QUICK INDEX

DOS INSTALL NOTES

STEP ONE

Type D:\ (Assuming D is the CD-ROM), Type INSTALL and Hit Return.

STEP TWO

Install Path C:\SPACE, use Quick Key "Down Arrow" to select next Step, accepting the default Install directory, or use Quick Key "Return" to activate text insertion. Type new directory path and hit "Return", use "Down Arrow" to select next Step.

STEP THREE

Graphics stored on Disk use Quick Key "Down Arrow" to select next Step, accepting the default Option, or use Quick Key "Return" to select Graphics stored in RAM, use "Down Arrow" to select next Step.

Graphics Stored On Disk

Selecting this Option forces the Space Station to load all user interface graphics from the install directory, as and when they are needed.

Graphics Stored In RAM

Selecting this Option forces the Space Station to load all user interface graphics into RAM, using 1212Kb of previously usably Wave memory. Designed for P150+ CPU's with a minimum of 32Mb of RAM, this activates several Improvements.

One

Up to 25% increase in Waves playable (Polyphony). P150+ CPU's only.

Two

No Hard Disk activity, except when loading and saving Instruments (Banks), eliminating all of the noise associated with Hard Disk Playback.

Three

Software and Waves are self contained and locked in RAM, enabling the Space Station to continue running in a live situation even after Hard Disk Failure and WIN95 General Protection Errors.

STEP FOUR

Install Now, use Quick Key "Return" to Install the Space Station Pro, or use "Down Arrow" and then "Return" to Quit the Install.

STEP FIVE

Change directory to the install location “C:\Space” and type GO to launch. Launching the Space Station for the first time activates the Licence Key, at this point you will need to type in the Licence Number located on the inside back page of the Manual Folder, (see Licence Key page 114 be for continuing).

FOR MORE INFORMATION

Contact WWW.Digitalaudioinnovation.com
Email Support@Digitalaudioinnovation.com

WIN95 INSTALL NOTES

STEP ONE

Click START and chose Run, type D:\ SETUP (Assuming D is the CD-ROM).

STEP TWO

Setup

Click Yes to start the Space Station Installation Program, or No to Cancel. Remember to read and follow all on screen prompts.

STEP THREE

Install Path C:\SPACE, click Next to accept the default directory, or change the path and directory by using the File Windows or by typing the desired location.

STEP FOUR

Click Install to accept the default Program Group or select one from the list.

STEP FIVE

Graphics in RAM or Disk, click Yes for RAM and No for Disk

Graphics Stored In RAM

Selecting this Option forces the Space Station to load all user interface graphics into RAM, using 1212Kb of previously usably Wave memory. Designed for P150+ CPU's with a minimum of 32Mb of RAM, giving several Improvements.

One

Up to 25% increase in Waves playable (Polyphony). P150+ CPU's only.

Two

No Hard Disk activity, except when loading and saving Instruments (Banks), eliminating all of the noise associated with Hard Disk Playback.

Three

Software and Waves are self contained and locked in RAM, enabling the Space Station to continue running in a live situation even after Hard Disk Failure and WIN95 General Protection Errors.

Graphics Stored On Disk

Selecting this Option forces the Space Station to load all user interface graphics from the install directory, as and when they are needed.

STEP SIX

Double click on the Space icon or click Start\Programs\Space Station to launch. Launching the Space Station for the first time activates the Licence Key, at this point you will need to type in the Licence Number located on the inside back page of the Manual Folder, (see Licence Key page 114 be for continuing).

FOR MORE INFORMATION

Contact WWW.Digitalaudioinnovation.com
Email Support@Digitalaudioinnovation.com

GETTING STARTED

Their are four recommended Steps to ensure successful results from the Space Station. If at the end of these Steps things are not going well, then read the Trouble Shooting Guide (pages 115-117). If the problems persist then contact us via phone or Email.

STEP ONE

WIN95

Double click on the Space Station short cut to Launch.

DOS

Change directory to the Space Station install Path (C:\SPACE),
then Type GO followed by Quick Key "Return" to Launch.

STEP TWO

Left click\drag the Mouse Pointer across the Keyboard Panel, piano style Keys. If the MIDI Analyzer in the centre of the Keyboard Panel illuminates in a Bar Graph style, then the Sound Engine is running (continue to Step Three). If there is not any MIDI Analyzer activity then re-install the Space Station, if you just have re-installed, read the TSG pages 115-117. If the problems persist then contact us via phone or Email.

STEP THREE

Click on the Function Button "SHIP" (Keyboard Panel right side), to activate the Ship Navigator. Your current location is displayed by a red highlight, move the mouse pointer over the green rectangle (Level Jump Gate), labelled Level 2. The name of the Level "Output Settings" will be displayed in the Status Screen (Keyboard Panel left top), click to activate Jump Gate.

OUTPUT SETTINGS

Click on the TEST Button to allow the Space Station to calculate the best possible Output Frequency and Polyphony of your Hardware. If at the end of the Test routine your Polyphony Value is less than 8, it is advisable to select the next best Frequency Value by clicking on the Button, and then activating the Test routine again. When all Tests have been completed click on the Function Button "SHIP", then click on the Jump Gate "ZONE 0 LEVEL 1", "Desktop and MIDI Analyzer".

STEP FOUR

Click on the Function Button "HELP" to activate the Help Navigator for the current Level "Desktop". It is recommended that you read as much of this Help file as possible, as it relates to basic operation within the Space Station. If Manuals are not your thing and instant Sound is what you want, then Cancel the Help Navigator by clicking on Option 4 (Keyboard Panel Option Screen) or use Quick Key "F4". Click\hold the "LOAD" Button (Load\Save Bar top left), and drag down to "LOAD GROUP". Release click to activate the Load Group Window, select DEMO.GPW and click "OK" or use Quick Key "Return" to Load. Click "OK" to change Tempo or use Quick Key "Return". After Loading is completed click the Song Control Button "PLAY" (Keyboard Panel left), to activate Tempo Looping, all Keys with Waves Assigned will have Green LED's, left click\hold any Assigned Keys or push\hold QWERTY keys "\ to k" to play back, but for full control use a MIDI Keyboard. For more information on any aspect of the Space Station use the Help Navigator!

INTRODUCTION

The Space Station is a memory resident, software driven virtual sampler for DOS or Windows 95. It features all of the standard functions found on a hardware sampler and several others never seen before!. The user interface has been designed for quick and easy use. However, the Space Station is a professional audio suite, and time will be needed to explore all its possible applications. The manual deals with all Space Station functions and concepts but some understanding of MIDI, Sampling and Sound Design is necessary as standard terms have been used when applicable.

REQUIREMENTS

The Core of the Space Station's Output Engine can be adjusted to 11Khz, 22Khz or 44Khz in Stereo or Dual Mono modes, this enables the Software to run on any IBM or Clone PC with a 386 or faster processor, containing 8Mb of RAM or more, a Sound Blaster 16,32 or 64, a dual speed CD ROM or faster, a 16 colour VGA adapter or better and a minimum of 10Mb of Hard Disk space. Win95 users will need a minimum of 32Mb of RAM.

386 DX40
11Khz Stereo or Dual Mono modes only using DOS 5 or greater.
486 DX66
11Khz or 22Khz Stereo or Dual Mono modes using DOS 5 or Greater.
P60 - P90
All modes using DOS 5 or Greater or the same as a 486 DX66 in WIN 95.
P100 - P200
All modes in DOS or WIN 95.
P166MMX -P300MMX
All modes in DOS or WIN 95.
P2
All modes in DOS or WIN 95.

For information on Polyphony Values see Test Results below.

COMPATIBILITY

The Space Station only supports the Creative Labs Sound blaster 16 range of cards. There are many audio cards claiming to be 100% Sound blaster compatible which in fact, are not. The Space Station talks directly to the Digital Sound Processor (DSP) of your audio card. Unless you have a Creative Labs Sound blaster 16 or AWE contact will not be established, and the Space Station will not launch.

FUNDAMENTALS

The Space Station Loads Waves into RAM, eliminating the need for Audio Cards with RAM on board, the more RAM your PC has the more Waves you can Load**.** All operations including Wave Play back are carried out from within RAM limiting Disk access and preventing most of the noise associated with PC Audio.

PERFORMANCE

The Space Station will perform like any Multitimbral Hardware device, with use of 16 MIDI Channels sharing a global Polyphony Value. Instruments can be Loaded\ Assigned to MIDI Channels and Played back simultaneously. Instruments can be modified both on screen and with MIDI in REAL TIME.

INSTRUMENTS

Standard PC Wave files can be Loaded\Assigned to Keys and modified using Sampler\Synth style editing tools. Instruments can consist of 1-128 Waves (single Layered) or 2-256 Waves (multi layered) and stored to disk as Banks.

1-256 WAVES = 1 BANK, 1-16 BANKS = 1 GROUP

STRUCTURE

The Space Station has been split into seven Functional areas known as Zones, each of which is colour coded and has several Control Windows known as Levels. All Zones and Levels are numbered for quick identification.

ZONES

Designed for controlling and Monitoring MIDI, Groups, Banks and Waves.

Desktop (Zone 0)
Split into three Levels for monitoring MIDI Data, Status and Memory Messages.
Edit Group (Zone 1)
Split into five Levels for assigning Banks(Instruments) to MIDI Channels and setting Audio quality\Polyphony, Sound blaster Levels, MIDI and Preferences.
Edit Bank (Zone 2)
Split into nine Levels for generating and modifying Banks (instruments). All Levels. within this Zone give access to advanced synth style editing functions used for controlling Waves in a none destructive manner. All Versions except OEM.
Edit Wave (Zone 3)
Split into five Levels for modifying and Recording Wave Files. All Levels within this Zone physically modify the Waves. PRO and Manufacture Versions only.
Sequencer (Zone 4)
Split into five Levels for creating and modifying Songs. All Levels within this Zone are used for modifying MIDI Data in different ways. Zone Under Construction.
Mixer (Zone 5)
Split into three Levels for transmitting fixed or user definable MIDI Data and constructing and saving Mixers.
Navigator (Zone 6)
Split into two Levels for moving around Zones\Levels quickly and providing on line Help for the current active Level.

LIBRARY

To make the Space Station more immediately useable for amateurs and pros alike, there is an extensive Instrument\Accessaries library supplied on CD ROM. You will find six directories named Groups, Banks, Waves, Mixers, LFO and Envelope.
Groups
Contains a range of Demo files to get you started.
Banks
Contains a range of sub directories each of which tree down to list the available Instruments, ie: Banks\Sounds\Keyboard\Piano\ Acoustic\Grand02.bnk.
Waves
Contains a simular directory structure to Banks and contains two Types of Waves.

Type One
Loop Waves, one Bar live performances in the Key of A or E within twelve Tempos. All of the available Loop Waves have be Assigned and saved as Banks utilising the Loop Mode 2 Function and without, all Loop Mode 2 Banks have a 2 on the File Name end.
Type Two
Single Tones Recorded from Keys C0,1,2,3,4,5,6 used for creating Instruments such as Grand02.bnk, use these Waves to create your own Instruments and save as Banks.
Mixers
Contains a range of different User Mixers for controlling all types of MIDI Hardware.
LFO
Contains a range of different LFO Shapes used within Zone 2 Levels 7, 8 and 9.
Envelope
Contains a range of different Envelope Shapes used within Zone 2 Level 3.

WINDOWS 95

The Space Station can be Sequenced on the same PC running WIN 95 as long as there is another MIDI port installed, this can be a second Sound Card or a dedicated MPU401 or compatible. The second MIDI port is used to physically Output to the Sound Blaster using MIDI cables, as the Space Station deals only with MIDI generated by itself or received from the Sound Blaster external Input, however use of the AWE32/64 Wave table or SB16 Daughter Board can still be achieve internally. When using a Sequencer capable of Hard Disk Playback it is important to Launch the Space Station first unless two Creative Labs Sound Blaster cards are installed or the Sequencer is set to default to the other card, this is due to the Space Station utilizing the SB16 Wave Play back section of the Audio card. When using two Sound cards Hard Disk Play back is possible but Polyphony will be seriously effected.

TEST RESULTS

1=DOS, 2=WAD, 3=APC, 4=WIN95, N\T=Not Tested.

CPU	1, 2, 3	1, 2	1, 3	1	4, 2, 3	4, 2	4, 3	4
I 486	9 22K	15 22K	8 22K	14 22K	N\T	N\T	N\T	N\T
A 586	10 44K	13 44K	16 22K	22 22K	N\T	N\T	N\T	N\T
P166L	48 44K	64 44K	35 44K	48 44K	33 44K	50 44K	29 44K	39 44K
P200L	51 44K	70 44K	44 44K	60 44K	40 44K	54 44K	31 44K	41 44K
200Mx	53 44K	72 44K	48 44K	64 44K	41 44K	55 44K	35 44K	49 44K
P2 233	62 44K	89 44K	41 44K	59 44K	50 44K	70 44K	49 44K	67 44K

TOUR

KEYBOARD

The Space Stations interface and layout, has been designed to react and feel like a conventional MIDI Keyboard. The Virtual Sampler Keyboard Panel is always displayed, and is used to activate functional areas within the software known as Levels. Up to sixteen different instruments can be assigned and played back at any time, using the appropriate MIDI Channel. Channel and Timing data can be increased or decreased using the Keyboards Switches and Screens. All 128 MIDI notes can be played form the Virtual Keys, triggering internal or external sounds.

LOOP MODES

Conventional samplers only Loop around user definable points, limiting their live performance. The Space Station has two Modes of Looping, designed for different types of Waves and effects.

Loop Mode 1

User definable Start and End Points are placed within the Wave and used to Loop around, in a forward or forward then reverse motion, as with conventional methods. This type of Looping is used to create endless sustain effects.

Loop Mode 2

When Looping Waves of a known Tempo and Bar length, using conventional methods will result in a timing mismatch, unless extreme accuracy is used when creating Loop Points. Generally this type of Wave would be triggered by a Sequencer at the beginning of a Bar or Beat, removing all live performance. The Space Stations Loop Mode 2, generates Cells that are triggered by MIDI Note's. Cells contain trigger patterns that play the assigned Wave, and Loop around the internal or external MIDI Clock. This type of Looping is used to enable musicians, to regain live control of Tempo dictated music, for their self's or in sync with others.

IN/OUTPUT MIXER

Sound Blaster Cards have an on board Mixer for adjusting the five different Input device Levels. This Mixer also has an Output stage with control's for Bass, Treble and Master Volume. Use this Mixer to match the Gain Levels of the Sound Blaster Card with the Input/Output Device. Correct Level matching results in cleaner Recording and Play back, all Values can be stored as default.

ENVELOPE GENERATOR

Envelope History

Since the invention of the first ever tone generator, Envelopes have been used to craft sound. The first Envelope Generators had values only for Attack Time, Decay Time, Sustain Level and Release Time (A,D,S,R). As analogue synth's got bigger and better, Envelope Generator's did not. Instead more A,D,S,R's were made available for shaping each of the sound elements. When digital synth’s came on to the market, Envelope Generators began to change. First by giving Time and Level Values for each of the four Points, with MIDI control of Attack and release. Then by giving access to six Points, ten Points and even one Envelope for Key On and another for Key Off, what could come next ?

The Space Station

Envelope Shapes can Be Modelled with the mouse pointer, creating as many Points as desired in real time, whilst the Wave is Playing. Attack and Release Points are MIDI controllable and can be placed at any point with the Shape. Any known Envelope Generator can be emulated with the use of Sustain and Loop Points. All Envelope Shape's can be displayed together with the Wave and a Time/Depth Grid. Different Time Scales can be used for accurate Modelling. Shapes can be synced to Time, Wave or even MIDI. Shapes can be Modelled with a range of specially designed Tools within two different Modes (Free Hand and Node), and Saved.

LFO S

LFO History

Since the invention of the first synthesizer Low Frequency Oscillators (LFO's), have been used to add natural and violent Modulation effects to sounds. A typical use for an LFO is to emulate natural vibrato and tremolo by Modulating Pitch or Volume. Analogue and early Digital synth's only had access to several LFO Shapes (Sin, Square, Triangle, Saw and Random), becoming the norm. On most synth's LFO Depth, and on some Time can be adjusted with MIDI Controllers. With newer synth's LFO Shapes can be used to Modulate the Depth or Time of another.

The Space Station

Up to six different LFO Shapes can be used per Instrument, these Shapes can be one of the default's or Loaded from the library supplied. Shapes can be used to Modulate Waves or other LFO's Depth or Time. MIDI Controllers, Poly Pressure, After Touch or Pitch Bend can be used to control LFO Depth and Time. Shapes can be synced to Real Time or MIDI and display their current Depth and Time positions's. Shapes can be Modelled in real Time using a range of specially designed Tools within two different Modes (Free Hand or Node), using the LFO Designer. All Designed Shapes can be saved to Disk.

MIXER S

The Space Station has two types of on board virtual Mixers for transmitting different forms of MIDI Data, the Main Mixer and the User Mixer.

Main Mixer

Within the Main Mixer there are four different virtual Mixer's, one for Volume, Pan and Amplitude Envelope Attack and Release Times. Each of these contain sixteen arrays of Faders and Switches, one for each MIDI Channel.

User Mixer

Within the User Mixer there are four different virtual Mixer's, each of which has sixteen user definable MIDI Faders and Switches that are capable of transmitting any form of MIDI Data on any Channel. User Mixer's can be Loaded from the library supplied on disk or Designed using the Mixer Designer and Saved.

NAVIGATOR

As with standard studio equipment the Space Station uses Function Buttons to activate areas within the software known as Zones. Each of these Zones is colour coded and contains several different sub areas known as Levels. Level's are accessed by using the standard method of paging form one Level to the next within an active Zone, just like directory tree's. There is how ever a draw back with this type of interface, in that moving from the last Level of a Zone, to last of another, becomes very tedious. The standard improvement adopted by software developers, is to use drop down list's that drop down other list's and so on, surely to improve things, things must become quicker and more accessible.

Ship Navigator

The least amount of clicks has become the Space Station developers guide, and due to this the Navigator was designed. Every Level within the software can be viewed together in a simple map style layout using one click. Current location is displayed by a red highlight, and any Level can be Jumped to using one click. Up to four of these Jumps can be stored and activated using Quick Keys.

Help Navigator

When Help is needed and its bad enough to actually read some thing, then and only then do you actually experience the endless cycle of nonsense, commonly known as Help Files. The Space Stations Help Navigator will only give access to files relating to the active Level. All of Function Headings and the individual Functions within each Level can be listed by using the Search Navigator. All of the Help Files have been written by the Interface Design Manager, if your experience difficulty using any part of the Space Station do not hesitate to Email.

OUTPUT SETTINGS

At the heart of the Space Station is the Sound Engine, designed to give precision performance. By using the on board Test routine the Sound Engine will model its self around the capabilities of your PC, automatically calculating the best possible Output Frequency and Polyphony. The Space Station is not like any other Wave play back device on the market, it will out perform any known hard disk recorder. The Polyphony Value is the true amount of Waves playable at any one time even if they are ten minutes long. The Sound Engine has be designed to allocate up to 4096 Stereo Wave Files, to a total of 3.5Gb of RAM, The only limitation to Wave size is the available memory. The Output Frequency can be changed in Real Time, without effecting the play back speed of any Waves Loaded. The Sound Engine takes into account that you will be editing Waves in real time, there for it is possible to increase the Polyphony Value for Live performance.

DESKTOP

ZONE 0, LEVEL 1 (DESKTOP)

LEVEL OVERVIEW

Here you can launch other applications that may be installed for controlling different types of hardware. Different applications will be represented by icons as with any desktop.

Key Features

Load/Save, full MIDI Analyser, Application launching.

SCREEN LAYOUT

The desktop is split into three sections, two are static features, the third is the Control Window.

SECTION ONE

LOAD/SAVE BAR

At the top of each screen is a Load/Save bar, this is a static feature. All Zones and Levels have access to the Load/Save bar, however available options change depending on the active level.

Key features

Load, Active screen & Save

LOAD

Click and hold to activate drop down list, drag to highlight choice and release click to select.

Load Group

Activates the Load Group window,
(see Load/Save and Group Files below).

Clear Group

Returns the Space Station to its default state, removing all user elements.

ACTIVE SCREEN

Displays the currently selected MIDI Channel, Group, Bank and Wave. This information is displayed in two ways. The first displays the MIDI Channel, Group, Bank, and currently selected Wave for Editing (Zone 2 Edit Bank). The second displays the currently active MIDI Channel, Group, and bank to be played by the Keyboard Panel only, (see Keyboard Panel below).

SAVE

Click and hold to activate drop down list, drag to highlight choice and release click to select.

Save Group

Activates the Save Group window, (see Load/Save and Group Files below).

