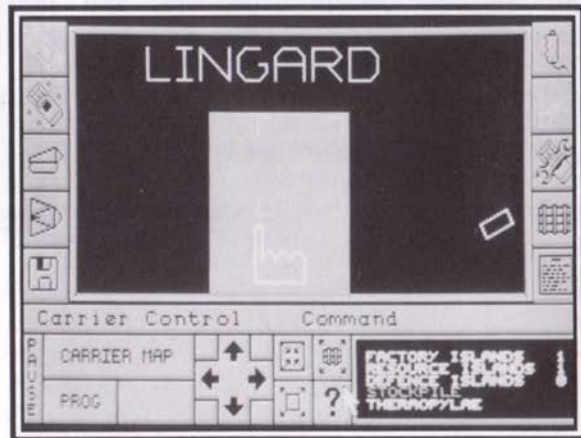
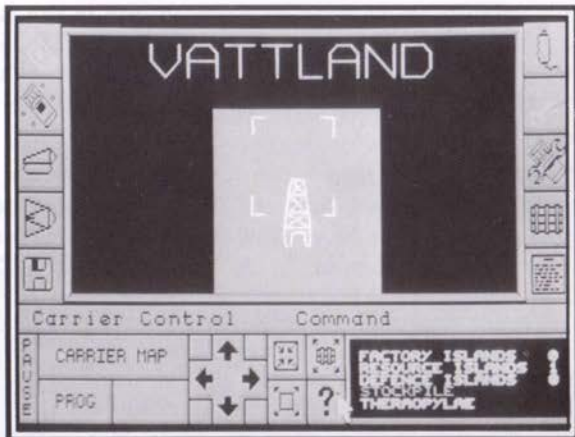
manufacture weaponry, refined fuel, and other equipment required by the Carrier's forces.

If a Resource island loses its network link to the Base island, it will stockpile resources on the island until it reaches its maximum storage capacity, but these resources will not be shipped to the Factory islands. The island's Command Centre will also cease to construct oil rigs, fuel dumps and defences, as well as stopping all repairs to these buildings.

FACTORY ISLANDS

Factory islands are constructed by planting Factory ACCB's on unoccupied islands. A completed Command Centre then constructs factories to manufacture equipment and refine fuel for the Carrier's forces, and warehouses for storage of these supplies. Up to three factories can be constructed on an island, depending upon the physical size of the island, and the number of factories directly influences the quantity of supplies that are manufactured.

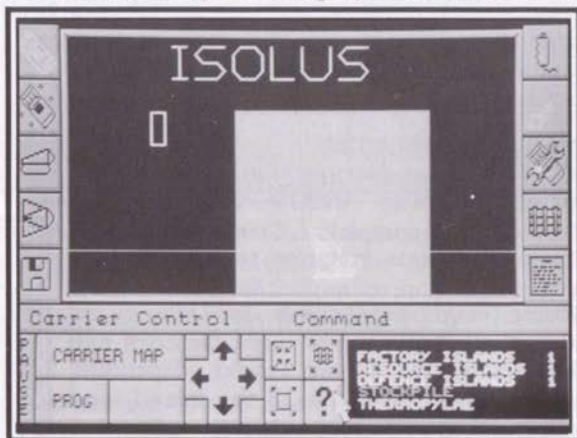
The completed supplies are shipped to the Stockpile island via the Resource network. Factory islands are capable of producing resources at one quarter of the rate of a dedicated Resource island.



If a Factory island loses its network link to the Base island, it immediately ceases to produce supplies, although it carries on the production of Resources, stockpiling them until it reaches its maximum storage level. The island's Command Centre will also cease to construct factories, warehouses and defences, as well as stopping all repairs to these buildings.

DEFENCE ISLANDS

Defence islands are different from Resource and Factory islands in the sense that they do not primarily produce anything. They are constructed by planting Defence ACCB's on unoccupied islands. A completed Command Centre constructs a number of defensive stations, including a Marauder unit (a squadron of droid-controlled flying drones which are extremely agile and are armed with deadly heat-seeking missiles), sea-facing missile launchers, ground-to-air missile launchers, and runways on islands which are large enough, to enable you to refuel your Manta aircraft. Defence islands can produce resources at one eighth the rate of a dedicated Resource island.



THE STOCKPILE ISLAND

The Stockpile Island is the island where all constructed weaponry, fuel and equipment is shipped by the Resource Network. From there, a Supply Drone



ferries the cargo back to the Carrier itself (providing there is room on the Carrier for the cargo). The

CENTRE ON STOCKPILE icon will always centre the map on the Stockpile, and

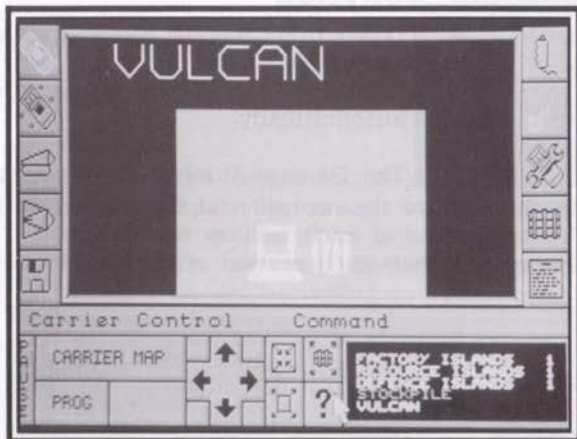
zoom in to a suitable resolution.

Any island under your command can be the Stockpile island provided there is a network link to the Base island, and it is

advisable to make sure that it is well defended (i.e. make the surrounding islands Defensive).

If the connection between the Stockpile island and the rest of the network is broken, no new resources are being stockpiled, and you have a tactical decision to make. You can wait until the Supply drone has ferried the remaining stockpiled cargo back to the Carrier, and then instruct another island to become the Stockpile. Alternatively, you can immediately instruct another island to become the Stockpile to ensure that new resources are being shipped, in which case any resources on the old Stockpile island will be lost.

To instruct a new island to become the Stockpile, centre the map on the chosen island, and then click on the **PROG** icon.

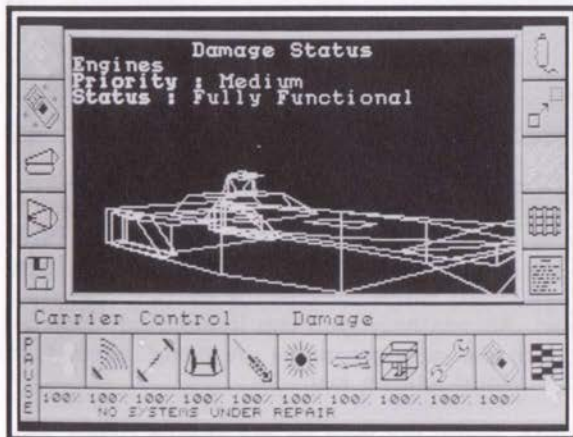


DAMAGE CONTROL



Owing to its cellular composition which is modelled on a similar structure to carbon-based life forms (the structural definition of the each section of the Carrier is stored within every cell), the Carrier is able to repair itself automatically.

The Damage Control Computer is the core of the repair system which is fundamental to the operation of the Carrier within a battle environment. It monitors the damage status of each section of the Carrier, and then instructs the Automatic Repair System to repair each section of the Carrier according to user-defined priorities.

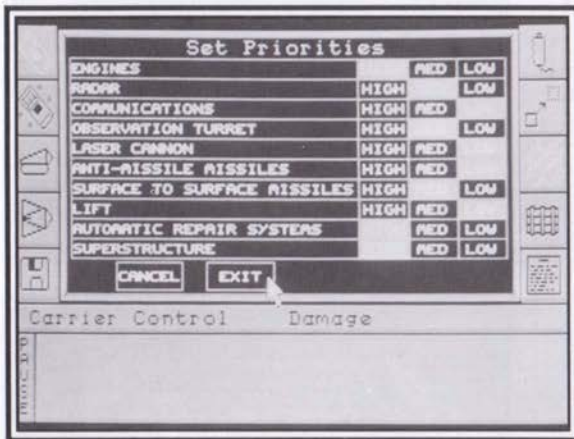


Selecting the Damage Status screen results in the computer displaying a rotating three dimensional wire-frame representation of the Carrier, below which is a row of icons, each assigned to one of the major sections of the Carrier, and each accompanied by a 'functioning level' percentage value for the section. If an icon is selected, a graphic representation of the section is highlighted within the ship, along with an information box containing the following details:

Carrier Section
Repair Priority
Repair Status
Condition

(E.g. Observation Turret)
(Low, Medium, High)
(Fully functional, Under Repair)
(Operative, Inoperative, Reduced Efficiency)

Below the list of Section percentages is the Current Repair Level, which shows which Priority sections are in the process of repair. By clicking on the 'Set Priorities' icon to the right of the Carrier section icons, you are able to select the repair priority for each section. The priorities available are **HIGH**, **MEDIUM**, and **LOW**.



It is a good idea to always keep the **Automatic Repair Systems** setting on high, as this is the section which repairs the rest of the Carrier sections. The other priorities should be set according to your current combat state. For example, if the Carrier is stationary, but under attack from enemy aircraft it is beneficial to put the **Laser Cannon** and the missile systems on High Priority, and other sections such as the Engines on a low priority.

The Automatic Repair Computer will repair high priority sections first, spreading the repair time evenly between all the sections. Once these have been repaired it

will set about repairing all medium priority sections, and then all low priority sections. Many sections will be operative when their repair level is over 50% - however, they will function with reduced power and efficiency.

