

K5000S OWNER'S MANUAL



CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



WARNING

TO REDUCE THE RISK OF
FIRE OR ELECTRIC
SHOCK, DO NOT EXPOSE
THIS PRODUCT TO RAIN

AVIS : RISQUE DE CHOC ELECTRIQUE - NE PAS OUVRIR.

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.
ATTENTION: POUR EVITER LES CHOCS ELECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.

This musical instrument is designed for household use, not commercial use.

FCC Information

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a different electrical circuit from the receiver.
- Consult the dealer or an experienced radio/TV technician for help.

Canadian Radio Interference Regulations

This instrument complies with the limits for a class B digital apparatus, pursuant to the Radio Interference Regulations, C.R.C., c. 1374.

Important Safety Instructions

- * Read Instructions – This Owner's Manual contains valuable information that will help you make full use of the instrument's many capabilities. All the safety and operating instructions should be read before the product is operated.
- * Retain Instructions – The safety and operating instructions should be retained for future reference.
- * Heed Warnings – All warnings on the product and in the operating instructions should be adhered to.
- * Follow Instructions – All operating and use instructions should be followed.
- * Water and Moisture – The appliance should not be operated or stored near water or other moisture - for example, near a bath tub, wash bowl, kitchen sink, or laundry tub; in a wet basement; or near a swimming pool; and the like.
- * Power Cord Protection - Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.
- * Ventilation – The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or similar surface that may block the ventilation openings; or placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
- * Heat – The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
- * Noise – Keep the appliance away from electrical motors, neon signs, fluorescent light fixtures, and other sources of electrical noise.
- * Shocks – Protect the appliance from physical shocks and impact. Never move it while it is in operation.
- * To reduce the risk of injury, close supervision is necessary when a product is used near a children.
- * Do not touch the power plug with wet hands. There is a risk of electrical shock. Treat the power cord with care as well. Stepping on or tripping over it can break or short-circuit the wire inside.
- * Do not place this product on an unstable or slant cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. Besides, the unit may malfunction. Use only with a cart, stand or table recommended by KAWAI, or sold with the product.
- * The appliance, in combination with an amplifier and speakers or headphones, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should consult an audiologist.
- * This product may be equipped with a polarized line plug (one blade wider than the other). This is a safety feature. If you're unable to insert the plug into the outlet, contact an electrician to replace your obsolete outlet. Do not defeat the safety purpose of the plug.
- * Always turn the power off when the appliance is not in use. The power supply cord of the product should be unplugged from the outlet when left unattended or unused for long period of time. Otherwise, fire or other hazards may be caused due to lightning and power-line surges, etc.
- * Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

- * Unplug the appliance and power supply cord from the wall outlet immediately and refer servicing to qualified service personnel under the following conditions:
 - a) When the power-supply cord or plug is damaged.
 - b) If liquid has been spilled, or objects have been fallen into the product.
 - c) If the product has been exposed to rain or water.
 - d) If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by this manual as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
 - e) If the product has been dropped or damaged in any way.
 - f) When the product exhibits a distinct change in performance - this indicates a need for service.
- * Protect the product from direct sunlight, extremes in temperature (such as inside your car on a warm day) or humidity, dusty environment, or vibration (especially during transportation).
- * Always turn down the volume(s) of all instruments (such as guitar or keyboard) before connecting or disconnecting to the instrument.
- * Make sure that all POWER switches are off before changing equipment connections.
- * Check all equipment connections before applying the power.
- * Do not connect to the same circuit as a heavy load or equipment that generates line noise.
- * Unplug this product from the wall outlet before cleaning.
- * Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning. (Clean the instrument with a soft cloth, a mild detergent, and lukewarm water.) Never use harsh or abrasive cleansers or organic solvents.
- * Servicing – The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.
- * Do not disassemble or attempt to modify the appliance. Opening or removing covers may expose you to dangerous voltage.

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WELCOME TO THE K5000S

The K5000S is an Advanced Additive Synthesizer that combines realtime performance features and unique synthesis capabilities into a single unit.

ADVANCED ADDITIVE TONE GENERATOR

The K5000 series updates the famous K5 synthesizer tone generator and its unique additive harmonic synthesis approach. The Advanced Additive Tone Generator contains 32 source generators, which depending on how they are used, can yield up to 32 voice polyphony.

PCM samples can also be mixed with additive sources. As few as one or as many as six sources can be used to make a single sound. For example, a PCM wave of a piano hammer can be superimposed with the sound of the piano string created by additive harmonics.

128 BAND FORMANT FILTER

A new addition to the Advanced Additive tone generator is the 128 Band Formant Filter, which can be used as a Parametric EQ or several other configurations. The Formant Filter is completely controllable by envelopes or LFOs.

MACRO CONTROL

Unique to the K5000S model are the macro controls for major sound parameters, available on the front panel for instant access. In addition, four user controls are programmable for each patch.

PROGRAMMABLE ARPEGGIATOR

The K5000S Programmable Arpeggiator, features a wide range of control, ideal for use in Tekno and other modern musical styles.

DIGITAL EFFECTS SYSTEM

The K5000S contains an advanced digital effects processor (DSP), which allows four individual effects of chorus, delay, distortion, etc., in addition to reverb and a graphic equalizer.

When playing a single sound, individual *sources* can be routed to individual effects; when playing multiple sounds in Multi mode, individual *sounds* can be routed to individual effects.

IF YOU NEED HELP...

Please consult your local Kawai representative or contact the Kawai distributor in your country.

ABOUT THE KEYBOARD'S INTERNAL MEMORY

The contents of the keyboard's internal memory (such as tone data) and system data may be lost if you turn off the power while writing, saving or loading data.

Do not turn off the power while writing, saving or loading data.

If you have lost your system data, use the following procedure to reload the system data from the included SYSTEM DISK.

1. Insert the SYSTEM DISK into the disk drive.
2. Press the F2 button beside the LCD.
3. Turn the power on while holding down the F2 button. The installation will begin.
4. It will take about 8 minutes for the installation. You are now ready to use the K5000S.

NOTE:

* If you install this SYSTEM disk, the entire memory will be reset to factory preset setting and your own personalized data you created will be lost. You may not be able to back up the internal memory. So, we recommend that you save your important data on a floppy disk.

* It is not possible to copy this SYSTEM DISK. Retain the SYSTEM DISK with proper care.

* The contents of the keyboard's internal memory may be lost if you turn off the power while installing system data.

Do not turn off the power while installing system data.

If you lost system data, take the following procedure using the included SYSTEM DISK and load system data.