SECTION TWO

CONTROL WINDOW

In the middle of the screen is the Logo, this area will change as different Levels are activated**.** All of the functions available for the active Level will be accessible from within the Control Window.

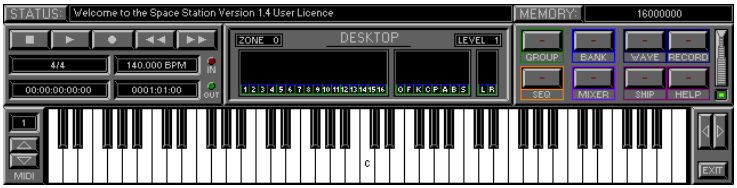
SECTION THREE

KEYBOARD PANEL

At the bottom of each screen is a Keyboard Panel. This is a static feature. All Zones and Levels require access to the keyboard. The keyboard itself is a standard piano style keyboard with 10 available octaves. Selected and assigned keys are colour coded for quick reference (see LED's at the end of this section).

Key features

Status Screen, Memory Screen, Song Control Buttons, Time Display Screens, MIDI In/Out lights, Options screen, Function buttons, Panel Flip Switch, MIDI Channel Changer, Keyboard Keys, Keyboard Scroll Buttons, Exit Button



STATUS SCREEN

Displays current activity. Click on status switch to display history (see Zone 0 Level 2 Desktop\Status History). Histories can be saved as standard txt files. Prompts are also issued in this screen for required actions (rather like a live help file). Messages are displayed in different colours to alert your attention.

Message type

Error Message, Red
Warning Message, Orange
Command Message, Green
Acknowledgement, White
Function not available, Yellow

MEMORY SCREEN

Displays the total memory available. Activate this switch for full Memory History. (see Zone 0 Level 3 Desktop\Memory History)

SONG CONTROLS

Play

Click or use Quick Key "Ctrl",
(used to activate Loop Mode 2 and Synchronizing).

Stop

Click or use Quick Key "Space Bar", click again to stop audio output and reset clock and LFO's. Quick Key "Escape" will terminate audio playback but will not stop the clock.

Record
Single click to activate record mode. Function has no internal use.
Rewind
Click and hold to rewind song position.
Forward
Click and hold to forward song position.
All buttons are used in conjunction with the Remote Control,
(Zone 1 Level 5 Edit Group\Preferences).

TIME DISPLAYS

Time Signature (top left)
Used to dictate the amount of beats per Bar/Whole note.
Left click to increase value, right click to decrease.
Tempo (top right)
Used to dictate the current clock rate in beats per minute.
Left click to increase value right click to decrease.
SMPTE (**bottom left)**
Used to display the current SMPTE song position.
(see current frame rate, Zone 1 Level 5 Edit Group\Preferences (Sync))
Beats & Bars (bottom right)
Used to display the current song position in beats and bars.

MIDI LIGHTS

Flash in sync with data transfer operations between the Space Station and any internal or external MIDI device. These lights will flash as they monitor MIDI, prior to any MIDI Filter settings, (see Zone 1 Level 4 Edit Group\MIDI Filter).

OPTION SCREENS

Designed for multi functional operations within Zones. The screens display available options within a current level. Initially the option screen will be an Analyser, for monitoring MIDI and Audio data.

ANALYSER

1-16
Displays MIDI data on the specific Channel number.
O
Displays all Note On data.
F
Displays all Note Off data.
K
Displays all Key Pressure data (Poly Pressure).
C
Displays all Control Change data .
P
Displays all Program Change data.
A
Displays all After Touch data .
B
Displays all Pitch Bend data.
S
Displays all System Messages and System Exclusive data.

L
Displays the Left Audio output level.
R
Displays the Right Audio output level.

In all other levels, up to four options are made available.
Use the mouse or Quick Keys "F1 - F4" to select option.

FUNCTION BUTTONS

Group
Activates Zone 1 Level 1(Edit Group\Bank Assigner). Designed for handling Banks of Waves and the current Space Station settings. Active colour green.
Bank
Activates Zone 2 Level 1(Edit Bank\Wave Assigner). Designed for handling Waves and synth style editing. Active colour blue.
Wave
Activates Zone 3 Level 1(Edit Wave\Wave Editor). Active colour dark blue.
Record
Activates Zone 3 Level 5(Edit Wave\Wave Recorder).
Active colour dark blue.
Seq
Activates Zone 4 Level 1(Sequencer\Part Arranger).
Function not available. Active colour orange.
Mixer
Activates Zone 5 Level 1(Edit Mixer\Main Mixer). Designed for handling MIDI data from within a virtual mixing console. Active colour mauve.
Ship
Activates Zone 6 Level 1(Navigator\Ship).Designed for quick and easy manoeuvring around the Space Station. Active colour purple.
Help
Activates Zone 6 Level 2(Navigator\Help). Designed to provide online Help on every Function within the active Level. Active colour purple.

FLIP SWITCH

Gives access to further control options (Flip Screen).

FLIP SCREEN

Left and Right Locators
Displays the current position of the Left and Right Locators
(used with Cycle and Punch In/Out modes).
Cycle
Activates Cycle mode (Song loops between Locator positions).
Replace/Overdub
Switches between Replace or Overdub modes. Function not available.
Punch In/Out
Activates Punch In/Out mode, (see Zone 3 Level 5 Edit Wave\Wave Recorder)
Click
Activates/deactivates the Metronome (see Zone 1 Level 5).
Master
Activates the Master Tempo Track. Function not available.
Sync
Activates the Synchronizer (see Zone 1 Level 5).

MIDI CHANNEL

Displays the currently selected Channel. Click Arrows to change the MIDI channel or use Quick keys "Up and Down Arrows".

KEYBOARD KEYS

Used for Assigning and Playing back Waves.
The Keyboard will send MIDI Note On\Off data with a fixed Velocity to trigger internal Waves and external devices**.**
(to set Velocity values see Zone 1 Level 5 Edit Group\Preferences)

Left Mouse Click

Plays the Assigned Wave or Waves and any external devices**.**

Right Mouse Click

Selects the Key and the Upper Wave, click again to select Lower Wave.
(for more on multi layered Banks see Key Mapping, Zone 2 Level 2).

LEDs

Indicates the status of Selected and Assigned keys. Black Key LEDs appear above the Keyboard, White Key LED's appear below. Each LED consists of an Upper and Lower section, Colour coded as follows.

Cyan

Indicates the Selected Key.

Green

Indicates a Wave has been Assigned to that Key.

Red

Indicates the Selected Wave.

Yellow

Indicates a Ghost Wave (see Key Mapping, Zone 2 Level 2)**.**

SCROLL BUTTONS

Used to change the Keyboard and QWERTY playing range (octaves).

Left

Shifts the playing range down one Octave.

Right

Shifts the playing range up one Octave.
Click Arrows or use Quick keys "Left and Right Arrows".

EXIT BUTTON

Used to exit Space Station**.**

QWERTY KEYBOARD

Two Modes of operation are available.

Mode One: MIDI Keyboard (Default)

In this mode the QWERTY will send MIDI Note On\Off data with a fixed Velocity value, for triggering internal and external devices, (see Zone 1 Level 5). For Note layout (see QWERTY Map below).

Mode Two: Normal
In this mode the QWERTY will work as any standard keyboard, for text insertion. This mode is activated when text insertion is necessary.

QWERTY MAP
The keyboard has been split into two levels, Lower and Upper.

Lower
QWERTY Keys "\" to “Shift” (right-hand) are White Notes
(Lowest Octave and a half).
QWERTY Keys "A” to “#" are the Black Notes
(Lowest Octave and a half).
Upper
QWERTY Keys "Q” to “]" are the White Notes
(Upper Octave and a half).
QWERTY Keys "2" to “=” are the Black Keys
(Upper Octave and a half).

Remember: There are less Black Notes than White, so some Keys are not used.

Note Values
Upper Level Note values follow sequentially from last Lower Level Note value. When the Keyboard Panel is in default position,
(Middle C in the center)**.**

Lower
QWERTY Key "M" will be Middle C. This allows for one Octave movement down (next left C) to QWERTY Key "\", and half an Octave movement up (next right G#) to QWERTY Key "#".
Upper
QWERTY Key "Q" will be A3. This allows for one and a half Octave's movement up (to E5), QWERTY Key "]".

Scrolling the Keyboard Panel Left or Right will shift the Octaves being played.

Remember: The QWERTY Map has been designed to work with a standard UK keyboard. Different key layouts will result in Note mismatches.

LOAD/SAVE

The following Functions apply in all Zones/Levels and for all File Types. Each File Type will also have its own special functions (see Zone 6 Level 2 Navigator\Help).

FILE NAME

Load

Displays the currently selected File Name and Type.

Save

Used to input File Name, click to activate Text mode.

FILE LIST

Load

Display a list of available Files to select from.

Save

Display a list of previously Saved Files.

List Scroll

Use the Up/Down Arrows or Scroll Bar to view File List.

Scroll Bar

The size of the Bar is proportional to the displayed File List.

LIST OF FILE TYPE

Displays the current File Type to Load/Save. Click Arrow to active/deactivate File Type List. Click on Type to select (see Group Files below).

DIRECTORIES

Displays the currently selected Drive and Directory.

DIRECTORY LIST

Display the available Directories. Double click on the Folders to open.

List Scroll

Use the Up/Down Arrows or Scroll Bar to view Directory List.

Scroll Bar

The size of the Bar is proportional to the displayed Directory List.

DRIVES

Displays the currently selected Drive.
Click Arrow to view Drive List, click to select.

OK

Load\Save the file in the File Name screen.
Click or use Quick Key “Return”.

CANCEL

Exit Load/Save Window. Click or use Quick Key “Back Space”.

SAMPLE RATE

Displays the File Output quality,
(see Zone 1 Level 2 Edit Group\Output Settings).

TOTAL WAVES

Displays number of Waves in the selected file.

TOTAL SIZE

Displays number of bytes required to load selected file.

LICENCE NUMBER

Displays the Licence Number from the machine that saved the file.

MANUFACTURER

Displays the name of the file Manufacturer. Space Station File Types are copyright protected. Unauthorized copying, reproduction, hiring, lending, public performance and broadcasting is prohibited. Any File Type found to have a Manufacturer’s Name, will comply to all of the copyright protections listed with the purchase. Any File Type without a Manufacturer’s Name can be freely distributed, but under no circumstances may they be sold. Space Station Files are encrypted to enforce the copyright laws, and can be traced back to the file generator.

Red Text

Indicates a Manufactures File has been modified and saved by a user.
(copyright still applies).

To purchase a Manufacture’s Licence, contact Hypnosis Studio.

GROUP FILES

Contain all Data/Settings from multiple Space Station Zones\Levels. There are two different types of Group File.

Type One (*.GRP)

Contains all of the settings from Edit Group Zone 1, Edit Bank Zone 2 and MIDI Mixers Zone 5. For Wave Files only the locations will be saved.

Pros

Smaller file size to enable floppy disk transfer.
Wave files remain on original media to conserve disk space .Disk Volume Names saved and used to prompt on Loading, if media is removable. RAM Doubling Effect where Wave Sample Rate is greater than Output Rate. Original Wave Sample Rate unaffected by save Output Rate, stops degeneration.

Cons
Wave data not saved.

Remember: Protect or Backup any Waves and their directory locations.

Type Two (*.GPW)
Contains all of the settings from Edit Group Zone 1, Edit Bank Zone 2, MIDI Mixers Zone 5 and the Wave data.
Pros
All elements in one file, allowing easier transfer.
Accelerated load times.
Original Sample Rate unchanged, enabling improvements to Output quality.
Wave quality unaffected by re-saving at lower Output Rates.
Cons
Waves converted on loading will be saved at the current Output Rate.

Remember: Increase Output Rate for Wave Loading and decrease for Playback.
The RAM Doubling Effect will not work if the Output Rate is increased for Loading.

STATUS HISTORY

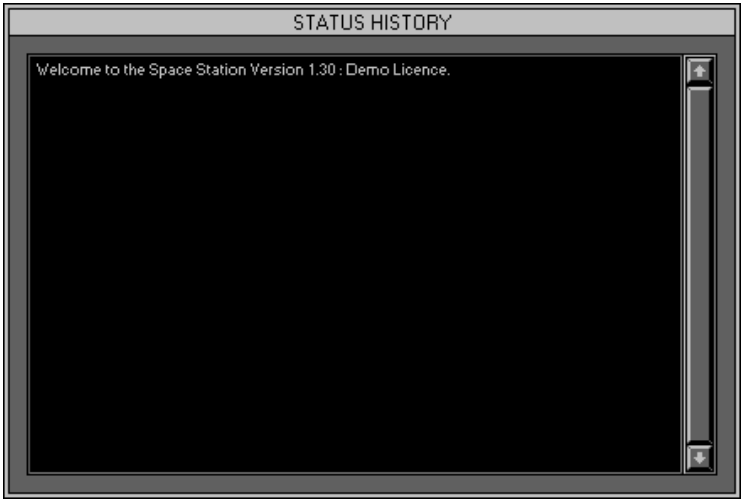
ZONE 0, LEVEL 2 (DESKTOP\STATUS HISTORY)

LEVEL OVERVIEW

Here you can view, save and clear the last one hundred status messages that appeared in the status screen.

Key Features

Colour coded message, Text scrolling, Clearing, Saving



MESSAGE TYPES

Error Message, Red
Indicate that something has gone wrong.
Warning Message, Orange
Indicate that something fundamental is about to be changed.
Command Message, Green
Indicate that a course of actions must be followed.
Acknowledgement ,White
Indicate that a function is in operation or completed.
Function not available, Yellow
Indicate that this function does not have any effect in this version.
Message order
The most recent message appears at the top of the History list.

SCROLL BAR

Buttons
Allow for manipulating up and down the History, click to scroll.
Bar
Bar size is proportion to History List, click\drag to scroll.

OPTION SCREEN

Displays available Options.

Clear all entries
Clears all entries in the Status History (no undo).
Save as *.txt
Activates the Save History Window. Histories are saved as standard txt files.
Keep and exit
Keep the history list and exits Status History (Zone 0 Level 1 Desktop).
Cancel
Exit Status History (to original location).

MEMORY HISTORY

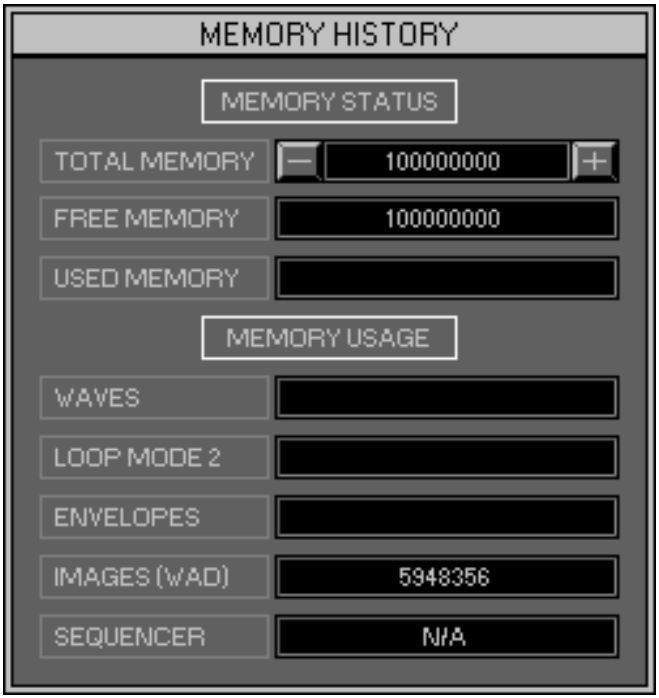
ZONE 0, LEVEL 3 (DESKTOP\MEMORY HISTORY)

LEVEL OVERVIEW

Here you can change & View the amount of Memory used by the Space Station.

Key Features

Memory adjustments, Individually itemised Memory usage.



MEMORY STATUS

Total Memory

Displays the total usable Memory. Win 95 users can change the amount of usable Memory with the +\- Buttons,
click to increment/decrement in 1Mb amounts.

Remember: Leave enough Memory for Win 95 and other application's, removing to much Memory from your operating system slows it down.

Free Memory

Displays the total Memory available.

Used Memory

Displays the total Memory used.

MEMORY USAGE

Waves
Displays the total Memory used by Waves.
Loop mode 2
Displays the total Memory used by Loop Mode 2 Cells.
Envelopes
Displays the total Memory used by the Envelope Shapes.
Images (WAD)
Displays the total Memory used by the Graphic Interface.
Sequencer
Displays the total Memory used by the Sequencer.
Function not available.

OPTION SCREEN

Displays available Options.

Exit
Exit Memory History (Zone 0 Level 1 Desktop).
Cancel
Exit Memory History (to original location).

BANK ASSIGNER

ZONE 1, LEVEL 1(EDIT GROUP\BANK ASSIGNER)

LEVEL OVERVIEW

Here you can Assign Banks of Waves to MIDI Channels, change their basic attributes and save them as a Group. Each entry displays information on the allocation and contents of the Banks.

Remember: 1-256 WAVES = 1 BANK, 16 BANKS = 1 GROUP

Key Features
Load/Save, Channel Assigning, Bank Naming, Tuning, Pitch Bend, Output Mode, Memory & Wave Count,

LOAD

Click to activate drop down list.

Load Group
Activates the Load Group window (see Load/Save and Group Files below).
Load Bank
Activates the Load Bank window (see Load/Save and Bank Files below).
Clear Group
Returns the Space Station to its default state, removing all user elements.
Clear Bank
Returns the selected Bank to its default state, removing all user elements.
Replace Bank
Returns the selected Bank to its default state and activates the Load Bank window.

SAVE

Click to activate drop down list.

Save Group
Activates the Save Group window (see Load/Save and Group Files below).
Save Bank
Activates the Save Bank window (see Load/Save and Bank Files below).

CHANNEL

Displays the sixteen available MIDI Channels. These Channels can not be adjusted.

Remember: Ensure Banks are loaded to the correct Channel.

BANK NAME

Displays the Name of the Bank Assigned to that MIDI Channel. To rename a Bank, select the desired Channel and click on the Name field.

Not Assigned
MIDI Channel has not been used.
Untitled
MIDI Channel is in use but the Bank has not been Named.
Text in Cyan
Alterations have been made that are not saved.

TUNING

Used to adjust the Tuning of each Bank.

Values
Divided into semitones and cents. Right click to increase and left to decrease. Hold down the relevant button and click the other for Turbo mode.

PITCH BEND

Sets up the maximum amount of pitch change for MIDI Pitch Bend.

Values
Measured in semitones. Right click to increase and left to decrease.

OUTPUT MODE

Indicates the current Output Mode.

Stereo
Displays that Stereo Mode is active and panning is possible**.**
Dual Mono
Displays that Dual Mono Mode is active. At default all odd Channel numbers will be Output from the Left and all even from the Right, click to toggle.

MEMORY

Displays the Bank size in bytes.

WAVES

Displays the number of Waves per Bank.

OPTIONS SCREEN

Gives access to Level Jump Gates**.**

Output settings
Activates Zone 1 Level 2, Edit Group\Output Settings. Determines Quality.
Output Mixer
Activates Zone 1 Level 3, Edit Group\Output Mixer.
MIDI Filter
Activates Zone 1 Level 4, Edit Group\MIDI Filter.
Preferences
Activates Zone 1 Level 5, Edit Group\Preferences.

LOAD/SAVE

See Load\Save Desktop (no special functions).

GROUP FILES

Contain all data/settings from multiple Space Station Zones\Levels. There are two types of Group File (see Group Files Zone 0 Desktop).

BANK FILES

Contain all Data/Settings from Zones 2 plus the Channel data from Zone 1. There are two different types of Bank File, (see below).

Type One (*.BNK)

Contains all of the settings from Edit Bank Zone 2. For Wave Files only the locations will be saved.

Pros

Smaller file size to enable floppy disk transfer.
Wave files remain on original media to conserve disk space.
Disk Volume Names saved and used to prompt on Loading, if media is removable.
Ram Doubling Effect where Wave Sample Rate is greater than Output Rate.
Original Wave Sample Rate unaffected by saved Output Rate, stops degeneration.

Cons

Wave data not saved.

Remember: Protect or Backup any Waves and their directory locations.

Type Two (*.BKW)

Contains all of the settings from Edit Bank Zone 2 and the Wave data.

Pros

All elements in one file, allowing easier transfer.
Accelerated load times.
Original Sample Rate unchanged, enabling improvements to Output quality.
Wave quality unaffected by re-saving at lower Output Rates.

Cons

Waves converted on loading will be saved at the current Output Rate.

Remember: Increase Output Rate for Wave loading and decrease for playback. The Ram Doubling Effect will not work if the Output Rate is increased for loading.

