



Astral Guidance *Operating System*

A Slice Bar Product

ASTRAL GUIDANCE OPERATING SYSTEM

Version 2.0

A Slice Bar Product

USING THIS USER GUIDE

The Astral Guidance Operating System is the culmination of many years of software development. Drawing from lessons learned in the Astra Protocol incident, improvements have been made to provide an operating system capable of commanding a starship.

Starships are no longer restricted to a single user view with all instrumentation cramped into small screen estate. The power of computing means that many complex calculations can be performed in the blink of an eye, allowing the computer to take on menial jobs and free up the operator for critical tasks.

Whilst comprehensive, this user manual will not detail the full capabilities of the Astral Guidance Operating System as that would require hundreds of pages. Further details should be provided as part of a rigorous training and induction process to ensure that captains fully understand the capabilities and limitations of the software.

Additionally, a glossary has been included to provide an overview of common astral-exploratory terms as well as a useful point of reference.

We thank you for purchasing the Astra Guidance Operating System, the finest in modern starship software.

A



Product

A Name You Can Trust

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The product described in this manual is subject to continuous development and improvement. All information of a technological and astronomical nature is provided by SLICE BAR GAMES in good faith. However it is acknowledged that there may be errors or omissions in this manual.

SLICE BAR GAMES welcome comments, suggestions and feedback relating to this product or manual. All correspondence should be forwarded to:

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WARNING

All maintenance and service on this product should be carried out by regulated SLICE BAR engineers. SLICE BAR can accept no liability for any loss or damage caused by service or maintenance by unauthorised personnel. Improper use of the functions described in this manual may contribute to catastrophic system failure. SLICE BAR accepts no responsibility for any harm, injury, or death caused through proper or improper use of this software. This includes, but is not limited to, celestial collisions, spontaneous explosion, nucleic meltdown, rapid and volatile decompression, and complete particle annihilation.

IMPORTANT

When using this user guide, pay attention to the different type styles which reflect how to interact with the system.

1. To reduce the risk of eye-strain please ensure that you operate the Astral Guidance Operating System in a well lit environment.
2. Do not use the Astral Guidance Operating System within an unsupported spacecraft. Violating this principle will invalidate any and all warranties.
3. Keep flower vases, drinks, scientific samples, alien blood, and any other liquids away from electronic equipment to reduce the risk of spills. Under such circumstances, consult qualified personnel.
4. Shutting down the operating system, self-destructing, or destroying the spacecraft in any form will lose all progress.
5. Do not operate any hardware without prior training.
6. Always ensure that a keyboard or voice module is connected via the proper interfaces.
7. Take special care to not pilot your spacecraft into any solid objects, especially large celestial bodies.
8. General care of the ship should be maintained to ensure optimum functionality.
9. There are no user-serviceable parts inside the spacecraft. Do not attempt to gain access into the equipment. Refer all servicing to qualified service personnel.

CONTENTS

USING THIS USER GUIDE	5
WARNING	7
IMPORTANT	7
CONTENTS	9
INSTALLATION	13
STEAM	15
FLOPPY DISK	15
MICROSOFT WINDOWS	15
CONFIGURATION	17
JOYSTICK CONFIGURATION	22
SECONDARY SCREEN	23
MODULES	25
DEFAULT HOTKEYS	27
ESCAPE (ESC)	27
FUNCTION KEY 12 (F12)	27
HELM (F1)	28
COMPONENTS	28
HOTKEYS	29
MANUAL CONTROLS	29
ENGINEERING (F2)	30
COMPONENTS	30
HOTKEYS	31
MANUAL CONTROLS	31
SCIENCE (F3)	32
COMPONENTS	32
HOTKEYS	33
MANUAL CONTROLS	33
ORDNANCE (F4)	36
COMPONENTS	36
HOTKEYS	37
MANUAL CONTROLS	37
NAVIGATION (F5)	38

COMPONENTS	38
HOTKEYS	39
MANUAL CONTROLS	39
OPERATIONS (F6)	40
COMPONENTS	40
HOTKEYS	40
MANUAL CONTROLS	40
HELP	42
STARChart	42
CONTROLS	42
LOG	43
DOCKING HUD	44
ENTERING COMMANDS	45
COMMAND FORMAT	47
SYNTAX ERROR	47
ARGUMENT TYPES	47
int	47
real	47
vector	47
Constants	48
Optional	48
COMMAND EXAMPLE	48
COMMANDS	49
ABORT	51
DESTRUCT	51
FILTER	51
FOLLOW	51
LINK	51
RECHARGE	51
SCAN	51
ROUTE	52
CLOSE	52
AIRLOCK	52
DATA	52
LINK	52

DISABLE	52
AUTOPILOT	52
LASERS	52
READOUT	53
SIGNAL	53
TRACTOR	53
VOICE	53
DISPLAY	53
CREDITS	53
DETAILS	53
DOCKING	54
FIGHTER	54
LONG	54
STARCHART	54
TRANSMISSION	54
MINE	55
ENABLE	55
AUTOPILOT	55
LASERS	55
RADIO	55
READOUT	55
SIGNAL	55
VOICE	56
FILTER	56
NOISE	56
FIRE	56
ALL	56
FORWARD	56
STARBOARD	57
PORT	57
FOLLOW	57
INJECT	57
COOLANT	57
FIGHTERS	58
PROBE	58

LOAD	58
LOG	58
LONG	58
RANGE	58
OVERRIDE	59
OPEN	59
AIRLOCK	59
PLOT	59
ROUTE	59
RECALL	59
FIGHTERS	59
RECENTRE	60
RECHARGE	60
SHIELDS	60
RELOAD	60
ALL	60
FORWARD	60
STARBOARD	60
REMOVE	61
ROUTE	61
REQUEST	61
DOCK	61
DRYDOCK	61
RESUPPLY	61
TRACTOR	62
SAVE	62
SPACECRAFT	62
SELF	62
DESTRUCT	62
AUTOPILOT	63
BEARING	63
ENGINES	63
LASERS	64
RADIO	64
RUDDER	64

THRUSTERS	65
ZOOM	65
SHUTDOWN	65
STABILIZE	65
ALL	65
POSITION	65
TARGET	66
ASTEROID	66
CLEAR	66
CLOSEST	66
COLLIDER	66
LIFEFORMS	66
PLANET	66
STATION	67
UMBILICAL	67
ANGLE	67
EXTEND	67
LOCK	67
RETRACT	67
UNLOCK	68
ZOOM	68
IN	68
OUT	68
ADDITIONAL HARDWARE	69
GLOSSARY OF TERMS	73
CAPABILITIES	81
IMPORTANT NOTE ON PHYSICS	84

INSTALLATION

Initial instructions about how to install the Astral Guidance Operating System onto your hardware of choice.

STEAM

Users who have purchased the Astral Guidance Operating System via Valve Corporation's Steam Program should follow the instructions provided by the Valve Corporation.