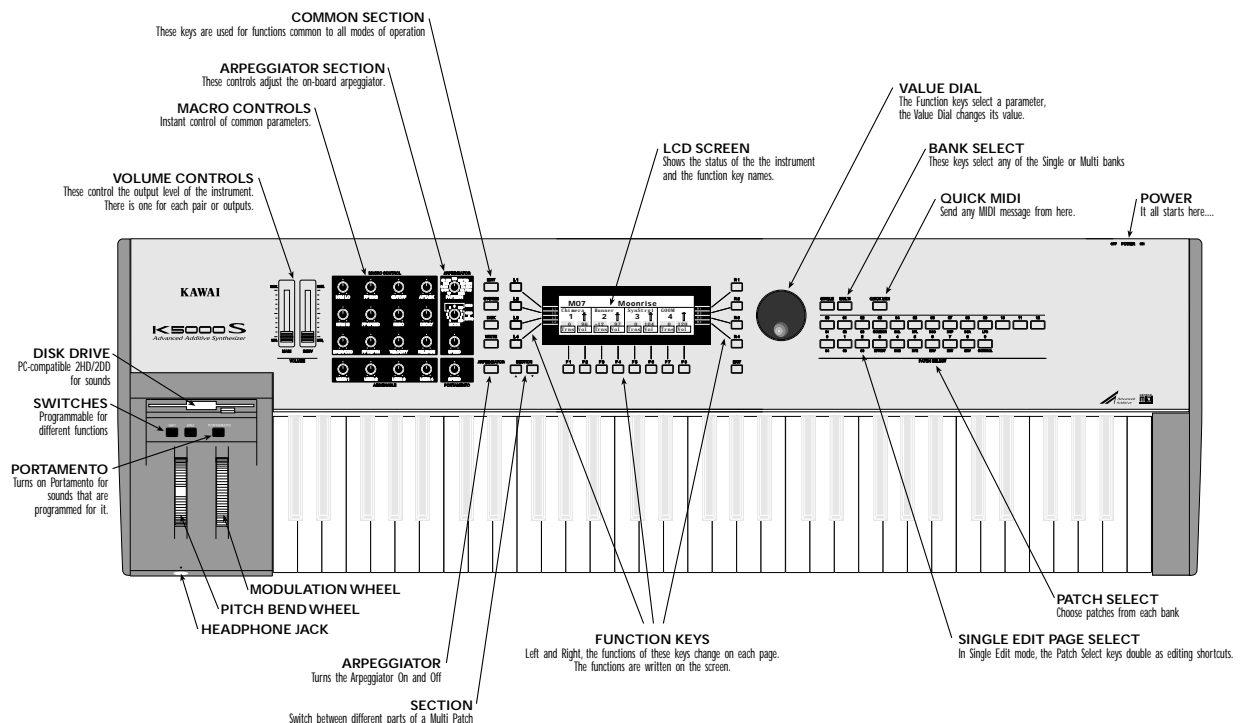
ABOUT THE MEMORY EXPANSION KIT

The K5000S MEMORY EXPANSION KIT may be available in your country. For more information, please consult your local Kawai representative or contact the Kawai distributor in your country.

K5000S FRONT PANEL

Front Panel Diagram is on an A3 Paper foldout, with the Rear Panel Drawing on the other side.

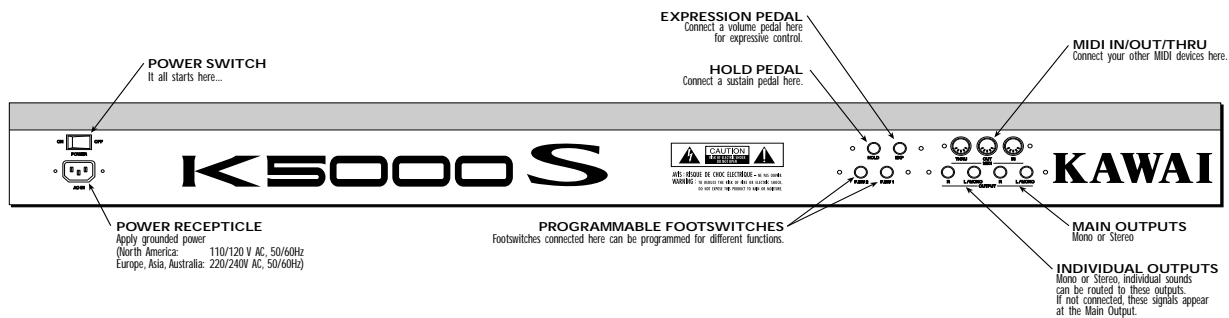
THIS PAGE IS ONLY A PLACEHOLDER



K5000S REAR PANEL

Rear Panel Diagram is on an A3 Paper foldout. It is placed here temporarily.

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GUIDED TOUR

CONNECTIONS

Naturally, the first thing you ought to do with your K5000S is plug it in!

POWER

Using the cable provided, connect the POWER jack to an AC outlet.

AUDIO

There are two pairs of audio output jacks on the back, plus the PHONES jack on the front (in front of the Pitch Bend wheel). This gives you a few choices, depending on what you're connecting to:

SOLO PLAY

Just plug your headphones into the PHONES jack on the front and go at it. There's plenty of power for phones. Use the MAIN volume slider to control the volume.

INSTRUMENT AMPLIFIER

If you are plugging into an amp, connect the MAIN L/MONO output jack on the rear panel to your amplifier. All sounds will be mixed to this single cable.

STEREO SYSTEM

To connect to a music system or amplified speakers, use the *two* MAIN outputs (L & R) to get stereo. You'll need adapters or adapting cable to convert the 1/4" Phone jacks on the K5000S to the RCA pin jacks on your stereo. Make sure to connect the K5000S to a LINE, AUX, or TAPE input on your stereo.

MIXING CONSOLE

If you've got more than two inputs available, by all means connect the two MAIN outputs *and* the two INDIVIDUAL outputs to your mixer. In this way, you can route certain sounds (piano, strings) through the reverb unit to the Main Outputs; and send others (bass drum, bass guitar) directly to the INDIVIDUAL outputs *without* reverb, or for special studio processing.

When connections are made to the INDIVIDUAL output jacks, the INDIVIDUAL volume slider on the front panel becomes active. You can adjust each pair of outputs independently.