OUTPUT SETTINGS

ZONE 1, LEVEL 2 (EDIT GROUP\OUTPUT SETTINGS)

LEVEL OVERVIEW

Here you can determine how the Space Station playback engine should perform. This Level controls Audio Quality, Output Mode, and the total Waves playable (Polyphony). The performance of the Space Station is processor dependent, however the Space Station will perform internal tests to determine the optimum settings for the available hardware.

Key Features

Adjust Frequency, Playback Mode, Polyphony settings, Hardware Testing

FREQUENCY

Controls the playback quality of the Space Station. Adjustments work in real time without effecting Wave Time/Pitch.

44100HZ

Professional mode, CD quality. Activates the SPDIF connector on the AWE64 Gold card. This mode has the best sonic capability but uses more system resources, resulting in lower Polyphony.

22050HZ

Semi professional mode. Activates the RAM doubling effect on 44100HZ Waves and increases Polyphony. Designed for 486 processors and slow Pentiums.

11025HZ

Amateur mode. Designed for speech applications and 386 machines. Activates the RAM doubling effect for 44K\22K Waves and offers the highest Polyphony.

PLAY MODE

Controls the Output Mode of the Sound Blaster Card.

Stereo

Enables Stereo Wave playback and dynamic Pan control .

Dual Mono

Enables independent Output control, allowing more flexible use of external effects and processors, and vastly improved Polyphony.

APC
Enables the Automatic Pitch Correction Engine, removing quantization distortion. The APC Engine is Polyphony hungry but is not always necessary. It is almost impossible to pre-determine when use of the APC will not be necessary, but there are some instances that are always ok.
One
All Waves to be played back have not been retuned, and do not use any Pitch varying effects, (MIDI Pitch Bend, Pitch Envelopes or Pitch Modulation).
Two
All Waves have a large harmonic content and do not use Pitch varying effects.

POLYPHONY
Refers to playing multiple Waves simultaneously.

Value Screen
Displays the maximum desired number of Waves. Click on the + and - buttons to change the value, however an internal test will be required to determine the capability of your hardware.

Remember: The maximum Polyphony Value is 128 Waves. A value exceeding hardware capability causes Output distortion.

TEST
Used to perform internal hardware tests. The Space Station's Test Routine creates a virtual Wave in RAM, and plays repeatedly while updating the display. This test determines the Polyphony capability of your Hardware.

Remember: The Test routine takes into account that the user interface is being accessed in real time, during MIDI playback only higher Polyphony is possible.

OPTIONS SCREEN
Displays available Options.

Left Output
Sets the total Polyphony for the Left Sound Blaster Output. Dual Mono only.
Right Output
Sets the total Polyphony for the Right Sound Blaster Output. Dual Mono only.

Click to increase or use Quick Keys, increasing one will decrease the other.

Save and Exit
Saves the settings to the Options.dat File and Exits back to Zone 1 Level 1 Edit Group\Bank Assigner.
Cancel
Reverts to previous settings and Exits to previous Zone\Level.

INPUT\OUTPUT MIXER

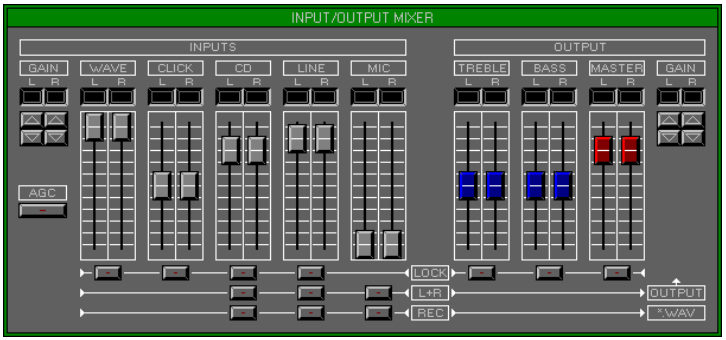
ZONE 1 LEVEL 3 (EDIT GROUP\INPUT\OUTPUT MIXER)

LEVEL OVERVIEW

Here you can adjust the Input and Output levels of the Sound Blaster card, for accurate matching to external devices.

Key Features

Gain Adjustment, Level Faders, Equaliser, Fader Locking, Muting, Record



INPUTS

Controls Sound Blaster Left and Right Input levels.

Gain
Adjusts Gain for all Inputs (Values *1,2,4,8).
Wave
Adjusts Wave Playback, click on Fader and move.
Click
Adjusts Click (OPL3 and AWE Wave Table) Playback.
CD
Adjusts CD Audio Playback.
Line
Adjusts External Line Input.
Mic
Adjusts External Microphone Input.

Automatic Gain Control (AGC)
Automatically adjusts Gain for the Microphone Input. This will help avoid audio signal clipping.

OUTPUTS

Controls the Sound Blaster Output level and Tonal quality.

Bass
Adjusts Bass Output.
Treble
Adjusts Treble Output.
Master
Adjusts the overall Output of the Sound Blaster.
Gain
Adjusts Gain for all Outputs (Values *1,2,4,8).

LOCK

Synchronises Faders ensuring a stereo match.

L+R

Mutes Input removing unnecessary noise.

REC

Routes Input to Wave Recorder.

OPTIONS SCREEN

Displays available Options.

Hold
Stores all current settings to disk, use with Fetch for undo.
Fetch
Reverts to previously Held settings.
Save + Exit
Saves the settings to the Mixer.dat File and Exits back to Zone 1 Level 1 Edit Group\Bank Assigner.
Cancel
Reverts to previous settings and Exits to previous Zone\Level.

MIDI FILTER

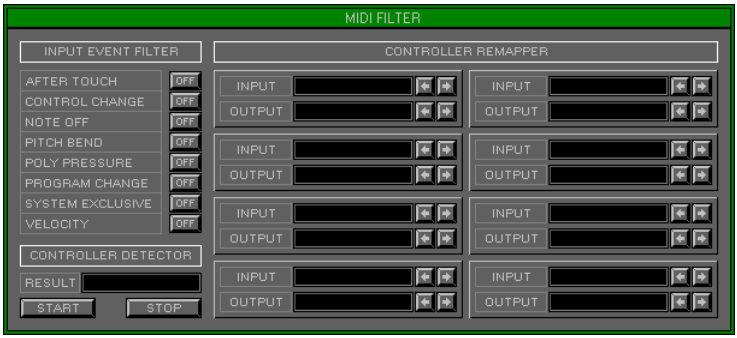
ZONE 1 LEVEL 4 (EDIT GROUP\MIDI FILTER)

LEVEL OVERVIEW

Here you can Filter or Remap MIDI Events for the current MIDI Channel.

Key features

Input Event Filter, Controller Remapper, Controller Detector.



INPUT EVENT FILTER

Here you can include or exclude certain types of MIDI Data from effecting the Space Station.

After Touch
Global key Pressure.
Control Change
Controllers 0 to 127 (see MIDI Implementation below).
Note Off
MIDI Key Release.
Pitch Bend
Global Pitch change.
Poly Pressure
Individual Key Pressure.
Program Change
Global Tone change.
System Exclusive
Advanced MIDI message used differently by each hardware manufacturer.
Velocity
Key dynamics, initial/termination key Pressure.

CONTROLLER REMAPPER

Allows different MIDI Control Change messages and Pitch Bend to be remapped to another. All of the Remapper Pods can be used, but no two can have the same Data entry. Designed primarily for keyboards with Pitch Bend/Modulation only, any combination is possible.

Pods
Enable the Input Data to transmit the Output.
Input
Displays the currently selected MIDI message. Click Arrows to Scroll List.
Output
Displays the currently selected MIDI message. Click Arrows to Scroll List.

CONTROLLER DETECTOR

Designed to find MIDI messages for Remapping.

Start
Activates the Detector.
Stop
Deactivates the Detector.
Result
Displays findings. Click on Result and drag to Mapper Pod, release click to set.

OPTIONS SCREEN

Displays available Options.

Hold
Stores all current settings to disk, use with Fetch for undo.
Fetch
Reverts to previously Held settings.
Save + Exit
Saves the settings to the MIDI.dat File and Exits back to Zone 1 Level 1 Edit Group\Bank Assigner.
Cancel
Reverts to previous settings and Exits to previous Zone\Level.

MIDI IMPLEMENTATION

NOTE ON/OFF

Send
Plays external MIDI devices.
Receive
Plays Assigned Waves.

VELOCITY

Send
Key On/Off
Receive
Key On/Off for Volume dynamics and Envelope Attack/Release control.

AFTER TOUCH

Send
User Mixer only.
Receive
Controls part or all LFO Depth and Time values.

PITCH BEND

Send
User Mixer only.
Receive
Channel Pitch, or used for Remapping.

POLY PRESSURE

Send
User Mixer only.
Receive
LFO Depth.

CONTROL CHANGE

Send
Main/User Mixers.
Receive
See Controller list below.

PROGRAM CHANGE

Send
User Mixer only.
Receive
No internal use.

SYSTEM EXCLUSIVE

Send
User Mixer and Synchronizer.
Receive
Controls several internal elements (see System Messages below).

SYSTEM MESSAGES

System Reset
Resets all internal Addresses.
MIDI Time Code (MTC)
Time Base Synchronizing for accurate SMPTE display and Loop Mode 2 cycling.
Song Position
Tracking of external Sequencer Song Position for cycling.
MIDI Clock
Tempo Based Synchronizing for accurate Bar/Beat display and LFO/Env cycling.
Start
Starts internal/external Clocks**.**
Stop
Stops internal/external Clocks**.**
Continue
Continues internal/external Clocks.
For details on internal and external Synchronizing (see Zone 1/Level 5 Edit Group\Preferences).

CONTROLLER LIST

Modulation (001)
LFO 1-6 Depth.
Main Volume (007)
Channel Volume.
Pan (010)
Channel Left/Right position.
Amplitude Attack and Release (012 and 013)
Amplitude Envelope Attack and Release Point times.
Balance Attack and Release (016 and 017)
Balance Envelope Attack and Release Point times.
Pitch Attack and Release (018 and (019)
Pitch Envelope Attack and Release Point times.
LFO 1 Depth and Time (020 and 021)
LFO 2 Depth and Time (022 and 023)
LFO 3 Depth and Time (024 and 025)
LFO 4 Depth and Time (026 and 027)
LFO 5 Depth and Time (028 and 029)
LFO 6 Depth and Time (030 and 031)
Filter 1 Cutoff Frequency (044)
Filter 1 Resonance (045)
Filter 1 Type [Range 0-7] (046)
0 = Lowpass, 1 = Highpass, 2 = Bandpass, 3 = Notch, 4 -7 = 0 - 3 addition filter.
MIDI Chase Delay Time (047)
Values are in 10 Millisecond steps (IE: 100=1 second).
MIDI Chase Repeats (048)
MIDI Chase Start Volume (049)
MIDI Chase End Volume (050)
Filter 2 Cutoff Frequency (051)
Filter 2 Resonance (052)
Filter 2 Type [Range 0-7] (053)
0 = Lowpass, 1 = Highpass, 2 = Bandpass, 3 = Notch, 4 -7 = 0 - 3 addition filter.
Damper Pedal (064)
Soft Pedal (067)
Lowers the Velocity of all new Keys.
Soft Pedal 2 (068)
Lowers the Velocity of all Keys.
Hold 2 (069)
Holds currently held Keys only, any keys played after activation will be unaffected.
MIDI Chase On\Off (115)
Enables MIDI Chase on this Channel.
Filter 1 And 2 Serial\Parallel (116)
Enables the Filters to run in conjunction or independent from each other.
Filter 1 And 2 On\Off (117, 118)
Enables ether Filter for this channel only, removing up to 7 notes Polyphony.
Rest Loop Mode 2 (119)
Terminates all Loop Mode 2 Cells.
All Sounds Off (120)
Terminates all Waves on current Channel.
Reset Controllers (121)
Resets all Controller Data.
All Notes Off (123)
Terminates any Keys Playing.

PREFERENCES

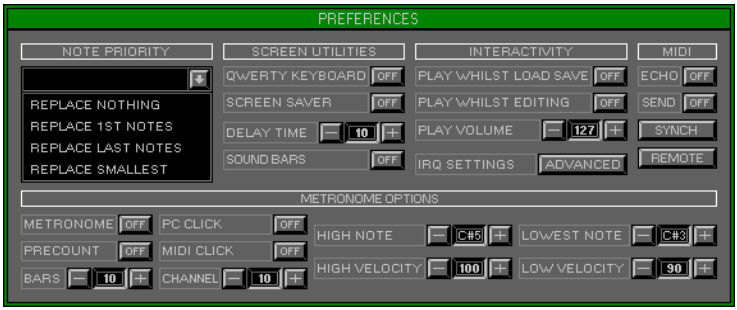
ZONE 1 LEVEL 5 (EDIT GROUP\PREFERENCES)

LEVEL OVERVIEW

Here you can adjust the Space Stations working environment with access to basic and advanced options.

Key Features

Note Priority, Screen Utilities, Interactivity, MIDI, Metronome Options.



NOTE PRIORITY

Used to determine what happens when the total Polyphony Buffer is exceeded.

Replace Nothing
Waves will not play until Buffer space is available.
Replace 1st Notes
Any new Wave will replace the 1st Wave.
Replace Last Notes
Any new Wave will replace the last Wave.
Replace Smallest
Waves will replace those with the least time remaining, unless Waves playing are Looped in this instance Replace 1st Note will apply.

SCREEN UTILITIES

QWERTY Keyboard
Enables/disables the on screen QWERTY Keyboard, used for Text insertion when the PC Keyboard is out of reach or not connected.
Screen Saver
Enables/disables the Screen Saver (Interactive Star System).
Delay Time
Screen Saver Delay Time in minutes.
Sound Bars
Enables/disables the Screen Saver Stereo Sound Bars.

INTERACTIVITY

Allows the user to modify aspects of the PC to enable smother performance on slower machines and any computers containing non standard hardware.

Play Whilst Load Save
PC's running Windows 95 or using slow disk drives may encounter audio clipping when Loading/Saving. Use to disable the Sound Engine in Load/Save Mode.
Play Whilst Editing
Used in conjunction with the Wave Effects Racks. Function not available.
Play Volume
Sets the Velocity used by the QWERTY keyboard and the Keyboard panel.

IRQ Settings
Certain types of PC hardware such as PS2 Mice, will automatically shield interrupts. This may cause audio clipping, by shielding this IRQ the Space Station will only acknowledge the call when the Sound Engine has finished a cycle. This will cause a PS2 Mouse to react slowly when Polyphony is set to maximum. For this reason we suggest that a serial Mouse is used instead!
Advanced
Activates the IRQ Setting Window. To shield an IRQ click to turn On/Off.

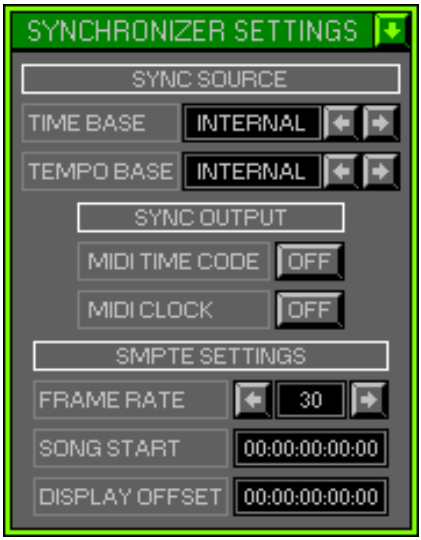
MIDI

Basic/advanced MIDI options.

Echo
Routes all incoming MIDI to the MIDI output.
Send
Routes all internally generated MIDI to the MIDI output. This option must be enabled if you want MIDI data from the Mixers ECT to control external devices.
Sync
Activates the Synchronizer Settings window.

SYNCHRONIZER SETTINGS

Synchronize the Space Station to external hardware, enabling LFO, Env & Loop Mode 2 Synchronizing.



SYNC SOURCE

Determines if the Space Station should be Synchronized internally or externally.

Time Base

Internal or External with the use of MTC. When Locking to an external Sequencer the use of MTC is important to maintain a constant true Sync. MTC transmits a continuous flow of Time stamps, used to define the Bar and Beat locations.

Tempo Base

Internal or External with the use of MIDI Clock. When Locking LFO's and Envelopes to an external Sequencer, using MIDI Clock for the Tempo Base will give better than usual results. This is due to the Space Station using its own internal Clock to recalculate any anomalies in the MIDI Clock Data.

Remember: Set the Space Stations Tempo to match the Tempo of the external Sequencer. Tempo changes are only possible with the use of the Master Track.

SYNC OUTPUT

Transmits Synchronizing Data to other devices, the Space Station becomes the Master, and other's the Slaves. This is vital if multiple Space Station's are to be Synced together without the use of a Sequencer.

MIDI Time Code

Activates/deactivates MTC transmission.

MIDI Clock

Activates/deactivates MIDI Clock transmission.

SMPTE SETTINGS

Calculates the exact Frame rate needed to transmit or receive MTC.

Frame Rate
Frames per second, used by Master only. Automatically calculated by Slave.
Song Start
Defines the Song Start Time, left\right click to Up\Down the Values.
Display Offset
The SMPTE Display Window can start from a different Value, than the actual Time Value. Used in conjunction with the Song Start Value.

REMOTE

Activates the Remote Control Window.

REMOTE CONTROL

All Song Controls Output MIDI Note On/Off Values. Some Sequencer software such as Cubass for the Atari, use these Values to activate their equivalent's.

Remote Active
Switch On/Off to activate or deactivate the remote control settings.
Remote Key
Transmitted first to identify Remote access. Click to activate, select the appropriate Key using the Keyboard panel as normal.
Stop
Note used by the Stop Button, select Key as normal.
Play
Note used by the Play Button, select Key as normal.
Record
Note used by the Record Button, select Key as normal.
Rewind
Note used by the Rewind Button, select Key as normal.
Forward
Note used by the Forward Button, select Key as normal.

Remember: MIDI Send must be switched on for the Remote to Transmit, and all of the Key Values must match those of the software you wish to control.

METRONOME OPTIONS

Sets up the MIDI and PC Clock\Click.

Metronome
Enables\disables the Metronome and MIDI Clock.
Precount
Enables\disables the Sequencer pre-record count in. Function not available.
Bars
Sets the amount of Bars used by the Sequencer Precount.
PC Click
Enables\disables the PC Click,
used in conjunction with the Keyboard Flip Screen.
MIDI Click
Enables\disables the MIDI Click, used in conjunction with the Keyboard Flip Screen.
The MIDI click allows an external devices to become the Click.
Channel
Sets the Channel that the MIDI Click is sent on.
High Note
Sets the Note used for the first Beat of the MIDI Click.
High Velocity
Sets the Velocity used by the High Note.
Low Note
Sets the Note used for the remaining Beats of the MIDI Click.
Low Velocity
Sets the Velocity used by the Low Note.

OPTIONS SCREEN

Displays available Options.

Hold
Stores all current settings to disk, use with Fetch for undo.
Fetch
Reverts to previously Held settings.
Save + Exit
Saves the settings to the pref.dat and Exits to Zone 1 Level 1,
Edit Group\Bank Assigner.
Cancel
Reverts to previous settings and Exits to previous Zone\Level.

WAVE ASSIGNER

ZONE 2, LEVEL 1 (EDIT BANK\WAVE ASSIGNER)

LEVEL OVERVIEW

Here you can Load/Assign Waves and Save them as Banks. Adjustments can be made to basic attributes with the use of data basing tools. Waves can be moved around and across MIDI Channels without amending Attributes.

Key Features

Bank Loading\Clearing, Wave Loading\Clearing\Shuffling, Note Assigning, Tuning, Volume, Pan, Sustain, File Size, Frequency Display, Comments.

LOAD

Click to activate drop down list.

Load Bank
Activates the Load Bank window (see Load/Save Bank and Bank Files below).
Load Wave
Activates the Load Wave window (see Load Waves and Wave Files below).
Clear Bank
Returns the Bank to its default state, removing all user elements.
Clear Wave
Removes the selected Wave.
Clear Wave Mode
Activates Clear Wave Mode, follow on screen prompts.
Shuffle Mode
Activates Shuffle Mode (see below).

SAVE

Click to activate drop down list.

Save Bank
Activates the Save Bank window (see Load/Save and Bank Files below).
Save Wave
Activates the Save Wave window (see Load/Save and Wave Files below).

NAME OF WAVE

Displays the Wave File Name. Double thickness Names indicate Multilayered Keys, (see Zone 2 Level 2 Edit Bank\Key Mapping).