STORES



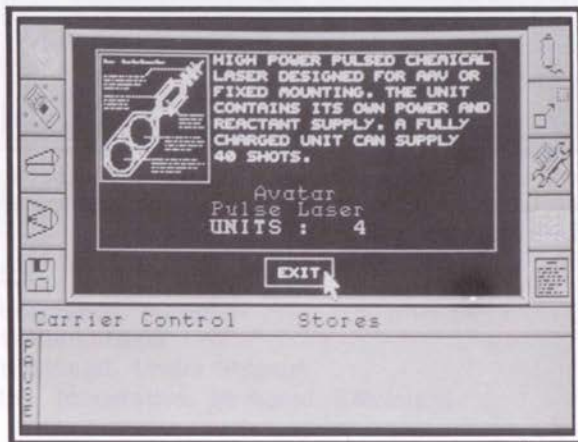
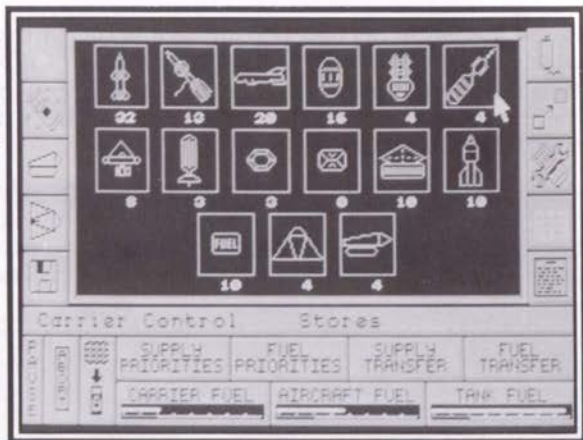
EQUIPMENT STORES

The Carrier's Hold contains the stores and fuel supplies, and they are managed by the electronic Quartermaster computer.

An icon represents each of the various kinds of weaponry, vehicles, materials and other equipment contained in the stores, and displayed below each icon is the quantity available.

By clicking on an icon, the display is expanded to present information about the item in question, as well as a detailed diagram. To return to the main stores screen, click on the **EXIT** box.

New equipment is manufactured on the various islands that are controlled by your forces, from the raw materials that are mined and refined on each island. Once the equipment has been built, it is shipped back to the Carrier via the safest shipping lines, and then added to the stores.



FUEL STORES

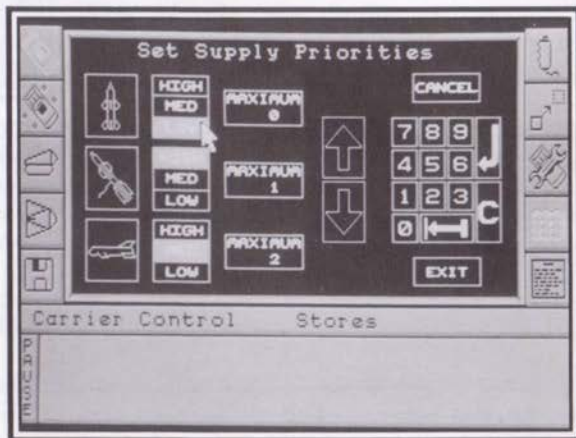
At the bottom of the screen are displayed a bar indicator for each of the three types of fuel stored in the Carrier: Aircraft fuel, AAV fuel and Carrier fuel.

Replacement fuel supplies are refined and shipped back to the Carrier via the island network complex.

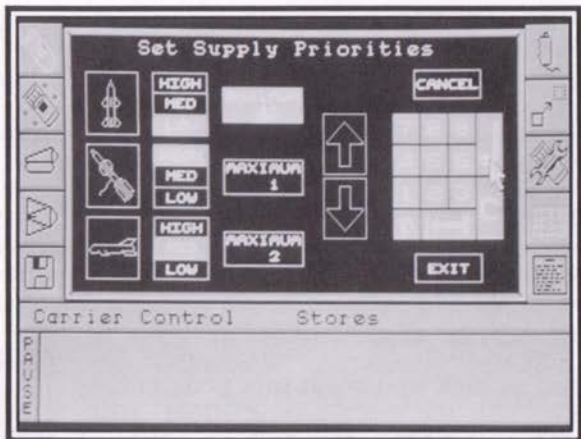
SUPPLY PRIORITIES

Clicking on the **SUPPLY PRIORITIES** icon puts you in the Set Supply Priorities screen. This section is used to set the rate at which the Resource Network manufactures replacement weaponry and equipment. Click on the large upward and downward facing arrows to cycle through the available resource types.

Next to each equipment icon is its Priority Box, with the three setting **HIGH**, **MEDIUM**, and **LOW**. The Resource Network manufactures all equipment which is on High priority initially, and then builds anything on Medium priority, and finally anything on low priority. To set the priority level, simply click on the words **HIGH**, **MEDIUM**, or **LOW**.



To the right of the Priority Box is the Quantity Box - this shows the maximum quantity that is to be constructed for the piece of the equipment. To change this value, click on the box (it will highlight) and then enter the new value between 0 and 999 by clicking on the numbers on the numeric keypad on the screen. Next to the 0 key is a delete button, and to the right of the numbers 3 and 6 is a Cancel button which will undo any change to the initial value. Above the Cancel button is the Enter button, which you should select when you have finished inputting the quantity required.



Use the above procedure to set the priorities and quantities for all the equipment resources that you require. Once you have set these values, the Base island Command Centre assigns a factory on one of the Factory islands to produce one of equipment types that has been set on high priority. If there are available factories after all the high priority tasks have been set, the medium priority tasks are assigned, and then the low priority tasks.

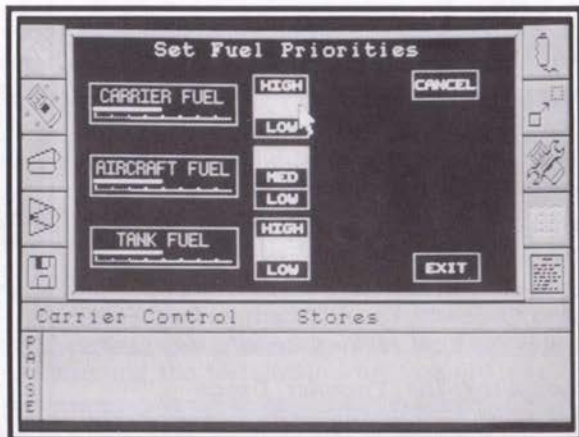
Manufactured supplies are shipped to the Stockpile island, and the quantities defined in the Set Priorities section are always maintained whenever possible.

Clicking on the **CANCEL** box will undo all changes made since the Set Supply Priorities screen was selected, and clicking on the **EXIT** box returns to the main Stores screen.

FUEL PRIORITIES

The three types of fuel can be prioritised in the same way as equipment resources. You can set the fuel to be produced at **HIGH**, **MEDIUM**, or **LOW** priority, and it will be produced in that order.

Clicking on the Cancel box resets everything to its state when you entered the Fuel Priorities screen, and click on the Exit box returns to the main Stores screen.

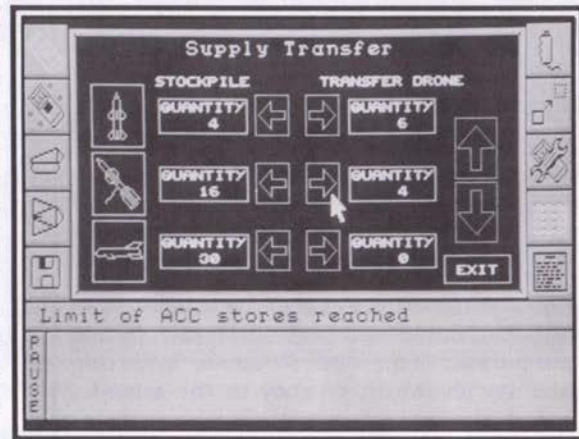


SUPPLY TRANSFER

All manufactured equipment is transferred from the factory islands to the Stockpile Island, where it is held until the Carrier requires fresh supplies. This section enables you to transfer supplies from the Stockpile Island to the Transfer Drone, which ferries the supplies to the Carrier.

To transfer the supplies, the Carrier must be in range of the Stockpile Island. If it is not in range, or if the Carrier's communications are damaged or at fault, you will not be able to access the Transfer screens.

Click on the left and right arrows to move supplies from the Stockpile Island to the Transfer Drone - you will be informed if you exceed the Carrier's Stores limit or the Transfer Drones's maximum cargo quota.



To exit the Supply transfer screen, click on **EXIT**.

FUEL TRANSFER

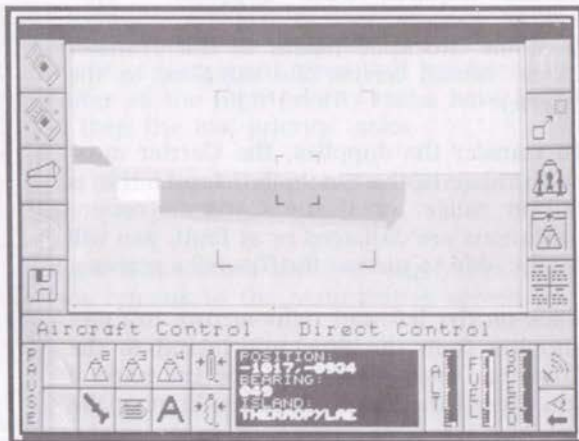
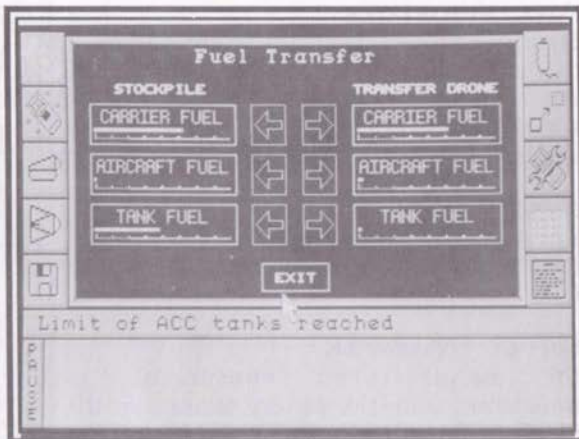
The Fuel Transfer screens allow you to load the Transfer Drone with fuel for the Carrier, AAV's and aircraft.

Click on the left and right arrows to select the quantities of fuel for the Transfer Drone, and click on the Exit box when you have finished. You will be informed if you reach the limit of the Carrier's fuel tanks.

Launching the Transfer Drone

Once the Transfer Drone has been loaded with supplies and fuel, clicking on the **LAUNCH** icon, situated at the bottom left-hand corner of the control panel sends the drone from the Stockpile island to the Carrier, provided the Carrier is within range of the Stockpile island. The Transfer Drone leaves the Stockpile island and docks with the bow of the Carrier.

After the Transfer Drone has docked with the Carrier and transferred its supplies, it heads back for the Stockpile island. As a defensive measure against the enemy, the Transfer Drone has been designed to be semi-submersible, and it sinks into the water on its return journey to the island.