FLOPPY DISK

Insert the diskette into the floppy disk drive with the metal cover forward and the label facing up.

MICROSOFT WINDOWS

In a command terminal, navigate to the floppy disk drive, usually A:
Type:

ASTRALGUIDANCEOPERATINGSYSTEM.BAT

The automated procedure should then install and launch the Astral Guidance Operating System.

CONFIGURATION

Tailoring the function of the Astral Guidance Operating System to suit your specific user needs.

Launching the Astral Guidance Operating system with the command -C or -CONFIG will launch the Astral Guidance Operating System Configuration Tool. This launches a state-of-the-art Graphical User Interface (GUI) that allows the user to configure the Astral Guidance Operating System. Users may manipulate this GUI using either the **TAB** key to select the element that they wish to adjust and use either the **UP** and **DOWN** keys to adjust the numerical value or the **SPACEBAR** to toggle the control. If the user has the interface element commonly known as a **MOUSE** then they may simply **LEFT-CLICK** on the controls they wish to manipulate. Additionally, for numerical controls, the user may type in the value they wish. The values to configure are:

- Foreground Colour (int,int,int)
 - The colour of the text and all graphical elements of the Astral Guidance Operating System Terminal.
 - [Default value : 255,176,0]
- Background Colour (int,int,int)
 - The colour of background that all elements are rendered upon of the Astral Guidance Operating System Terminal.
 - [Default value : 5,3,0]
- Enable Ghosting (true / false)
 - Enables / disables the CRT ghosting effect.
 - [Default value : FALSE]
- Enable Scanlines (true / false)
 - Enables / disables the CRT scanline effect.
 - [Default value : TRUE]
- Enable Flicker (true / false)
 - Enables / disables the CRT flicker effect.
 - [Default value : TRUE]
- Run in Window (true / false)
 - Enables / disables the terminal to run in a window.
 - [Default value : FALSE]
- Pri. Monitor (int)
 - Sets which monitor the terminal is displayed on.
- Fidelity (High / Regular / Low)
 - Adjusts the rendering algorithm to allow for higher definition or faster.
 - [Default value : HIGH]
- Second Screen (true / false)

- Enables the second screen for limited readouts. See SECONDARY SCREEN for more information.
 - [Default value : FALSE]
- Sec. Monitor (int)
 - Sets which monitor the secondary screen is displayed on.
- Update Rate (int)
 - Sets the rate at which the terminal updates (milliseconds). Note that this may be affected by hardware.
 - [Default value : 16]
- CRT Refresh (int)
 - Sets the rate at which the monitor refreshes (milliseconds). Note that this may be affected by hardware.
 - [Default value : 16]
- Computer Voice (selection)
 - Sets the voice that the terminal uses. If no voice specified, uses the default system voice.
- Voice Speed (int)
 - Sets the rate at which the terminal speaks.
 - [Default value : 0]
- Play Music (true / false)
 - Determines whether randomised music from the music directory should play during gameplay.
 - NOTE: Due to technical limitations, other sounds may be removed whilst music is playing.
 - [Default value : TRUE]
- Music Directory (string)
 - The directory to play music from. Supported file types are .MP3 and .WAV.
 - [Default value : ./Audio]
- Initial Objects (int)
 - Sets the initial interesting object count when the terminal loads.
 - [Default value : 45]
- Min. Objects (int)
 - Sets the minimum interesting object count during the terminal update.
 - [Default value : 60]

- Use Ship Scaling (true / false)
 - Modifies the AI ship spawning algorithm to balance around the player's progress.
 - [Default value : FALSE]
- Friendly Fire (true / false)
 - Determines whether ship missiles can damage allied starfighters.
 - [Default value : TRUE]
- External Log (true / false - string)
 - Determines whether the console should log to an external source (i.e. a printer) and the name of the device.
 - [Default value : FALSE]

To ensure that the values are committed for the session, click the APPLY button. To ensure that these applied values persist for future sessions, click the SAVE button.

JOYSTICK CONFIGURATION

Clicking the **CONFIGURE JOYSTICK** button will open a new GUI for the purposes of configuring the primary and secondary joystick for enhanced user input. Here the user is presented with the following options (repeated for the secondary joystick).

- Primary / Secondary (selection)
 - The index of the physical joystick to use as the logical primary / secondary joystick.
- Invert X (true / false)
 - Whether to invert the logical X input of the joystick.
 - [Default value: FALSE]
- Invert Y (true / false)
 - Whether to invert the logical Y input of the joystick.
 - [Default value: FALSE]
- Deadzone (real,real)
 - The cutoff value that the physical joystick must be outputting is greater than to detect as logical input.
 - [Default value: 0.00,0.00]
- Btn 1 (selection)
 - The index of the physical joystick button to map to the logical button 1.
- Btn 2 (selection)
 - The index of the physical joystick button to map to the logical button 2.
- Btn 3 (selection)
 - The index of the physical joystick button to map to the logical button 3.
- Btn 4 (selection)
 - The index of the physical joystick button to map to the logical button 4.

To aid in configuring the device, the GUI will display tools for showing the logical inputs of the X, Y coordinates and whether the logical buttons are detected as being pressed.

SECONDARY SCREEN

For those systems with sufficiently powerful hardware, there is an option to output instrumental readings onto a secondary monitor to allow for further analysis outside of a dedicated module. To enable the secondary screen, ensure that the **SECOND SCREEN** option is set in the **Astral Guidance Operating System Configuration Tool**.

The **SECONDARY SCREEN** has the option of five instruments to display:

- **COMBAT RADAR**
- **SHEILDS**
- **GEIGER COUNTER**
- **SIGNAL WAVEFORM**
- **STARChart**

The details of these instruments can be found in their respective pages in the manual. Pressing the backtick, ` , key will toggle which instrument is displayed.

Note that due to the additional rendering requirements for this additional screen, users may experience a degradation in system performance and that the **SECONDARY SCREEN** updates at a lower frequency than in a dedicated module.

MODULES

Here we will explain the functions of the key modules available in the Astral Guidance Operating System. Those who are experienced with space navigation may skip this section.

The Astral Guidance Operating System provides the user with a series of viewports, known henceforth as MODULES, to give a clear view on the operation of the host spacecraft. Each module may be manually overridden to allow for manual interaction and shortcut functions using so-called HOTKEYS.

MODULES may be selected by typing the name of the MODULE and pressing RETURN. Some MODULES may also be selected by pressing the corresponding FUNCTION KEY for that MODULE, these MODULES are shown with the FUNCTION KEY shown in parentheses after the MODULE name.