NOTE

Displays Note/Key the Wave is Assigned to. Left click to activate, right click on Keyboard Keys to select new position. To move across Banks, change MIDI Channel before selecting new position. All Wave Attributes will be moved except the LFO Shapes and Maps, (see Zone 2 Level 7 Edit Bank\LFO Assigner).

Remember: Multilayered Keys cannot be moved (see Shuffle Mode below).

TUNING

Divided into semitones and cents. Use left and right clicks to Up/Down Values, click opposite mouse button to activate Turbo Mode.

VOLUME

Adjustable from 0-650 Use left/right clicks and Turbo to toggle. Alternatively click on the column heading to select all entries. Column heading changes colour to indicate current Mode.

Grey - Normal
Independent control of Wave volumes.
Green - Proportional
All Wave Volumes increase or decrease Proportionally.
Red - Global
All Wave Volumes increase or decrease to match that of the selected.

PAN

Adjustable left/right for each Wave. Adjust as with Volume.

FILE SIZE

Wave size in bytes.

FREQUENCY

Frequency of Wave (44K, 22K or 11K).

SUSTAIN

Defines how the Wave should react after the Key is released.

On
Stops at Wave end unless Looping (see Zone 2 Level 4 Edit Bank\Loop Mode 1 and Zone 2 Level 6 Edit bank\Loop Mode 2).
Off
Wave stops on Key release.
User
Controlled by an Amplitude Envelope, (see Zone 2 Level 3 Edit Bank\Envelope Generator).

COMMENTS

Left click to activate Text insertion, Return to deactivate.

VIEWING ORDER

Click on Heading bar Switch to change Modes.

Key Mode (K)
Waves displayed in Key order, C-2 to G8.
Alpha Mode (A)
Waves displayed in Alpha/Numeric order.

SCROLL BAR

Buttons
Allow for manipulating up and down the Wave List, click to scroll.
Bar
Bar size is proportion to Wave List, click\drag to scroll.

SHUFFLE MODE

Used to reorganise Waves between two Keys to another location. All spaces will be removed but the Wave Attributes will remain intact.

Remember: Waves and Key Mappings can be Shuffled to different Key Values, Wave Pitches will not be amended.

Shuffle Range
The Key Range selected for Shuffling and the new location.

Lowest Key
Auto activated on entering mode. Defines the Lowest Key within the Shuffle Range. Right click on Keyboard Keys to select new Key Value. Click To reactivate.
Highest Key
Auto activated on Lowest Key selection. Defines the Highest Key within the Shuffle Range. Right click to select as with Lowest Key**.** Click to reactivate**.**
Shuffle Key
Auto activated on Highest Key selection. Defines the Key Waves are Shuffled to. Right click to select as with Lowest Key. To Shuffle across Banks change MIDI Channel before selecting new Key. Click to reactivate**.**

Remember: All Wave Attributes will be Shuffled across Banks except the LFO Shapes and Maps (see Zone 2 Level 7 Edit Bank\LFO Assigner).

Shuffle
Activates the Shuffle Function.
Finish Mode
Terminates Shuffle Mode.

OPTIONS SCREEN

Gives access to Level Jump Gates**.**

Key Mapping
Activates Zone 2 Level 2 Edit Bank\Key Mapping. Used for Mapping and Layering Waves across the Keyboard with Pitch correction.
Envelope
Activates Zone 2 Level 3 Edit Bank\Envelope Generator. Modifies Wave Amplitude, Pan and Pitch Values over Time.
Loop
Activates Zone 2 Level 4 Edit Bank\Loop Mode 1. Used to Loop Waves around User definable points. Access to Loop Modes.
LFO
Activates Zone 2 Level 7 Edit Bank\LFO Assigner. Used for Modulating Wave Volume, Pan and Pitch with Low Frequency Oscillators.

LOAD/SAVE BANK

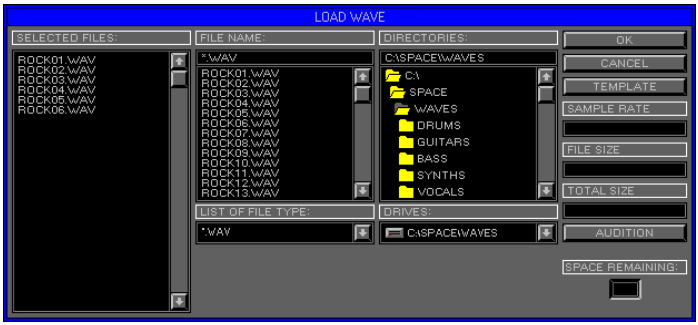
See Load\Save Desktop (no special functions).

BANK FILES

Contain all Data and Settings from Zones 2 plus the Channel Data from Zone 1. There are two different types of Bank File, (see Bank Files Zone 1 Level 1).

LOAD WAVE

Waves from different Directories and Drives, can be added to a Selected File List for Loading. Waves will be Automatically Assigned from the selected Key.



SELECTED FILES

Displays the List of Files to Load. Right click on File Name to remove from List.

List Scroll

Use the Up/Down Arrows or Scroll Bar to view File List.

Scroll Bar

The size of the Bar is proportional to the displayed File List.

FILE NAME

Displays the currently selected File Name and Type. Left click on Wave Name in File List to select. Click OK or use Quick Key “Return” to Load the Wave to the Selected Key.

FILE LIST

Displays the List of File Names to select from. Three Modes are available for adding Waves to the Selected File List.

Mode 1

Right click on any File Name, add's all Waves in directory to Selected File List.

Mode 2

Left click on File Name to select, click again to add to Selected File List.

Mode 3

Left click on File Name to select , right click on lower File Name to add all Waves between left/right clicks to Selected File List.

List Scroll

Use the Up/Down Arrows or Scroll Bar to view File List.

Scroll Bar

The size of the Bar is proportional to the displayed File List.

LIST OF FILE TYPE

Displays the current File Type to Load. Click Arrow to activate/deactivate File Type List. Click on Type to select (see Wave Files below).

DIRECTORIES

Displays the currently selected Drive and Directory.

DIRECTORY LIST

Display the available Directories. Double click on the Folders to open.

List Scroll

Use the Up/Down Arrows or Scroll Bar to view Directory List.

Scroll Bar

The size of the Bar is proportional to the displayed Directory List.

DRIVES

Displays the currently selected Drive, click to view Drive List, click to select.

OK

Loads all Selected Files. Click switch or use Quick Key “Enter”.

CANCEL

Cancel Mode 1 & 3, keeping Selected List up to that point. Exit Load Window and returns to the Wave Assigner. Click or use Quick Key “Back Space”.

TEMPLATE

Active when a Wave is Selected, the Template Function copies all Attributes from the Selected Wave to those Loading. Click to enable/disable.

Remember: The Selected Wave is displayed in the Active Screen. If the Selected Wave is on a different MIDI Channel, the LFO Shapes/Maps will not be copied.

SAMPLE TYPE

Displays Wave Information.

FILE SIZE

Displays number of bytes required to load Selected File.

TOTAL SIZE

Displays number of bytes required to load Selected File List.

AUDITION

Plays Selected File Name.

SPACE REMAINING

Displays the total amount of Keys remaining after and including the Selected.

WAVE FILES

Wave Files (*.WAV) are the standard PC Audio File Type. There are over 4000 Waves on the CD under the Wave directory.

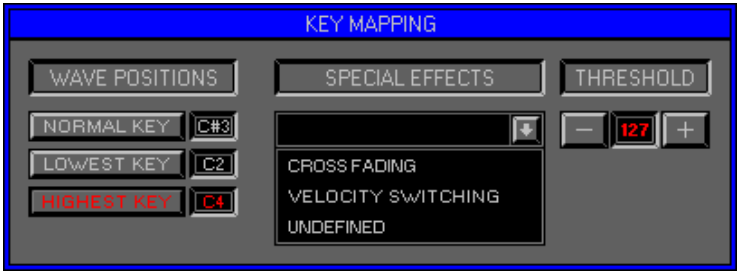
KEY MAPPING

ZONE 2 LEVEL 2 (EDIT BANK\KEY MAPPING)

LEVEL OVERVIEW

Here you can Map Waves across a Range of Keys, automatically recalculating Pitch. Mapping creates Ghost Waves, Keyboard LED's yellow. Key Mappings can be Multi Layered allowing for a total of 256 Waves per Bank.

Key Features
Wave Positions, Special Effects, Threshold



WAVE POSITIONS

Define the Selected Wave and Range for Key Mapping.

Normal Key
Defines the currently selected Wave/Key to Map. Click to select a new Wave/Key from the Keyboard Panel as usual.

Remember: Only Keys Assigned with Waves can be selected. Ghosts Waves are Mapped to Keys, not Assigned.

Lowest Key
Defines the Lowest point within the Key Mapping Range for the selected Wave. Click to select a new Key from the Keyboard Panel as usual. Ghost Waves will be Mapped down to this point and their Pitch automatically corrected.

Highest Key
Defines the Highest point within the Key Mapping Range for the selected Wave. Click to select a new Key from the Keyboard Panel as usual. Ghost Waves will be Mapped up to this point and their Pitch automatically corrected.

Ghost Waves
Unlike any other Sampler on the market, Ghost Waves within the Space Station can be controlled individually. All Zones/Levels used by Waves can be utilised, but Ghosts cannot be separated form their originator.

Remember: Clearing a Ghost Wave will remove Key Mappings from that Range.

SPECIAL EFFECTS

Create Multi Layered Key Mappings. Select Special Effect before creating Ghost Waves. Click Arrow and select Effect from List.

Undefined
No Special Effect used.
Cross Fading
Enables overlapping of separate Key Mappings for Wave blending. Indicated by double thickness LED's the Cross Fade area fades one Key Mapping into the next. Keys within the Cross Fade Range will use two Notes Polyphony.

Remember: Only Ghost Waves can be within the Cross Fade Range.

Velocity Switching
Assigns two Waves to the same Key. Upper and Lower Layers indicated by Double thickness LED's. Both Waves can be played simultaneously using two Note Polyphony, or individually depending on the Threshold Value (see below). Click on Arrow to drop down list, select Velocity Switching, Normal Key is Auto selected, select new Wave/Key to Assign the Upper Wave.

Remember: The current Normal Wave/Key will become the Upper Wave, the new Normal Wave/Key will be the Lower.

THRESHOLD

Used only for Velocity Switching Waves, the Threshold Value determines the point at which Lower and Upper Waves are separated. Each Key Mapping has one Threshold Value.

Threshold (0)
Lower and Upper Waves play simultaneously.
Threshold (greater than 0)
Velocity Values less than or equal to the Threshold Value play the Lower Wave. Velocity Values greater than the Threshold Value play the Upper Wave.

OPTIONS SCREEN

Displays available Options.

Hold
Stores all current settings to disk, use with Fetch for undo.
Fetch
Reverts to previously Held settings.
Keep And Exit
Keeps all Key Mappings and Exits to Zone 2 Level 1 Edit Bank\Wave Assigner.
Cancel
Reverts to previous settings and Exits to previous Zone\Level.

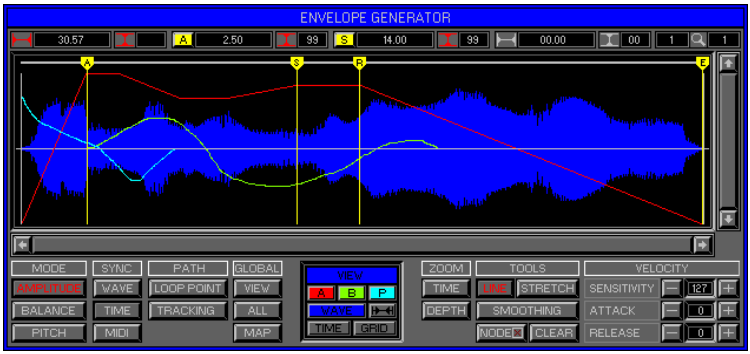
ENVELOPE GENERATOR

ZONE 2, LEVEL 3 (EDIT BANK\ENVELOPE GENERATOR)

LEVEL OVERVIEW

Here you can Generate Envelope Shapes and Attach them to Amplitude, Balance and Pitch. The Space Station has unrivalled Envelope Attributes capable of simulating any type of Shape. Shapes can be Modelled using conventional methods (ADSR) but unlimited Point creation is possible. Envelope Shapes, Wave and play position can be Viewed simultaneously. User definable Time Display plus Grid for accurate Point creation. Envelope Shape Modelling during audio play back using Free Hand or Node Mode. MIDI controllable Fixed Pointers for variable Envelope Attack\Release. Envelope Shapes Sync to Time (Conventional) Wave or MIDI. Shapes can be Loaded\Saved.

Key Features
Value Displays, Play Position Display, Fixed Pointers, Envelope Display, Wave Display, Shape Modelling, Envelope Mode, Syncing, Path control, Global control, View control, Zoom, Modelling Tools, Velocity control, Load\Save.



LOAD

Click to activate drop down list.

Load Envelope
Activates the Load Envelope window
(see Load/Save and Envelope Files below).

SAVE

Click to activate drop down list.

Save Envelope
Activates the Save Envelope window
(see Load/Save and Envelope Files below).

VALUE DISPLAYS

Display Time and Depth Values, Icons Colour Coded for Envelope Mode.

Blank
Mode not Active (see Mode below).
RED
Amplitude Mode.
Green
Balance Mode.
Cyan
Pitch Mode.

Envelope Size (Top Left)
Total Envelope Time and Depth Values.
Time
Total Envelope Time, right\left click to Up\Down the Value, plus Turbo. Use this method to stretch Envelope Shapes without increasing Memory size.
Depth
Adjustable for Pitch only (4 to 32 Semi Tones), right\left click to Up\Down Value.

Fixed Pointers (1+2)
User selectable Displays, not adjustable (see Fixed Pointers below).
Display 1
Currently selected Fixed Pointer, Time and Depth Value.
Display 2
Last selected Fixed Pointer, Time and Depth Value.
Display Switch
Right\Left click to select Fixed Pointer or Node (see Node Mode below). Switch Icons change to Display Pointer.
A
Attack Point Time and Depth Values.
L
Loop Point Time and Depth Values.
S
Sustain Point Time and Depth Values.
R
Release Point Time and Depth Values.
E
End Point Time and Depth Values.
Node
Selected Node Time and Depth Values (Node Mode only).

Mouse Pointer
Current Time and Depth Values of the Mouse Pointer.

Zoom
Current Time and Depth Zoom Ratios (see Zoom below)
Time (Left)
Right\Left click to Time Zoom In\Out from Envelope Start.
Depth (Right)
Right\Left click to Depth Zoom In\Out from Envelope Base Line (see below).

ENVELOPE DISPLAY

Displays the currently selected Wave and Envelope Shape for Modelling (see Mode, View , Modelling and Tools below).

Location Bar
Displays current Shape Playback Location.

Fixed Pointer Bar
Used for Creating and Moving Fixed Pointers (A, L, S ,R and E).
Fixed Pointers
Space Station Fixed Pointers are not like conventional Envelope Points (ADSR). Fixed Pointers are Virtual Marks along the Modelled Shape Used to control Envelope Playback. Moving Fixed Pointers adjusts the Time position without Modelling the Envelope Shape. Left click\drag Pointer to Move.
Attack Point
Sets the Maximum Virtual Attack Time for MIDI Control. Using MIDI Controllers and Velocity (see velocity below), the Time between Envelope Start and Attack Point can be varied (see Zone 1 Level 4 Controller Implementation).
Loop Point
Special Fixed Pointer Used with Sustain for Envelope Looping (see Path below).
Sustain Point
Prevents the Envelope Shape playing beyond this Point until MIDI Key Off. Receiving Key Off before reaching the Sustain Point forces Shape playback to the Sustain Values (see Path below).
Release Point
Sets the Maximum Virtual Release Time for MIDI Control. Using MIDI Controllers and Velocity (see velocity below) the Time between Envelope Release and End Points can be varied,
(see Zone 1 Level 4 Controller Implementation).
End Point
Sets the Envelope Termination Time (not deletable). Move this Point to increase or decrease the Envelope Shape resolution and Memory used.
Creating
Right click on Fixed Pointer Bar to Create Sustain Point, click again left or right of Sustain to Create Attack\Release Points, for Loop Points (see Path below).
Deleting
Right click on Pointer to Delete.

Remember: Deleting the Sustain Point will remove all Fixed Pointers.

Shape Display
All Generated Envelopes can be Displayed simultaneously with the selected Wave and a Time\Depth Grid (see View below). Only the active Envelope Shape can be Modelled (see Mode and Tools below).
Graph
Two Vertical Grey Lines are used to Display the Y Axis Envelope Depth.
One Horizontal Grey Line Displays the X Axis Envelope Time.

Remember: The X Axis is always Plotted at Y=0 (Base Line).

Scroll Bars
Used to Manoeuvre around Envelope Shapes.

Time
Used to Manoeuvre Up\Down Envelope Time. Bar size proportional to Displayed Envelope. Click Left\Right Arrows or click\drag Scroll Bar to move.
Depth
Used to Manoeuvre Up\Down Envelope Depth. Bar size proportional to Displayed Envelope. Click Left\Right Arrows or click\drag Scroll Bar to move.

MODE

Three Envelope Types can be Generated and selected using the Mode Switches. Each Switch is Colour Coded and has three operating Positions.

Position 1
Switch Out and Grey. Envelope not Generated. Left Click to Generate.
Position 2
Switch In and Coloured. Envelope Generated and selected, right click to Delete.
Position 3
Switch Out and Coloured. Envelope Generated but not selected, click to select.

Red
Amplitude Envelope Type 1. Wave Volume over Time (see Amplitude below).
Green
Balance Envelope Type 2. Wave position within the Stereo Image.
(see Balance below).
Cyan
Pitch Envelope Type 3. Wave Pitch over Time (see Pitch below).

Amplitude
Generates a basic Amplitude Envelope Shape for Modelling (see Tools below). Due to the nature of Amplitude control (Values of 0-100), graphical representation and application of this Envelope Type differs.
Graph
X Axis Plotted along the bottom (Y=0) Base Line.
Y Axis Amplitude Depth (Wave Volume).
Base Line
Shapes that Touch the Base Line Terminate Wave Playback on the Point of collision. Designed for Key On\Off Envelope Shape Generation.
Key On\Off Envelopes
Acoustic Instruments fade naturally longer when a note is held than if the note is released. Modelling Amplitude Shapes to Base Line after a natural fade creates a Key On Envelope. Model a second Shape within the same Envelope after the first Shape Base Lined for Key Off Envelopes.

Remember: Place the Sustain Point within the second Shape
(see Fixed Pointers above and Path below).

Balance
Generates a basic Balance Envelope Shape for Modelling (see Tools below). Due to the nature of Balance control (Values of R-L), graphical representation and application are similar to Pitch Envelopes.
Graph
X Axis Plotted along the centre (Y=0) Base Line.
Y Axis Stereo Image Position.

Wave Right Output
Shapes Above the Base Line.
Wave Left Output
Shapes Below the Base Line.
Base Line
Defines the centre of the Stereo Image.
Stereo Waves
Fade between the Left\Right Outputs, they will not swap sides.

Remember: Pan Values will offset the Balance Envelope (see Zone 2 Level 1 Edit Bank\Wave Assigner and Zone 5 Level 1 Mixer\Main Mixer).

Pitch
Generates a basic Pitch Envelope Shape for Modelling (see Tools below). Due to the nature of Pitch control (Values of + or -) graphical representation and application are similar to Balance Envelopes.
Graph
X Axis Plotted along the centre (Y=0) Base Line.
Y Axis Pitch Depth (Wave Pitch).
Wave Pitch +
Shapes Above the Base Line.
Wave Pitch -
Shapes Below the Base Line.
Base Line
Wave Pitch unchanged.

SYNC

Conventional Envelopes only Sync to Time, limiting their applications. The Space Station has Three different Syncing methods each with its own unique qualities.

Wave
Envelope Shape Sync's to Wave duration, increasing\decreasing Wave Pitch varies Envelope Speed. When Syncing to Wave, modifying Envelope Size and Fixed Pointer Positions is not possible.
Fixed Pointers
Display Wave Points that effect Envelope Playback.
S
Displays the Loop End Point (see Zone 2 Level 4 Edit Bank\Loop Mode 1).
L
Displays the Loop Start Point (see Zone 2 Level 4 Edit Bank\Loop Mode 1).
E
Displays the Wave and Envelope Shape End Point.

Remember: Amplitude Envelopes terminate Wave playback at End Point.

Time
Envelope Shape Sync's to Time as with standard conventions, modifications to Wave Attributes using this Syncing method commence at Envelope Shape Time, irrespective of Wave Pitch and duration.

MIDI
Envelope Shape Sync's to MIDI Clock, increasing\decreasing Temp varies Envelope Speed for Arpeggio effects.