PEDALS

HOLD

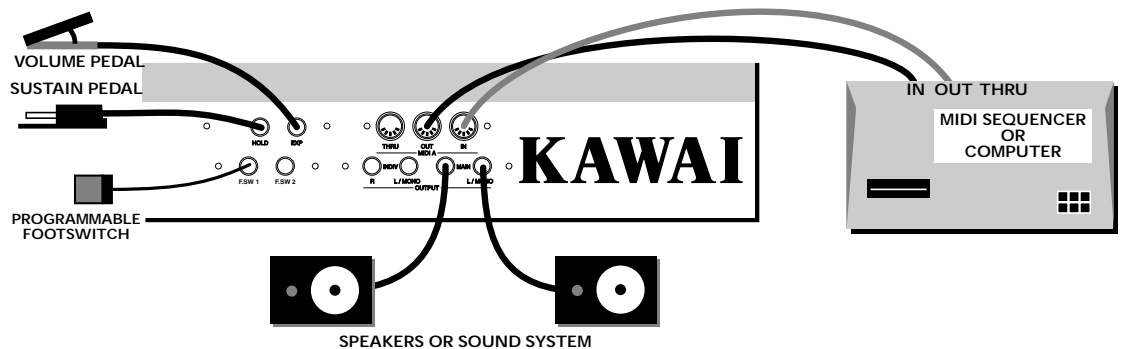
Connect a Hold pedal to the HOLD jack on the rear panel. Use a Momentary On footswitch, like the Kawai model F-1. This acts like a piano-style damper pedal, sustaining after releasing keys.

EXPRESSION

You can connect a Volume pedal (Kawai model V-20X) to the EXPRESSION jack on the rear panel.

PROGRAMMABLE FOOTSWITCHES

You can connect additional momentary footswitches, like the Kawai model F-1, to the Footswitch jacks as well. These can be programmed to do a range of things, such as change octave or turn the arpeggiator on and off.



MIDI

There is a full set of MIDI ports on the rear panel of the K5000S: IN, OUT, and THRU jacks. You don't need to connect *any* of them, but if you want to talk to your other MIDI gear, here's how to connect them:

EXTERNAL KEYBOARD OR DRUM CONTROLLER

If you want to play the K5000S from another keyboard, MIDI drum or Guitar controller, connect it to the MIDI IN jack.

You will need to set the K5000S's Unit Channel to match the input jack and the MIDI channel the device transmits on. Press SYSTEM, then MIDI (F5), then Unit CH (L2).

SEQUENCER OR COMPUTER

If you want to use the K5000S with a sequencer or computer, you will need two cables. Connect the MIDI OUT of the K5000S to the MIDI IN of the computer, and the MIDI OUT of the computer to the MIDI IN of the K5000S.

You will need to adjust the K5000S's Channels (in System of Multi) to match the sequencer. Depending on your configuration, you may also want to turn Local Control OFF – press SYSTEM, then MIDI (F5), then Local (L1).

ADDITIONAL SOUND MODULES

To use the K5000S to control other sound modules, connect a cable from the K5000S's MIDI OUT jack to the MIDI IN jack of the other device. If you have more than one device, you can loop from the MIDI THRU of the first device to the MIDI IN of the second.

PLAY THE DEMO

Now that everything is connected, lets see what the K5000S can do!


In the package with your K5000S is a demonstration diskette. Playing this will give a good picture of the K5000S's capabilities.

PLAYING THE DEMO

- With the Power OFF, insert the Supplement Disk into the disk drive on the left side of the instrument.
- Press and hold the F1 button, and while holding, turn on the power.
- The K5000S will startup, and a special Demo Play screen will appear.
[screen]
- Press F2 or F3 to select a song, then press F1 to Play the song.
- Press F1 again to stop.
- Press F2 or F3 to select a new song, or F4 to exit to the K5000S main screen.

PLAYING SOUNDS

Below is the K5000S Single Play screen. This screen appears after turning on the power.

A001			Runner		
USR1	Level	Pi tch	ARP 	UP/DWN2	
USR2	LF0 spd	Pi tch	SW1	OctUp	
USR3	Vi brato	Pi tch	SW2	OctDown	
USR4	Panpot	Pi tch	FSW1	Arpegi o	
			FSW2	-----	

SINGLE SOUNDS

The K5000S contains two banks of Single sounds – A & D. Press the SINGLE button to switch between the two banks. Each bank is organized into groups of 10 patches.

There are up to 128 patches available in a bank, but the patch memory can used up by fewer complex patches.


What happened to B & C? They are used on the companion unit – the K5000W.

CHOOSING A SINGLE SOUND

- If not already selected, choose the SINGLE bank, using the SINGLE button on the front panel.
- Choose a group: press one of the buttons labeled 00 – 12 on the front panel. A menu of the patches in the group appears on the screen.

Single Bank Menu	
A001 Runner	A005 Driver
A002 Gorgizmo	A006 Reznator
A003 Dist Pulse	A007 Goom
A004 Telmetal	A008 Heaven
	A009 Creaturz

- Choose a patch: press one of the buttons labeled 0 – 9 on the front panel. The single patch appears on the screen.

A001			Runner		
USR1	Level	Pi tch	ARP 	UP/DWN2	
USR2	LF0 spd	Pi tch	SW1	OctUp	
USR3	Vi brato	Pi tch	SW2	OctDown	
USR4	Panpot	Pi tch	FSW1	Arpegi o	
			FSW2	-----	

MODIFYING A SOUND

On the left side of the keyboard are 12 Macro Controls which can be used to instantly change the sound quality. In addition, there are four Assignable controls on the bottom row – User 1 through User 4. The screen explains the functions of these controls, as shown in the illustration above.

These do not change the preset values of the patch, which can only be changed by *editing* the patch – described starting on page !!!.

MULTI SOUNDS

Multi Patches are *combinations* of up to four Single patches. They can be arranged in layers, key splits, velocity splits, channel splits, or any combination.

CHOOSING A MULTI

There are 64 Multi patches, M01 – M64.

- Choose the Multi bank: press the MULTI button on the front panel.
- Choose a group: press one of the buttons labeled 00 – 06 on the front panel. A menu of the patches in the group appears on the screen.

Multi Bank Menu			
M10	Komradds	M15	E. Normus
M11	Addalogg	M16	Raunch
M12	Addalogg2	M17	TakeOver
M13	CashFlow	M18	Frostbyt
M14	WINBRASS	M19	Wilder

- Choose a patch: press one of the buttons labeled 0 – 9 on the front panel. An individual Multi patch appears on the screen.