DEFAULT HOTKEYS

In most modules, the following hotkeys are present:

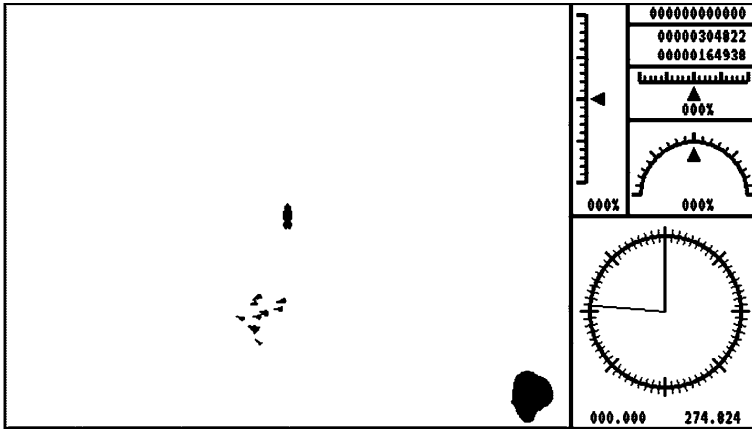
ESCAPE (ESC)

Quits out of a sub-module and disables MANUAL OVERRIDE.

FUNCTION KEY 12 (F12)

Toggles MANUAL OVERRIDE

HELM (F1)



The HELM module shows a short range scan of the area surrounding the spacecraft and displays instruments relating to the ship's position and velocity.

COMPONENTS

VIEWPORT

Displays a short range view of the sector surrounding the ship. NOTE this is independent of any scanners.

ENGINES

Displays the current output of the primary engines which controls the forward / reverse thrust in relation to the ship.

SPEEDOMETER

Displays the starship's current velocity.

COORDINATES

Displays the starship's absolute position in the sector.

THRUSTERS

Displays the current output of the lateral engines which controls the port / starboard thrust in relation to the ship.

RUDDER

Displays the current output of the rotational engines which controls the rotational thrust to determine the ship's facing.

COMPASS

Displays the ship's current bearing and the direction it is travelling in. NOTE that a ship may be travelling in a direction that it is not facing in.

HOTKEYS

None

MANUAL CONTROLS

PLUS

Increase primary engine output

MINUS

Decrease primary engine output

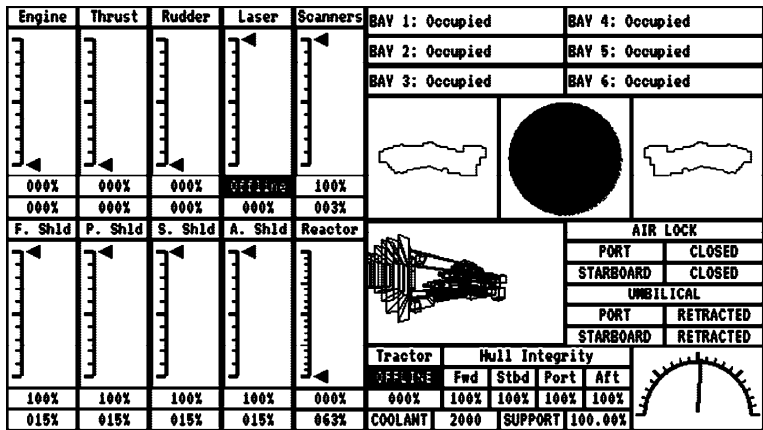
LEFT

Increase counter-clockwise rotational engine output.

RIGHT

Increase clockwise rotational engine output.

ENGINEERING (F2)



The ENGINEERING Module displays a highly accurate display of the starship's current status.

COMPONENTS

REACTOR LOAD

Displays the current load on the (from L-R) reactor for the Primary Engines, Lateral Engines, Rotational Engines, Scanners, Forward Shields, Port Shields, Starboard Shields, Aft Shields.

REACTOR STATUS

Displays the overall load on the reactor and its current temperature in relation to its threshold.

FIGHTER BAY STATUS

Displays the status of all fighter bays.

SHIP DETAILS

Displays the profile of the ship along with the shield strength and a hyper-detailed 3D render of the ship.

AIR LOCK STATUS

Displays the status of each airlock.

UMBILICAL STATUS

Displays the status of each umbilical.

TRACTOR LOAD

Displays the status and reactor load of the Tractor Beam

HULL INTEGRITY

Displays the strength of the Forward, Starboard, Port, and Aft hull. WARNING - Loss of hull integrity will result in total system failure.

GEIGER COUNTER

Displays the current level of radiation that the ship is experiencing.

COOLANT LEVELS

Displays the remaining amount of engine coolant (in Litres).

LIFE SUPPORT LEVELS

Displays the remaining level of life-support.

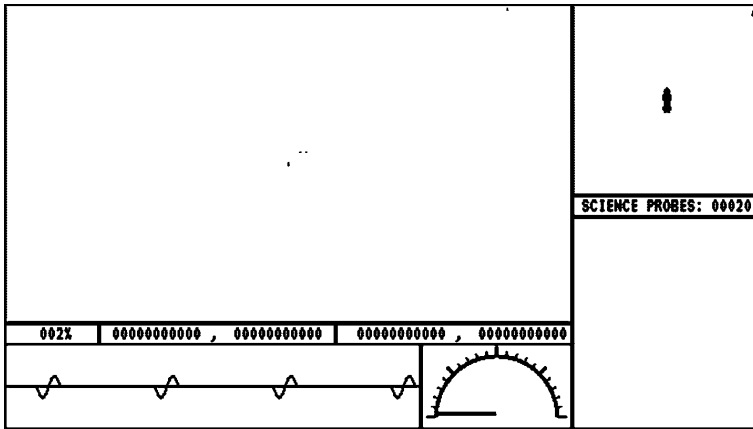
HOTKEYS

None

MANUAL CONTROLS

None

SCIENCE (F3)



The SCIENCE module shows a long range scan of the area surrounding the spacecraft, a short range scan, a waveform of any detected signals, and details of the object in the ship's targeted object memory banks.

COMPONENTS

MAP

Displays the long range scan of the sector at the specified zoom and offset.

MAP ZOOM

Displays the zoom of the map.

CURSOR POSITION

Displays the coordinates underneath the cursor.

COORDINATES

Displays the coordinates of the offset of the map window

SIGNAL WAVEFORM

Displays the waveform of the nearest detected signal.

GEIGER COUNTER

Displays the current level of radiation that the ship is experiencing.

VIEWPORT

Displays a short range view of the sector surrounding the ship. NOTE this is independent of any scanners.

SCIENTIFIC PROBES

Displays the number of scientific probes within the cargo hold.

TARGETED SCHEMATICS

Displays a readout of the object in the ship's targeted object memory banks.