PATH

Defines fundamental characteristics of the Sustain Point.

Loop Point
Creates and Deletes Fixed Pointer Loop, used in conjunction with the Sustain Point for Envelope Shape Looping. Envelope Shape Playback no longer stops at the Sustain Point but returns to the Loop Point and continues.

Tracking
Controls how the Envelope Shape should respond after receiving MIDI Note Off.
Tracking Off
Receiving MIDI Note Off forces the Envelope Play Location to the Sustain Point, Tracking all Envelope Shape Values there after.
Tracking On
Tracking functions differently on Amplitude Envelopes than Balance and Pitch.
Amplitude Tracking
Receiving MIDI Note Off forces the Envelope Play Location to the Sustain Point but keeps the current Depth Value, any differences between the current Depth and Sustain Depth becomes the Tracking Offset. Shape Tracking continues there after using the Offset to define the actual Depth Value.
Balance\Pitch Tracking
Receiving MIDI Note Off has no effect on the Envelope Play Location.

GLOBAL

Used for Viewing Envelope Shapes\Types and Copying to Other Waves.

View
Views all Waves with identical Envelope Shapes\Types to the selected Wave, Click\Hold to View. Keyboard LED's split into three Colours to identify which Envelope Shapes\Types are used by other Waves within the current Bank.

Red
Amplitude, Keys with Red LED's use the same Envelope Shape as the selected Wave for Amplitude controlling.
Green
Balance, Keys with Green LED's use the same Envelope Shape as the selected Wave for Balance controlling.
Cyan
Pitch, Keys with Cyan LED's use the same Envelope Shape as the selected Wave for Pitch controlling.

All
Copies all Envelope Shapes\Types of the selected Wave to all Waves within the Bank. Results displayed in the Status Screen.
Map
Copies all Envelope Shapes\Types of the selected Wave, to all Waves Mapped to the selected Wave. Results displayed in the Status Screen.

VIEW Multi layered panel used for setting the Envelope Displays.

A
Enables/disables Amplitude Envelope Displaying.
B
Enables/disables Balance Envelope Displaying.
P
Enables/disables Pitch Envelope Displaying.
Wave
Enables/disables Wave Displaying.
Wave Icon
Enables/disables Wave Loop Displaying.
Time
Activates the Time Scale Panel (see below).
Grid
Activates the Grid Setup Panel (see below).

TIME SCALE
Time Value Displays and Grid scaling.

Sec
Seconds.
Sps
Samples.
Byt
Bytes.
SMPTE
24, 25 and 30 Frames per second.
MIDI
Bars and Beats.
Exit
Exits Time Scale to View.

GRID SETUP
Sets the Envelope Display Time and Depth Grid.

Time
Activates\deactivates the Time Grid.
1 - 4
Activate the four possible Grid resolutions for each Time Scale.
Sec
Seconds, 1/4 Seconds, 1/10 Seconds and 1/20 Seconds.
Sps
1000 Samples, 250 Samples, 100 Samples and 10 Samples.
Byt
1000 Bytes, 250 Bytes, 100 Bytes and 10 Bytes.
SMPTE 24 & 30 Frames
Seconds, 2 Frames, 1 Frame and ½ Frame.
SMPTE 25 Frames
Seconds, 5 Frames, 1 Frame and ½ Frame.
MIDI
Beat, 1/8 Beat, 1/16 Beat and 1/32 Beat.

Depth
Activates\deactivates the Depth Grid.
1 - 4
Activate the four possible Grid resolutions for each Envelope Mode.
Amplitude and Balance
½, 1/4, 1/8 and 1/16
Pitch
Semi-tones, ½ Semi-tones, 1/4 Semi-tones and 1/8 Semi-tones.
Snap
Enables the mouse pointer to lock to Grid points only.

ZOOM
Activates Mouse Pointer Time and Depth Zoom Tools.

Time
Activates\deactivates the Time Zoom Tool, right\left click to Zoom In\Out.
Depth
Activates\deactivates the Depth Zoom Tool, right\left click to Zoom In\Out.

Remember: Both Zoom Tools can operate simultaneously.

MODELLING
Shape Modelling can be achieved using various Tools within one of two Modes.

Free Hand Mode (Default)
Modelling with the Mouse Pointer.
Node Mode
Up to 100 Nodes can be placed at points within the Shape and used to Model parts between the selected Node and Nodes immediately to the left\right.

TOOLS
Used for Modelling techniques, some Tools work differently within each Mode.

Line Draw (Default)
Used for Shape Drawing, Functions differently for each Mode.
Free Hand Mode
Mouse Pointer becomes a Cross Hair, Left click\drag to redraw Envelope Shape.
Node Mode
Mouse Pointer becomes a Hand when over a Node, Right click along Shape Time to Create Node, left click\drag Node to Rubber Band all Shape parts between the selected Node and Nodes immediately to the left\right. Right click Node to Delete.

Stretch
Used to Shrink or Expand Shapes, Functions differently for each Mode.
Free Hand Mode
Mouse Pointer becomes a Cross Arrow. Left click\drag, left\right to Shrink or Expand Envelope Shape Time from the Pointer Position.
Right click\drag up\down to Shrink or Expand Envelope Shape Depth.
Node Mode
Function not available.

Smoothing
Automatically Smooths Shape Edges. Continuous use will Flat Line the Shape.

Node
Switches between Node Mode and Free Hand Mode.
Switch Up
Free Hand Mode.
Switch Down
Node Mode.

Clear
Removes all User Nodes and Fixed Pointers.

VELOCITY
Defines what effect if any MIDI Velocity produces.

Sensitivity
Controls the Level of Amplitude variation from Key Dynamics.
Value
Greater Values result in more Volume variation, click +\- to up\down the Value.
Attack
Controls the Level of all Fixed Pointer Attack variation from Key Dynamics.
Value (0)
No effect.
Value (+)
Greater Velocities result in faster Attack Times.
Value (-)
Greater Velocities result in slower Attack Times.
Release
Controls the Level of all Fixed Pointer Release variation from Key Dynamics.
Value (0)
No effect.
Value (+)
Greater Velocities result in faster Release Times.
Value (-)
Greater Velocities result in slower Release Times.

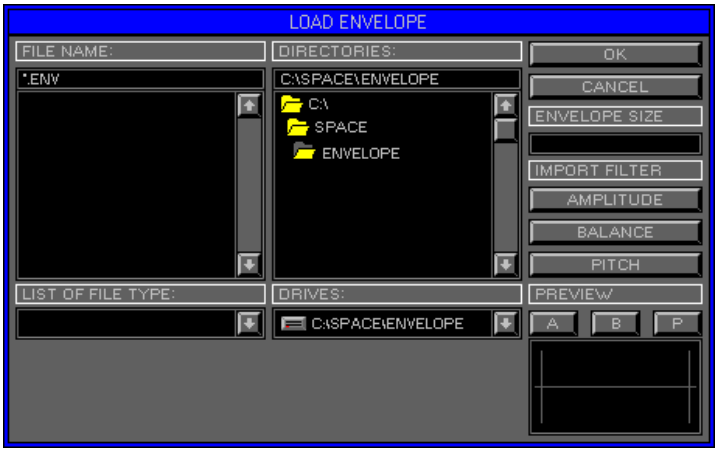
OPTION SCREEN
Displays available Options.

Hold
Stores all current settings to disk, use with Fetch for undo.
Fetch
Reverts to previously Held settings.
Keep and Exit
Keeps Shape Design and Exits to Zone 2 Level 1 Edit Bank\Wave Assigner.
Cancel
Removes all Modelling on selected Wave returns to the previous Zone\Level.

LOAD/SAVE
Envelope Shapes are Loaded\Saved with the use of Import\Export Filters.

ENVELOPE FILES

Contain all three Envelope Shapes and associated Fixed Pointers.



FILE NAME

Displays the currently selected File Name and Type.

FILE LIST

Displays the List of File Names to select from.

Scroll Bar

The size of the Bar is proportional to the displayed File List.

LIST OF FILE TYPE

Displays the current File Type to Load. Click Arrow to activate/deactivate File Type List. Click on Type to select (see ENV Files below).

DIRECTORIES

Displays the currently selected Drive and Directory.

DIRECTORY LIST

Display the available Directories. Double click on the Folders to open.

List Scroll

Use the Up/Down Arrows or Scroll Bar to view Directory List.

Scroll Bar

The size of the Bar is proportional to the displayed Directory List.

DRIVES

Displays the currently selected Drive.
Click Arrow to view Drive List, click to select.

OK

Loads Selected File. Click or use Quick Key “Enter”.

CANCEL

Exit Load Window and return to the previous Level. Click or use "Back Space".

ENVELOPE SIZE

Displays number of bytes required to load Selected File.

IMPORT FILTER

Determines which Shapes within the selected Envelope File are Loaded.

Amplitude
Click to include\exclude the Amplitude Shape.
Balance
Click to include\exclude the Balance Shape.
Pitch
Click to include\exclude the Pitch Shape.

EXPORT FILTER

Determines which Shapes within the selected Envelope File are Saved.

Amplitude
Click to include\exclude the Amplitude Shape.
Balance
Click to include\exclude the Balance Shape.
Pitch
Click to include\exclude the Pitch Shape.

PREVIEW

Used to view Shapes.

A
Click to enable\disable Amplitude Shape Previewing.
B
Click to enable\disable Balance Shape Previewing.
P
Click to enable\disable Pitch Shape Previewing.

PREVIEW WINDOW

Displays the selected Preview Shape.

LOOP MODE 1

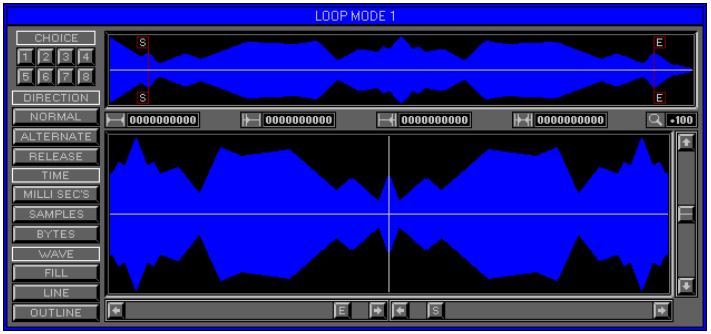
ZONE 2, LEVEL 4 (EDIT BANK\LOOP MODE 1)

LEVEL OVERVIEW

Here you can set Start and End points for the Wave to Loop around. Looping can be in two directions, Forward or Forward\Reverse. Setting Loop Points prevents Waves from Terminating on Key release to create endless Sustain Effects. Natural and Synthetic Waveforms have individual characteristics, experience with different Wave types will aid Glitch Free Loop Point finding, but generally Auto Looping is quicker (see Zone 2 Level 5 Edit Bank\Auto Looping).

Key Features

Eight Choices, Directions, Visual Displays, Visual Modes.



CHOICE

Eight Different Loop Point combinations can be used, only the selected Choice will be stored on Loop Exit. Choices will be kept when Jumping between Loop Mode 1 and Zone 2 Level 5 Auto Looping, but not when selecting a new Wave.

Switches 1-8

Generate Start and End Points, click to activate\deactivate.

Remember: All Eight Choice will be copies of the Stored Choice.

DIRECTION

Determines Loop performance.

Normal

Waves Play from beginning to Loop End Point, then jump back to the Loop Start Point Cycling indefinitely between Points. Forward Looping.

Alternate

Waves Play form beginning to Loop End Point, then Reverse back to the Start Point Cycling indefinitely between Points. Forward\Reverse Looping.

Release

Disables Loop Cycling on Key Release. Waves Play beyond the Loop End Point Terminating normally, Reversed Waves return to a Forward direction.

Remember: Terminate Wave Playback before changing Direction.

TIME

Scale used in Time Display Windows.

Milli Sec's
Thousands of seconds.
Samples
Wave Sample Rate.
Bytes
File Size.

WAVE

Method used to Display the Wave.

Fill
Fills the gaps between Samples.
Line
Displays each Sample as vertical lines.
Outline
Displays the maximum Sample values only.

WAVE DISPLAY

Displays the entire Wave plus the Loop Start and End Pointers. Pointers update during Wave Playback. Central marker turns red to Display Wave Play Location.

Start Point
Location of Loop Start Point. Left click\drag to move Pointer.
End Point
Location of Loop End Point. Right click\drag to move Pointer.

Remember: Loop Start\End Pointers can not be reversed.

VALUE DISPLAYS

Relate to various Loop Mode 1 Attributes.

Wave Length
Total Wave Time.
Start Point
Time Location of Start Point. Right\left click plus Turbo to up/down Value.
End Point
Time Location of End Point. Right\left click plus Turbo to up/down Value.
Loop Size
Total Loop Time.
Zoom
Current Zoom Ratio for Loop Displays. Single right\left click to up\down Value.

LOOP DISPLAYS

Split screen design displaying before End Point (left) and after Start Point (right). Each Display is separated by a vertical grey line which represents both Loop Pointers. Using this method the exact Loop transition can be viewed.

Before End Point Display (Left)
Displays the portion of Wave immediately before the Loop End Pointer.
Before Start Point Display (Right)
Displays the portion of Wave immediately after the Loop Start Pointer.

ZOOM BAR

Controls Loop Display Zoom Ratio.

Scroll Mode One
Click Up\Down Arrows to Zoom Scroll.
Scroll Mode Two
Click\drag Zoom Box up\down to Zoom In\Out.
Scroll Mode Three
Click within Scroll Bar Snap Zoom.

SCROLL BARS

Used to move the Loop Pointers in ration with the Zoom status.

Scroll Mode One
Click Left\Right Arrows to Zoom Lock Scroll, click opposite mouse button to active Scroll Acceleration, release opposite click to Hold current Scroll Speed.
Scroll Mode Two
Click\drag Pointer Box left\right to move Pointer.
This Mode is Not Zoom Locked.
Scroll Mode Three
Click within Scroll Bar to relocate Pointer. This Mode is not Zoom Locked.

STEREO DISPLAY

Stereo Waves can be displayed in three Modes. Option appears only when using Stereo Waves.

B
Left\Right sides Displayed together.
L
Brings Left side to front**.**
R
Bring Right side to front.

WAVE COLOURS

Left\Right Side are Displayed in different Colours.

Wave (Yellow)
Left Channel Values.
Wave (Blue)
Right Channel Values.
Wave (Green)
Opposite Channel Value to that of the Wave Colour directly above. Mode B only.

OPTIONS SCREEN

Displays available Jump Gates and Options.

Auto Looping
Activates Zone 2 Level 5 Edit Bank\Auto Looping. Enables Start and End Points to be Located automatically.

Loop Mode 2
Activates Zone 2 Level 6 Edit Bank\Loop Mode 2. Tempo controlled Looping.

Keep And Exit
Keeps selected Choice and Exits to Zone 2 Level 1 Edit Bank\Wave Assigner.

Cancel
Reverts selected Wave to previous Choice and Exits to previous Zone\Level.

AUTO LOOPING

ZONE 2 LEVEL 5 (EDIT BANK\AUTO LOOPING)

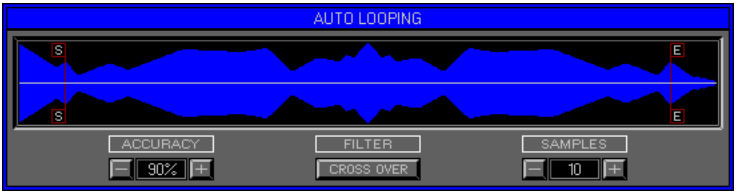
LEVEL OVERVIEW

Here you can Automatically detect Loop Start\End points with Extreme Accuracy. Most Samplers have Auto Loop facilities but few if any are quite like the Space Station. Sample Editors such as Avalon for the Atari use similar techniques but not during Audio Playback. Auto Looping within the Space Station is capable of finding Glitch Free Loop Points within any Wave, but due to the nature of Sound not all Results will be desirable. Natural and Synthetic Waveforms have individual characteristics, experience with different Wave types will aid Loop Point finding, but generally satisfactory results can be achieved.

Remember: Loop Choice, Direction and Stereo Display Mode are set form Zone 2 Level 4 Edit Bank\Loop Mode 1.

Key Features

Wave Display, Auto Point Finding, Accuracy, Filter, Samples.



WAVE DISPLAY

Displays the entire Wave plus the Loop Start and End Pointers. Pointers update during Wave Playback. Central marker turns red to Display Play Location.

Start Point

Loop Start Point, left click within Display or click\drag to move Pointer.

End Point

Loop End Point, right click within Display or click\drag to move Pointer.

Pointers

Auto detect the closest point to the desired position within the User Values set. Results are displayed in the Status Screen. Large Values and slow CPU's result in longer response times, Waves continue to Loop around the last positions.

Remember: Loop Start and End Pointers can not be reversed.

ACCURACY

Defines the level of Accuracy tolerated for a good result.

Values

Click +\- Buttons to up\down the Value. Values of 100% are not unthinkable but are generally unrealistic, in practice Values between 80-90% give good results.

FILTER

Defines the type of point to find within a Wave. Successful Looping relies heavily on both the Start and End Pointers residing on Zero Values.

Remember: Audio signals oscillate both positive and negative .

Cross Over
All audio signals will at some point cease to be positive and start to be negative, or visa versa. The point between this change is the Zero Cross Over, a true Zero Value. Generally this type of Filter will give the correct results, but when dealing with Phase Shifting Waves and Alternate Looping, clipping will probably occur.
Zero
All audio signals have positive and negative ripples, between these ripples there will be Zero points. When dealing with Alternate Looping, using a Cross Over Filter gives bad results because Waves will Play a full positive\negative ripple in one direction, then the next. Zero Filters allow Points to be placed within a ripple, enabling a Wave to play part of the positive\negative ripple, then back on itself creating a full ripple. This type of Filter should help remove audio clipping.

SAMPLES

Digital audio signals contain thousands of positive and negative voltages known as Samples. The amount of which depends upon the Wave length and Sample Rate. Using Samples as part of the search, defines an area immediately after the Start Point or before the End Point to match.

Values
Click +\- Buttons to up\down the Value. Large Sample Values will cause longer delays in Point finding, but when Looping the ambient tail end of a Wave, good results can be found quickly.

Remember: Every Sample Value is subjected to the Accuracy Value.

OPTION SCREEN

Displays available Options.

Keep And Exit
Keeps Choice and returns to Loop Mode 1.
Cancel
Removes Choice and returns to Loop Mode 1.
Save Choice And Exit
Keeps Choice and Exits to Zone 2 Level 1 Edit Bank\Wave Assigner.
Cancel And Exit
Remove amendments and Exit Auto Loop (to original location).

LOOP MODE 2

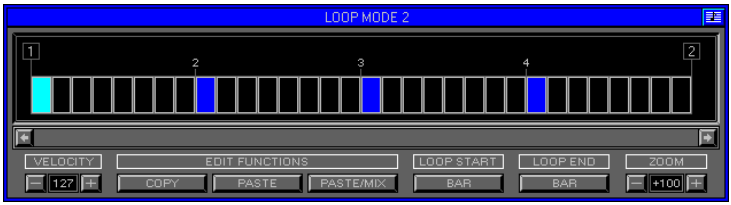
ZONE 2 LEVEL 6 (EDIT BANK\LOOP MODE 2)

LEVEL OVERVIEW

Here you can generate a Loop Cell that contains Note On\Off Data to play the Wave. Cells will be triggered by Note On\Off Data but Looped by the Sync Source, internal or external. This type of Looping has been designed for Waves that have a known Tempo or a desired pattern. You can buy Sample CD's that contain One-Four bar Loops of live performances. Up to now it has not been possible to Loop this type of Wave in time without a Sequencer, due to varying Wave lengths. Loop Mode 2 uses Sequencer technic's of re-triggering the Wave at set Time Points, whilst giving back live control.

Key Features

Bar Selection, Grid Display, Note\Velocity Modes, Velocity, Edit Functions, Loop Start, Loop End, Zoom.



Remember: Set the desired Time Signature\Tempo (see Keyboard Panel) then the amount of Bars per Cell form the Keyboard Options Screen.

NOTE MODE

In this Mode Entries of a Fixed Velocity can be inserted into the Cell, left click\drag to create or select Entries, right click\drag to delete. Default Mode.

VELOCITY MODE

In this Mode Entry Velocity can be adjusted easily, left click\drag to adjust Velocity, right click to create or delete entry.

CELL DISPLAY

Used to display and create Entries within the Cell.

CELL

Divided into Bars, Beats and Segments a Cell will be triggered by a MIDI Note On, and continue to Loop until receiving a MIDI Note Off. Cells will not respond to MIDI Velocity, as each Entry within the Cell has its own.

Remember: Cell Looping will not commence until the Clock is running.