Please note that while the Transfer Drone is docking with the Carrier, the launching and docking of AAV's and Passive Defence Drones is disallowed, although you can watch the docking sequence from the AAV Traffic Control screen.

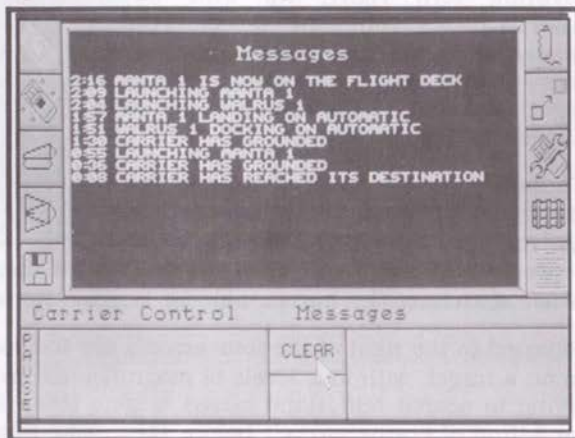
If the Transfer Drone comes under attack while docking with the Carrier, clicking on the **ABORT** icon sends it back underwater and returns it to the Stockpile Island, where it is safe from the enemy.

MESSAGING



The Carrier is equipped with a comprehensive message reporting facility. Every time an important message is generated by one of the Carrier's onboard computer systems and displayed on the central message line, it is also sent to the Messaging Computer. By selecting the Messaging icon, you are able to read the last sixteen messages received within the previous five minute period, as well as how long ago the message was reported.

By clicking on the **CLEAR** icon, you will clear the message screen completely.



CARRIER DEFENCE

LASER TURRET

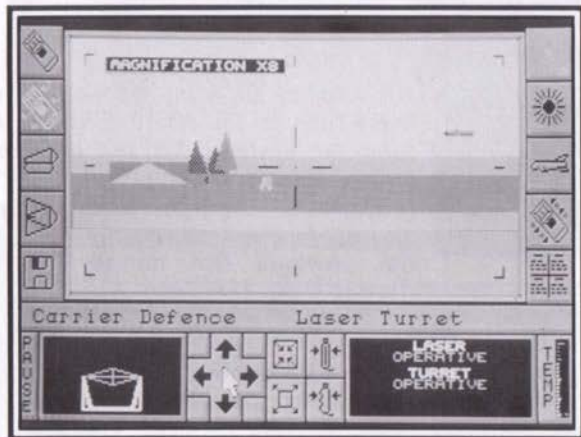


Mounted on the top of the Carrier is a rotating turret supporting a high-power chemical laser. The turret is manoeuvrable in two axes - it can rotate by 360 degrees, and also elevate up and down.

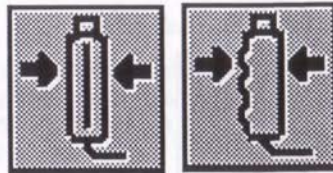
The turret can be moved in direct control mode, simply by moving the mouse or joystick left, right, up and down. Alternatively, you can select Pointer mode, which enables you to click on the four arrow icons to position the laser sight, and click in the centre of the arrow cluster to fire the laser.

To help you keep track of the position of the turret while you are aiming its sights, the Carrier's targeting computer shows a representation of the turret in the bottom left hand corner of the display, and is of great use when searching the barren sky for enemy aircraft and missiles.

Situated to the right of the four arrows are the zoom control icons. These allow you to zoom in on a target, with four levels of magnification from x1 to x8. This is extremely useful when trying to search out island based targets from the Carrier, and is also useful for accurate targetting of enemy aircraft before they come into the range of the Carrier's other defences.



To the right of the zoom icons are the **CENTRE HORIZONTAL** and **CENTRE VERTICAL** icons, which simply bring the laser turret to a standstill in either the X or Y axis.



The laser itself is of the high power, long range dual beam variety, and since it is directly powered from the Carrier's neutron drives, it is extremely potent when used against almost all targets.

On the far right of the control panel is the laser temperature gauge. Every time the laser is fired, the laser mechanism generates a tremendous amount of heat - if the laser temperature rises too much, the laser will function firstly with less power, and finally it will fail. If the laser temperature rises into the danger area, you should allow it to cool sufficiently before using it again. Set the repair priority for the laser gun to High in the Damage Control screen, if it should fail to function.

On the left hand side of the screen is the information panel. This tells you the current status of the turret itself, and the laser cannon, as well as providing warning messages when the laser starts to overheat.

DECOY FLARES

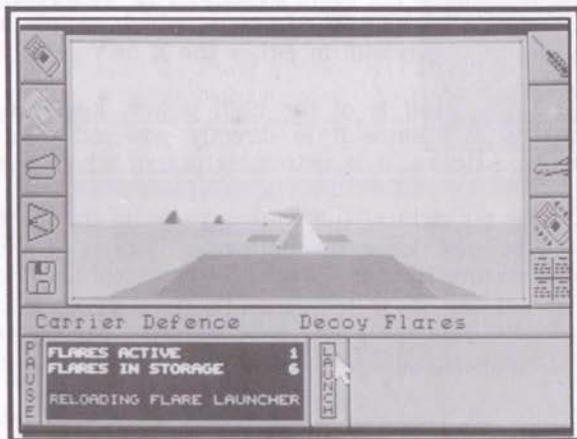


An integral part of the Carrier's air defence system are the Decoy Flares - these are high intensity magnesium - composite based devices which are launched from the Carrier deck into the sky above in an attempt to divert incoming enemy heat-seeking missiles which have been trained on the Carrier. The flares are automatically tracked by a wide-angle lens camera mounted on the Carrier.

To fire a flare, simply click on the **LAUNCH** icon. A flare will be sent high into the sky, and then slowly descend back down to earth. Because of the lightness of the composite metals, the flares are likely to drift away from the Carrier, depending upon the direction and strength of the wind.

Multiple flares may be launched, but it takes a few seconds for the flare launcher to reload. The flare tracking camera will automatically follow the most recently launched flare.

The information panel to the left of the **LAUNCH** icon shows the number of flares currently active, and the number of flares which are held in the Carrier's stores, as well as a message line which will tell you whether or not a flare can be launched.



SURFACE TO SURFACE MISSILES



Because of the Carrier's ability to anchor in very shallow water off an island, the revolutionary and technically advanced "Hammerhead" low flying remote surface-to-surface missile facility has been incorporated in the Carrier's defensive systems, in order for it to be able to attack island based defence stations and enemy shipping.

The Carrier is equipped with a number of Remote Viewing Drones, which can be launched above the Carrier one at a time. The drone relays an aerial image back to the Carrier, and while it is airborne you can aim and launch multiple surface-to-surface missiles at any target within range of the drone.

Click on the **LAUNCH** icon to send a Viewing Drone up. Once the drone attains its optimum altitude, it will slowly drift downwards, until it self-destructs prior to reaching sea level.

During its descent, you can launch surface to surface missiles by clicking on the right mouse button (or by pressing the Space Bar if you are using a joystick), to select Targetting Mode. The cursor will change shape to a cross-hair.

Move the cross-hair cursor over the target and press the fire button to launch a missile. The missile flies at the same height as the Carrier, so it is not particularly effective against moving targets such as aircraft, which can change altitude.

Once a missile has been fired, it takes a few seconds for the missile launcher to prepare itself for another missile. During this time, move the cross-hair over your prospective target, and fire as soon as the missile launcher is ready.

There are a limited quantity of both missiles and Viewing Drones, although these can be replenished by directing the island network factories to manufacture replacement missiles and drones. The bottom left hand section of the control panel gives a visual indication of the number of missiles and drones available, and status lines informing you whether they are ready for launch, or reloading.

DRONE POSITIONING

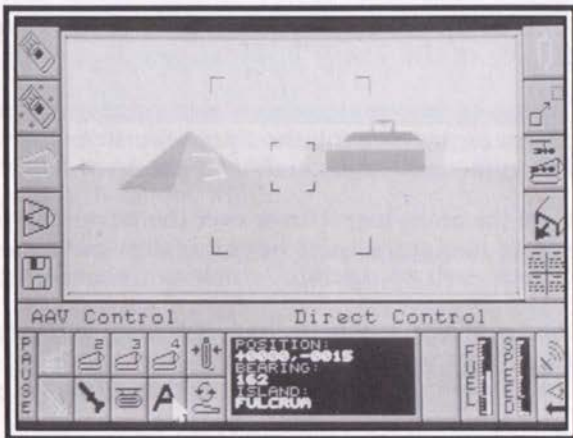


Drones are inflatable decoy units, designed to provide a sacrificial defence against enemy AAV and low level missile attack, and they are remotely controlled from the Carrier Defence Computer. Drones automatically follow the Carrier as it moves around and their configurations can be reprogrammed at any time.

In the event of an enemy projectile entering close proximity of a drone, the drone will generate a heat field, as well as a surrounding shield of electromagnetic interference, in an attempt to convince the projectile's guidance system that it has reached its target, thus preventing any damage to the Carrier.

Any direct contact with a Drone will result in the immediate detonation of the highly packed explosive which is encased within its inflatable shell. The pressure sensing mechanisms built into the Drone will prevent detonation if a large wave or sea creature were to come into contact with its surface.

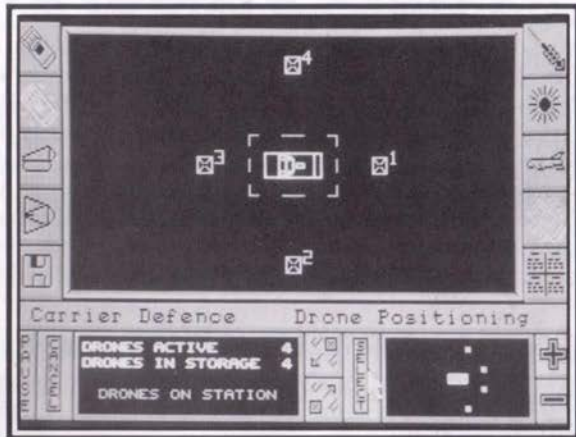
The Carrier is initially equipped with eight Drones - four active and four in the ship's stores. If a Drone is destroyed, a replacement can be brought into position from the stores. The Resources network will manufacture replacement drones and transport them back to the Carrier, depending upon the availability of raw materials throughout your island network.



By selecting the Drone Positioning screen, you are able to move the Drones around into your own strategic positions.