HOTKEYS

FUNCTION KEY 9

Scan Target

FUNCTION KEY 10

Zoom In

FUNCTION KEY 11

Zoom Out

MANUAL CONTROLS

UP

Decrease Cursor Y Position

DOWN

Increase Cursor Y Position

LEFT

Decrease Cursor X Position

RIGHT

Increase Cursor X Position

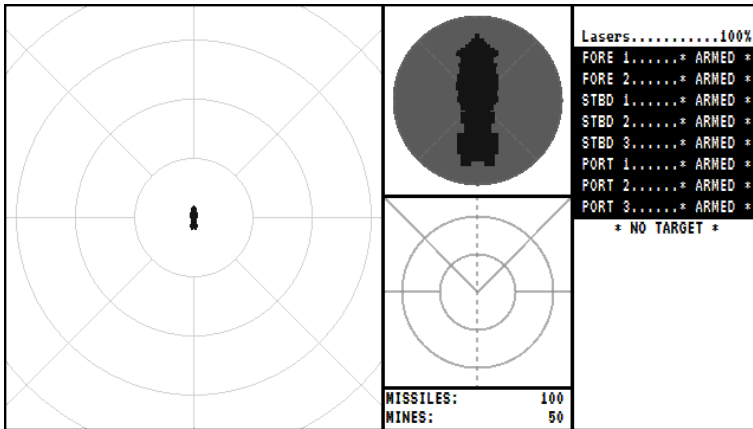
RETURN

Target Lock

PLUS
Zoom In

MINUS
Zoom Out

ORDNANCE (F4)



The ORDNANCE Module is used for combat encounters and shows details of the ship's shield levels, armaments and details of the object in the ship's targeted object memory banks.

COMPONENTS

VIEWPORT

Displays a short range view of the sector surrounding the ship. NOTE this is independent of any scanners.

SHIELDS

Displays the current shield levels and shield strength.

COMBAT RADAR

Displays the position of any large objects in relation to the ship's facing.

AMMUNITION

Displays the remaining missiles and mines in the ship's cargo hold

TARGET LOCK, LASER, AND RELOAD STATUS

Displays the status of the ship's targeted object, the status and power of the ship's laser array, and the status of each of the ship's missile ports.

COMBAT SCHEMATICS

Displays a readout of the object in the ship's targeted object memory banks.

HOTKEYS

None

MANUAL CONTROLS

NUM PAD 0

Toggle Lasers

NUM PAD 1

Fire Port 3

NUM PAD 3

Fire Starboard 3

NUM PAD 4

Fire Port 2

NUM PAD 5

Fire Forward 2

NUM PAD 6

Fire Starboard 2

NUM PAD 7

Fire Port 1

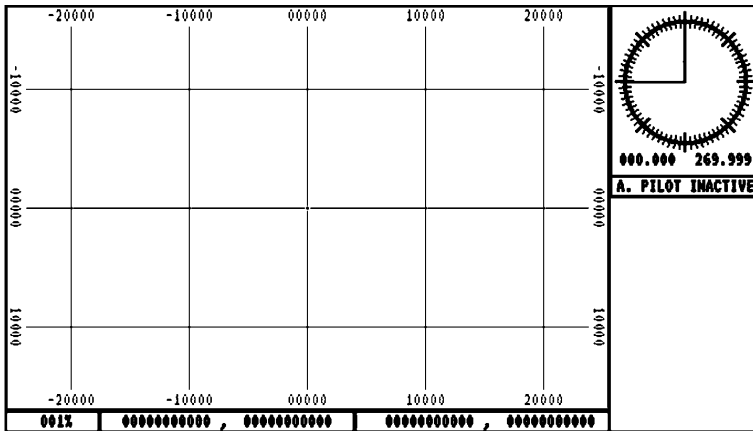
NUM PAD 8

Fire Forward 1

NUM PAD 9

Fire Starboard 1

NAVIGATION (F5)



The NAVIGATION Module is used for showing the ship's position and navigating through the current sector.

COMPONENTS

MAP

Displays the long range scan of the sector at the specified zoom and offset.

MAP ZOOM

Displays the zoom of the map.

CURSOR POSITION

Displays the coordinates underneath the cursor.

COORDINATES

Displays the coordinates of the offset of the map window

VIEWPORT

Displays a short range view of the sector surrounding the ship. NOTE this is independent of any scanners.

COMPASS

Displays the ship's current bearing and the direction it is travelling in. NOTE that a ship may be travelling in a direction that it is not facing in.

AUTOPILOT STATUS

Displays whether the autopilot is active or not.

AUTOPILOT ROUTE

Displays the coordinates currently programmed into the ship's autopilot pathfinding module.

HOTKEYS

FUNCTION KEY 9

Toggle Autopilot

FUNCTION KEY 10

Zoom In

FUNCTION KEY 11

Zoom Out

MANUAL CONTROLS

UP

Decrease Cursor Y Position

DOWN

Increase Cursor Y Position

LEFT

Decrease Cursor X Position

RIGHT

Increase Cursor X Position

RETURN

Plot Point in Autopilot

BACK

Remove point from Autopilot

OPERATIONS (F6)

Mission Duration: 0 DAYS 0 HOURS 0 MINUTES 5 SECONDS		FIGHTER 1: Docked
Distance Travelled: 0000000000		FIGHTER 2: Docked
Total Displacement: 0000000000		FIGHTER 3: Docked
Ships Destroyed: 00000		FIGHTER 4: Docked
Space Stations Linked: 00000		FIGHTER 5: Docked
Celestial Bodies Scanned: 00000		FIGHTER 6: Docked
Survivors Detected: 00000		
Assets of Value Recovered: 00000		
000046502711 : 1 CELESTIAL BODY(S) DISCOVERED		* 000045612147 : HEADQUARTERS
000045761656 : Mission Commenced		

The OPERATIONS Module shows the overall mission status, the status of all the ship's AI drone fighters, the Captain's log and any transmissions received.

COMPONENTS

MISSION STATUS

Displays details on the length and progress of the mission.

FIGHTER STATUSES

Displays all information regarding the AI drone fighters.

MISSION LOG

Displays significant events, reported in reverse chronological order.

TRANSMISSION LOG

Displays all transmissions received, reported in reverse chronological order.

HOTKEYS

None

MANUAL CONTROLS

UP

Decrease Selected list item

DOWN

Increase Cursor Position

TAB

Switch between Captain's Log and Transmissions

RETURN

View selected Captain's Log / Transmission

HELP

The HELP module is used to display an abridged list of commands applicable in the Astral Guidance Operating System. For a more comprehensive description of commands, it is recommended that you use this user guide.

STARCHART

The STARCHART is a sub-module of the NAVIGATION module that displays all discovered celestial bodies, space stations and the spacecraft's current relative position.

CONTROLS

ESC

Exit the sub-module.

SPACEBAR

Toggle all object name visibility.