M07 Moonrise							
Chimera		Runner		SynStrg1		G00M	
1	1ch	2	1ch	3	1ch	4	1ch
0	96	+12	97	0	104	0	120
Trns	Vol	Trns	Vol	Trns	Vol	Trns	Vol

MODIFYING A MULTI

On the screen there are Transpose and Volume sliders for each Section, as shown in the illustration above. Push the button underneath the desired slider, then change the value with the VALUE dial. The slider image will also move according to your adjustment.

These do not change the preset values of the patch, which can only be changed by *editing* the Multi patch – described starting on page !!!.

PROGRAMMABLE ARPEGGIATOR

The Programmable Arpeggiator offers a wide range of options to mix preset control with live performance. The following explanation only hints at what is possible...

- Press SYSTEM, then F2 (Arp) to reach the Arpeggiator Common Page.

- Set the controls as shown in the screen –

Note (L1) = 48

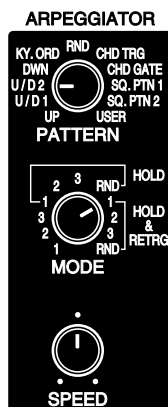
RangeLo (R1) = C -2

Range Hi (R2) = C 3

Arpeggiator		Common Parameter	
> Note (UP- RND)	48	RangeLO	C -2
> Gate	50%	RangeHI	C 3
> Level	100%	Play Mode	Altnate
<div> <div>ON</div> <div>INT</div> </div> <div> <div>Velo</div> <div>Clk</div> </div>		<div>Edit</div>	

- Select Single Patch A006 (Reznator).

A006		Reznator	
USR1	HramOdd	-----	ARP UP/DWN2
USR2	HramEvn	-----	SW1 HarmMax
USR3	Tremolo	-----	SW2 OctUp
USR4	Panpot	-----	FSW1 Arpeggio
			FSW2 HE#1



- Set the Arpeggiator Controls (left of the screen, next to the Macro Controls) as follows:

Pattern = U/D 2

Mode = Hold and Retrig 1

Speed = around 12 o'clock (straight up)

- Turn on the arpeggiator by pressing the ARPEGGIATOR button – it will light up red.

ARPEGGIATOR




- In the lower half of the keyboard, play a four note chord. The notes will arpeggiate. You can release the keys and the notes will still play.
- You can play a melody on top of this arpeggio with the right hand.

SINGLE SECTION

SINGLE PLAY

Pressing the SINGLE key on the right side of the keyboard brings up the Single Play window.

A001			Runner		ARP 	UP/DWN2
USR1	Level	Pi tch			SW1	OctUp
USR2	LF0 spd	Pi tch			SW2	OctDown
USR3	Vi brato	Pi tch			FSW1	Arpegi o
USR4	Panpot	Pi tch			FSW2	-----

The name of the patch is displayed, as well as the four user parameters and arpeggiator settings.

CHANGING SINGLE PATCHES

Single patches are arranged in 2 banks, A & D. To change banks, press SINGLE again. Each bank is arranged in groups of 10 patches. To select a different patch, use the Patch Select keys 0 through 9 on the right side of the panel. To change groups, use the Patch Select keys 00 through 12. A menu screen appears as shown below.

Single Bank Menu	
A001 Runner	A005 Driver
A002 Gorgizmo	A006 Reznator
A003 Dist Pulse	A007 Goom
A004 Tel metal	A008 Heaven
	A009 Creaturz

This screen lists the patches in the group. To select one press the 0-9 key corresponding to the last digit of the patch number. A different patch will play, with the display as shown at the top of this section.

NOTE:

In the Single Bank, there is not a fixed number of patches. Instead there is a fixed *amount of memory* for the patches. If your patches are simple, more of them can be stored. As a result, all patch locations may not be available.

MODIFYING PATCHES

In Single Play mode, the Macro Controls on the left of the instrument are available for instant edit. These controls are described below. They add and subtract from the original values contained in the patch, and affect all sources.

There are also four user controls which can be programmed as part of each patch. The programmed function is displayed on the main screen (USR1 – USR4).

A001			Runner		
USR1	Level	Pi tch	ARP	UP/DWN	2
USR2	LFO spd	Pi tch	SW1	OctUp	
USR3	Vi brato	Pi tch	SW2	OctDown	
USR4	Panpot	Pi tch	FSW1	Arpeggio	
			FSW2	-----	

HRM LO

This control adjusts the level of the lower harmonics. This does not adjust the *low notes*, rather it adjusts the *low end* of any note.

HRM HI

This control adjusts the level of the upper harmonics. This does not adjust the *high notes*, rather it adjusts the *high end* of any note.

EVEN/ODD

This control adjusts the balance of even versus odd harmonics. A positive value boosts the even harmonics and cuts the odd ones, a negative value cuts the even harmonics and boosts the odd ones.

FF BIAS

This control adjusts the Formant Filter Bias, or center frequency.

FF SPEED

This control adjusts the speed of the LFO or Envelope controlling the Formant Filter.

FF DEPTH

Adjusts the Formant Filter LFO or Envelope Depth.

CUTOFF

This adjusts the filter cutoff frequency. Turn this up to make the sound brighter.

RESONANCE

This adjusts the filter resonance.

VELOCITY

Scales the velocity plus or minus. Use this control to adjust the way the patch responds to the dynamics of your playing.

ATTACK

This adjusts the envelope attack time for the DCA and DCF. Turn it down (minus value) to make the attack *sharper*, turn it up to make the attack *smoother*.

DECAY

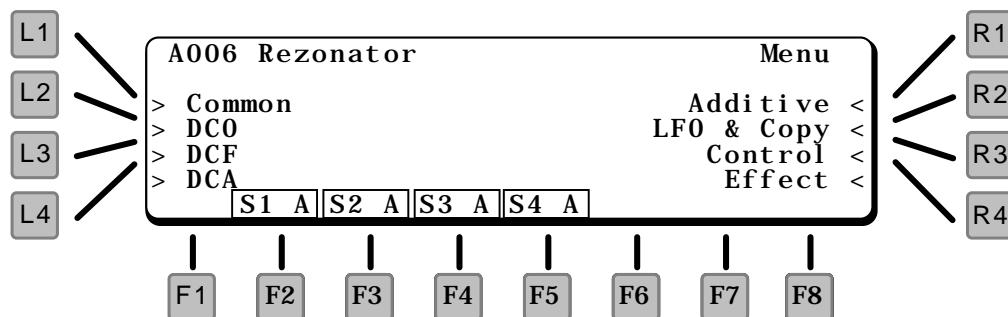
This adjusts the initial decay for both the DCA and DCF envelopes. Turn it down (minus value) to make the decay *sharper*, turn it up to make the decay *smoother*.