The bottom left-hand section of the screen consists of the Drone Information panel. This window displays the number of active drones, the quantity of drones held in the Carrier's stores, and a message line which informs you of the drone's current status.

The main display shows the Carrier and the exclusion perimeter which defines the minimum distance at which the Drones may be positioned (any closer and they are in danger of being detonated by the Carrier itself).



LAUNCHING DRONES

To launch either a docked drone or a drone that is replacing one that has been destroyed, click on the **LAUNCH** icon. The drone will be launched into a stationing position at the rear of the Carrier. Repeat this process until you have selected up to four drones, and then click on the **SELECT** icon to send them to their destinations.



By clicking on one of the drones and dragging it to a new site, the drones may be individually repositioned to form custom defence patterns. Even while a drone is travelling to its new position, the moving drone may be clicked on, and a new destination set in the same manner.

DOCKING DRONES

By clicking on the **DOCK** icon, all four Drones will be sent to the rear of the Carrier, and then docked within the Carrier itself.



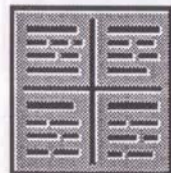
While the drones are active, the top speed of the Carrier is reduced therefore it is advisable to dock all drones if you wish the Carrier to travel at full speed.

DRONE PATTERN LIBRARY

Located in the bottom right-hand corner of the screen is the Drone Pattern Library section of the display - this consists of a miniature version of the Drone Positioning screen, and to the right of this display are the + and - icons. By clicking on either of these, you are able to cycle through a selection of nine pre-defined Drone patterns. Clicking on the **SELECT** icon will result in the currently active Drones assuming the library pattern, and clicking on **CANCEL** will send the drones back to their previous positions. Again, while the Drones are in transit, their destinations may be redefined.



CARRIER DEFENCE INFORMATION SCREEN



The Carrier Defence Information screen is a full screen display split into four sections, showing the current status of each of the four Carrier Defence sections. Each section has its current Repair State displayed (e.g. DAMAGED, INOPERATIVE), whether it is active, how many units are in the Carrier's stores, whether it is reloading (in the case of the Flare Launcher), etc.

LASER TURRET LASER CANNON STATUS : OPERATIVE REPAIR STATE : 100%		DECOY FLARES FLARES ACTIVE 0 FLARES IN STORES 10	
OBSERVATION TURRET STATUS : OPERATIVE REPAIR STATE : 100%		FLARE LAUNCHER STATUS : OPERATIVE REPAIR STATE : 100%	
SURFACE-SURFACE VIEWERS IN STORES 0 MISSILES IN STORES 16		DEFENCE DRONES DRONES ACTIVE 4 DRONES IN STORES 4	
MISSILE LAUNCHER STATUS : OPERATIVE REPAIR STATE : 100%		DRONES ON STATION	

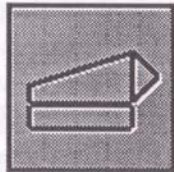
Carrier Defence

AMPHIBIOUS ASSAULT VEHICLE CONTROL

DIRECT CONTROL



The 'Walrus' (Water And Land Roving Utility Shuttle) class Amphibious Assault Vehicle (AAV) is a highly advanced and flexible all-terrain tank, with a variety of special functions which make it especially suitable for operating within the environment of the Carrier. It can be fitted with a number of versatile weapons including the Avatar heavy duty chemical laser, the Harbinger wire - guided surface to surface missile, as well as a number of special cargo pods.



The Carrier can store up to eight AAV's, although only four can actually be active at a time. The active AAV's are stored in the Carrier's Hold. Information regarding the Fitting, Course Plotting and Launching/Docking of the AAV's can be found in later sections of this Operations Guide.

Once an AAV has been fitted and launched, select the **Direct Control** icon, and then click on the appropriate AAV icon (1 to 4), located to the left of the control panel. The AAV will be in the vicinity of the Carrier (or the place where the Carrier was when the AAV was launched).

To assume control of the AAV, select direct control mode (by clicking on the right-hand mouse button, or by pressing the Space Bar).

STEERING THE AAV

Set your desired speed by clicking directly on the **SPEED** indicator - the speed will increase or decrease until the correct setting is reached. The maximum speed of the AAV on land is 184 kmh (115 mph), although its top speed is directly influenced by its repair state. In the water, the AAV's top speed is influenced by the turbulence of the water, but it is around 10% slower than when on land.



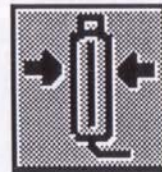
To steer the AAV, simply move the mouse (or other control device) left and right. The further you move the mouse, the faster the AAV will rotate.

The Walrus is a split-level vehicle, which means that the main body rotates freely on the AAV's tracks (which also double as a hull when the AAV is in the water). The AAV has two modes of control, with the body being either in a fixed state, or in a free rotation state.

Click on the **FREE ROTATE** icon to enable the AAV to turn on its tracks (it will highlight when selected). This is particularly useful if the AAV is travelling forwards, and it comes under attack - you can rotate to face the enemy target and attack, without changing course. To deselect this option, click on the **FREE ROTATE** icon again.



To stop the AAV rotating, click on the **CENTRE UP** icon. If you click on the **CENTRE UP** icon and then hold the button down for a second, the AAV's main body will swing around and lock into a forward facing position.



REAR VIEW SELECTOR

By clicking on the **REAR VIEW** icon, situated at the bottom right of the control panel, the display will flip to a view out of the rear of the AAV. To deselect this option, click on the **REAR VIEW** icon again.



BEACHING

The AAV is a fully amphibious vehicle, which sits semi-submerged in the water, its tracks doubling as a hull and providing the method of propulsion. When an AAV encounters the beach of an island, control is taken by the AAV's automatic beaching mechanism. The AAV aligns itself so that it is facing square to the beach (it automatically centres up, if necessary), assumes a suitable speed, and then emerges from the water, scaling the beach, and then returning to its pre-beaching speed.

The process for an AAV entering the sea is a reversal of the above.

AAV OPERATING RANGE

The AAV has two factors which limit its operating range. The first is fuel - the AAV carries enough fuel to propel it for 264 km (165 miles). If your AAV runs out of fuel, you will have to send another AAV equipped with a refuelling pod to rescue it.

Since the AAV is remotely controlled from the Carrier, its first person view has to be transmitted from the AAV back to the Carrier using an encrypted video signal. Because of the nature of this signal, the range of the AAV is limited to a fixed distance from the Carrier. Once the AAV begins to become out of range (at around 20 kilometres), the telemetry signal weakens considerably and the picture quality worsens. If the AAV travels further from the Carrier (up to around 26 km), the signal is completely lost and the AAV self-destructs to avoid it falling into the hands of the enemy.

AAV HEAD-UP RADAR

The AAV has a short range Radar, which can be selected by clicking on the **RADAR** icon situated at the bottom right of the control panel. The radar will show any significant objects such as aircraft, AAV's, Carriers, volcanoes, etc. as well as the island shoreline if one is within range. To deselect the radar, click on the **RADAR** icon again.



AAV STATUS DISPLAY

The centre of the AAV's Direct Control display, between the two groups of icons, contains the Status Display. This consists of three mini screens of information, which can be cycled through by clicking anywhere within the box.

POSITION

This is the AAV's current position, shown as two X,Y coordinates in relation to the centre of the map.

BEARING

This is the bearing of the AAV, shown as a standard compass value between 000 and 359.

ISLAND

This shows the name of the island within which the AAV is currently in range.

EQUIPMENT

This screen shows a list of any weaponry and equipment fitted to the AAV, along with relevant quantities.

REPAIR STATE

This indicator shows the repair state of the AAV, shown as a percentage. If the AAV sustains a number of hits, its speed and manoeuvrability are affected in direct proportion to its repair state. If the repair state drops below 12%, the AAV develops a fuel leak, in which case you have approximately two minutes to dock with the Carrier for repairs, before the AAV runs out of fuel. If the repair state becomes too low for the AAV's structure to contain, it will explode.

PAYLOAD

This shows the combined weight (in kilogrammes) of all equipment fitted to the AAV.

Please refer to the **AAV FITTING** section for information concerning the addition of weaponry to the AAV's payload.

WEAPONRY SYSTEMS

The AAV can carry one of two weapon types at any one time, and they both have a limited usable life.

AVATAR CHEMICAL LASER

The Avatar laser is of the high power pulsed chemical variety. The unit contains its own power and reactant supply, which means that it can operate even if the AAV on which it is mounted has run out of fuel. However, its life is limited to forty shots, after which its chemical nature make it unstable and it is automatically jettisoned by the AAV's weapons control system.

Select the **LASER** icon, and then select direct control mode (click on the right-hand mouse button or press the Space Bar). Press the fire button to release a twin laser bolt.



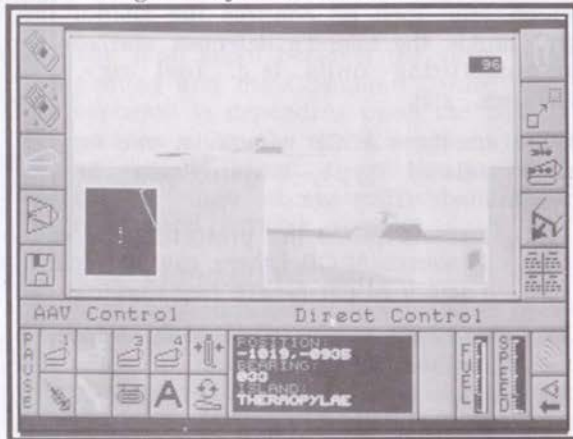
HARBINGER SURFACE-TO-SURFACE MISSILE

The Harbinger is the most sophisticated operator controlled missile in existence, and was designed specifically for installation on the AAV. Using an advanced remote wire-guidance system, it is especially potent when used against close range moving ground-based targets.

Select the **MISSILE** icon at the bottom left of the panel. Point the AAV in the general direction of your target, and click the fire button. A Harbinger missile will be launched, and as this happens, a remote picture-in-picture view of the missile will appear in the bottom right hand quarter of the display.



During the missile's flight, the AAV will continue moving while you take direct control of the missile. Your control device will move the missile up, down, left and right. The missile has a maximum range of 0.5 km, after which time it will self-destruct (the timer is visible in the top right-hand corner of the display). Detonation will occur if the missile collides with the ground, sea, or any target, and it is unlikely to withstand a direct hit from a laser cannon.