TAB

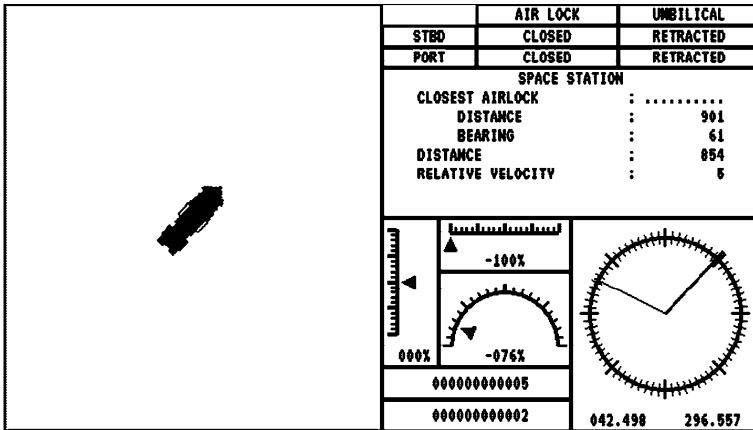
Cycle the highlighted object.

LOG

TIMESTAMP: 000122344527
CAPTAIN'S LOG
STARDATE 23/20-03/04
Captain's can maintain a log of events allowing them to record mission critical data.
F9 : EDIT F11 : SUBMIT F12 : DICTATE

The LOG is a sub-module of the OPERATIONS module that allows the editing and display of log entries. All log entries are assigned a timestamp based on the Astral Guidance Operating System's on-board clock when the log was created. Upon creating a new log entry, the LOG sub-module starts in EDIT mode, allowing free text addition and removal of text. Upon selecting an existing log entry, the LOG sub-module starts in the VIEW mode. Pressing F9 when in VIEW mode changes the LOG mode to EDIT mode. Pressing F10 in EDIT mode changes the LOG mode to VIEW mode. Pressing F11 will submit the entry - overwriting existing entries or appending a new entry to the log depends on whether the LOG sub-module was set to CREATE a new entry or EDIT an existing entry. Pressing F12 in either mode will dictate the log (*info - not all hardware supports this functionality*).

DOCKING HUD



The DOCKING HUD is a specialised sub-view of the HELM module that provides a more detailed display of ship velocity and position in relation to the computer's targeted object to aid in docking operations. Here you can see the umbilical status, information regarding the targeted object, including closest airlock, and the ship's orientation and velocity.

ENTERING COMMANDS

A brief introduction into the concept of COMMANDS and how they are used within the Astral Guidance Operating System.

The Astral Guidance Operating System is primarily controlled via text commands, these are entered by typing in the command and any arguments using the keyboard then pressing the ENTER or RETURN key to commit the command.

COMMAND FORMAT

Commands are entered in the format <COMMAND> <ARGUMENT LIST>, where the command is selected from the COMMANDS section below and the argument list is any number of values separated by a space. The arguments that a command accepts are displayed alongside the appropriate command.

SYNTAX ERROR

If the Astral Guidance Operating System cannot understand the provided command, or the arguments cannot be parsed, a SYNTAX ERROR will be reported. Other, more verbose, errors may be reported depending upon the command and the arguments.

ARGUMENT TYPES

Each argument passed to a command is of a specific type which determines the value that is held and how it is interpreted. The Astral Guidance Operating System supports the following types:

int

An int represents a whole number that can be either positive or negative. Ints are displayed with no decimal place, e.g. 1 -5 7

real

A real represents a number that consists of a whole and fractional part and can be either positive or negative. Real numbers can be displayed with or without decimal places, e.g. -2 1.6 6.43 1.0 0.3

vector

A vector represents a coordinate or pair of real numbers. It is specified by two real numbers and a comma separating the pair, e.g. -5,10.4 3,2

Constants

Some commands take arguments which are constant values, specified by a word in a non-italic typeface, e.g. ALL or FORWARD

Optional

Some commands take optional arguments. These arguments may be omitted from typing and still parse correctly.

COMMAND EXAMPLE

SET ENGINES 100

Calls the SET command with the sub-command of ENGINES with an argument of 100. This will set the ship's engines to 100%.

COMMANDS

A listing of all commands understood by the Astral Guidance Operating System's highly advanced parser.

ABORT

DESTRUCT

Arguments: [None]

Will attempt to cancel an initiated self-destruct sequence.

WARNING: This sequence is not 100% reliable and Slice Bar accepts no responsibility for failed execution.

FILTER

Arguments: [None]

Stops any signal filtering.

FOLLOW

Arguments: [None]

Stops the autopilot from following its target.

LINK

Arguments: [None]

Aborts any data-links in progress.

RECHARGE

Arguments: SHIELDS, ALL|FORWARD|STARBOARD|PORT|AFT (*optional*)

Cancels the specified shields from recharging.

SCAN

Arguments: [None]

Cancels any active or pending scanning operations.

CLEAR

ROUTE

Arguments: [None]

Clears the plotted route in the autopilot's memory banks.

CLOSE

AIRLOCK

Arguments: STARBOARD|PORT

Closes the airlock on the corresponding face.

DATA

LINK

Arguments: [None]

Begins handshake process with an external data source, enabling sanitisation of data-packets and access to improved scanning facilities.

DISABLE

AUTOPILOT

Arguments: [None]

Disables the artificial intelligence stabilization and pathfinding module.

LASERS

Arguments: [None]

Disables the automated targeting of the laser array.

RADIO

Arguments: [None]

Disables the scanner array.

READOUT

Arguments: [None]

Disables the computer generated vocalisation of messages.

SIGNAL

Arguments: JAMMERS

Disables the on-board radio from transmitting randomised multi-spectrum frequency electromagnetic radiation.

TRACTOR

Arguments: [None]

Disables the tractor beam.

VOICE

Arguments: [None]

Disables the voice recognition module.

DISPLAY

CREDITS

Arguments: [None]

View the Slice Bar engineers and contractors involved with the construction of this software.

DETAILS

Arguments: [None]

Shows advanced readouts for the scanned object.

Analysis is only available in the SCIENCE module.

DIAGNOSTICS

Arguments: [None]

Provides a detailed readout of the current status of all of the starship's components.

DOCKING

Arguments: HUD

Enters the docking hud module that displays additional information for assistance in docking.

Only available in the HELM module.

FIGHTER

Arguments: STATUS, *Index (int, optional)*

Displays the status of the AI-drone fighter specified by the *Index* argument. If no *Index* specified, displays details for all fighters.

LONG

Arguments: RANGE, SCAN

Displays the results of the most recent long-range scan.

Note that the coordinates returned by this scan are relative to the spacecraft and not absolute.

STARCHART

Arguments: [None]

Displays the astral chart of mapped space. See page 37 for more details.

Only accessible in the NAVIGATION module.

TRANSMISSION

Arguments: [None]

Displays the most recently received transmitted message.

To read other transmissions, use the MANUAL OVERRIDE controls within the OPERATIONS module.

DROP

MINE

Arguments: [None]

Drops a mine.