RELEASE

This adjusts the release or final decay time for both the DCF and DCA envelopes. Turn it up to make the sound fade out longer *after* releasing the keyboard.

SINGLE EDIT

Pressing EDIT brings up the Edit Menu. All editing pages can be accessed from this page, with the knobs on the left, or by using the Patch Select buttons to the right of the screen – see the legends *underneath* the buttons.



L1 COMMON
Jumps to the Common section, see page 30.

L2 DCO
Jumps to the DCO section, see page 31.

L3 DCF
Jumps to the DCF section, see page 33.

L4 DCA
Jumps to the DCA section, see page 36.

R1 ADDITIVE
Jumps to the ADD section, see page 38.

R2 LFO & COPY
Jumps to the LFO section, see page 52.

R3 CONTROL
Jumps to the Control section, see page 54.

R4 EFFECT
Jumps to the Effect section, see page 79.

NOTE:

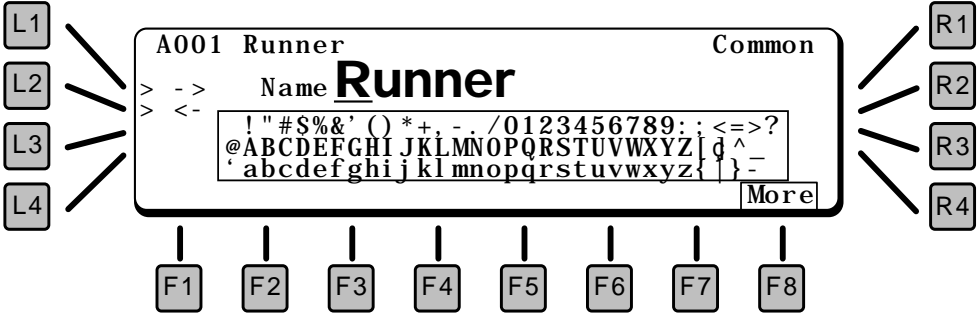
Throughout the various pages of Single Edit mode, the F2 through F7 keys can be used to turn individual sound sources on or off.

EXITING EDIT MODE

Press EXIT to return to Play Mode. Depending on which page is displayed, you may need to press EXIT more than once. If you have made any changes to the patch, an alert message appears, asking if you want to "Save". Press WRITE to save, or F8 (Quit) to exit without saving. To continue editing, press EDIT.

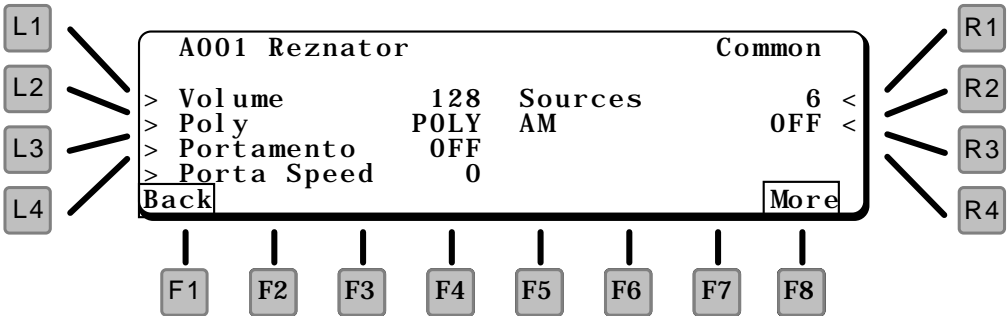
COMMON

The Common section contains several pages of basic parameters such as the patch name, below.



L1 and L2 move through the name forward and back, respectively. Use the Value dial to select a letter.

F8 MORE
Advances to the next page of Common parameters, below.



L1 VOLUME
Sets the master volume for the program.

L2 POLY
Sets the polyphonic mode for the patch.

POLY Standard polyphonic mode

SOLO1 Monophonic mode. Each key played re-triggers the envelopes.

SOLO2 Monophonic mode. Sustained keys played *do not* retrigger the envelopes.

L3 PORTAMENTO
This turns on Portamento for the patch. When ON, the sound will slide to each new pitch.

L4 PORTAMENTO SPEED
Sets the speed of the glide. The Portamento changes pitch at a constant rate – a larger interval takes longer than a shorter one.

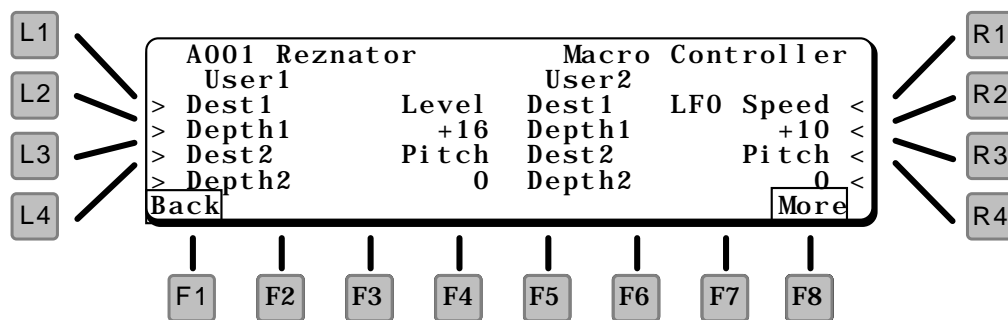
R1 SOURCES
Sets the number of sources for the patch. Patches can have up to six sources. Remember that the more sources used in a patch, the fewer notes that can be played.

- R2 AM**
Selects sources for Amplitude Modulation. One source can be set to modulate an adjacent source, i.e., 1>2.
- F1 BACK**
Goes back to the previous Common page, above.
- F8 MORE**
Goes to the Macro and Switch Controller pages, below.

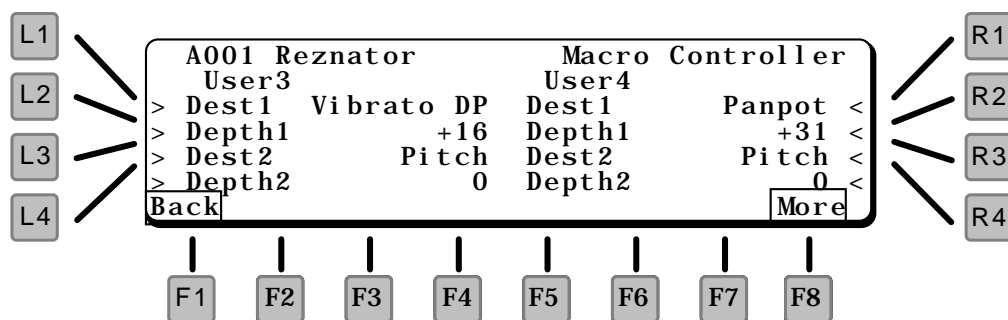
MACRO CONTROLLER

The next two pages control the functions of the four assignable user controls. Each control can manipulate two parameters.

