

# BLACK ANGEL



Let chaos rule with ultimate power



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# ***HOW TO LOAD & RUN BLACK ANGEL***

Black Angel can be run in two different modes: normal mode which will run on any Acorn with 1 Megabyte of memory and an enhanced mode which requires 2 Megabytes or more.

Black Angel automatically operates in 2MB mode if the necessary memory is available. To ensure this you may have to temporarily reallocate memory via the Task Manager. To select the Task Manager click with the middle mouse button on the 'A' or 'Acorn' symbol in the bottom right corner of desktop and select it. Open the Task window and look at the 'Applications', 'Next' bar. Check that this is set to at least 1024K before running Black Angel.

To load Black Angel insert the disc 1 into drive 0. Double click on the !BlackAngl application. The program will install itself on the iconbar. To open up the options click the middle (menu) button of the mouse over it.

When running Black Angel from floppy disc we recommend you make a backup of disc 2 and use this or a blank formatted disc for saving files to. Ensure that it is left in drive 0 whilst playing and that it is not write protected. Disc 1 is the key disc and to prevent unauthorised copying cannot be backed up.

## ***HOW TO SAVE A GAME***

You can return to desktop whilst playing Black Angel by pressing the "Esc" (Escape) key. The present game is paused. Please note that you can only save your position if you were in a Green zone (see Zone Indicator) when you pressed Escape.

To load a saved game you may either double click on its file or drag it onto the Black Angel iconbar icon.

# INTRODUCTION

Since the first tentative ventures into space some 20,000 years ago there have been ever increasing bounds in motion technology. Except that is for the one seemingly insurmountable problem, namely the absolute limiting velocity of light. Still, even now, the concept that it is impossible to travel through space at even a snail's pace Faster Than Light baffles the majority and is blindly accepted by the rest. The fact that there is a limiting speed is not the worst of the problems, the real terror is the Tau factor.

Briefly if  $V$  is the uniform velocity of a spacecraft and  $C$  the velocity of light, then  $\tau$  equals the squareroot of one minus  $V$  squared over  $C$  squared. This means that the closer  $V$  comes to  $C$  the smaller  $\tau$  becomes. Now suppose that a remote observer measures the mass of the spacecraft. The result he gets is her mass as it would be measured if she were not moving in respect to him, divided by her  $\tau$ . Thus the faster she travels the more massive she becomes, as regards to the observer and Universe at large. This extra mass does not just appear from nowhere it comes from the kinetic energy of motion:  $E=MC^2$ .

In addition to this if the remote and stationary observer were to compare the spacecraft's clocks to his own, he would conclude that the craft's clocks were running slow. This is because the period of time between two events, let us say between two ticks of the pilot's watch is equal to the period that the observer would measure if the pilot was stood next to him, multiplied by the  $\tau$  of the spacecraft. The result of this is that the nearer the spacecraft approaches the speed of light relative to the observer the slower time will seem to pass on board her. Physical dimensions also shrink in the direction of motion by the factor of  $\tau$ .

To an observer on board the craft viewing directly without the compensation of modern instrumentation, it would appear that the rest of the Universe is contracting in the direction of his motion. The distance he has to travel shrinks in his favour, whilst the surrounding stars become flattened and more massive. Of course it would be impossible for an observer to look directly upon such a scene because the normally visible light emitted from the stars in front of him could be doppler shifted up to lethal X or gamma radiations.

The overall picture is even more complicated than this for the craft's motion will have been accelerated and then decelerated with respect to the rest of the

Universe. This shifts the whole problem from the realms of special relativity to that of general relativity. The observer versus craft relationship is not truly symmetrical and the obvious paradox does not arise. When eventually the craft comes to rest in relationship to the observer, the observer will have experienced a longer period of time than the craft. The unfortunate result is this. For whilst the pilot of a spacecraft may have experienced only a few hours of travel, many tens or hundreds of years may have elapsed for the rest of the Universe. Criminals and murderers can escape justice, rescue from even minor accidents is impossible and as you will well know no law can be imposed upon any being who takes it to mind to ignore it.

Yet despite all this there are indications that travel Faster Than Light must be achievable. Take for instance the presence of the Star Gates at the boundaries of each planetary system in our galaxy. We didn't construct them so either they were created by a generous God or placed there by an extremely ancient civilization that is now possibly extinct. If we take the latter to be the most likely we have to wonder how this feat was achieved. For without the gates it would take millions of years to travel throughout our small galaxy in order to construct the gates, even if we knew how they were made! Yet the gates exist and we can use them to travel vast distances almost instantaneously. But unfortunately not with the efficiency or accuracy that we can travel through normal space. In fact it is not unknown for a craft to enter a gate and simply disappear never to be seen again.