DROPPING CARGO PODS

The AAV has a versatile cargo pod facility which enables it to carry a number of different types of cargo, although it can only carry one pod at a time.

To release a cargo pod, click on the **POD** icon, whilst in pointer mode, and then to release it, press the fire button in direct control mode.



The cargo pod type is selected during the Fitting stage, and is chosen from one of the following:-

AUTOMATIC CONTROL CENTRE BUILDER (ACCB)

The ACCB pod is the cornerstone of your assault on the island complex. It is a highly advanced computer and droid combination which, when deposited on an uncontrolled island, instigates the construction of the Command Centre, which from then on controls the island, and builds the island's defences and/or manufacturing units (e.g. fuel rigs, factories, etc).

There are three ACCB variations, one for each island type which can be constructed. They are:-

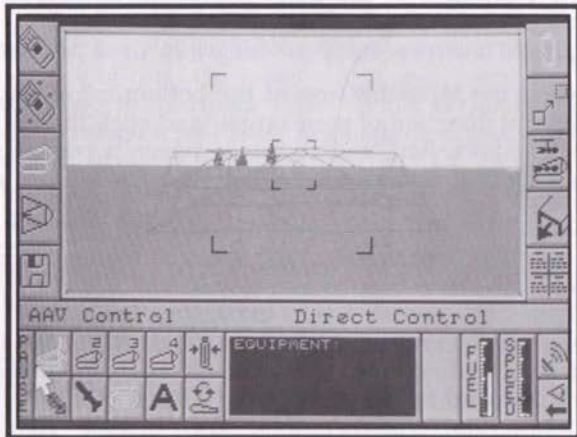
Defence ACCB (for protecting the rest of the network)

Resource ACCB (where raw materials are mined and refined)

Factory ACCB (where raw materials are used to build equipment)

Only one ACCB can be successfully dropped on an island at a time, and once it starts to construct the Command Centre, dropping of further ACCB's by either your forces or the enemy's will have no effect. The construction of a Command Centre is unstoppable, and to recapture an island that has had an enemy ACCB planted on it, you will have to wait until construction of the Command Centre has been completed.

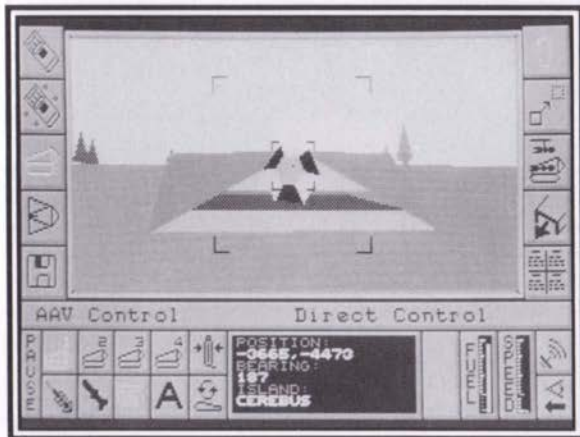
If you wish to change the nature of an island (e.g. turn a Defensive island into a Factory island) you will have to destroy the Command Centre and drop a fresh ACCB. If the Command Centre is destroyed, the other objects on the island are dismantled, and their constituents are redeployed into the network resources, although some of the resources are lost in the dismantling process.



VIRUS BOMB

Once an enemy-deployed ACCB has constructed a Command Centre on an island, it can be destroyed by the application of vast quantities of firepower (Command Centres are fortified with extremely powerful Neutron Shields).

Alternatively, you can equip an AAV with a Remote Reprogramming Virus Bomb, which, when fired at the opening of a Command Centre will explode, and begin to infect and gradually realign the Command Centre's control systems, until its allegiance is changed to that of your forces, and the island becomes part of your network. When this happens, any defences, manufacturing plants, and other island-based features will work for your forces and against the enemy.



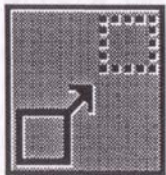
The time taken between the virus being planted and the Command Centre being captured is dependent upon the island's position within the island complex - if it is an outpost island, it will be easier to capture than an island with a more centralised network position.

AAV REFUELLING POD

If an AAV runs out of fuel whilst in operation, it is effectively immobilised, and open to attack by the enemy forces. However, a stricken AAV can be rescued by equipping another AAV with an **AAV REFUELLING POD**, and despatching it out to link up with it.

To refuel an AAV, drive the AAV that is carrying the fuel pod up to the stricken AAV, and park them nose-to-nose. Then, select the pod icon and release it. The immobile AAV is automatically refuelled, and the pod itself is discharged.

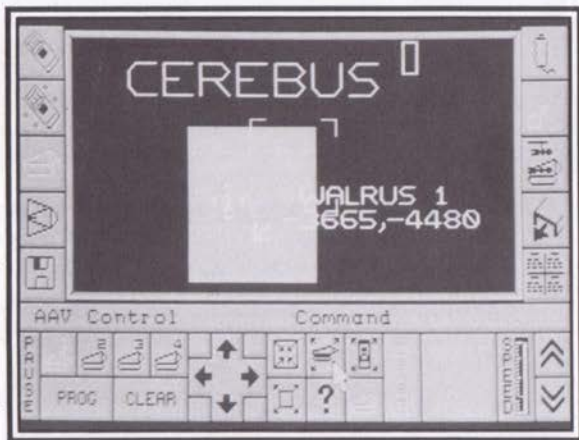
AAV NAVIGATION



The AAV Navigation section is your interface with the Carrier's advanced Navigation Computer. From this section, you are able to set an individual course for each AAV.

To set a course, firstly click on the AAV that you wish to set the course for. The AAV must be either in the docking bay, or currently active. Use the map manipulation icons (as described in the Carrier Map Command section) to zoom in to the required resolution, and then click on your chosen destination point. A small cross-hair marker will be plotted at this point.

Next, you should select the speed at which you wish the AAV to travel, by clicking on the icons situated at the bottom right of the screen. To program the settings into the Navigation Computer, click on the **PROG** icon, and a small disc with the AAV's number in the centre will appear to show the AAV's destination point. Providing the AAV is on Autopilot, and outside of the docking cone area, it will immediately change its course and head for the programmed destination. If the AAV is not already on Autopilot, when you click on the **PROG** icon, holding it down will engage Autopilot. If the AAV is in the docking bay of the Carrier, it will adhere to the course once it has been launched. If you wish to clear a course program, click on the **CLEAR** icon.



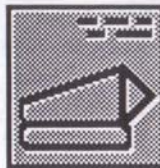
It is important to always bear in mind the fact that AAVs have only a limited range, for two reasons. Firstly, their fuel tanks dictate their maximum travelling distance - and if an AAV runs out of fuel, a relief AAV must be dispatched to deliver a fuel pod to the stricken AAV (fuel pods are available via the AAV fitting screens, provided the Stores are able to supply

them). Secondly, the Carrier's remote AAV control systems have a limited telemetry range before they become susceptible to jamming by the enemy, and unless kept in range of the Carrier, the AAV telemetry signal will initially weaken, and then be totally lost. If this happens, the AAV will self-destruct, in order to avoid the possibility of its control being taken over by the enemy.

Clicking on either the **CENTRE ON CARRIER** or the **CENTRE ON AAV** icon will jump to the second highest resolution, and centre the display on either the Carrier, or the currently selected AAV.

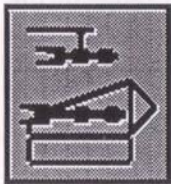


The **FLAG** icon, when selected, displays the AAV's number and its X,Y coordinates alongside the directional representation of the AAV, when the map is at its highest resolution.



The **REPORT** icon determines whether or not the Navigation Computer generates a message when the AAV reaches its destination. It is usually selected, therefore a message is sent to the message line, and the Messaging Computer.

AAV FITTING



Prior to an AAV being launched from the Carrier, it needs to be refuelled and fitted with a supply of weaponry. When originally manufactured, the AAV does not contain any weapons, and whenever it is returned to the Carrier's hangar, all weapon systems are removed and returned to the stores.

The top left quarter of the display always show the view from the Carrier's hangar, facing the bow doors, and the rest of the central display is dedicated to the Fitting procedures. At the bottom of the screen, between the icons is an AAV status display.

To fit an AAV, it must be in the hangar (if an AAV is destroyed while in service, and a spare AAV is available in the Carrier's stores, it will automatically be transported to the hangar as a replacement). Click on the AAV icon to select which one you wish to fit.

The right-hand side of the screen displays a side view of the AAV, with its two mounting points, a bar indicator to the left, showing how much fuel is onboard the AAV, and the repair state to the right, shown as a percentage.

REFUELLING

To select the quantity of fuel for the AAV, click on the two icons which are either side of the **REFUEL** box, until the required fuel level is reached. Below the Refuel box is a bar indicator showing how much AAV fuel is stored on the Carrier.

FITTING WEAPONS

The bottom left-hand quarter of the display contains the Payloads section. Cycle through the range of available weaponry by clicking on the + and - icons. For each weapon, you are told the quantity available in the stores, its weight, and a description of the weapon along with a graphical representation.

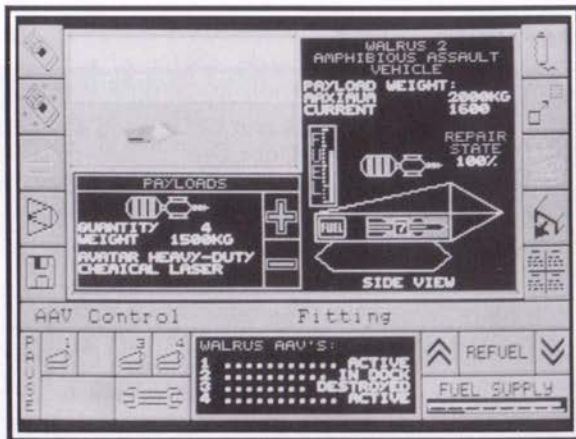
There are two types of equipment available for mounting on an AAV, one is a forward facing weapon such as a chemical laser or a missile launcher, and the other is a pod-type cargo, which is dropped from the rear of the AAV. Once you have selected a piece of equipment,

click on the equipment icon itself, and drag it onto the desired mounting point. If the equipment brings the payload weight of the AAV above its maximum limit, if the equipment is unsuitable for mounting in the selected position, or if there is simply no stock of the item, you will be informed with a suitable message.