Bar

Displayed by a number within a Line Box.

Beat

Displayed by a number on top of a Line.

Segment
Used to display and create Entries. The amount of Segments per Beat depends on the Time Signature selected on Cell creation.

ENTRY
Sends an internal Note On\Off, with a fixed Velocity to play the Attached Wave. Entry Velocities can be adjusted individually (see Velocity below) or with Velocity Mode. Entries are displayed by Blue Segments, the brighter the Blue the greater the Velocity. The selected Entry\Segment is displayed by a Red highlight. In Velocity Mode each Entry will still be Blue, but the Level of Velocity will be displayed by filling the Segment Red.

Remember: Loop Mode 2 Waves must not have Sustain Off.

SCROLL BAR
Click Left\Right Arrows to move Cell View. The Bar size is proportional to the Viewable Cell.

VELOCITY
Value used for new Entries, and the selected Entry.

EDIT FUNCTIONS
Copy
Copies the Cell to the Clipboard.
Paste
Replaces the current Cell with the Clipboard.
Paste Mix
Mixes the current Cell with the Clipboard.

LOOP START
The Time Location at which the Cell will Start after receiving a MIDI Note On.

Bar
Starts on next Clock Bar.
Beat
Starts on next Clock Beat.

LOOP END
The Time Location at which the Cell will Stop after receiving a MIDI Note Off.

Bar
Stops on next Clock Bar.
Beat
Stops on next Clock Beat.
Cell
Stops on completion.
Stop
Stops on MIDI Note Off.

Remember: Start\Stop Cells before the desired Wave Play\End Locations.

ZOOM

Current Zoom Ratio for Loop Display. Click +\- Buttons to Zoom In\Out.

OPTION SCREEN

Displays available Options.

Clear Entries
Removes all Cell Entries.
Cancel
Removes Cell and returns to Loop Mode 1.
Keep And Exit
Keeps Cell and Exits to Zone 2 Level 1 Edit Bank\Wave Assigner.
Cancel
Removes Cell and Exits Loop Mode 2 (to original location).

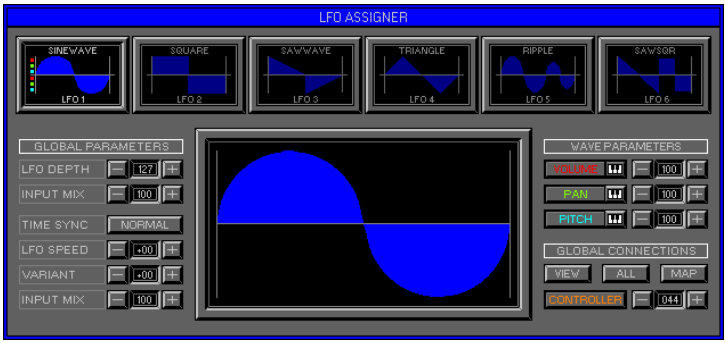
LFO ASSIGNER

ZONE 2 LEVEL 7 (EDIT BANK\LFO ASSIGNER)

LEVEL OVERVIEW

Here you can create controllable Volume, Pan and Pitch Modulation effects with the use of RAM simulated Low Frequency Oscillators (LFO's). The Space Station has Six LFO Shapes per Bank, Assignable to any Wave. Each LFO has its own Parameters and can be Saved individually, or as a Map. LFO Shapes can Modulate different aspects of each Wave in varying amounts. MIDI Controllers can be used for LFO Depth and Time giving hands on control.

Key Features
Loading\Saving, Shape Displays, Global Parameters, Selected Display, Wave Parameters, Global Connections.



LOAD

Click to activate drop down list.

Load LFO
Activates the Load LFO window (see Load/Save LFO and LFO Files below).
Load LFO Map
Activates the Load LFM window (see Load/Save LFM and LFM Files below).

SAVE

Click to activate drop down list.

Save LFO
Activates the Save LFO window (see Load/Save LFO and LFO Files below).
Save LFO Map
Activates the Save LFM window (see Load/Save LFM and LFM Files below).

SHAPE DISPLAYS

Each display has three Modes.

Mode 1
Out and blank, LFO not Active, right click to Activate.

Mode 2
Out and Shape Dark Blue, LFO Active but not selected, left click to select.
Mode 3
In and Shape Blue, LFO Active\Selected, right click to Deactivate.
Name
Current LFO File Name.
Shape
Current LFO Shape.
LFO 1-6
Current Active LFO Shapes.
Connections
Inside each Display are Six LED's to indicate LFO Connections, three Upper and three Lower.
Upper
LFO is connected.
Lower
Selected Wave is connected.
Red
Connected to Volume.
Green
Connected to Pan.
Cyan
Connected to Pitch.

GLOBAL PARAMETERS
Control the selected LFO Shape.

LFO Depth
Sets the Maximum Modulation Value. Click +\- Buttons to up\down the Value. No effect will be heard unless the LFO is Connected,
(see Wave Parameters below).

Input Mix
Sets the Maximum Depth Cross Modulation Value. Click +\- to up\down Value.
Value
Depth Cross Modulation Active (see Zone 2 Level 9 Edit Bank\LFO Mapper).
No Value
Depth Cross Modulation not Active,
(see Zone 2 Level 9 Edit Bank\LFO Mapper).

Time Sync
Time base used for LFO cycling.
Normal
Seconds (Free Running) LFO Shapes only Sync to themselves.
Use Stop and Play to restart.
Clock
MIDI clock (Internal/External). LFO Shapes Sync to MIDI Clock.

LFO Speed
Current cycle speed (seconds/Beats)

Variant
Sets the Maximum Time Acceleration Value. Click +\- to Up\Down the Value.
Value
Time Acceleration Active (see Zone 2 Level 9 Edit Bank\LFO Mapper).
No Value
Time Acceleration not Active (see Zone 2 Level 9 Edit Bank\LFO Mapper).

Input Mix
Sets the Maximum Time Cross Modulation Value. Click +\- to up\down the Value.
Value
Time Cross Modulation Active (see Zone 2 Level 9 Edit Bank\LFO Mapper).
No Value
Time Cross Modulation not Active (see Zone 2 Level 9 Edit Bank\LFO Mapper).

LFO DISPLAY
Displays the currently selected LFO Shape to Edit\Connect. Click to activate Shape Depth and Time Location Displaying. Central\Left side Grey markers fill Red to identify LFO Cycle and Depth Location.

WAVE PARAMETERS
Connect LFO Shapes to the selected Wave for varying Modulation effects.

Switches
Split into two parts for Attribute assigning, illuminated for Connection displaying.
Attribute Name (Part One)
Connects the selected LFO for Attribute Modulating.
Switches have three Modes.
Mode 1
Switch Out and Grey, LFO not Connected. Click to Connected selected LFO.
Mode 2
Switch In and Coloured, selected LFO Connected. Click to Disconnect LFO.
Mode 3
Switch Out and Coloured, LFO Connected. Click to select Connected LFO.
Key Icon (Part Two)
Assigns MIDI Poly Pressure for Attribute Modulation.
Click to activate\deactivate.

Remember: Waves using Poly Pressure do not Modulate until Receiving Pressure Values for the Assigned Key.

Volume
LFO Shape Modulates Wave Volume for Tremolo\Gate effects.
Value
Click +\- to up\down the Value, larger Values result in greater effects.

Pan
LFO Shape Modulates Wave Pan for Stereo\Shimmer effects.
Value
Click +\- to up\down the Value, larger Values result in greater effects. Pan settings from the Zone 2 Level 1+3 Edit Bank\Wave Assigner and Envelope Generator may already be applied and will alter the effect.

Remember: Stereo Waves will fade between left\right, they will not swap sides.

Pitch
LFO Shape Modulates Wave Pitch for Vibrato\Chorus effects.
Value
Semitones, click +\- to up\down the Value.
Larger Values result in greater effects.

GLOBAL CONNECTIONS
Used for Global Connections, Viewing and Copying Wave Parameters.

View
Views all Waves with identical LFO Connections to the selected Wave, click\hold to View Connections. Keyboard LED's split into three Colours to identify which LFO Shapes are Connected to the same Wave Parameters as the selected Wave.
Red
Volume, Keys with Red LED's use the same LFO Shape as the selected Wave for Volume Modulation.
Green
Pan, Keys with Green LED's use the same LFO Shape as the selected Wave for Pan Modulation.
Cyan
Pitch, Keys with Cyan LED's use the same LFO Shape as the selected Wave for Pitch Modulation.

All
Copies all LFO Connections and Wave Parameters of the selected Wave to all Waves within the Bank. Results displayed in the Status Screen.
Map
Copies all LFO Connections and Wave Parameters of the selected Wave, to all Waves Mapped to the selected Wave. Results displayed in the Status Screen.

Controller
Enables\Disables the Selected LFO, outputting to any of the available Internal\External MIDI Controllers.
Value
Controller number, click +\- to up\down the Value.

Remember: LFO's run independent of Wave Playback, to prevent continues Controller output (see LFO Mapper Zone 2 Level 8).

OPTIONS SCREEN

Displays available Jump Gates and Options.

LFO Designer
Activates Zone 2 Level 8 Edit Bank\LFO Designer. LFO Shape Modelling.
LFO Mapper
Activates Zone 2 Level 9 Edit Bank\LFO Mapper. Enables MIDI Controller Assigning and Cross Modulation, Time Acceleration effects.
Keep And Exit
Keeps selected Connections and Exits to Zone 2 Level 1 Wave Assigner.
Cancel
Reverts selected Wave to previous Choice and Exits to previous Zone\Level.

LOAD/SAVE

LFO's can be Loaded\Saved in two types, LFO (*.LFO) and LFO Maps (*.LFM).

LFO FILES

Contain only a single LFO Shape.

LFM FILES

Contain all LFO Shapes and Global Parameters, plus all settings from Zone 2 Level 9 Edit Bank\LFO Mapper.

Remember: Wave Parameters will not be removed when Loading.

FILE NAME

Displays the currently selected File Name and Type.

FILE LIST

Displays the List of File Names to select from.

LFO
Left click on Shape Name in File List to select. Click OK or use Quick Key "Return" to Load Shape to the selected LFO.
LFM
Left click on LFO Map Name in File List to select. Click OK or use Quick Key "Return" to Load LFM to the selected Bank.
Scroll Bar
The size of the Bar is proportional to the displayed File List.

LIST OF FILE TYPE

Displays the current File Type to Load, click Arrow to activate/deactivate File Type List. Click on Type to select (see LFO\LFM Files below).

DIRECTORIES

Displays the currently selected Drive and Directory.

DIRECTORY LIST

Displays the available Directories. Double click on the Folders to open.

List Scroll

Use the Up/Down Arrows or Scroll Bar to view Directory List.

Scroll Bar

The size of the Bar is proportional to the displayed Directory List.

DRIVES

Displays the currently selected Drive.
Click Arrow to view Drive List, click to select.

OK

Loads Selected File. Click or use Quick Key “Enter”.

CANCEL

Exit Load Window and return to the previous Level. Click or use “Back Space”.

FILE SIZE

Displays number of bytes required to load Selected File.

LFO TYPE

Displays LFO information.

PREVIEW

Activates the Preview Windows for Shape displaying (*.LFO only).

LFO FILES

LFO's (*.LFO)

Shapes are stored on the CD within the LFO Directory.

LFO Maps (*.LFM)

All Default LFO Map Attributes can be replaced with User settings. Save the User LFO Map to the Space Directory as Default.LFM. Delete the Default.LFM to return to original settings.

LFO DESIGNER

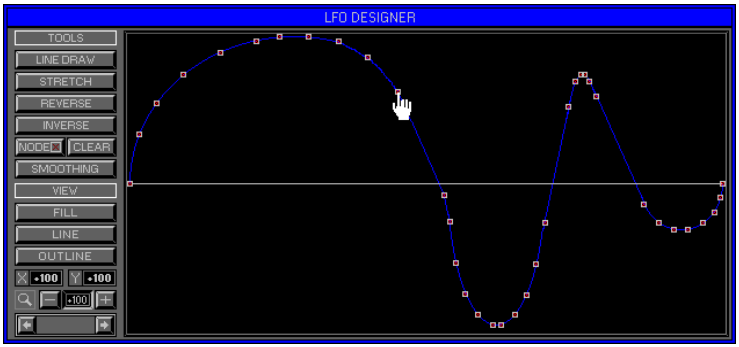
ZONE 2 LEVEL 8 (EDIT BANK\LFO DESIGNER)

LEVEL OVERVIEW

Here you can Model LFO Shapes with the use of several Tools. Modelling is possible during Wave Playback making the Space Station the first Real Time LFO Designer ever. LFO cycle position is displayed precisely when active. Two Modelling Modes are available, Free Hand or Node. Shapes can be Loaded\Saved.

Key features

Shape Displaying, Free Hand Modelling, Tools, View Controls, Load\Save.



LOAD

Click to activate drop down list.

Load LFO

Activates the Load LFO window (see Load/Save Zone 2 Level 7 LFO Assigner).

Load LFO Map

Activates the Load LFM window (see Load/Save Zone 2 Level 7 LFO Assigner).

SAVE

Click to activate drop down list.

Save LFO

Activates the Save LFO window (see Load/Save Zone 2 Level 7 LFO Assigner).

Save LFO Map

Activates the Save LFM window (see Load/Save Zone 2 Level 7 LFO Assigner).

LFO DESIGN SCREEN

Displays the currently selected LFO Shape for Modelling.

MODELLING

Shape Modelling can be achieved using various Tools within one of two Modes.

Free Hand Mode (Default)
Modelling with the Mouse Pointer.
Node Mode
Up to 100 Nodes can be placed at points within the Shape and used to Model parts between the selected Node and Nodes immediately to the left\right.

TOOLS

Used for Modelling techniques, some Tools work differently within each Mode.

Line Draw (Default)
Used for Shape Drawing, Functions differently for each Mode.
Free Hand Mode
Mouse Pointer becomes a Cross Hair, Left click\drag to Model LFO Shape.
Node Mode
Mouse Pointer becomes a Hand when over a Node, right click along Shape Time to Create Node, left click\drag Node to Rubber Band all Shape parts between the selected Node and Nodes immediately to the left\right. Right click Node to Delete.

Stretch
Used to Shrink\Expand Shapes, Functions differently for each Mode.
Free Hand Mode
Mouse Pointer becomes a Cross Arrow, left click\drag, left\right to Shrink or Expand LFO Shape Time from the Pointer Position. Right click\drag up\down to Shrink or Expand LFO Shape Depth.
Node Mode
Mouse Pointer becomes a Cross Arrow. Create\Delete Node as with Line Draw. left click\drag Node, left\right to Shrink or Expand all Shape parts between the selected Node and Nodes immediately to the left\right.

Reverse
Rotates the LFO Shape about the Depth Axis.

Inverse
Rotates the LFO Shape about the Time Axis.

Node
Switches between Node Mode and Free Hand Mode.
Switch Up
Free Hand Mode.
Switch Down
Node Mode.

Clear
Removes all User Nodes.

Smoothing
Automatically Smooths Shape Edges. Continuous use will Flat Line the Shape.

VIEW

Defines how the LFO Shape is Displayed, and the location of the Pointer.

Fill
Fills the gaps between Bytes.
Line
Displays each Byte as vertical lines.
Outline
Displays the maximum Byte values only.

X Screen
Displays the Mouse Pointer X Value (LFO Time).
Y Screen
Displays the Mouse Pointer Y Value (LFO Depth).

Zoom
Click +\- Buttons to Zoom In\Out.

Scroll Bar
Click Left\Right Arrows to Time Scroll, Bar size proportional to Shape displayed.

OPTION SCREEN

Displays available Options.

Hold
Stores all current settings to disk, use with Fetch for undo.
Fetch
Reverts to previously Held settings.
Keep and Exit
Keeps Shape Design and Exits to Zone 2 Level 7 Edit Bank\LFO Assigner.
Cancel
Removes all Modelling and returns to the previous Zone\Level.

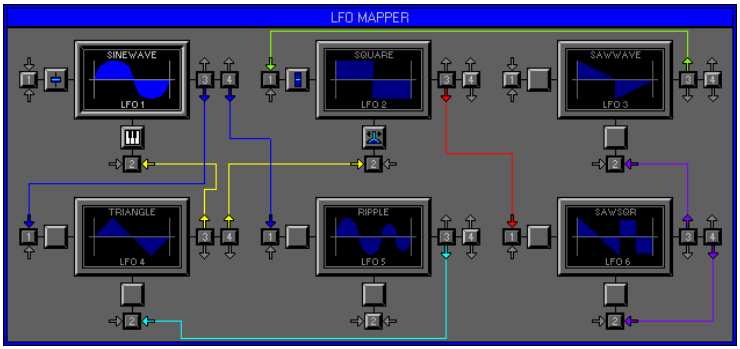
LFO MAPPER

ZONE 2 LEVEL 9 (EDIT BANK\LFO MAPPER)

LEVEL OVERVIEW

Here you can Assign MIDI Controllers to LFO Depth and Time for hand on effects. LFO Modules have both Inputs and Outputs used to Map Shapes together for Cross Modulation and Time Acceleration effects.

Key features
LFO Modules, Shape Displays, LFO Mapping, MIDI Controller Assigning, Controller Icons, Colour Coding Mapping Points, Loading\Saving.



LOAD

Click to activate drop down list.

Load LFO
Activates the Load LFO window (see Load/Save Zone 2 Level 7 LFO Assigner).
Load LFO Map
Activates the Load LFM window (see Load/Save Zone 2 Level 7 LFO Assigner).

SAVE

Click to activate drop down list.

Save LFO
Activates the Save LFO window (see Load/Save Zone 2 Level 7 LFO Assigner).
Save LFO Map
Activates the Save LFM window (see Load/Save Zone 2 Level 7 LFO Assigner).

LFO MODULES

Primarily divided into Three sections, LFO Modules have a Shape Display, four Mapping Points and two MIDI Controller Assign Points (MCAP).

SHAPE DISPLAYS

Each display has three Modes. Left click to select.

Mode 1
Out and blank, LFO not Active (see Zone 2 Level 7 Edit Bank\LFO Assigner).
Mode 2
Out and Shape Dark Blue, LFO Active but not selected. Click to select.
Mode 3
In and Shape Blue, LFO Active\Selected.
Name
Current LFO File Name.
Shape
Current LFO Shape.
LFO 1-6
Current Active LFO Module.
Connections
Inside each Display are Six LED's to indicate LFO Connections, three Upper and three Lower.
Upper
LFO is connected.
Lower
Selected Wave is connected.
Red
Connected to Volume.
Green
Connected to Pan.
Cyan
Connected to Pitch.

MAPPING POINTS

LFO Modules have two Types of Mapping Points. All Points have Direction Arrows that Illuminate on Mapping. Each Module has its own Mapping Colour.

Input Points (Type One)
Each LFO Module has two Cross Modulation Inputs, Switch 1 for Mapping to Depth, and Switch 2 for Mapping to Time.
Arrow (Grey)
Not Mapped.
Arrow (Blue)
Mapped to LFO One Output.
Arrow (Red)
Mapped to LFO Two Output.
Arrow (Green)
Mapped to LFO Three Output.
Arrow (Yellow)
Mapped to LFO Four Output.
Arrow (Cyan)
Mapped to LFO Five Output.
Arrow (Purple)
Mapped to LFO Six Output.

Output Points (Type Two)
Each LFO Module has two Output Points Switches 3 and 4 which are used for Mapping. Click to Activate\Deactivate Output, click LFO Module Input to Cross Modulate.

Remember: Only the selected LFO Module can be used for Output Mapping.

CROSS MODULATION

As with Waves LFO Shapes can be used to Modulate themselves or others using Mapping Points (see Mapping Points above).

Depth (Input 1)
Mapping to Input Point 1 allows the Output Shape to Modulate the Global Depth Value of the Input Shape,
(see Input Mix Zone 2 Level 7 Edit Bank\LFO Assigner).

Time (Input 2)
Mapping to Input Point 2 allows the Output Shape to Modulate the Global Time Value of the Input Shape, (see Input Mix Zone 2 Level 7 Edit Bank\LFO Assigner).
LFO Shapes Global Speed can only increase,
(see Time Acceleration below).

MCAP

LFO Modules have two MIDI Controller Assign Points, one for Depth and Time. Each Point has four different Icons for displaying the current Option.

Depth
Single left\right click to Scroll through available Options.
Grey Square
MIDI Controller Not Attached, LFO Modulates at all times.
Fader Icon
Fixed MIDI Controller Assigned (see Controller List Zone 1 Level 4 MIDI Filter).
Mod Wheel Icon
Modulation Assigned MIDI Controller (01).
Keyboard Icon
After Touch Assigned.