Now consider the hypothesis that the gates were constructed by a race that possessed a FTL drive. Why should they bother? Unless they served a purpose greater than mere travel within the galaxy! Also if this race existed why (until now) has no other evidence, other than that of the presence of the gates, been discovered. Surely a race with the power to build the gates would have left some small traces behind, even after the passage of many millions of years. If 200 million year old dinosaur bones exist in their thousands it cannot be too much to ask for a minor indication of such a powerful race.

To get to the main point of this discussion, a small but possibly vastly important discovery has been made on Solidaan in the Maan system. A small silver casket containing a sheet of hydro-carbon polymer. The sheet is imprinted with what we think is a form of holographic image. The image is of what appears to be a religious script and has been dated at a little over 5 Billion years old. In fact it is only slightly younger than our galaxy!

The casket was discovered during deep seismic tests for a geothermic reactor. It was suspended by no observable means inside an evacuated bubble 400 kilometres below the surface of Solidaan. In spite of it being exposed to the temperatures of the planet's core the casket and sheet are in perfect condition. A leading geologist has postulated that the casket was inserted into the planetary core at the time of its condensation from the stellar magma. There is one other unexplainable factor in this matter. The sheet is readable by any observer regardless of his or her endemic language!

You can make of the following text what you will, but if you look beneath the religious framework there is an unusually high probability that the text is based at least partially on fact. If this is so it may be possible for a very talented person to find and rebuild the key to the Star Gates. And may be find the answer to the Universe's biggest riddle:

Who made the Star Gates and why?

Perhaps even the answer to creation itself.

*On the Eleventh day God created the Sun, the Moon, the Stars and all things that inhabit the skies.*

*But alas Carrion could not behold these wonders for he was dazzled by the glorious lights that shone from heaven.*

*On seeing this failing God gave the Universe of things unto the Black Angel saying "Spread this day your wings of darkness and shield this place from the light of heaven".*

*And from that time the space between the stars was filled with the blackness of the Angel's wings.*

*On the twelfth day Carrion did construct a chariot of fire and entered unto it with great intent.*

*And he left this place with great swiftness and did fly beneath the wings of the Black Angel.*

*And lo the Angel did touch him and froze his heart and cloaked his mind in silence.*

*And on his return to the lands of Man, he walked forth with the spring of youthfulness whilst his grandsons were bent and withered like trees that had lived for a thousand years.*

*On seeing the aging of his children Carrion's mind was driven insane with anger and hate for God and the Black Angel.*

*And he cried out his anger and cursed the one who had robbed him of the love of his children.*

*"You who made this Universe are no longer my God for I have seen how you trap us and keep us like animals."*

*And in casting off the shackles of God Carrion was no longer governed by His laws and did travel near and far in the blink of an eye.*

*But still Carrion was not satisfied for though he was free to wander he was always a prisoner in God's Universe.*

*For still the lights of heaven were hidden from his eyes by the darkness of the Black Angel's wings.*

*To further his escape from God's Universe Carrion did make gates and passages in the Black Angel's fences of time and space. And when they were finished Carrion took all his family and possessions and left the Universe of things and travelled to the place of ultimate Joy.*

*On seeing that Carrion had escaped from the Universe of all things God was angered and there was great seething and chaos.*

*Stars grew old and shrank into nothing, the land was burnt and the seas boiled under airless skies.*

*When all was gone God created a new Universe of things from the ashes of the old.*

*All that remained of the old ways were the gates that Carrion had made, these were beyond even God's power to destroy.*

*God then called upon the Black Angel and gave unto her the key for the gates of Carrion and said:*

*"Take ye this key and lock the gates of Carrion and when you have done so split it asunder and place its parts where ordinary men might search in vain."*

*The Black Angel took the key and tried to lock the gates, but Carrion had made them well and she could only prevent them from opening fully.*

*Fearing God's anger she spoke not of this but broke the key asunder and taking each piece in turn she did place it within a casket of silver and hid it amongst the stars that she cloaked with her velvet wings.*

*The first piece she hid near a ball of blue where Barnard was seen with Atisco.*

*But for the second and following the place is unknown for I have no means of reaching Atisco.*

***Book of Raal Ch.18 V.7-12***

# GAME PLAYER'S MANUAL

Black Angel represents a significant advance in graphics as used in computer games. Craft controls function correctly for ALL directions of movement and enable you to look and fire your weapons in any direction, regardless of the trajectory that your ship is following. The loss of control for certain directions of flight that occurs in the normal type of flight simulator/space game does not happen in this program.