Certain weapons, such as the wire-guided missile launcher are able to carry multiple missiles. Select the quantity of missiles required by clicking on the increase and decrease boxes which are situated to either side of the missile icon. The ACCB pods are also selected in a similar fashion

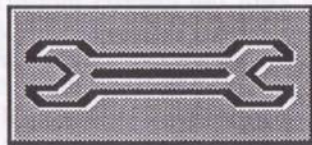
- select the required pod by clicking on the arrow boxes on either side of the pod icon.

At any time, you are able to mount an alternative piece of equipment, simply by dragging it onto an occupied mounting point. Likewise, you can remove equipment by clicking on its position on the AAV and dragging it back to the Payloads section of the display.



REPAIRING AAV'S

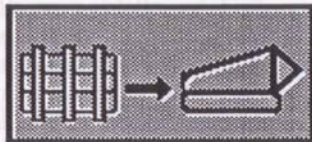
Each AAV has a repair state, which is displayed to the right of the side view of the AAV. To repair an AAV, click on the **REPAIR** icon. The repair process can be aborted at any time by clicking on the **CANCEL** box. Once the repair state reaches 100%, or if the repairs are cancelled, the AAV will undergo launch preparations.



REPLACING DESTROYED AAV'S

If one of your four AAV's is destroyed in action, you will want to replace it with another one.

Click on the icon of the AAV that has been destroyed (1-4) and you will see that the **REPAIR** icon has been replaced by the **TRANSFER** icon. Providing your island network is operational, and you therefore have AAV's being constructed and sent back to the Carrier's stores, you will be able to send an AAV from the stores to the Docking Bay by clicking on this icon.



AAV TRAFFIC CONTROL



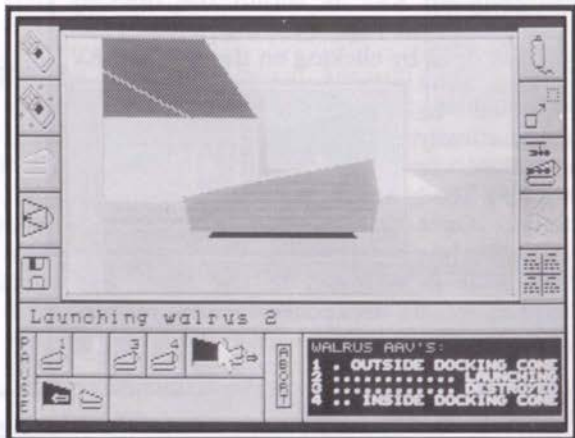
LAUNCHING AN AAV

Once an AAV has been refuelled, fitted with appropriate weaponry, repaired and prepared for service, it is ready for launch. The Traffic Control screen shows a display from a camera mounted at the rear of the Carrier.

Select the AAV which you wish to launch by clicking on one of the four AAV icons,



then click on the **LAUNCH** icon. The bow door opens, and the AAV drives out and stops as soon as it exits the docking cone area (unless it has a programmed course, in which case it will carry on to its destination). Once it has stopped moving, the AAV will rotate on the spot in a holding pattern. The information box at the bottom right of the control panel shows the current operational state of each AAV.



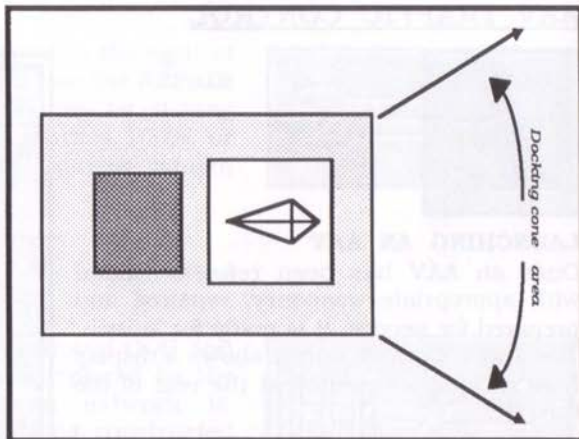
DOCKING AN AAV

Providing an AAV is within the docking cone area at the rear of the Carrier, you can tell it to dock by clicking on the **DOCK AAV** icon.

The AAV will be automatically switched to Autopilot mode. Once an AAV has



docked, it is returned to the hold, and stripped of its weaponry, ready for re-fitting.



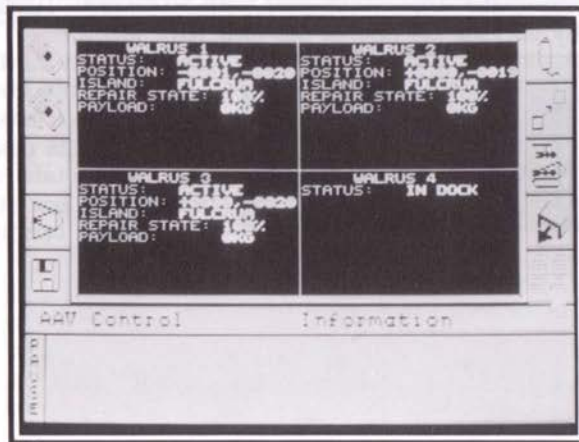
Note that only one AAV can be launched or docked at a time.

AAV INFORMATION



The AAV Information screen is a full screen display split into four sections, showing the current status of each of the four AAV's. Each AAV has its current status displayed (e.g. IN

DOCK, ACTIVE, DESTROYED), and if it is Active, information such as its position, current island, repair state, payload weight and a list of the current payload are displayed.

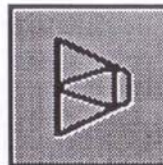


AIRCRAFT CONTROL

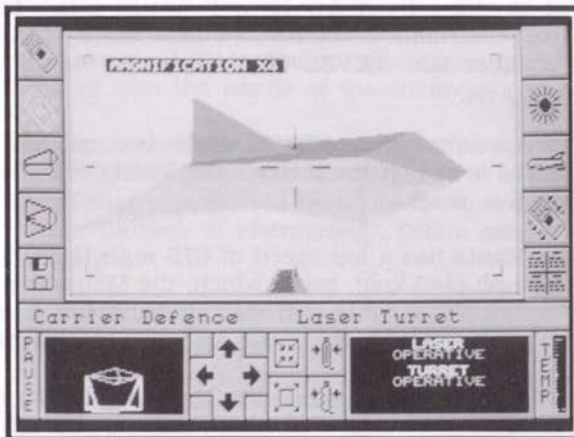
DIRECT CONTROL



The 'Manta' (Multi-role Aircraft for Nautical Tactical Assault) class aircraft was developed especially for deployment onboard the Carrier, and as a result, it has a number of distinctive features, such as its ability to take off and land on the Carrier or an island-based runway, its variable combat speeds, and its ability to carry a wide range of different weaponry and equipment types.



The Carrier can store up to eight Mantas, although only four can actually be active at a time. If all eight Mantas have been supplied to the Carrier, excess aircraft will be stored on the designated Stockpile island and shipped back when required. The active Mantas are stored in the Carrier's aircraft hangar, where they are fitted, refuelled, and repaired. Information regarding Flight Path plotting, Fitting, and Launching/Landing of the Mantas on the Carrier can be found in later sections of this Operations Guide.



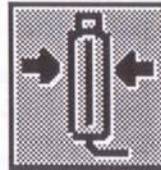
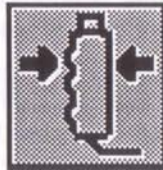
Once a Manta has been fitted, sent to the Flight Deck, and launched, select the **Direct Control** icon, and then click on the icon for the Manta (1 to 4) which you want to take direct control of. The Manta will be flying in a holding pattern in the vicinity of the Carrier (or the place where the Carrier was when the Manta was launched). To assume control of the Manta, disengage the **AUTOPILOT** facility, and select direct control (by clicking on the right-hand mouse button, or by pressing the Space Bar).



FLYING THE MANTA

To control the Manta, move the mouse (or joystick) left and right to bank the plane (the further you push the mouse, the steeper the turn), and pull backwards/push forwards to pitch up and down to affect its altitude. The altimeter is located towards the bottom right of the control panel - it is highly advisable to check your altitude every few seconds when flying low over the sea or an island, as even a slight collision will result in damage of the Manta's underbody. When flying close to, or over a volcano, it is important to avoid colliding with the rocks that are discharged from the volcano's mouth.

Two icons are present which enable you to level the Manta out in either its X (bank) or Y (pitch) axis. **LEVEL UP** forces the Manta to correct its Y axis, and fly parallel to the ground or sea. **LEVEL OUT** forces the Manta to correct its X axis.



The speedometer is situated at the bottom right of the control panel. Click directly on the desired speed on the meter - the Manta will then accelerate or decelerate until the defined speed is reached.

The Manta has a top speed of 675 mph (1080 kph) and a minimum flight speed of around 150 mph (240 kph), below which, the Manta is prone to stalling. Fortunately, the plane has some highly reliable anti-stalling hardware installed, and this mechanism has never yet failed, even under the most arduous conditions.

The Manta's top speed is directly related to its current repair state - if the Manta becomes damaged, the energy management computer will divert power away from the plane's Plasma Drive, in order to energise the shields.

REAR VIEW SELECTOR

By clicking on the **REAR VIEW** icon, situated at the bottom right of the control panel, the display will flip to a view out of the rear of the Manta. To deselect this option, click on the **REAR VIEW** icon again.



MANTA OPERATING RANGE

The Manta has two factors which limit its operating range. The first is its telemetry range. Since the Manta is remotely controlled from the Carrier, its first person view has to be transmitted from the Manta back to the Carrier using an encrypted video signal. Because of the nature of this signal, the range of the Manta is limited to a fixed distance from the Carrier. Once the Manta begins to become out of range (at around 20 kilometres), the telemetry signal weakens considerably and the picture quality worsens. If the Manta travels further from the Carrier (up to around 26 km), the signal is completely lost and the Manta self-destructs to avoid it falling into the hands of the enemy.

The second limit on the aircraft's range is fuel consumption. The Manta's tanks contain enough fuel to keep it in the air for about 163 km (101 miles). If your Manta runs out of fuel, it will spiral downwards into the ground or sea. Great care should be taken to ensure that the Manta is always within refuelling range of the Carrier, or alternatively, within range of an island equipped with a runway and fuel supply.