Control Destinations are the same as those for the other controllers. See page !!! for a listing.



- L1 DEST1**
Selects one (of two) destinations for User Control 1.
- L2 DEPTH1**
Sets the amount of control for Destination 1.
- L3 DEST2**
Selects the other destination for User Control 1.
- L4 DEPTH2**
Sets the amount of control for Destination 2.
- R1 DEST1**
Selects one (of two) destinations for User Control 2.
- R2 DEPTH1**
Sets the amount of control for Destination 1.
- R3 DEST2**
Selects the other destination for User Control 2.
- R4 DEPTH2**
Sets the amount of control for Destination 2.
- F8 MORE**
Goes to User Controls 3 & 4.



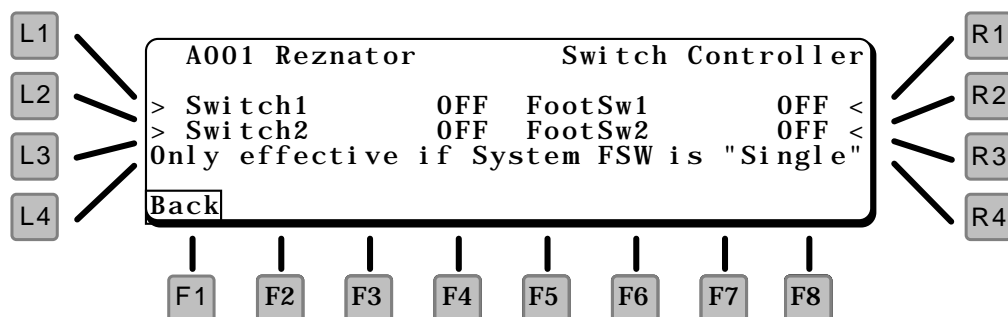
- L1 DEST1**
Selects one (of two) destinations for User Control 3.
- L2 DEPTH1**
Sets the amount of control for Destination 1.
- L3 DEST2**
Selects the other destination for User Control 3.
- L4 DEPTH2**
Sets the amount of control for Destination 2.
- R1 DEST1**
Selects one (of two) destinations for User Control 4.
- R2 DEPTH1**
Sets the amount of control for Destination 1.
- R3 DEST2**
Selects the other destination for User Control 4.
- R4 DEPTH2**
Sets the amount of control for Destination 2.
- F8 MORE**
Goes to the Switch Controller page, below.

SWITCH CONTROLLER

This page contains settings for the programmable buttons below the disk drive, and the programmable footswitch jacks on the rear panel.

NOTE:

The settings on this page take effect only if the Switches in the System page are set to Single – see page !!!



The switches can be set to any of the following functions:

OFF

Switch will have no effect.

HARMMAX

Sets all harmonics to maximum level.

HARMBRIT

Sets all harmonics into a bright configuration (higher harmonics louder than lower harmonics).

HARMDARK

Sets harmonics into a dark configuration (first harmonic is set to maximum, other harmonics set to successively lower levels – sharp dropoff rate).

HARMSAW

Sets harmonics into a configuration that generates a Sawtooth wave (first harmonic is set to maximum, other harmonics set to successively lower levels – smooth dropoff rate).

SELECTLOUD

Switches the harmonics selection to Loud, regardless of the current setting.

DHL LOUD

In the DHL page, switches the harmonics selection to Loud.

DHL 5TH

Adds the “fifth” harmonics – those tuned to a fifth above the fundamental pitch: 3, 6, 12, 24, 48 – to the current harmonic series.

DHL ODD

Adds the odd numbered harmonics – 3, 5, 7, etc. – to the current harmonic series.

DHL EVEN

Adds the even numbered harmonics – 2, 4, 6, etc. – to the current harmonic series.

DHE#1

Switches the harmonic envelope rapidly between odd and even harmonics – however the first three harmonics stay on constantly.

DHE#2

Sets the harmonic envelope to emphasize attack, and turns on feedback.

DHE LOOPON

Turns on harmonic envelope looping. See page !!!

DHF MAX

Sets the filter frequency to maximum.

DHF COMB

Turns on the formant filter LFO.

DHF HICUT

Sets the filter frequency low to cut out all the high frequencies.

DHF COMB2

!!!

L1 SWITCH1

Selects the function for switch 1.

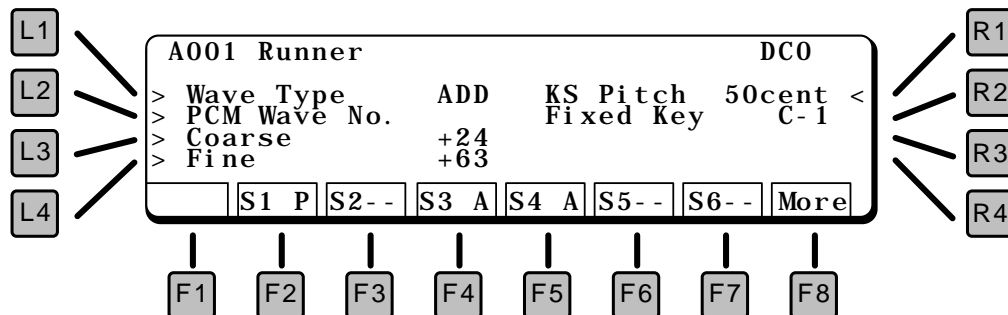
L2 SWITCH2

Selects the function for switch 2.

- R1 FOOTSW1**
Selects the function for footswitch 1.
- R2 FOOTSW2**
Selects the function for footswitch 2.

DCO

Pressing DCO in the Single Edit menu brings up the following screen which contains the DCO parameters.



L1 WAVE TYPE

Selects the wave type for the source: ADD for the additive synthesizer, PCM for sample waves.

L2 PCM WAVE NUMBER

Selects the PCM wave to be used. See page !!! for a list of waves.

NOTE:

This has no effect if ADD is the selected wave type.