In addition to this other craft that you will meet are not the simple convex surface triangles that you find in older inferior games, they are fully ordered multi-concave surface objects. It is thanks to the overwhelming power of the Acorn RISC Technology that makes it possible to write the code to plot such objects in real time.

Also for the ultimate in reality, Black Angel is the first game to encompass the fourth dimension of Time. Your craft is subject to all the laws of relativity that a real craft would be. Of course scaled down so that it doesn't really take you several years of game playing to reach the nearest star!

The objective of the game is to seek out and find the parts to the key to the Star Gates, with which you should be able to escape from your dying galaxy to begin life again in a better place.

The Star Gates are seemingly artificial objects that are to be found in distant orbit of every star in your galaxy. They exhibit properties similar to rotating black holes and can be used, with the aid of complex organic computers, to give almost instantaneous travel between star systems. Though if need be you can point your craft at any star that you can see on your viewscreen (the position plotted on the screen is the actual position of the star, not the one as would be seen by the naked eye) and fly directly there at velocities so close to the speed of light that time is hugely distorted by relativity.

Whilst no one knows who made the Star Gates a recent discovery of a 5 Billion year old document gives you a tiny clue to their possible origin and purpose. There is apparently a key to the Star Gates which will enable you to use them as was originally intended by their manufacturer. This key, which is actually a huge computer program, has been split into a multitude of small pieces and hidden throughout the galaxy inside eight dimensional caskets.

You have been given the clue to the location of the first of the caskets which lies in the star system of Atisco. When you find it and retrieve the first part of the key you will be given the second clue and so on (via the Message Log). You must proceed in this fashion until you possess all the parts to the key. When you possess the entire key you will be able to claim your reward by entering the nearest Star Gate. Should you happen by chance upon a casket other than the one that you seek you will get no benefit other than an insight into its location. The caskets must be accessed in the correct order for the key segments to be given up.

The caskets, as previously stated, are eight dimensional objects and so may appear in our Universe in any one of four guises. The current form that they adopt may also affect your success or failure in obtaining the key segments. One additional clue, the caskets can never be destroyed!

So much for the main game plot. As Black Angel is based upon reality (in an infinite Universe all things are possible so long as they obey the laws of physics!) you also need to maintain your craft and pay off the immense debt you amassed on the day of its purchase. This can be done in a variety of ways but the most honest is to seek employment. One problem, that is always bound to arise with the mass availability of interstellar craft of the kind that we have in this game, is the total collapse of law and order. If one craft is attacked and destroyed by another there is no way that a message can be received and help dispatched in time to save the victim. Not to mention the fact that the aggressor will have been able to cover at least twice the distance that any craft coming directly to the victim's aid would have had to cover. Plus none of this takes into account time distortions caused by relativistic speeds.

But to get back to the subject of employment. The kind of job available to the possibly untrustworthy pilot of an interstellar craft is by necessity somewhat limited, and because you probably cannot be trusted to carry out your task. You will have to pay a licence fee for the honour of gaining some work. Full payment will only be made on completion of the task. Jobs will usually be of the delivery, collection or bodyguard variety and the wages for a particular task are usually fixed in the short term within a particular star system. Some jobs will require you to jettison an item. This can be achieved by pressing 'J' when required.

## A FEW LITTLE POINTERS

As a few little pointers to at least get you going, try the following clues:

One item you must have has nothing to do with farmers cleaning their headlights. 123

If the Knight bought one it would be better than if he grew it himself. 456

Is there any point in having six of one when with a little more you could have one of the other. 789

You may have noticed the numbers after the clues. You will find a similar number after most clues that you get from the caskets (see Message Log). If you enter the number into the !Clues application, which is on disc 2, you may get some additional help to solve the problem!

Please note that the majority (but by no means all) of the clues that you get from the caskets take a general format. The first part usually refers to the system name (which all have a maximum of 6 letters) and the second to the casket's specific location.

N.B. on a 1 Megabyte machine you should not attempt to run !Clues or any other applications/RAM disc any at the same time as !Black Angel. This is because on a 1 Megabyte machine Black Angel requires all available memory.