Remember: LFO Shapes will not Modulate Waves until receiving Values from the Assigned MIDI Controller.

Time
Single left\right click to Scroll through available Options.
Grey Square
MIDI Controller Not Assigned, LFO Time not Modulated.
Fader Icon
Fixed MIDI Controller Assigned (see Controller List Zone 1 Level 4 MIDI Filter).
Pitch Bend Icon
Pitch Bend Assigned (see Time Acceleration below for Special Function).
Keyboard Icon
After Touch Assigned.

Remember: LFO Time Acceleration will not commence until receiving Values from the Assigned MIDI Controller.

TIME ACCELERATION

LFO Time can be Increased\Decreased by MIDI Controllers or LFO Shapes. To Accelerate a Shapes Time correctly two Values are need.

Value One (Minimum Time)
Set by the Global LFO Speed (see Zone 2 Level 7 Edit Bank\LFO Assigner).
Value Two (Maximum Time)
Set by the Global LFO Variant (see Zone 2 Level 7 Edit Bank\LFO Assigner).

Special Function
When Pitch Bend is Assigned to Time the current LFO Speed will increase to 50% of the Maximum Time Value. Positive\negative Pitch Bend Values increases\decrease LFO Speed.

OPTION SCREEN

Displays available Options.

Hold
Stores all current settings to disk, use with Fetch for undo.
Fetch
Reverts to previously Held settings.
Keep and Exit
Keeps Module Mapping and Exits to Zone 2 Level 7 Edit Bank\LFO Assigner.
Cancel
Removes all Mapping and returns to the previous Zone\Level.

WAVE EDITOR

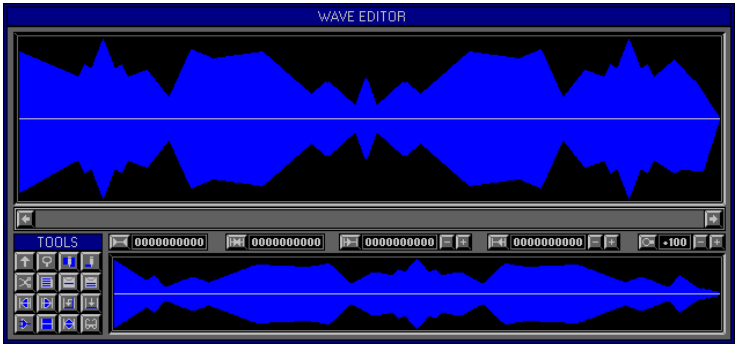
ZONE 3, LEVEL 1 (EDIT WAVE\WAVE EDITOR)

LEVEL OVERVIEW

Here you can Edit Waves in a destructive manner with the use of several different Tools. Sections or all of the selected Wave can be can be Played, Copied and Pasted to different Keys. Adjustments to Wave Volume can be made using Fade, Amplify and Maximise Tools. Sections of silence can be added or forced into the Wave accurately using special Viewing Tools. Waves can be Loaded and Saved.

Key Features

Wave Displays, Time Displays, Multi Point Playing, Selecting, Zooming, Deleting, Amending, Cut, Copy, Paste, Paste Mix, Fade In/Out, Insert Silence, Force Silence, Amplify, Maximise, Top and Tail, View Settings, Load/Save.



LOAD

Click to activate drop down list.

Load Wave

Activates the Load Wave window,
(see Load Waves and Wave Files below).

Clear Wave

Removes the selected Wave.

SAVE

Click to activate drop down list.

Save Wave

Activates the Save Wave window (see Save and Wave Files below).

WAVE DISPLAY

Displays the currently selected Wave File for Editing, all Tools will be used within this Display (see Tools below).

Remember: A Wave must be selected for Viewing and Editing.

Scroll Bar

Used to Manoeuvre around Waves, click Arrows or click\drag Bar to move. The Bar size is always proportional to the amount Wave Displayed.

TOOLS

Sixteen different Tools are available for making amendments to the selected Wave. Tool names, functions and operations are displayed in the Status Screen when Hovering over the Tool Icon.

Select

Used to Select areas of the Wave for amending with other Tools, left click\drag to Select Wave area or double click to Select all. Left click\drag again to move left side of selected area, or right click\drag to move the right side of the selected area. To reset the Selected area, right click the Select Tool Icon.

Magnify

Used to Zoom In/Out on Mouse Pointer position,
right/left click to Zoom In/Out.

Delete

Click to Delete Selected area.

Draw

Used for free hand editing, click\drag to redraw Wave Levels. Use this Tool to remove small glitches within a Wave, excessive use will create audio glitching.

Cut

Removes the Selected area of Wave to the clip board,
used with Paste/Paste Mix.

Copy

Copies the Selected area of Wave to the clip board,
used with Paste/Paste Mix.

Paste

Inserts any Wave data on the clip board into the selected Wave, starting form the left side of the Selected area.

Paste Mix

Mixes any data on the clip board with the selected Wave, starting from the left side of the Selected area. Mixing Waves together increases Gain levels, beware distortion.

Fade In

Generates smooth Volume increment effects within the Selected area. Activating the Fade In Tool will generate a Path from the bottom of the Wave to the Top, in the centre of this Path will be a Node Point. Click\drag the Node around to generate a curved Path, to apply the effect right click on the Fade In Tool Icon. To reset the Path left click the Fade In Tool Icon.

Fade Out
Generates smooth Volume decrement effects within the Selected area. Activating the Fade Out Tool will generate a Path from the top of the Wave to the bottom, in the centre of this Path will be a Node Point. Click\drag the Node around to generate a curved Path, to apply the effect right click on the Fade Out Tool Icon. To reset the Path left click the Fade Out Tool Icon.
Insert Silence
Inserts a section of Silence within the current Wave, starting from the left side of the Selected area. The amount of Inserted Silence is equal to the Selected area.
Force Silence
Replaces all Wave data within the Selected area with Silence.
Amplify
Generates smooth Volume increment\decrement effects within the Selected area. Activating the Amplify Tool will generate a Path from one side of the Selected area to the other. At each end of the Path is a Node, left click\drag Node up\down to increase\decrease Wave Volume. Right click along the Path to generate another Node, up to 99 Nodes can be used to generate complex Amplification effects. To apply the effect right click on the Amplify Tool Icon or Left click to reset the Path.
Maximise
Increases the Volume of all Wave data within the Selected area, by the maximum amount possible without introducing distortion.
Top & Tail
Removes the start and end of the current Wave. Left click on the Wave to remove the section to the left, right click on the Wave to remove the section to the right. The Top & Tail Tool uses the closest Zero Crossover Point for a cut location, preventing start or end glitching, (for more on Zero Crossover Points see Zone 2 Level 5 Auto Looping).
View
Activates the View Settings Window, (see View Settings below).

VIEW SETTINGS
Multi panelled window used to set Display criteria.

WAVE
Determines how the Wave is Displayed.

Wave
Click to activate full screen Wave viewing, positive and negative peaks.
-
Click to activate full screen negative viewing.
+
Click to activate full screen positive Wave viewing.
Loop Points
Click to view Wave Loop Points, only available when Loop Points have been set (see Zone 2 Level 4 Edit Bank\Loop Mode 1).

Stereo
Activates left and right Wave side viewing and Editing,
only available for Stereo Waves.
L
Brings the left Wave Side to front, for viewing and Editing independently.
R
Brings the right Wave side to front, for viewing and Editing independently.

TIME

Determines the Time scale used by the Value Displays**.**

SEC
Time scale in Seconds.
SPS
Time scale in Samples.
BYT
Time scale in Bytes.
SMPTE 24, 25, 30
Time scale in SMPTE, 24, 25 or 30 Frames per second.
MIDI
Time scale in MIDI, Bars and Beats.

GRID

Determines the Grid Settings.

Time
Activates\deactivates the Time Grid.
1 - 4
Activate the four possible Grid resolutions for each Time Scale.
Sec
Seconds, 1/4 Seconds, 1/10 Seconds and 1/20 Seconds.
Sps
1000 Samples, 250 Samples, 100 Samples and 10 Samples.
Byt
1000 Bytes, 250 Bytes, 100 Bytes and 10 Bytes.
SMPTE 24 & 30 Frames
Seconds, 2 Frames, 1 Frame and ½ Frame.
SMPTE 25 Frames
Seconds, 5 Frames, 1 Frame and ½ Frame.
MIDI
Beat, 1/8 Beat, 1/16 Beat and 1/32 Beat.
Depth
Activates\deactivates the Depth Grid.
1 - 4
Activate the four possible Grid resolutions, ½, 1/4, 1/8 and 1/16.
Snap
Enables the mouse pointer to lock to Grid points only.

VALUE DISPLAYS

Display Time Values relating to the Wave areas. Display Icons have special functions**.**

Wave Time Icon
Click to Loop Play Wave from start to end, click again to stop.
Wave Time Display
Total Wave Time, (see View Settings\Time above).
Total Selected Area Icon
Click to Loop Play Wave from Selected Area start, to Selected Area end, click again to stop.
Total Selected Area Display
Total Time of the Selected Area, (see View Settings\Time above).
Left Selected Area Icon
Click to Loop Play from Wave start to Selected Area start, click to stop.
Left Selected Area Display
Left side Time Location of the Selected Area, click +\- to Up\Down.
Right Selected Area Icon
Click to Loop Play from Selected Area end to Wave end, click to stop.
Right Selected Area Display
Right side Time Location of the Selected Area, click +\- to Up\Down.
Zoom Icon
Click to Auto Zoom in, to the Selected Area, click again to return.
Zoom Display
Displays the current Magnification Level, click +\- to Up\Down the Value.

OVERVIEW

Displays the entire Wave and the Selected Area, and can be used for Selecting.

OPTION SCREEN

Displays available Options.

Hold
Stores all current settings to disk, use with Fetch for undo.
Fetch
Reverts to previously Held settings.
Effects Rack
Activates Zone 3 Level 2, Edit Wave\Effects Rack, used for applying special Effects like Echo, Reverb, Flanging, Chorus and Distortion (Function currently under construction).
Processor Rack
Activates Zone 3 Level 3, Edit Wave\Processor Rack, used for applying special Processes like Filters, EQ and much more (Function currently under construction).

SAVE WAVE

See Load\Save Desktop (no special functions).

WAVE FILES

Wave Files (*.WAV) are the standard PC Audio File Type.

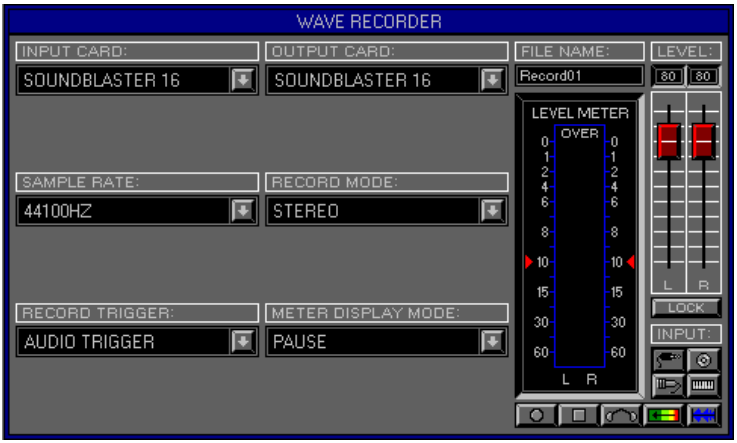
WAVE RECORDER

ZONE 3, LEVEL 5 (EDIT WAVE\WAVE RECORDER)

LEVEL OVERVIEW

Here you can Record Waves to the Selected Key, using any of the Sound Blaster Inputs. Waves can be Recorded in Mono or Stereo, and at one of three different Sample Rates. Wave Recording can be Triggered from four different ways including MIDI. Input Levels can be accurately adjusted and Displayed in three different Meter Modes. Waves can be Saved to disk.

Key Features
Input Output Card, Sample Rate, Record Mode, Record Trigger, Meter Display Mode, File Name, Level Meter, Level Control, Input Control.



SAVE

Click to activate drop down list.

Save Wave
Activates the Save Wave window (see Save and Wave Files below).

INPUT CARD

Displays the currently selected Sound Blaster Card, used for Wave Recording.

OUTPUT CARD

Displays the currently selected Sound Blaster Card, used for Wave Output.

Remember: The Space Station only supports one Sound Card at present, Wave Recording disables the Playback Engine. Function under construction.

SAMPLE RATE

Defines the Record quality. All sounds contain a range of frequencies that need to be Recorded to ensure an accurate reproduction. The rule of thumb is to double the frequency value of the sound to be Recorded and select the closest Sample Rate.

Remember: More Memory is used, the greater the Sample Rater.

44100HZ
CD quality, used for Recording several instruments together.
22050HZ
Instrument quality, used for Recording individual performances.
11025HZ
Speech quality, used for spoken words and low frequency sounds.

RECORD MODE

Defines wich of the Sound Blaster Card Inputs are to be used for Recording.

Mono
Left and Right Inputs are mixed together.
Stereo
Left and Right Inputs are Recorded independently.
Mono Left
Only the Left Input is Recorded.
Mono Right
Only the Right Input is Recorded.

RECORD TRIGGER

Defines how the Space Station should start Recording.

Normal
Activate/deactivate Recording by using the Record and Stop Buttons, or the Keyboard Options Screen (see Input\Record, Stop and Option Screen below).
Audio Level
Recording commences when the Input Level exceed's a user definable Trigger Point (see Level Meter\Audio Trigger below). Activate/deactivate as Normal.
Mouse
Recording is activated by a left click\hold on the Record Button (see below), and deactivated by a release click.
MIDI Clock
Recoding commences when the MIDI Clock current time location equals the Left Locator position, and stops at the Right Locator position (see Left and Right Locators Zone 0 Level 1 Keyboard Panel\Flip Screen). To select this Mode both Locators must be set, and Punch In\Out must be on (see Flip Screen). Activate Recording with the Record Button.

METER DISPLAY

Defines how the Level Meter should respond, three Modes are available.

Normal
Meter Levels are always equal to the Input signal.
Pause
Meter Levels are always equal to the Input signal, but the maximum Meter Level is held momentarily.
Hold
Meter Levels are always equal to the Input signal, but the maximum Meter Level is always held.

FILE NAME

Wave File Name to be Recorded, click to activate text insertion.

LEVEL METER

Displays the Input signal's Level with the use of a multi coloured bar graph. The Level Meter will not Display unless Monitor is active (see Input below).

Green
-60db to -10db
Light Green
-10db to -4db
Yellow
-4db to -1db
Orange
-1db to 0db
Over
Flashes Red when the Input signal exceeds 0db.

Remember: Digital Audio signals clip at Levels above 0db.

Audio Trigger
Two Red triangles left/right of the bar graph, used in conjunction with the Record Trigger (see Audio Level above), click\drag to desired Level to set Threshold.
Threshold
Audio Levels above the Threshold Value will activate Recording.

LEVEL

Defines the Input signals Level.

Value Screens
Display the Left and Right Input Values.
Faders
Increase/decrease the Left and Right Input Levels, click\drag Fader up/down.
Lock
Synchronises Faders ensuring a stereo match**.**

INPUT

Selects between the four available Sound Blaster Inputs.

Line Input
Sound Blaster External Jack Input, Faders Red.
CD Input
Sound Blaster Internal CD Input, Faders Blue.
Microphone Input
Sound Blaster External Mic Input, Faders Green.
Keyboard
Sound Blaster OPL3 Synth or AWE Wave Table Input, Fader Purple.
Record
Activates Wave Recording (see Sample Rate, Record Mode and Trigger above).
Stop
Deactivates Wave Recording (see Record Trigger above).
Monitor
Activates the Record Monitor and Level Meter, disabling Wave Playback.
Meter Reset
Used to reset the Meter Display.
Output Record
Space Station Output Record mode, Faders Orange. This mode enables new Waves to be created from any Waves that are playing back.
Record Frequency is set by the current Output Settings.

OPTIONS SCREEN

Displays available Options.

Record
Activates Wave Recording, Option changes to Stop after selecting.
Discard Wave
Clears the Recorded Wave from Memory.
Keep + Exit
Keeps Wave and Exits to Zone 3 Level 1 Edit Wave\Wave Editor
Cancel
Removes the currently selected Wave and Exits to previous Zone\Level.

SAVE WAVE

See Load\Save Desktop (no special functions).

WAVE FILES

Wave Files (*.WAV) are the standard PC Audio File Type.

MAIN MIXER

ZONE 5, LEVEL 1 (MIXER\MAIN MIXER)

LEVEL OVERVIEW

Here you can adjust the Main Volumes, Pan positions and the Amplitude Envelopes Attack and Release Times, for each individual MIDI Channel. Channels can be locked together to enable multi Fader adjustments. Animation Mode for on screen movement.

Key Features

Individual Channel adjustment, Fader Animation, Muting, Fetching and Locking,

MIXER

Switches between the four available Main Mixers.

Volume

Sixteen Main Volume Faders (Control Change 7) one for each MIDI Channel. Use Faders to increase/decrease the Volume of the selected Channel.

Pan

Sixteen Pan Faders (Control Change 10) one for each MIDI Channel. Use Faders to control the left and right balance of each Channel.

Attack

Sixteen Attack Faders (Control Change 12) one for each MIDI Channel. Use Faders to control the Amplitude Envelopes Attack Time. No effect heard if Points are not set! (see Fixed Pointers Zone 2 Level 3 Edit Bank\Envelope Generator).

Release

Sixteen Release Faders (Control Change 13) one for each MIDI Channel. Use Faders to control the Amplitude Envelopes Release Time. No effect heard if Points are not set! (see Fixed Pointers Zone 2 Level 3 Edit Bank\Envelope Generator).

CHANNEL

Each of the sixteen MIDI Channels within the Space Station have been allocated with a Current Value Screen, Fader and four Switches.

Current Value Screen
Displays the Value for each Channel at all times, reflecting all MIDI changes.
Fader
Left click\drag, up/down to change current Value. Fader Values will be transmitted internally and externally to adjust each Channel.

Remember: The type of Data sent depends on the current active Mixer

Switches
Each Channel has four switches, each of which functions differently.
Mute
Mutes the Volume of the current Channel.
Fetch
Recalls the current Channels last Held position (see Option Screen below).
Lock A
Locks the current Channel to Special A for Multi Fader movement (See below).
Lock B
Locks the current Channel to Special B for Multi Fader movement (See below).

SPECIAL

Channels A and B have been designed to adjust all Locked Faders.

Current Value Screen
Displays the current Value for each Special Channel.
Fader
Special Faders react slightly differently from the Channel Faders, enabling the movement of different Channel values. Click Fader and drag up/down to move all Locked Channels. Special Faders may reach their maximum/minimum Value, whilst the Locked Faders have not reached theirs. To enable more Fader movement simply release click, and click again anywhere within the Special Faders path but not on the Fader itself. This will define the Special Faders new position without moving any of the Locked Channels, then move the Fader as before.

Remember: all of the Channel Faders can have different Values, the offsets between these Values will be retained even after all of the Channels have been maximised or minimised.

Switches
Each Special Channel has two Switches.
Mute
Mutes the Volumes of all Locked Channels.
Fetch
Recalls the last Held positions of all Locked Channels.

MODE

Animate
Fader Animation displays all MIDI value changes. Faders can still be used to transmit Data as before, but during user movement all Animation stops.

Remember: The Mouse Pointer will start to blink as the Faders Animate.

Solo
Mutes the Volumes of all MIDI Channels with the exception of the selected Bank. This will enable the ability to monitor the currently selected Channel only.
Setup
Activates the Joystick port Calibration Screen for use with the Hypnosis Studio external Mixer controller. Function currently not available.

OPTIONS SCREEN
Displays available Options.

Hold
Stores all current settings to disk, use with Fetch for undo.
Fetch
Reverts to previously Held settings.
User Mixer
Activates the User Mixer (Zone 5 Level 2 Mixer\User Mixer).
Mixer Designer
Activates the Mixer Designer (Zone 5 Level 3 Mixer\Mixer Designer).

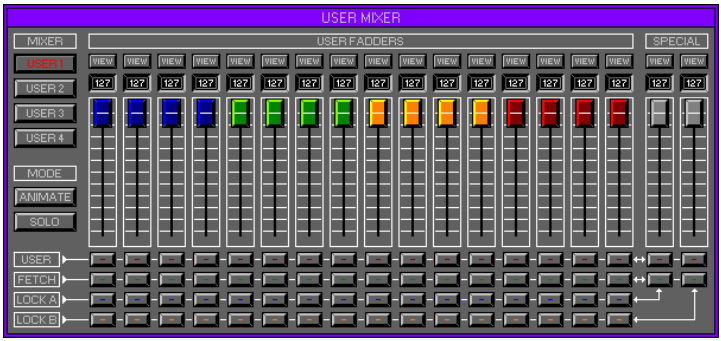
USER MIXER

ZONE 5, LEVEL 2 (MIXER\USER MIXER)

LEVEL OVERVIEW

Here you can adjust the sixteen different User Faders and Switches, to Output different types of MIDI Data. Channels can be locked together to enable multi Fader adjustments, Animation Mode for on screen movement. Load and save to importing and exporting different User Mixer types.