MANTA HEAD-UP RADAR

The Manta has a short range Radar, which can be selected by clicking on the **RADAR** icon situated at the bottom right of the control panel. The radar will show any significant objects such as aircraft, AAV's, Carriers, volcanoes, etc. as well as the island shoreline if one is within range. To disable the radar, click on the **RADAR** icon again.



MANTA STATUS DISPLAY

The centre of the Manta's Direct Control display, between the two groups of icons, contains the Status Display. This consists of three mini screens of information, which can be cycled through by clicking anywhere within the box.

POSITION	This is the Manta's current position, shown as two X,Y co-ordinates in relation to the centre of the map.
BEARING	This is the bearing of the Manta, shown as a standard compass value between 000 and 359.
ISLAND	This shows the name of the island within which the Manta is currently in range.
EQUIPMENT	This screen shows a list of any weaponry and equipment fitted to the Manta, along with relevant quantities.
REPAIR STATE	This indicator shows the repair state of the Manta, shown as a percentage. If the Manta sustains a number of hits, its speed and manoeuvrability are affected in direct proportion to its repair state. If the repair state drops below 12%, the Manta develops a fuel leak, in which case you have approximately two minutes to land on the Carrier for repairs, before the Manta runs out of fuel and crashes. If the repair state becomes too low for the Manta's structure to contain, it will explode.
PAYLOAD	This shows the combined weight (in kilogrammes) of all equipment fitted to the Manta.

Please refer to the **MANTA FITTING** section for information concerning the addition of weaponry to the Manta's payload.

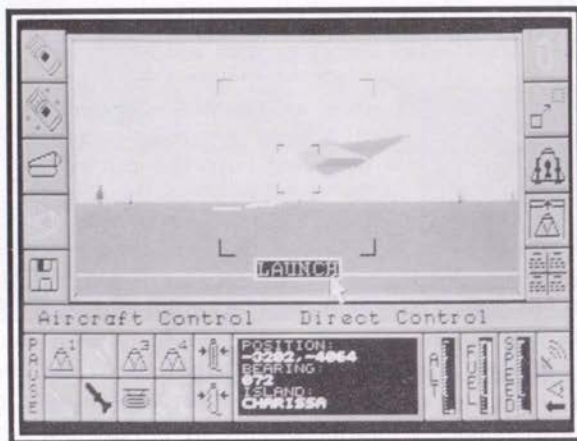
LANDING ON A RUNWAY

The Command Centres on Resource islands are programmed to build runways, so that you can land your aircraft and refuel them (providing the island has an active Fuel Producing Unit).

To land on a runway, you must approach it from the far end, flying towards the refuelling area. Keep your altitude low, and decrease in speed as you near the runway. Most importantly, keep yourself as parallel to the ground as possible - the more acute your landing angle, the more chance you have of crashing.

Once you make contact with the runway (and providing you haven't crashed), the Command Centre on the island will immediately take control of the aircraft, and taxi it to a free refuelling bay. The Manta will be automatically refuelled, and readied for take-off.

To launch the aircraft, click on the **LAUNCH** box which appears on the main display - the Manta will taxi out to a position in the centre of the runway, and then accelerate up to a speed at which it can take off. The Command Centre's Aircraft Control System is fairly crude, and it will not take evasive action if, for instance, two aircraft are intructed to take off at the same time. Once the Manta has taken off, it is put into a holding pattern, circling above the runway area on Autopilot. To resume direct control, simply click on the **AUTOPILOT** icon, and then enter Direct Control mode by clicking on the right-hand mouse button, or by pressing the Space Bar.



WEAPONRY SYSTEMS

The Manta can carry a variety of payloads, mounted on the underside of the wings and fuselage. These are attached to the aircraft in the **Aircraft Fitting** section, and this procedure is explained further on in this manual.

QUASAR GROUND ATTACK LASER

This fuselage mounted multi-beam laser was originally designed to provide an effective laser unit for destroying ground based targets. However, although it is of the slow pulse variety, it is very potent when used against close range airborne targets as well.

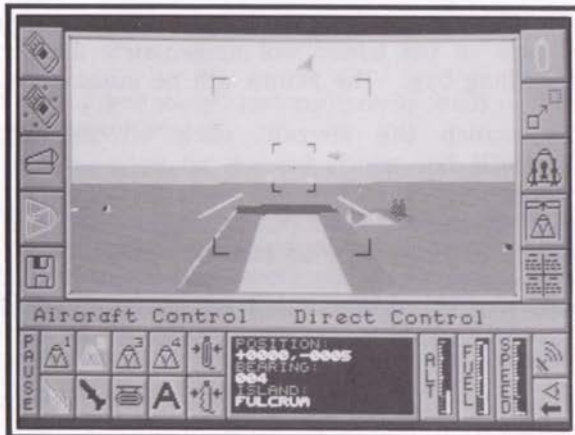
The Quasar's laser generator is powered directly from the Manta's plasma energy drive, and therefore has an unlimited firing life, and it rarely, if ever overheats.

To use the laser, select the **LASER** icon,



and then select direct control mode (click on the right-hand mouse button, or press the Space Bar). A fixed targetting sight is projected onto the centre of the display. Press the fire button to release a twin laser bolt.

The Quasar has a very fast reload time, which means that a barrage of laser bolts can be rapidly fired at the target.



ASSASIN AIR-TO-AIR MISSILE

The Assassin is the very latest of the intelligent heat-source seeking missiles. It has a short-burn plasma jet propellant, and is constructed from an extremely light and rigid carbon-fibre/titanium composite. The onboard guidance system locks on to the heat pattern of the target, and then keeps track of it until the target is out of range, or the missile's propellant is exhausted.

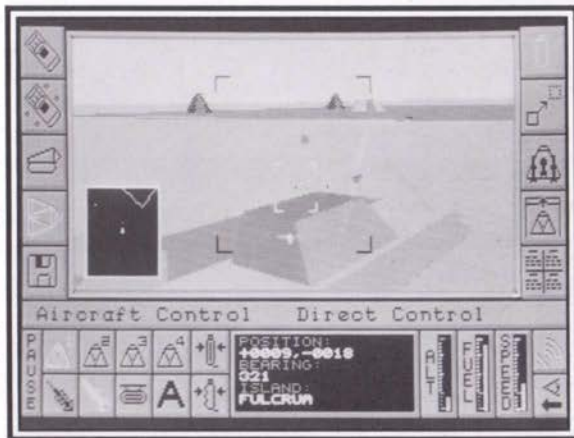
Its main purpose is to destroy other air-based targets, although it can be used against ground installations (such as missile launchers) although it is advisable to use a laser against targets such as these.

Select the **MISSILE** icon at the bottom left of the control panel. The Manta's missile targeting sight will appear, and unlike the fixed sight which is used with the Quasar laser, the sight will 'float' around the screen as the mouse or joystick is moved.



To aim a missile, move the sight over your prospective target and press the fire button. Providing the target is a legitimate one (a major feature of the targeting system is its ability to recognise a 'friendly' target, such as one of your own aircraft or ground installations, and refuse to lock on to it), the sight will flash rapidly, signalling that it is ready to launch a missile.

Press the fire button again to launch the missile. If the fire button is not pressed within two seconds of the targeting system locking on, the target will be cancelled.



QUAKER CLUSTER BOMB

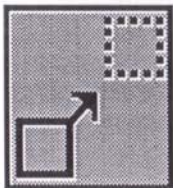
The Manta's most devastating weapon is the 1000lb bouncing Quaker cluster bomb. The Quaker is a multiple warhead fragmentation device, which is designed to throw out a number of smaller proximity-fused warheads on each impact with the ground, and the bomb's core will detonate upon collision with any object that it encounters.

Owing to limitations in the warhead design, the Quaker will not skim or bounce on impact with the sea.



To select the bomb, click on the **CARGO** icon which is situated towards the bottom left of the control panel. Fly towards your target and then press the fire button to release the bomb. As it falls downwards it will assume the velocity and direction of the aircraft at the point of release. If the bomb doesn't collide with a target after three or four bounces, it will detonate automatically.

AIRCRAFT NAVIGATION

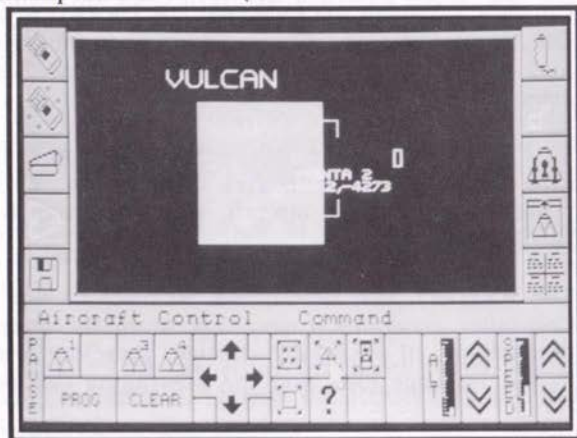


The Aircraft Navigation section is your interface with the Carrier's advanced Navigation Computer. From this section, you are able to plot individual flight paths for each of the aircraft.

To set a flight path, firstly click on the aircraft that you wish to set the course for. The aircraft must be either in the air, on a runway, or on the deck ready for take-off. Use the map manipulation icons (as described in the Carrier

Map Command section) to zoom in to the required resolution, and then click on your chosen destination point. A small cross-hair marker will be plotted at this point.

Next, you should select the altitude and speed at which you wish the aircraft to fly, by clicking on the icons situated at the bottom right of the screen. To program these settings into the Navigation Computer, click on the **PROG** icon - a small disc with the aircraft's number in the centre will appear to show the aircraft's destination point. Provided the aircraft is on Autopilot, and in the air, it will immediately change its course and head for the programmed destination.



If the aircraft is on the deck of the Carrier, or docked on a runway, it will adhere to the flight-path once it has been launched. If you wish to clear a flight-path program, click on the **CLEAR** icon.