# ***KESTREL OPERATOR'S MANUAL***

The Maan Industries Kestrel control panel layout follows the industry standard layout. (See Galactic standards A310 TO A5000).

<b>Acceleration Rate</b>	0-200,000 Kph in 17 seconds.
<b>Terminal Velocity</b>	.99999 C. achieved in 158 seconds.
<b>Minimum Tau</b>	.00447
<b>Rest Mass (unloaded)</b>	1.27 Tonnes.
<b>Max Mass (unloaded)</b>	283.98 Tonnes.
<b>Hull Construction</b>	.15mm vitrified magnesium sheet, atmospheric pressure supported.
<b>Shielding</b>	Electrostatic.
<b>Fuel System</b>	Interstellar hydrogen net with a 400ckm catchment field.

## ***ENGINES***

Engine selection is via the keyboard:

- F1 Impulse drive (IM) - approximate maximum speed = 0.0001C.
- F2 Fusion drive (FU) - approximate maximum speed = 0.002C.
- F3 Super String drive (SS) - approximate maximum speed = 0.9999C.

The indicators for these are positioned to the top left of the main display panel and indicate thus:

Black	Not Selected
Green	Drive Selected

The Velocity (VEL) indicator is automatically calibrated to suit the drive that is in operation.

The Tau (TAU) indicator is independent of the drive in use and indicates Tau relative to the home system of Maan.

## ***ANTI DRIVES***

- F4 Anti drive (ST - String Tie) - Toggles on/off. (Also Keypad 5).  
This Anti drive has an indicator (ST) which is positioned to the right of the Super String drive.

Space Bar Short term Anti drive (Only on when the Space Bar is held down).

The Anti drive uses the Super String Polymerization effect to halt motion. This reduction in motion is anti-logarithmic in operation and under certain circumstances will leave a small residue motion. This can be overcome by disengaging and re-engaging the Anti drive.

When an Anti drive is engaged the maximum obtainable speed while thrusters are in operation is drastically reduced.

## ***FLIGHT CONTROL***

Steering and thrust control is via the Manual Operator's Universal Steering Equipment otherwise known as the mouse. A mouse position indicator is provided to the left of the main radar display.

Rotational dampers are fitted but can be disengaged / re-engaged with F12. The current state of the dampers is indicated by the colour of the cross hairs on the mouse position indicator (box to the left of the radar).

Blue	= dampers on
Red	= dampers off

Vertical movement of the mouse results in the alteration of the pitch attitude of the craft.

Horizontal movement of the mouse results in an alteration of the Yaw attitude of the craft.

Keys < and > alter the Roll attitude of the craft.

## MAIN THRUSTERS

Adjust (right mouse button) Thrust from rear of craft.  
Menu (middle mouse button) Thrust from front of craft.

When you want to go in a specific direction it is usually best to come to a halt first using an Anti drive so as to remove any existing and opposing motion. Remember you are not necessarily moving in the direction you are looking.

## THRUST LOCK

The main thrusters can be locked on by simultaneously pressing 'T' with 'Adjust' or 'Menu'. Pressing 'T' on its own will release the thrust lock. A thrust lock indicator (TL) is provided on the bottom left hand side of the main display panel and indicates thus:

Green	Thrust lock off.
Amber	Front thrusters locked on.
Red	Rear thrusters locked on.

## LATERAL THRUSTERS

Keypad 4	Thrust left.
Keypad 6	Thrust right.
Keypad 8	Thrust up.
Keypad 2	Thrust down.

Keypad 1	Combination of 2 and 4
Keypad 7	Combination of 4 and 8
Keypad 9	Combination of 8 and 6
Keypad 3	Combination of 6 and 2

The lateral thrusters use the same apertures as the attitude adjusters therefore Pitch Yaw and Roll cannot be altered whilst the lateral thrusters are operating.

Of course all above thrusts will result in a motional shift 180 degrees relative to the applied thrust. That is presuming a stationary craft not subject to any other influences, pressing Adjust will cause the craft to move forwards relative to its

original position.

In addition to the above controls there are three 'flash' rotational thrusters:

Left arrow	Rotate left 90 degrees.
Right arrow	Rotate right 90 degrees.
Down arrow	Rotate 180 degrees.

## AUTO IDENTIFICATION

Whilst your craft is pointing directly at an identifiable object the object type and any shield capacity it may possess will be displayed in white below the current sight. This information will be displayed in yellow for a short period of time after the object moves from the centre of the screen. (This facility can be disabled/re-enabled by pressing 'A').