Note that the armoury must contain a mine for this command to succeed.

ENABLE

AUTOPILOT

Arguments: [None]

Enables the artificial intelligence stabilization and pathfinding module.

LASERS

Arguments: [None]

Enables the automated targeting of the laser array.

RADIO

Arguments: [None]

Enables the scanner array.

READOUT

Arguments: [None]

Enables the computer generated vocalisation of messages.

SIGNAL

Arguments: JAMMERS

Sets the on-board radio to transmit randomised multi-spectrum frequency electromagnetic radiation towards the targeting computer's target.

Note that the targeting computer must have a valid selection for this command to succeed.

TRACTOR

Arguments: [None]

Enables the tractor beam.

Note that the targeting computer must have a valid selection for this command to succeed.

VOICE

Arguments: [None]

Enables the voice module.

FILTER

NOISE

Arguments: [None]

Enables high-definition noise cancelling algorithms to produce higher fidelity readouts.

Requires the starship to be stable for the triangulation algorithms to work correctly.

FIRE

ALL

Arguments: [None]

Fires all missiles.

FORWARD

Arguments: *ALL (optional) | Tube (int, optional)*

Fires the forward missiles. If the *ALL* argument is specified, all forward missiles will be fired, otherwise the missile tube specified in the *Tube* argument will be fired.

STARBOARD

Arguments: *ALL (optional) | Tube (int, optional)*

Fired the starboard missiles. If the *ALL* argument is specified, all starboard missiles will be fired, otherwise the missile tube specified in the *Tube* argument will be fired.

PORT

Arguments: *ALL (optional) | Tube (int, optional)*

Fires the port missiles. If the *ALL* argument is specified, all port missiles will be fired, otherwise the missile tube specified in the *Tube* argument will be fired.

FOLLOW

Arguments: *Distance1 (float), Distance2 (float)*

Sets the autopilot to periodically re-route to follow the object in the targeting computer's memory banks. The *Distance1* argument specifies the distance to move towards, the *Distance2* argument specifies the distance to stop moving at to allow for smooth transitions.

INJECT

COOLANT

Arguments: *Amount (int)*

Injects the amount of liquid nitrogen coolant specified in the *Amount* argument into the engines.

Note that there must be sufficient coolant in the inventory for this command to succeed.

LAUNCH

FIGHTERS

Arguments: *Bay (int, optional)*

Scrambles the AI drone fighter from the bay specified in the *Bay* argument. If *Bay* is not specified, all fighters are scrambled. Note that the bay must contain a fighter for this command to succeed.

PROBE

Arguments: [None]

Launches a self-propelled diagnostics probe.

Note that the SCIENCE module must contain a probe for this command to succeed.

LOAD

Arguments: [None]

Prompts for a mission record from disc to restore the terminal to.

LOG

Arguments: *Entry (int, optional)*

Opens the chronological logging module to edit the log entry specified by the *Entry* argument. If no *Entry* is provided, a new log entry is created. See page 43 for more details.

LONG

RANGE

Arguments: SCAN

Performs a scientific analysis of the sector providing relative positions of the nearest celestial body, signals of artificial origin, and space stations.

MANUAL

OVERRIDE

Arguments: [None]

Allows for manual override of the current view, enabling control via cursor and other specified keys. Press the ESCAPE key to exit.

OPEN

AIRLOCK

Arguments: STARBOARD|PORT

Opens the airlock on the corresponding face.

PLOT

ROUTE

Arguments: (*Coordinate (vector)*) | TARGET

If a coordinate is provided, appends the value specified in the *Coordinate* argument into the autopilot's current route. If TARGET is provided, appends the current location of the object in the targeting module's memory banks to the autopilot's current route.

RECALL

FIGHTERS

Arguments: *Bay (int, optional)*

Recalls the AI-drone fighter from the bay specified by the *Bay* argument. If *Bay* is not specified, all fighters are recalled.

Note that the bay must be assigned to a fighter for this command to succeed.

RECENTRE

Arguments: [None]

Recentres the viewport to the vessel's current position. Only accessible in SCIENCE and NAVIGATION modules.

RECHARGE

SHIELDS

Arguments: ALL|FORWARD|STARBOARD|PORT|AFT (*optional*)

Sets the selected shields to recharge back to maximum efficiency.

Note that recharging shields provide no deflective capabilities.

RELOAD

ALL

Arguments: [None]

Reloads all missiles.

FORWARD

Arguments: ALL (*optional*) | Tube (*int, optional*)

Reloads the forward missiles. If the *ALL* argument is specified, all forward missiles will be reloaded, otherwise the missile tube specified in the *Tube* argument will be reloaded.

STARBOARD

Arguments: ALL (*optional*) | Tube (*int, optional*)

Reloads the starboard missiles. If the *ALL* argument is specified, all starboard missiles will be reloaded, otherwise the missile tube specified in the *Tube* argument will be reloaded.

PORT

Arguments: *ALL (optional) | Tube (int, optional)*

Reloads the port missiles. If the *ALL* argument is specified, all port missiles will be reloaded, otherwise the missile tube specified in the *Tube* argument will be reloaded.

REMOVE

ROUTE

Arguments: *Count (int, optional)*

Removes the last plotted coordinate from the route in the autopilot's memory banks. If the *Count* argument is provided, it will repeat this for the number provided by the *Count* argument or until the route is empty.

REQUEST

DOCK

Arguments: [None]

Sends an automated docking request to the computer that is data-linked with the vessel and returns the response.

DRYDOCK

Arguments: [None]

Sends an automated ship repair request to the computer that is data-linked with the vessel and returns the response.

RESUPPLY

Arguments: [None]

Sends an automated request to resupply operational materials to the computer that is data-linked with the vessel and returns the response.

REVERSE

TRACTOR

Arguments: POLARITY

Inverts the polarity of the tractor beam, between ATTRACT and REPEL.

SAVE

Arguments: [None]

Stores the current mission record to disc.

SCAN

Arguments: [None]

Scans the objects in the targeting module's focus.

Note that there must be an object in the targeting module's focus for this command to succeed.

SPACECRAFT

Arguments: [None]

Scans for nearby spacecraft and returns their relative distance.

SELF

DESTRUCT

Arguments: [None]

Prompts whether the user wishes to initiate the self-destruct sequence. Selecting Y to this prompt initiates the self-destruct sequence with a timer of fifteen (15) seconds.

WARNING: Initiating self-destruct sequence may result in catastrophic damage to oneself, irreparable damage to your system and will invalidate any and all warranties.

SET

AUTOPILOT

Arguments: (ENGINES | THRUSTERS | RUDDER), *Value (real)*

Adjusts the rate at which the AI-assisted propulsion system operates when controlling the starship.

ENGINES

Forward / reverse engines

THRUSTERS

Port / starboard engines

RUDDER

Rotational engines

BEARING

Arguments: *Angle (real)*

Sets the ship to rotate to the bearing specified with the *Angle* argument.