L3 COARSE

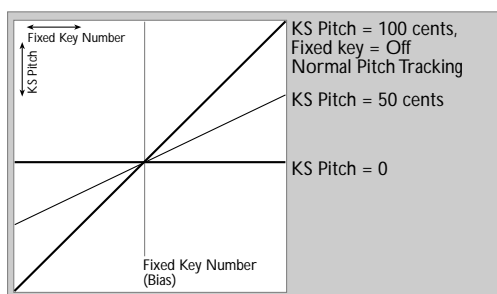
The coarse frequency in semitones. The range is two octaves above or below.

L4 FINE

The fine frequency setting. Use this for detuning the wave to create beating or fullness.

R1 KS PITCH

When the Fixed Key is being used (not Off, below) this parameter adds the key value to control the pitch. This can be used to play in quarter-tones, or to add “stretch” to the tuning. The reference point is the Fixed Key value.



R2 FIXED KEY

Sets the fixed pitch for the source. The range is A-1 to C7. If Off, then normal key tracking applies.

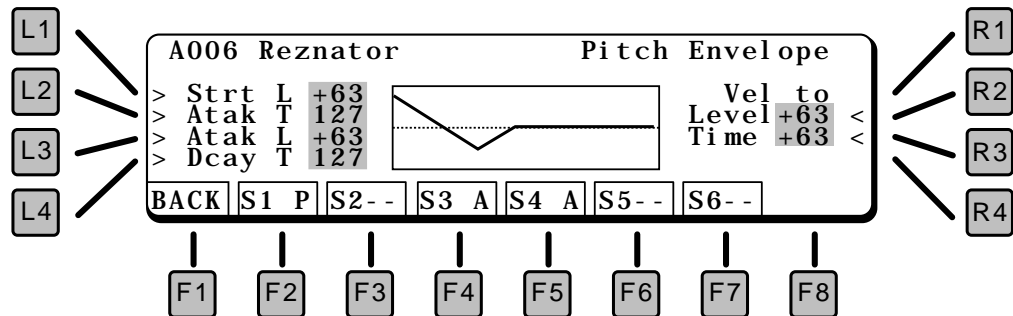
F8 MORE

Goes to the DCO Pitch Envelope page, below.

DCO PITCH ENVELOPE

The DCO Pitch envelope changes the pitch of the sound over time. Many acoustic instruments have small pitch changes during their initial attack – pulling guitar strings and embouchure in wind instruments – which can be simulated using the DCO Pitch Envelope.

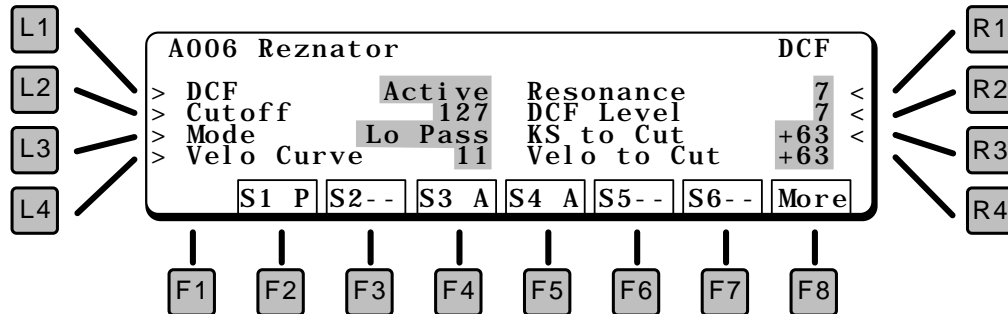
Because of its function during the attack phase of the sound, the DCO Pitch Envelope has only attack and decay functions – it does not sustain.



- L1 STRT L (STARTING LEVEL)**
Sets the starting level for the envelope.
- L2 ATAK T (ATTACK TIME)**
When a note is played (note on), the envelope will go from the starting level to the Attack Level in this amount of time.
- L3 ATAK L (ATTACK LEVEL)**
Sets the level after the initial attack.
- L4 DECY T (DECAY TIME)**
After reaching the attack level, the envelope will then go to zero in this amount of time.
- R1 LEVEL (VELOCITY TO LEVEL)**
This controls how much the key velocity affects the *amount* of pitch envelope.
- R2 TIME (VELOCITY TO TIME)**
This controls how much the key velocity affects the *overall time* of pitch envelope.

DCF

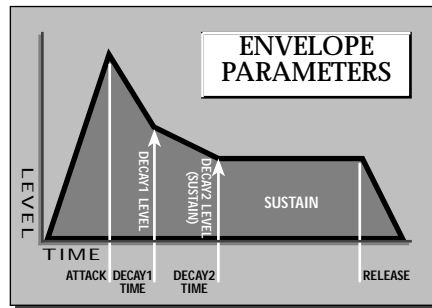
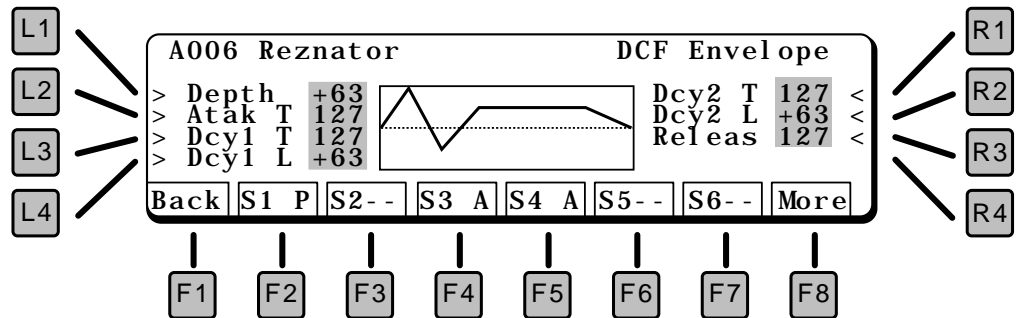
Pressing DCF in the Single Edit menu brings up the following screen which contains the DCF parameters.