Whilst information is displayed in WHITE text, the scanned craft can be entered into the Craft Log by pressing 'L'. Valuable data for your quest can be obtained by such logging.

## 'O' ORBITAL LOCK

In order to achieve very high orbital speeds, the craft is fitted with an orbital lock system. This system has the following advantages over using a natural orbit:

- 1: It removes the need for highly accurate flight paths when entering an orbit around a body of planetary mass or greater.
- 2: The direction of the orbit can be adjusted or even reversed at will.
- 3: Orbital times are reduced from Hours to Seconds.

An orbital lock indicator (OR) is provided, it is the second indicator in the group to the top right of the main display panel and indicates thus:

Black	Orbital lock off.
Green	Orbital lock on.

The indicator will occasionally flash red or amber when in use.

Please note that while orbital lock will attempt to hold you in orbit at all times its performance is not 100%. Failure can be induced by either attempting to enter orbital lock at too low a velocity, use of the string tie whilst in orbital lock or thrusting in the general direction of the orbited body.

### **'8' (Not keypad) MOTION CORRIDOR**

The motion corridor displays a headup graphic of the current accumulated motion. This is displayed as a yellow square the corners of which are connected via 4 vectoral lines to a motional offset point. These lines will be displayed in blue if the offset point is in front of you (i.e. you are looking in the general direction of motion) and in red if the offset point is behind you. The motional offset is proportional to your current velocity.

Additionally there is also a numerical indication of velocity in Galactic spacial units and your current position in three dimensional coordinates relative to the home system of Maan. The coordinates are indicated in units based on the distance travelled by light during the period it takes the planet Solidaan to orbit Maan once. This is approximately  $9.4608e12$  GsU and is termed one light year.

There are three special keys for use with the motion corridor:

- S Save current corridor.
- R Restore the saved corridor.
- C Display current corridor.

The motion corridor display is important in positioning your craft at a specific location and in ensuring that your current motional vector has not been displaced by gravitational fields or other influences.

### **'9' (Not keypad) TRACTOR BEAM**

The Tractor beam is an optional upgrade to the standard craft and should be considered as one of your first acquisitions, as without one it will be impossible for you to complete your quest.

When the Tractor beam sight is positioned over an object with a mass of less than  $10e18$  tonnes (i.e. less than a small planetary mass) it will give an indication of what that object is and its range from the craft. If the range is between 3000

and 4000 clicks, the object is not shielded and has a relative mass less than  $10e4$  tonnes the Tractor beam can be applied as follows:

- E Engage Tractor beam.
- D Disengage Tractor beam.
- F Feed.

The feed option can be applied to any form of spacecraft held in the Tractor beam. Its effect is to drain any available energy from the captured craft resulting sometimes in a recharging of your reserve capacitors (RES). If the captured craft's energy is drained sufficiently to break down its structural integrity field it will be destroyed.

The Tractor beam draws energy from the main hydrogen net and therefore affects the amount of energy available for the main drives. The Super String drive will not normally be usable with Tractor beam engaged and with massive captured objects the Fusion drive may also go off line.

An object held in the Tractor beam is physically tied to the tractoring craft via a cylinder of hyper-polymerized Super Strings. This has the effect of maintaining the object's original galactic vector from the tractoring craft under all circumstances.

The Tractor beam indicator (TB) is the second from the left in the line of indicators to the bottom right of the instrument panel. It indicates as follows:

- BLACK: Tractor beam not installed.
- GREEN: Tractor beam installed but disengaged.
- RED: Tractor beam engaged.

### **'=' SELECTED COORDINATES INDICATOR**

When this control is selected the craft will orientate itself to point to the selected coordinates (see Star Map). The selected coordinates are shown in red and your present coordinates are shown below these in blue.

Please note this option will orientate your craft to point at the selected coordinates but it is the responsibility of the pilot to ensure that the craft is actually moving in that direction. Judicious use of thrusters and String Tie will

be needed to achieve this.

## ***PLANETARY MASS INDICATOR***

The planetary mass indicator is positioned to the right of the main radar display and is used to indicate the relative direction of a pre-selected planet or the nearest Sun, or the nearest Star Gate.

A planet or Sun can be selected by one of the following keys:

- Keypad / The planet nearest to the local sun.
- Keypad \* The second nearest.
- Keypad # The third nearest.
- Keypad - The fourth nearest.
- Keypad + The fifth nearest.
  