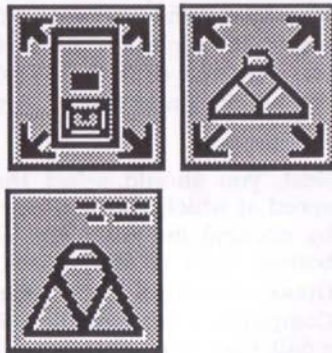
It is important to always bear in mind the fact that aircraft have only a limited range, for two reasons. Firstly, their fuel tanks dictate their maximum flight distance - to carry out a long-distance raid will entail island-hopping, refuelling from island to island. Secondly, the Carrier's remote aircraft control systems have a range of only a few miles before they become

susceptible to jamming by the enemy, and unless kept in range of the Carrier, the aircraft telemetry signal will initially weaken, and then be totally lost. If this happens, the aircraft will self-destruct, in order to avoid the possibility of its control being taken over by the enemy. However, a single Long-Range Communication Pod may be fitted to one of the aircraft. This will enable it to fly anywhere within the island complex (subject to fuel consumption) and remain in contact with the Carrier. The Communications Pod may be activated in the Aircraft Fitting section.

Clicking on either the **CENTRE ON CARRIER** or the **CENTRE ON AIRCRAFT** icon will jump to the second highest resolution, and centre the display on either the Carrier, or the currently selected aircraft.

The **FLAG** icon, when selected, displays the aircraft number and its X,Y coordinates alongside the directional representation of the aircraft, when the map is at its highest resolution

The **REPORT** icon determines whether or not the Navigation Computer generates a mes-sage when the aircraft reaches its destination. It is usually selected, therefore a message is sent to the message line, and the Messaging Computer.



AIRCRAFT FITTING



Before an aircraft can be launched from the Carrier, it needs to be refuelled and fitted with a supply of weaponry. When originally manufactured, the aircraft do not contain any weapons, and whenever they are returned to the Carrier's hangar, all weapon systems are removed and returned to the stores.

The top left quarter of the display always shows the view from the Carrier's Helm, and the rest of the central display is dedicated to the Fitting procedures. At the bottom of the screen, between the icons is an aircraft status display.

To fit an aircraft, it must be in the hangar (if an aircraft is destroyed while in service, and a spare aircraft is available in the Carrier's stores, it will automatically be transported to the hangar as a replacement). Click on the aircraft icon to select which one you wish to fit.

The right-hand side of the screen displays an underside view of the aircraft, with its mounting points, a bar indicator to the left, showing how much fuel is in the aircraft's twin tanks, and the repair state to the right, shown as a percentage.

REFUELLING

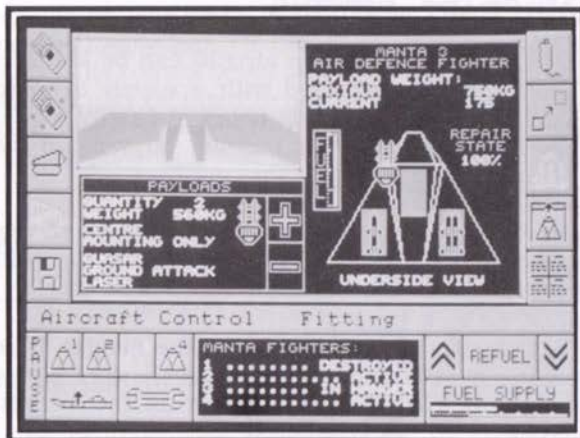
To select the quantity of fuel for the plane, click on the two icons which are either side of the **REFUEL** box, until the required fuel level is reached. Below the Refuel box is a bar indicator showing how much aircraft fuel is stored on the Carrier.

FITTING WEAPONS

The bottom left-hand quarter of the display contains the Payloads section. Cycle through the range of available weaponry by clicking on the + and - icons. For each weapon, you are told the quantity available in the stores, its weight, its mounting type, and a description of the weapon along with a graphical representation.

Once you have selected a weapon type (you are generally advised to mount a Quasar ground attack laser cannon in the centre mounting, unless you require alternative weaponry for particular missions), click on the weapon icon itself, and drag it onto the desired mounting point. If the weapon brings the payload weight of the aircraft above its maximum limit, or if the weapon is unsuitable for mounting in the selected position, you will be informed with a suitable message.

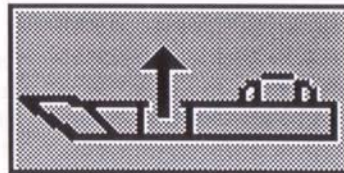
At any time, you are able to mount an alternative weapon, simply by dragging it onto an occupied mounting point. Likewise, you can remove a weapon by clicking on its position on the aircraft and dragging it back to the Payloads section of the display.



Repairing aircraft

Each aircraft has a repair state, which is displayed to the right of the underside view of the aircraft. To repair an aircraft, click on the **REPAIR** icon. The repair process can be aborted at any time by clicking on the **CANCEL** box. Once the repair state reaches 100%, or if the repairs are cancelled, the aircraft will undergo flight preparations.

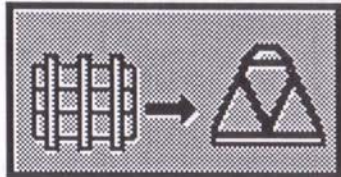
To send a fitted and refuelled aircraft up on the lift to the Carrier's deck, ready for launching, simply click on the **DECK** icon, provided the deck is clear.



REPLACING DESTROYED AIRCRAFT

If one of your four aircraft is destroyed in action, you will want to replace it with another one.

Click on the icon of the manta that has been destroyed (1-4) and you will see that the **REPAIR** icon has been replaced by the **TRANSFER** icon. Providing your island network is operational, and you therefore have aircraft being constructed and sent back to the Carrier's stores, you will be able to send a Manta from the stores to the Docking Bay by clicking on this icon.

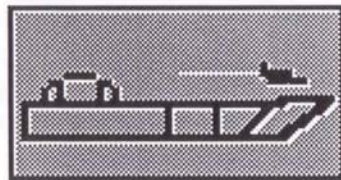
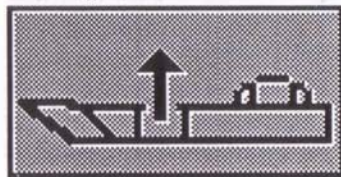


AIRCRAFT TRAFFIC CONTROL

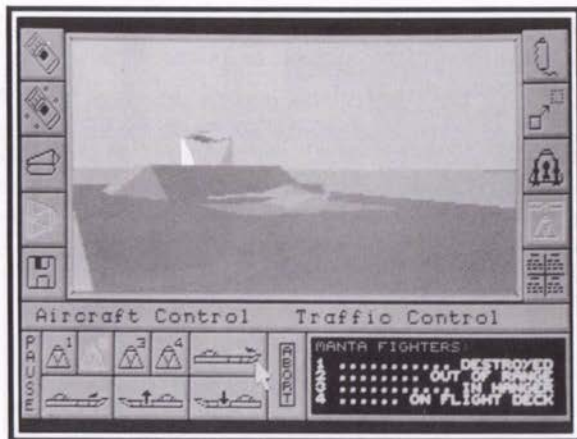


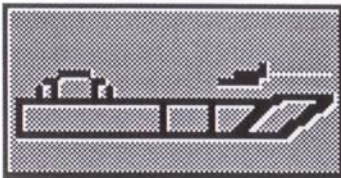
Once an aircraft has been fitted with a suitable quota of weaponry, and it has been refuelled, repaired and prepared for flight, you are ready for launch.

Select the aircraft you wish to launch, by clicking on one of the four aircraft icons,

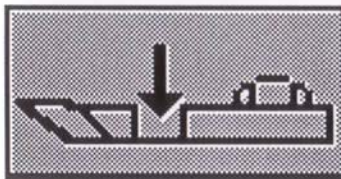
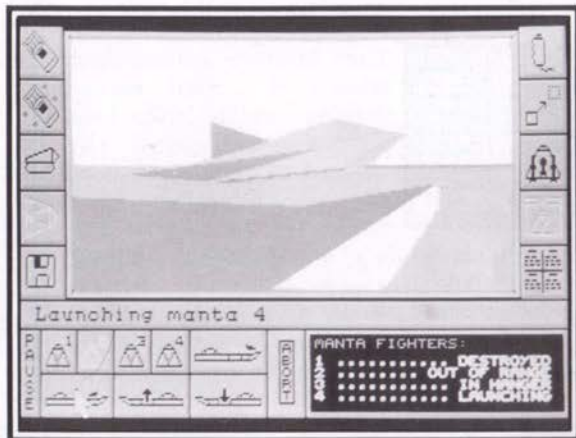


and then click on the **FETCH** icon, to bring the aircraft up from the hangar (if you have already clicked on the **DECK** icon while in the Fitting section, you will not need to do this). When the lift has returned with the aircraft, click on the **LAUNCH** icon. Once the aircraft has been launched, it will be locked into a circular holding pattern, until direct control is assumed. The information box at the bottom right of the control panel shows the current operational state of each aircraft.





As long as it is within range of the Carrier, by switching to autopilot mode and clicking on the **LAND** icon, the aircraft will be brought in to land on the flight deck. It is possible to cancel the automatic landing sequence at any time by clicking on the **ABORT** icon.



Clicking on the **HANGAR** icon will send the aircraft currently occupying the flight deck down to the hangar, ready for refitting.

Note that only one aircraft can occupy the flight deck or the lift at a time.

AIRCRAFT INFORMATION



The Aircraft Information screen is a full screen display split into four sections, showing the current status of each of the four aircraft. Each plane has its current status displayed (e.g. *IN HANGAR*, *ACTIVE*,

DESTROYED), and if it is Active, information such as its position, current island, repair state, payload weight and a list of the current payload are displayed.

	<p> PANTA 1 STATUS: ACTIVE POSITION: 10000, -0022 ISLAND: FULCRUM REPAIR STATE: 100% PAYLOAD: 60KG MISSILES (1) </p>	<p> PANTA 2 STATUS: ACTIVE POSITION: 10002, -0021 ISLAND: FULCRUM REPAIR STATE: 100% PAYLOAD: 705KG LASER MISSILES (3) </p>	
	<p> PANTA 3 STATUS: ACTIVE POSITION: 10002, -0020 ISLAND: FULCRUM REPAIR STATE: 100% PAYLOAD: 720KG MISSILES (2) CLUSTER BOMB </p>	<p> PANTA 4 STATUS: ACTIVE POSITION: 10000, -0017 ISLAND: FULCRUM REPAIR STATE: 100% PAYLOAD: 300KG COMMS POD </p>	
	<p>Aircraft Control Information</p>		
	<p>RECEIVED</p>		



RAINBIRD

RAINBIRD SOFTWARE

74 NEW OXFORD ST. LONDON WC1A 1PS, ENGLAND

Rainbird and the Rainbird logo are trademarks of British Telecommunications plc.

N10111