ENGINES

Arguments: *Percentage (real)*

Sets the ships engines to output at the rate specified with the *Percentage* argument.

Specifying a negative value will put the engine into reverse.

LASER

Arguments: MODE, (ASTEROIDS | CLOSEST | FIGHTERS | MISSILES | TARGET)

Sets the laser array's automatic targeting mode:

ASTEROIDS

Target the nearest asteroid

CLOSEST

Target the nearest asteroid, fighter, lifeform, missile, or selected target

FIGHTERS

Target the nearest enemy fighter

LIFEFORMS

Target the nearest biological object

MISSILES

Target the nearest hostile projectile

TARGET

Prioritise the ship's current target

LASERS

Arguments: *Percentage (real)*

Sets the power of the lasers to the value specified with the *Percentage* argument.

RADIO

Arguments: *Range (int)*

Sets the range that the scanners operate at.

RUDDER

Arguments: *Percentage (real)*

Sets the ships rotational engines to output at the rate specified with the *Percentage* argument. Specifying a positive value will result in a clockwise rotation whilst a negative value will result in an anti-clockwise rotation.

SHIELDS

Arguments: (FORWARD | STARBOARD | AFT | PORT) (*optional*), *Percentage (real)*

Sets the provided shield levels to the value specified with the *Percentage* argument. If no shield is specified, all shields will be set to the *Percentage* value.

THRUSTERS

Arguments: *Percentage (real)*

Sets the ships lateral engines to output at the rate specified with the *Percentage* argument. A positive value will result in a starboard translation whilst a negative value will result in a port translation.

ZOOM

Arguments: *Percentage (int)*

Sets the zoom of the current viewport. Only accessible in Science and Navigation modules.

SHUTDOWN

Arguments: [None]

Shuts down the terminal.

STABILIZE

ALL

Arguments: [None]

Activates the inertia module to stabilize the ship's translation and rotation.

POSITION

Arguments: [None]

Activates the inertia module to stabilize the ship's translation.

ROTATION

Arguments: [None]

Activates the inertia module to stabilize the ship's rotation

TARGET

Note that the TARGET command only works on objects within the distance of the short range scanners.

ASTEROID

Arguments: [None]

Engages the ship's targeting module to focus on the closest valid space debris.

CLEAR

Arguments: [None]

Clears the ship's targeting module's focused target.

CLOSEST

Arguments: [None]

Engages the ship's targeting module to focus on the closest valid target.

COLLIDER

Arguments: [None]

Engages the ship's targeting module to focus on what has triggered the on-board collision warning.

LIFEFORMS

Arguments: [None]

Engages the ship's targeting module to focus on the closest living biological matter.

PLANET

Arguments: [None]

Engages the ship's targeting module to focus on the closest valid celestial body.

SHIP

Arguments: [None]

Engages the ship's targeting module to focus on the closest valid spacecraft.

STATION

Arguments: [None]

Engages the ship's targeting module to focus on the closest valid space station.

UMBILICAL

ANGLE

Arguments: (FORWARD | STARBOARD | AFT | PORT), *Angle (int)*

Sets the angle that the docking umbilical on the corresponding face extends relative to the vessel's bearing.

Note that this command requires the umbilical to be completely retracted.

EXTEND

Arguments: (FORWARD | STARBOARD | AFT | PORT)

Begins the extension process for the docking umbilical on the corresponding face.

LOCK

Arguments: (FORWARD | STARBOARD | AFT | PORT)

Engages the environmental clamps for the docking umbilical on the corresponding face, ensuring no loss of life support function between the vessel and target airlock.

WARNING - this process ensures that the vessel is tethered to the target airlock and over extension or flexion of the docking umbilical may result in severance.

RETRACT

Arguments: (FORWARD | STARBOARD | AFT | PORT)

Begins the retraction process for the docking umbilical on the corresponding face.

STOP

Arguments: (FORWARD | STARBOARD | AFT | PORT)

Halts the retraction or extension process for the docking umbilical on the corresponding face.

UNLOCK

Arguments: (FORWARD | STARBOARD | AFT | PORT)

Disengages the environmental clamps for the docking umbilical on the corresponding face.

WARNING - this removes any guarantee of environmental seal along the docking umbilical and any passage along this corridor should take the necessary precautions.

ZOOM

IN

Arguments: *Percent (int, optional)*

Zooms the current viewport in by the specified amount. Only accessible in the Science and Navigation module.

OUT

Arguments: *Percent (int, optional)*

Zooms the current viewport out by the specified amount. Only accessible in Science and Navigation modules.

ADDITIONAL HARDWARE

The Astral Guidance Operating System requires no additional hardware interfaces to operate, however a joystick may be utilised for an enhanced experience.

Astral Guidance Operating System has support for hardware user interfaces. If detected, this will allow the user to operate certain modules interactively whilst retaining keyboard command support.

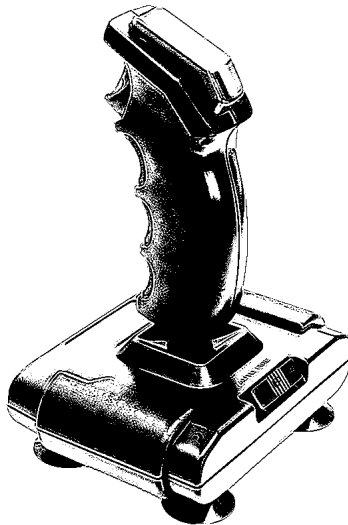
Joystick support is present on the map view in both the SCIENCE and NAVIGATION modules. Moving the joystick will move the cursor as appropriate and pressing FIRE will perform the following actions:

SCIENCE

Attempts a TARGET LOCK on the highlighted object

NAVIGATION

Orders the AUTOPILOT to PLOT ROUTE to the highlighted coordinates



GLOSSARY OF TERMS

*Some commonly used terms from the universe of astral-navigation,
explained for Astral Guidance Operating System users...*

AIR LOCK

Reinforced elements of the ship's hull that can be opened and closed on command to enable passage of the crew along a docking umbilical.

ASTEROID

Large chunks of mass of indeterminate origin.

ASSETS OF VALUE

Specialised objects the Science Division require for further analysis.

AUTOPILOT

Automated pathfinding and navigation system. If a route has been plotted into its memory banks, it will attempt to move the ship between its destination points by controlling the engines accordingly. If no route in memory banks, will attempt to stabilize the ship.

BATTLESHIP

A large, highly armoured and highly armed spacecraft.

CELESTIAL BODY

A large collection of matter in either solid or gas form. A star, planet, or moon.

CIVILIAN TRANSPORTATION

Spacecraft dedicated to the transportation of civilians.

COOLANT

A liquid-nitrogen based substance for reducing the reactor-core temperatures.