- Keypad . The local Sun.

The selected planet's or Sun's keypad symbol will be highlighted on the Star Map.

The selected planet or Sun will be indicated by a triangle of three green dots on the planetary mass indicator. If the triangle is inverted the selected object is behind you. You should manoeuvre your craft so that the small triangle is positioned at the apex of the red runway symbol on the indicator display. When correctly positioned a pair of dots will be seen to move down the arms of the runway symbol. This indicates that your craft is now facing the selected object.

The nearest Star Gate is always displayed as a triangle of white dots in the indicator and does not need to be selected via the Star Map.

The planetary mass indicator detects objects by detecting their gravitational wells. As distortions can be introduced by nearby objects the indication given should not be relied on as being 100% accurate though in most circumstances it is. Visual confirmation of an object should always take priority over gravitational detection.

## ***MAIN RADAR DISPLAY***

The main radar display is a three dimensional indicator of all objects not of natural origin within a maximum range of 170000 clicks from the centre of your craft. Magnification factors of 1x, 2x, 3x are selectable using either 'Delete' or 'Copy' keys to toggle up or down the range.

The display is based upon the international standard for displaying three dimensional coordinates upon a two dimensional surface. The position of an object is displayed upon an X,Y,Z plane aligned to the natural X,Y,Z plane of your craft. That is the plane mirrors the alignment of your craft under the influences of yaw, pitch and roll.

The Z plane is represented by 5 vertical lines and the X and Y planes are represented by a pair of intersecting red lines. The whole display being tilted by some 15 degrees from the vertical order to aid readability.

When an object is displayed upon the radar display its offset from ground zero (your own position) is indicated by two grey lines. A base line is drawn across the X,Y plane to the object's X,Y coordinate and a vertical displacement line in the Z plane, to indicate the object's height above or below the X,Y plane.

Under some circumstances when there are a large number of objects displayed upon the radar a slight improvement in readability can be obtained at the loss of X,Y positional information by switching out the base line. This can be achieved by pressing 'B' to toggle the base line in or out.

Two additional radar display forms are available for users with 2 Megs or more. The R key cycles between the default mode as previously described and these 2 additional forms: a maximum effective range indicator and an open display.

## ***RADIATION, GRAVITY and FLUX INDICATORS***

There are three gauges and complementary indicators to the right of the main radar display. These gauges are vital for the safety of the craft.

A reading in excess of 50% on the radiation gauge (RAD) will result in the String Tie going offline.

Any reading in excess of 30% on the gravity gauge (GRA) will result in increasing chances of structural failure of the craft.

High levels of magnetic flux (FLX) can disable the Tractor beam as well as endanger the structural integrity of the craft.

## **SHIELDING**

The standard electrostatic shields are self recharging from the hydrogen net. Should the shields fail completely the craft will be in extreme danger of exploding under its own internal pressures. A shield energy level gauge (SHI) is provided on the far left hand side of the display panel. When this gauge reads less than 25% full an alarm will sound and a "SHIELDS CRITICAL" message will appear at the top of the screen. If you find this alarm distracting it can be muted by pressing 'M'.

## **RESERVE ENERGY**

A reserve energy bank is provided which can be used to help recharge the shields and the weapons. To activate the reserve energy banks use:

- X To increase the shields (SHI).
- C To increase the weapon's charge (WC).

A reserve energy gauge (RES) is situated to the right of the shield energy gauge. Each time one of the above keys is pressed, upto 25% of its maximum capacity will be transferred over.

## **ZONE INDICATOR**

All planets and Space Docks are now equipped with Holgarth neutrality shielding. This gravity driven shielding renders any weapon's energy completely harmless. A zone indicator (SZ) is situated to the immediate right of the planetary mass indicator and indicates thus:

- GREEN Inside Holgarth shielding. No weapons work.
- AMBER Holgarth shielding partially effective.
- RED All weapons will work normally.

## **TELEPORT INDICATOR**

When you are sufficiently close to a planet or Space Dock full teleporter capability will be established by the planet or Space Dock in question. This will be indicated by the teleporter indicator (TP) which is situated second on the right of the zone indicator.