Key Features
Customized Faders and Switches, Individual Channel adjustment, Animation, Fetching and Locking, Fader information displayed on Hovering, Load\Save.



LOAD

Click to activate drop down list.

Load User Mixer
Activates the Load User Mixer window (see Load/Save and Mixer Files below).

SAVE

Click to activate drop down list.

Save User Mixer
Activates the Save User Mixer window (see Load/Save and Mixer Files below).

MIXER

Switches between the four available User Mixers.

User 1 (Default1.mix)
Sixteen User Faders and Switches.
User 2 (Default2.mix)
Sixteen User Faders and Switches.
User 3 (Default3.mix)
Sixteen User Faders and Switches.
User 4 (Default4.mix)
Sixteen User Faders and Switches.

CHANNEL

Each of the sixteen possible Channels within the User Mixer have been allocated with a View Button, Current Value Screen, Fader and four Fixed Switches.

View Button
Activates the View Settings Window.
View Settings
Displays the User Name and Attributes, for the Fader and Switch. To edit the User Name, click the Fader or Switch Button and input text.
Current Value Screen
Displays the Value for each Channel at all times, reflecting all MIDI changes.
Fader
Left click\drag, up/down to change current Value. Fader Values will be transmitted internally and externally to adjust MIDI Channels. Hover over Fader to display User attributes in the Status Screen.

Remember: The type of Data and MIDI Channel sent, depends on the attributes assigned to the User Fader. Faders can be one of two types, Latching and non Latching (see Mixer Designer Zone 5 Level 3 Mixer\Mixer Designer).

Switches
Each Channel has One User Switch which functions differently to the Main Mixer and three Fixed switches, each of which works as before.

User
Toggle on\off to transmit User MIDI Data internally or externally. Hover over Switch to display User attributes in the Status Screen.

Remember: The type of Data and MIDI Channel sent, depends on the attributes assigned to the User Switch. Switches can be one of two types, Latching and non Latching (see Mixer Designer Zone 5 Level 3 Mixer\Mixer Designer).

Fetch
Recalls the current Channels last Held position.
Lock A
Locks the current Channel to Special A for Multi Fader movement (See below).
Lock B
Locks the current Channel to Special B for Multi Fader movement (See below).

SPECIAL

Channels A and B have been designed to adjust all Locked Faders.

Current Value Screen
Displays the current Value for each Special Channel.

Fader
Special Faders react slightly differently from the Channel Faders, enabling the movement of different Channel Values, click Fader and drag up/down to move all Locked Channels. Special Faders may reach their maximum/minimum Value, whilst the Locked Faders have not reached theirs. To enable more Fader movement simply release click, and click again any were within the Special Faders path but not on the Fader itself. This will define the Special Faders new position without moving any of the Locked Channels, with the exception of Non Latching Faders that will

snap back to a default position (see Mixer Designer). Moving the Special Fader as before will give more movement to Latching Faders, but accelerates Non Latching.

Remember: Faders can have different Values, the offsets between these Values will be retained even after all of the Channels have been maximised\minimised.

Switches
Each Special Channel has two Switches.
User
Activates all Locked Channel User Switches.
Fetch
Recalls the last Held positions of all Locked Channels.

MODE

Animate
Fader Animation displays all MIDI Value changes. Faders can still be used to transmit Data as before, but during user movement all Animation stops.

Remember: Only MIDI Data used Internally will Animate.

Solo
Mutes the Volumes of all MIDI Channels with the exception of the selected Bank. This will enable the ability to monitor the currently selected Channel only.
Setup
Activates the Joystick port Calibration Screen for use with the Hypnosis Studio external Mixer controller. Function currently not available.

OPTIONS SCREEN
Displays available Options.

Hold
Stores all current settings to disk, use with Fetch for undo.
Fetch
Reverts to previously Held settings.
Main Mixer
Activates the Main Mixer (Zone 5 Level 1 Mixer\Main Mixer).
Mixer Designer
Activates the Mixer Designer (Zone 5 Level 3 Mixer\Mixer Designer).

LOAD/SAVE
See Load/Save Desktop (no special functions).

MIXER FILES
Contain all Data and Settings from Zone 5 Levels 2 and 3.

MIXER DESIGNER

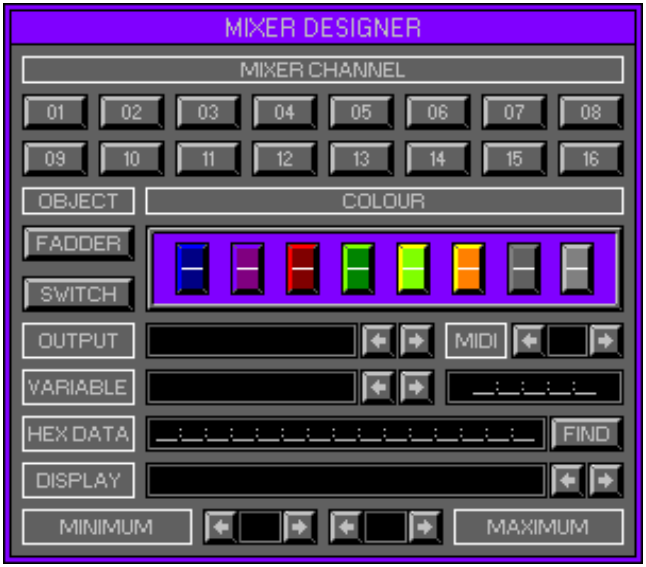
ZONE 5, LEVEL 3 (MIXER\MIXER DESIGNER)

LEVEL OVERVIEW

Here you can assign Attributes to each of the sixteen User Fader and Switches. All types of MIDI Data Can be sent including System Exclusive.

Key Features

Channel selecting, Object assigning, Colour selecting, Attribute assigning.



LOAD

Click to activate drop down list.

Load User Mixer

Activates the Load User Mixer window (see Load/Save and Mixer Files below).

SAVE

Click to activate drop down list.

Save User Mixer

Activates the Save User Mixer window (see Load/Save and Mixer Files below).

MIXER CHANNEL

Switches between the sixteen available Mixer Channels.

Buttons (1-16)

Selects the Mixer Channel for Attribute Editing.

OBJECT

Selects between the User Fader and Switch, left click to select, right to deactivate.

Switch out and not coloured
Object not Assigned.
Switch depressed and coloured
Object is active.
Switch out and coloured
Object is assigned.

Fader
Assigns a Fader to the current Mixer Channel and activates the Attribute options.
Switch
Assigns a Switch to the current Mixer Channel and activates the Attribute options.

COLOUR

Displays the eight different User Colours available for the selected Object.
Each Object has two different Types, Latching and Non Latching.
Left click to select a Colour, Type Latching (red highlight). Left/right click to scroll through available Types, (Latching/Non Latching).

Latching (red highlight)
This forces the Object to stay at its current position, after left release.
Non Latching (green highlight)
This forces the Object to return to the centre, after left release. Faders only.
Non Latching (orange highlight)
This forces the Object to return to zero, after left release. Switches pop out.
Non Latching (yellow highlight)
This forces the Object to return to maximum, after left release. Faders only.

OUTPUT

Displays the currently selected MIDI Event Type to be transmitted by the Object.
Click direction buttons to scroll through available Events,
(see MIDI Events below).

VARIABLE

Displays the exact Attribute within the MIDI Event Type to be Transmitted by the active Object, click to scroll through available Variables (see MIDI Events below).

MIDI

Displays the current MIDI Channel for the active Object, click to scroll Options.

1-16
Defines the exact MIDI Channel to transmit on.
Multi
Up to five different MIDI Channels can be used together.
Use the Multi Channel input screen to select up to Five Options,
right\left click to up/down the Options.
All
All MIDI Channels will be used.
Fix
Uses the selected MIDI Channel.

HEX DATA

Displays up to fifteen Hexadecimal dual nibble bytes that create a MIDI Event.
To change a Value use right\left clicks to scroll through the List.

Value List
Starts with No Entry, then scrolls through all of the possible Hexadecimal numbers.
After the Hexadecimal list there are four Special Options.

XX
Active Objects Value.
VR
Variable.
CS
Check Sum Value (For some Roland Devices).
F7
System exclusive End. (Must always terminate a System Exclusive Event).

DISPLAY

Displays the Hexadecimal Data in English and Decimal.
Use the Left\Right Buttons to scroll through the Text.

FIND

Auto Detects incoming MIDI Data Events, deactivate to keep. All Data received will be displayed, even the MIDI Channel. It is important to have a good knowledge of MIDI Data to make effective use of the Find function.

Remember: Send one MIDI Data Event Value only, this will stop Data Over Runs.
If a Data Over Run occurs, more Bytes than are needed will be found.
To remove a Data Over Run activate Find again, or delete the extra Bytes by replacing them, with a No Entry Value from the Value list.

MINIMUM

Displays the Minimum Value the current Object Transmits.
Use the Right\Left Buttons to increase or decrease the Value.

MAXIMUM

Displays the Maximum Value the current Object Transmits.
Use the Right\Left Buttons to increase or decrease the Value.

OPTIONS SCREEN

Displays available Options.

Hold
Stores all current settings to disk, use with Fetch for undo.
Fetch
Reverts to previously Held settings.
Main Mixer
Activates the Main Mixer (Zone 5 Level 1 Mixer\Main Mixer).
Mixer Designer
Activates the Mixer Designer (Zone 5 Level 3 Mixer\Mixer Designer).

LOAD/SAVE

See Load/Save Desktop (no special functions).

MIXER FILES

Contain all data/settings from Zone 5 Levels 2 and 3.

MIDI EVENTS

OUTPUT	**VARIABLE**
Control Change	Controllers 0 - 128.
Program Change	N/A.
After Touch	N/A.
System Exclusive	**Normal** Data Byte not converted.
System Exclusive	**14 bit Korg** Data Byte converted into 14 bit bi-polar, allowing + and - values.
System Exclusive	**Full Nibble** Data Byte converted into 2 Nibbles allowing for values of 0 -255.
System Exclusive	**Half Nibble** Data byte converted into 2 Nibbles allowing for values of 0-127.
System Exclusive	**Lex1 & Lex2** Used to control the Lexicon LXP-1.
MIDI Time Code (MTC)	N/A.
Song position	N/A.
Song Select	N/A.
Unknown	N/A.
Unknown	N/A.
Tune Request	N/A.

OUTPUT	VARIABLE
Clock	N/A
Unknown	N/A
Start	N/A
Continue	N/A
Stop	N/A
Unknown	N/A
Active Sensing	N/A
System Reset	N/A
Note Off	Note value 0 - 127
Note On	Note value 0 - 127
Poly Pressure	Note value 0 - 127

MIXER NOTES

When designing your own Mixers, a good understanding of MIDI Date Events is a necessary evil. Events like Poly Pressure have two controllable Variables, the Note value and the Pressure value. The location of the VR and XX, HEX values will determine which of the Poly Pressure components will be increased or decreased by the Fader.

SHIP NAVIGATOR

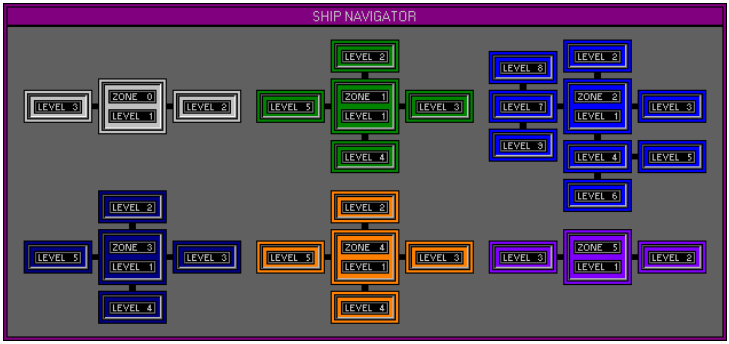
ZONE 6, LEVEL 1 (NAVIGATOR\SHIP NAVIGATOR)

LEVEL OVERVIEW

Here you can view all of the Zones and Levels within the Space Station and Teleport directly to them. Your current location is always displayed.

Key Feature

Level Names displayed when hovering, Location, Teleporting, Jump Storing



LOCATION

The current location is displayed by a red highlight.

ZONES

Desktop

Three Levels are available.

Edit Group

Five Levels are available.

Edit Bank

Nine Levels are available.

Edit Wave

Five Levels are displayed but none are available in this version.

Sequencer

Five Levels are displayed but none are available in this version.

Mixer

Three Levels are available.

LEVEL NAMES

Move the mouse over a Level and its Name will be displayed in the Status Screen.

TELEPORTING

Activate a Jump Gate by left clicking on the Level.

JUMP GATES

Up to four Jump Gates can be stored at any one time for quick Jumping.

Storing Jump Gates.
To store a Jump Gate simply use the following F keys.
F9
Stores the current location on the F5 key.
F10
Stores the current location on the F6 key.
F11
Stores the current location on the F7 key.
F12
Stores the current location on the F8 key.

Pressing F5, F6, F7 or F8 will activate the stored Jump Gate.

OPTION SCREEN

Displays available Options.

Space Station
Displays information on the Space Station (Names, Number & Protections)

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LICENCE KEY

The first time the Space Station Pro is run you will need to unlock the Licence Key, failure to do this will force the software to launch with a Demo Licence. This will not damage your install but each time you launch the Space Station the Licence Key will be activated, until all the numbers are correctly entered.

Warning

After the Licence Key has been activated it will not be possibly to move the Space Station Install to another hard disk drive. It is important that you Install to either a second hard drive not containing your operating system, incase of serious system failure or you refrain from Formatting the Install drive. In the event of system failure were a total re-installation of your operating software is necessary, instead of formatting your hard drive, use the Deltree command instead (Deltree C:). If it is not possible to Deltree your hard disk and formatting is the only way to go, as with Hardware failure then it is worth phoning to let us know in advance.

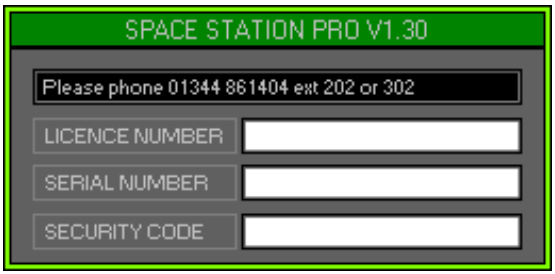
LICENCE NUMBER

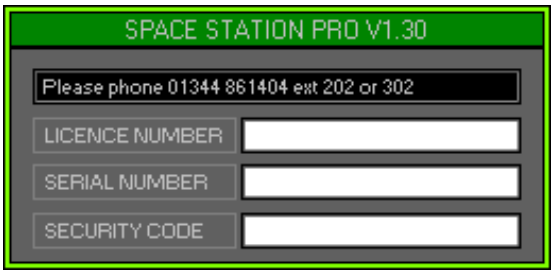
This number will be found on the inside, back of your manual folder. Type this number in with the QWERTY keyboard or use the Number Pad on screen, then hit Return to generate you Serial Number.

Remember to write both of these numbers within the boxes below.

SECURITY CODE

This Code can only be obtained by phoning one of the following numbers.
8AM - 6PM Monday To Friday
Phone 01344 861404 Ext 202 or 302.
10AM - 10PM Any Day
Phone 01344423305





TROUBLE SHOOTING

All Error's have been divided into two Failure types.

Failure (A)
Space Station Fails to launch, (see Failure (A) Error's and Fixes below).
Failure (B)
Space Station has problems whilst running,
(see Failure (B) Error's & Fixes below).

FAILURE (A)

Syntax Error (10001) : main [nosound] [win95] [wad]
Incorrectly typed command line. For the Space Station to Launch correctly the command lines must be correct. To adjust the command line on DOS machines edit the GO.BAT file within the Space directory, for Win95 edit the Short Cut, Properties, Program, Command Line.
DOS4GW.EXE
This must be typed first as DOS4GW put s the PC into Protected Mode.
Main.EXE
This must be typed second as Main launches the Sound Engine.
Nosound
This syntax command can be used to enable the Space Station to Launch on a PC without a Creative Sound Blaster 16, and disables the Sound Engine.
Win95
This syntax command must be typed third when Launching the Space Station within Windows 95. Without this command several low level elements of the software will generate General Protection Faults rendering your PC unstable.
Wad
This syntax command must be typed last, if it is to be used.
The Wad command is used to Load all of the Graphic Images into Protected Memory, generating the most stable environment the Space Station could have.

File Error (10002) Cannot Find Fonts file. Please re-install Space Station.
Fonts file missing or corrupt. File Fonts.FON can be copied to Space Station working directory, but re-installation is recommend.

Environment Error (10003) : Not enough Base memory !
less than 500kb of base memory free.
DOS
Remove non essential device drivers from Config.sys and Autoexec.bat.
WIN95
Increase base memory in short cut properties, memory.

Internal Error (10004) : Unable to allocate sample store!
unable to allocate more than 2k of sample space. Memory alloc tables corrupt. This Error message should never appear, if it does contact Hypnosis Studio.

Environment Error (10005) : No Mouse driver Loaded or locatable
Mouse driver test routine failed to find a driver or mouse. Make Shore that a DOS mouse drive is installed on your system as it is needed.

Memory Error (10006) : Unable to Allocate DMA Buffer !
Unable to allocate more than 2k of base memory. Memory alloc tables corrupt
This Error message could indicate corrupt *.DAT files. Delete all Space Station *.DAT files, located within the install directory (C:\SPACE). Launch the Space Station and re-enter install codes if necessary.

Environment Error (10007) : Can not find Sound Blaster Card
There are several different reasons for receiving this Error!
One
No Creative Sound Blaster 16 or greater Card installed. Purchase and install.
Two
Sound Blaster not found at currently set Blaster environment.
Change the Blaster environment within the Autoexec.bat file to match the location of the audio card, or REM the line (REM SET BLASTER=A220 I5 D1 H5 P330 T6), to auto detect environment on Launch.
Three
Plug and Play Sound Blaster Card IRQ is not set to 2, 5, 7 or 10.
Reconfigure Card to use IRQ 2, 5, 7 or 10.
Four
Sound Blaster Device is in use by another application.
Terminate all other applications and Launch again.

Environment Warning (10008) : No Sound Blaster environment set
Displayed only when no Blaster environment has been set, this Warning will be followed by Auto Configuration or Environment Error (10007).

FAILURE (B)
There are two different types of error when the Space Station is running, Sound or Mouse related.

NO SOUND
Part One
Is the Sound Engine running! (see Getting Started, Step Two).
Make sure that no other programs are running.
If all else fails then try removing any non standard cards.
If all of the above have been tried, and the Engine is still not running contact Hypnosis Studio and we will try to get you started.

Part Two
Is there Audio Output ! when a Wave is triggered or any of the Inputs are used (see Zone 0 Level 1 Desktop MIDI Analyser, L\R Displays).
Yes
Check the Sound Blaster Mixer Levels (see Zone 1 Level 3 Input\Output Mixer).
Check the External Amplifier, is it on?, is the Volume Level OK.
Check all connection cables, replace if necessary.
No
Is something Loaded.
Are you Playing a Key with a Wave Assigned.
Are you Playing on the right MIDI Channel.
Are MIDI Volume Levels OK (see Zone 5 Level 1 Edit Mixer\Main Mixer).
Are Wave Volumes OK (see Zone 2 Level 1 Edit Bank\Wave Assigner).
Is Pitch set excessively low (see Zone 1 Level 1 and Zone 2 Level 1).

Have you Base Lined the start of an Amplitude Envelope (see Zone 2 Level 3).
Is a slow LFO attached to Amplitude forcing the Volume low (see Z 2 Level 7).
Are the Loop Start and End Points together (see Zone 2 Level 4)
Are Waves using Loop Mode 2! Hold Keys longer.
Is the Mouse Play Volume set Low (see Zone 1 Level 5 Edit Group\Preferences).

MOUSE

No Mouse Pointer
There is no DOS Mouse Driver installed. Install a Mouse Driver.

Mouse Interferes With Audio
You are using a Bus Mouse (PS2), change it for a serial Mouse or (see Zone 1 Level 5 Edit Group\Preferences, Advanced IRQ Settings).
Your Mouse driver is not well written, install the Mouse driver on the CD (Mouse).

Mouse Clicking Has No Effect
A Function is active (see Status Screen for desired action).