CORRUPTION

Transmissions received in high-noise environments may be subject to a level of corruption and may need to be cross referenced against other signals to determine their meaning and origin.

CRYSTALLINE ENTITIES

Ancient and seemingly inert crystal structures that appear to be impervious to conventional ordnance. They react with, and emit their own electromagnetic radiation and show signs that imply sentience.

DESTROYER

Multi-purpose spacecraft with effective combat capabilities, typically used for search and rescue, patrol, and escort missions.

DISTRESS BEACON

Artificially generated periodic signal that typically consists of a transmission.

ENGINES

Provide forward / reverse thrust for a spacecraft.

FIGHTER

Artificially controlled short range attack craft, usually docked on board a starship.

FRIGATE

Multi-purpose spacecraft with some combat capabilities, typically used for search and rescue, patrol, and escort missions.

HELIOSAUR

Space-faring migratory reptilians. Known to travel between planets and nest on asteroids. Usually docile, but may attack small craft or if agitated.

HULL

Key component of a ship's construction. Keeps the atmosphere in and the vacuum of space out. A hull rift can result in total system failure.

LASER ARRAY

Short ranged energy weapon capable of automatic targeting of starships, starfighters, asteroids and missiles.

LIFE SUPPORT

A combination of Oxygen, Nitrogen, other gases, and heating systems that are used to create and sustain an artificial environment on board a ship that is capable of sustaining life.

MINE

Immobile proximity based explosive.

MINEFIELD

Areas of proximity based explosives, typically with their own stabilisation engines to negate gravitational pull.

MISSILE

Rocket propelled explosive with homing capabilities.

MOON

Large solid mass, which may have a thin atmosphere, typically orbiting a planet.

NOISE

Distortion to scientific instrumentation through factors such as proximity to large masses, radiation, or high speeds.

PLANET

Large mass in either solid or gaseous form.

PROBE

Self-propelled scientific diagnostic device, capable of retrieving data not possible by a longer ranged scan.

RADIATION

Electromagnetic interference causing instrumentation noise and other distortions to electronic equipment.

RAM

Specialised spacecraft used for breaching asteroids and ship hulls. Strong forward shields, durable armour, and powerful engines.

REACTOR

The lifeblood of any starship. Converts matter into energy, however overloading can cause overheating. Overheating can cause explosive system failures.

RIFT WORM

Gigantic, seemingly mindless segmented lifeforms. Powerful enough to bore straight through rock and with the unexplained ability to travel via space-time anomalies.

RUDDER

Provides clockwise / counter-clockwise thrust for a spacecraft.

SCANNER ARRAY

Selection of instruments that can perform diagnostics via radio and other long-wave electromagnetic radiation.

SCIENTIFIC DIVISION

A key component of High-Command that specialises in investigation and diagnostics around the forces of nature and the universe.

SCIENTIFIC VESSEL

Civilian vessel tasked with the auditing of a sector and providing scientific results for Scientific and other divisions.

SCOUT

Vanguard military vessel that searches for threats and alerts nearby spacecraft. Low offensive capabilities.

SHIELD MITES

Parasitic life forms that feed primarily on energy. Swarms have been known to drain the shields of spacecraft.

SHIELDS

Refractive diffusion lasers enveloping the entire ship in four sectors of 45°, protecting the physical structure from damage.

SPACE STATION

Remote artificial structures that can be found orbiting a planet or in the fringes of space. Their memory banks can be accessed along with their long range scanning capabilities.

STAR

An extraordinarily large celestial body in gaseous form that provides a high amount of radiation and heat for other nearby celestial bodies.

THRUSTERS

Provides port / starboard thrust for a spacecraft.

TRACTOR BEAM

An inverted-repulsion device providing an attractive force between the starship and its target.

TRANSMISSION

Messages sent via electronic means may be detected as transmissions.

UMBILICAL

Retractable, reinforced corridors that can be anchored with the airlock of another structure and sealed to ensure no atmospheric loss when transferring crew or other materials..

CAPABILITIES

In case it hasn't been made clear by the manual so far, the Astral Guidance Operating System brings a multitude of advanced features to your fingertips. In this chapter, we will explain just a few.

Since man first looked up to the moon in the night sky, he dreamed of travelling amongst the stars, and now, with the Astral Guidance Operating System, those dreams have become reality. Powerful engines allow us to travel many kilometres in the blink of an eye whilst robust shielding devices can allow us to withstand extremities of pressure that would crush us like a can or make us pop like a balloon.

MULTI-VIEW FUNCTIONALITY

No longer is a user constrained to having to manage all their information at once. The Astral Guidance Operating System combines all instrumentation into a series of rapidly accessible modules so that the relevant information is available at the right time, without the sacrifice of clarity of meaning.

PRECISION NAVIGATION

Operators can set the output rate of the forward, lateral, and rotational engines, allowing them to not only adjust their position and bearing, but set the rate at which they achieve it.

AUTOMATIC FLIGHT CONTROLS

Using complex calculations, the ship can automatically adjust its rotational engines to turn to face whichever bearing you desire and, coupled with the intelligent routing system, can ensure you reach your target destination with only a few short commands. But if you don't feel like going anywhere, the Astral Guidance Operating System has you covered, by being able to lock your bearing and position so you barely move a metre, even after a heavy collision.

ADVANCED SCANNING FACILITIES

When enabled, the long range scanners can inform you of any celestial bodies or space stations within range, whilst shorter band scanners can detect smaller objects at a closer distance, ensuring you aren't caught off-guard. These scanners can also produce detailed schematics of nearby objects, and if that's not detailed enough, you can always launch a probe to fill in those missing details!

POWERFUL OFFENSIVE AND DEFENSIVE CAPABILITIES

With four separate diffraction shields, each covering 45°, your ship will be able to withstand even a direct hit from an asteroid or stray missile. Speaking of missiles, all ships come with the ability to launch a number of highly explosive missiles that can lock onto and follow their target. For a more high-tech solution, an array of highly focusable, automated lasers can be enabled, capable of depleting shields and reducing asteroids to dust in a matter of minutes as well as shooting down any incoming projectiles.

SHIP TO CRAFT DOCKING

New to more recent models is the ability to control the ability for the ship to dock with other craft and space stations. The Astral Guidance Operating System is capable of sending automated docking requests to ensure that the recipient is prepared for the arrival of the ship. Sufficiently advanced craft can also have their docking umbilicals controlled to extend at a specified angle to allow for more leeway when piloting craft to a docking port, and status monitoring of airlocks can ensure that any leaks in life support are rapidly detected.

IMPORTANT NOTE ON PHYSICS

According to Newton's First Law on Motion, bodies at rest remain at rest, whilst bodies in motion will remain in motion at a constant velocity unless acted upon by a net external force. Users are cautioned to remember this law of inertia when it comes to operating the craft's engines.