- BLACK No teleport capability
- GREEN Full teleport capability

## **TIME SLIP**

Time Slip is a recently fitted and upgradeable option for the more up-to-date craft. It is, up to now, the only useful byproduct of research into Faster Than Light travel. Whilst in operation the host craft is effectively isolated from the fourth dimension (Time). This has the effect, from the host's point of view, of stopping time in the rest of the Universe while allowing the host craft to move freely about. The advantages that this gives to someone involved in a battle are obvious. To engage/disengage Time Slip press 'BACK SPACE' (the key to the right of the £ key).

Time Slip is independent of the main hydrogen net and recharges via a tachion capture tube. Unfortunately the charge required is very high so use of Time Slip is limited to short periods of intermittent use dependent upon its upgrade level. Each additional level of upgrade obtained will effectively double the period of Time Slip which is available.

When installed Time Slip indicates its presence by setting the Time Slip (TS) indicator to green. The Time Slip level gauge (TiSl) will also indicate the length of Time Slip available.

## **GATE PASS**

The Gate Pass is an organic computer with an initial operational speed in the order of 275 BIPS (Billion instructions per second). This phenomenal speed is required to guide the craft through the Star Gates to the selected coordinates accurately. Unfortunately each time the Gate Pass is used a portion of the biomass is destroyed, this results in ever increasing inaccuracy.

A Gate Pass indicator (GP) will be found to the right of the orbital lock indicator. It is recommended that you replace the Gate Pass when this indicator shows red. Gate Passes can be purchased from planets and Space Docks when available.

## WEAPONS

There are 6 weapons banks fitted which are individually selected by '1' through '6' (Not keypad) and are fired with Select (left button) on the mouse.

The weapons currently available are as follows:

- 14Mw Gas laser.
- 10Gw Plasma beam.
- Absorption cannon.
- Multi strike absorption cannon (MUSPAC).
- Absorption torpedo.
- Multi strike absorption torpedo (MUSPAT).

If the target is an interstellar craft the four latter options work by absorbing the target's shield energy until the target explodes under its own internal pressures.

A weapon's energy level control is provided by the 'W' key. This toggle key increases or decreases the strike or absorption forces to a level where disablement (stunning) of the target craft is more or less likely than its total destruction. A weapon's energy level indicator (WL) is provided. It is the second indicator on the bottom left of the display panel and indicates thus:

- Amber More likely to Stun.
- Red More likely to Kill.

All weapons work off the same energy source but each takes differing amounts of energy from the bank. The more powerful the weapon the more charge it uses so some amount of care should be exercised when firing if a total loss of weapon's firepower is to be avoided.

Pressing C will partially increase the weapon's energy bank from the Reserve Energy. The weapon's energy bank is fully recharged when a systems recharge is purchased from any of the planets or Space Docks.

Weapon's Charge (WC), Weapon's Temperature (WT) and Reserve Energy (RES) gauges are provided to the left of the main radar display.

## MAIN VIEW SCREEN

Accessed by pressing F5. (This is the view outside your craft).

## STAR MAP SCREEN

Accessed by pressing F6.

Tab	Input star name to search
X	Input X coordinate
Y	Input Y coordinate
Z	Input Z coordinate
G	Go to selected coordinates
H	Home to current coordinates
S	Select coordinates
C	Move left
V	Move right
/	Move down
'	Move up
[	Move into display
]	Move out of display
Shift + above	Rapid movement
Alt	Colour display to indicate depth band

The Star Map is used to select a set of coordinates to be used by either the Gate Pass computer or by the Selected Coordinate Indicator. All coordinates are relative to the home star of Maan which is taken to be at position X 00.0 Y 00.0 Z 00.0.

In addition to a graphical display of the galaxy the following information is also

displayed:

**THE VIEWING COORDINATES:** The XYZ coordinates of the square green cursor in the centre of the screen.

**RANGE:** The length of the vector from your current position to the viewing coordinates.

**SYSTEM IN VIEW:** The name of the star (if any) that is contained within the green cursor and also within the depth range. Planetary names will also be given if you have visited the system.

**SELECTED COORDINATES:** The currently selected coordinates.

To enter a specific set of XYZ coordinates first press the coordinate initial key followed by the desired coordinate to one decimal place. For example to enter the coordinates X 1.5 Y 2.0 Z -4.2 type them in as they are written but pressing the 'Return' key after each group of a letter and numbers.

To get the coordinates of a specific star system first press 'Tab' followed by the name of the star and then 'Return'.

At this stage either of the above will only have moved the viewing position of the map.

To select the coordinates for use press 'S'.

You can move the viewing position of the map with the keys indicated above. When 'Alt' is held down the stars will be artificially coloured for depth indication:

RED	Indicates that the star is behind you.
BLUE	Indicates that the star is in front of you.
WHITE	Indicates that the star is within viewing range.

Even though a star is within viewing range the coordinates indicated can have an error of plus or minus 4 light years. Always get the coordinates of a desired star by entering its name via 'Tab'.

## **SYSTEMS COMMUNICATIONS SCREEN**

Accessed by pressing F7.

This screen gives you some general information to the current position of your craft and also the ability to communicate with planets in order to obtain work.

General information indicated:

**SELECTED COORDINATES:** The currently selected coordinates.

**RANGE:** The length of the vector from your current position to the selected coordinates.

**PRESENT POSITION:** The XYZ coordinates of your current position.

**GATE PASS TOLERANCE:** The accuracy that can be relied upon for computer guidance through Star Gates (see Gate Pass).

**CURRENT VELOCITY:** Your velocity relative to the home system of Maan.

**STATIC ELAPSED TIME:** The time that has elapsed on the home system of Maan since your purchase of the craft. General relativity will cause this clock to appear to run faster at high velocities.

**ZONE:** The current zone that you are in.

To the top right of the System Communications screen there is a graphical display (non real time and not to scale) of the system that you are currently in (if you are in one).

The rest of the right hand side of this screen is concerned with the purchase of employment licences. In order for this function to operate you must be within a green zone. Some jobs available from planets will require you to be in teleport range before they can be purchased.

Once within teleport range a selection of employment licences will be available for purchase. They will be displayed under the 'LICENCE PURCHASE LINK' heading and can be toggled through with 'Page Up' and 'Page Down'. Most jobs

are only available from planets and the rewards payable are fixed throughout the system.

Once you have made your selection press 'P' to purchase the licence followed by 'Y' to confirm or 'N' to cancel the purchase. If you purchase the licence instructions will then be given to you as to what the job entails and a registration fee equal to 25% of the advertised reward will be deducted from your current account. You will receive the advertised reward when the job is completed.

Plus when you are employed as an armed escort you will also receive 25% of the advertised reward each time you destroy a craft when the job is "in progress". Plus also note that when you successfully complete a mercenary job you will be paid the full advertised reward multiplied by the number of specified targets.

Incoming messages regarding jobs can be logged by pressing 'L' for future reference via the Message Log screen.

## ***STATUS / CREDIT SCREEN***

Accessed by pressing F8.

This screen gives you an inventory of each item of equipment or cargo that you are currently carrying, the balance of your current account and the percentage of the key that you have recovered. It also enables you to scrap items that you are carrying in any of the craft's 14 storage podules.

The top left of the screen contains a breakdown of the content of each of the storage podules.

If the craft is in teleport range of a planet or Space Dock full teleport capability will be established and the current scrap value for each item will also be displayed. This value will be different for each planet or Space Dock in the system. At this time a cursor that can be moved by pressing 'Page Up' or 'Page Down' will be displayed. If you wish to scrap the content of a storage podule position the cursor over it and press 'S'. The cash will be paid directly into your current account.

The top right of the screen contains a list of any precious elements that your craft may be carrying and their interplanetary agreed value. Each time you enter

teleport range these elements will be teleported down and their value automatically credited to your account.

## ***DEBIT SCREEN***

Accessed by pressing F9.

This screen shows you the balance of your current account, the balance of your loan account and the static elapsed time. Remember general relativity will cause this clock to appear to run faster at high velocities.

Payments into the loan account will be made automatically from your current account at the first occasion that you enter teleport range after a payment becomes due. Should there be insufficient funds available items will be scrapped from your storage podules, starting at podule 14 and working up, until the debt is paid off. If there are still insufficient funds available your ship will be confiscated. Change will be given for an item having a higher scrap value than the debt.

Payments to the loan account of 50000 Gecu become due every 24 hours starting at the time of purchase of the craft. Interest will be charged at the rate of 1.5% per day.

Whilst in teleport range of a planet or Space Dock this screen enables you to purchase any items of equipment or maintenance that are available at that location. This option works in the same manner as the scrapping of items except that you should press 'P' to purchase the item.

## ***CRAFT LOG***

Accessed by pressing F10.

"Page Up" and "Page Down" toggles through the logged crafts (see Auto Identification).

## ***MESSAGE LOG***

Accessed by pressing F11.

This screen displays the last clue to a key segment and the last incoming message to be logged and its presumed source. There is also space for any additional information that may be received.

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