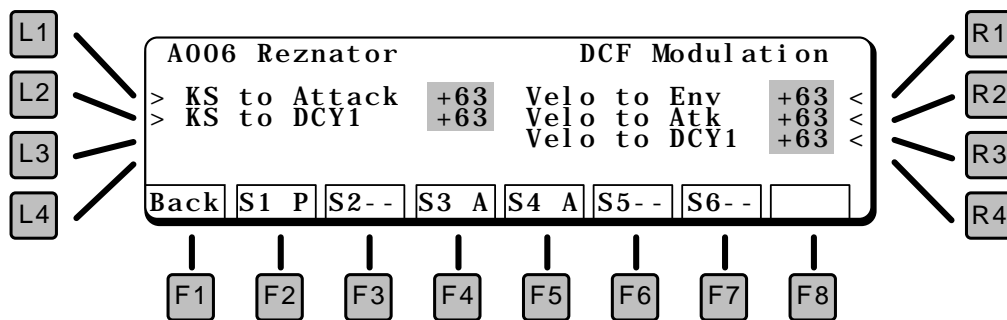
- L1 DCF**
This turns on the DCF. If Active, the signal is routed through the DCF. If set to Bypass, the sound does not pass through the DCF.
- L2 CUTOFF**
Sets the basic filter cutoff frequency.
- L3 MODE**
Sets the *type* of filter. The choices are:
 - Lo Pass Low Pass Filter – Cuts off the high frequencies (lets the low frequencies pass thru)
 - Hi Pass High Pass Filter – Cuts off the low frequencies (lets the high frequencies pass thru)
- L4 VELO CURVE**
Selects a velocity response curve. Works with Velo to Cut to tailor how the filter cutoff is affected by the key velocity.
- R1 RESONANCE**
Sets the amount of filter resonance. The higher the setting, the more *nasal* the sound.
- R2 DCF LEVEL**
Adjusts the input level to the filter.
- R3 KSTO CUT**
Controls how much the Key Scale affects the filter cutoff frequency.
- R4 VELOCITY TO CUT**
Controls how much the Velocity affects the filter cutoff frequency.
- F8 MORE**
Goes to the DCF Envelope page, below.

DCF (FILTER) ENVELOPE

This screen controls the envelope generator for the filter.



- L1 DEPTH**
Scales the strength of the entire envelope.
- L2 ATAK T (ATTACK TIME)**
When a note is played (note on), the envelope will go from zero to maximum in this amount of time. A short attack time gives a sharp edge to the start of the sound like a piano. A long attack gives a more legato effect.
- L3 DCY1 T (DECAY1 TIME)**
After reaching the maximum, the envelope will go to the decay1 level in this amount of time.
- L4 DCY1 L (DECAY1 LEVEL)**
After reaching the maximum, the envelope will go to this level.
- R1 DCY2 T (DECAY2 TIME)**
After reaching the decay1 level, the envelope will go to the decay2 level in this amount of time.
- R2 DCY2 L (DECAY2 LEVEL)**
The sustain level. After Attack, Decay1, and Decay2, if a note is still held on it will sustain at this level.
- R3 RELST (RELEASE TIME)**
When a note is released (goes off) the envelope will return to zero in this amount of time.
- F8 MORE**
Goes to the next page of parameters, which modulate the envelope.



L1 KSTO ATTACK

Adds Key Scale to control the Attack time.

L2 KSTO DCY1

Adds Key Scale to control the Decay 1 time.

R1 VELO TO ENV

Adds Velocity to control the overall envelope level. The more velocity, the more the filter will open.

R2 VELO TO ATK

Adds Velocity to control the Attack time.

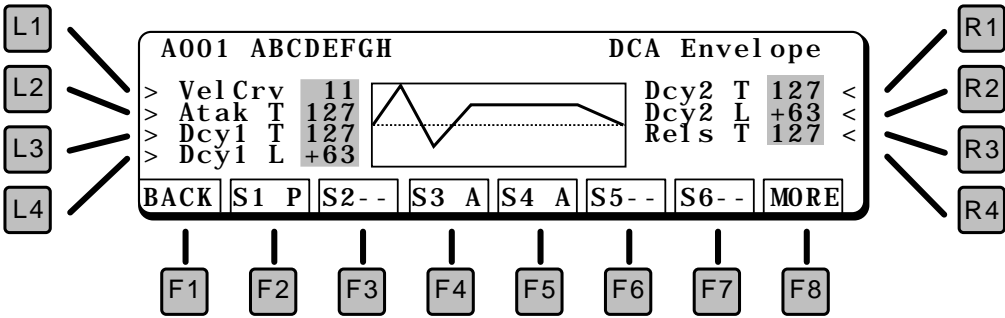
R3 VELO TO DCY1

Adds Velocity to control the Decay 1 time.

DCA

The Digitally Controlled Amplifier (DCA) sets the volume of the sound. It is controlled by an envelope to shape a sound's overall transient characteristics.

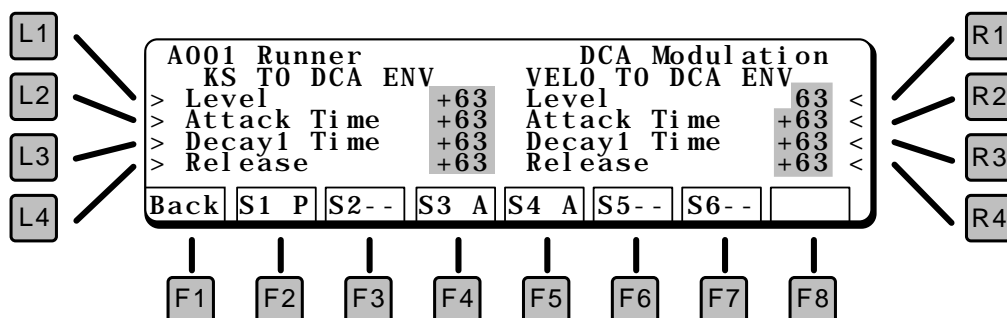
The DCA envelope screen shows a visual representation of the envelope.



- L1 VELOCITY CURVE**
Selects a velocity response curve to tailor the response of the DCA to key velocity.
- L2 ATTACK TIME**
When a note is played (note on), the envelope will go from zero to maximum in this amount of time. A short attack time gives a sharp edge to the start of the sound like a piano. A long attack gives a more legato effect.
- L3 DECAY1 TIME**
After reaching the maximum, the envelope will go to the decay1 level in this amount of time.
- L4 DECAY1 LEVEL**
After reaching the maximum, the envelope will go to this level.
- R1 DECAY2 TIME**
After reaching the decay1 level, the envelope will go to the decay2 level in this amount of time.
- R2 DECAY2 LEVEL**
The sustain level. After Attack, Decay1, and Decay2, if a note is still held on it will sustain at this level.
- R3 RELEASE TIME**
When a note is released (goes off) the envelope will return to zero in this amount of time.
- F8 MORE**
Goes to the DCA Modulation page, below.

DCA MODULATION

This page offers parameters to modify the DCA envelope by key scale (which note is played) or velocity (how hard a key is played). Careful use of these parameters can add life and expression to any sound.



MODULATION BY KEY SCALE:

L1 ENVELOPE LEVEL

Uses key scale to control the maximum amount of the envelope. With a positive value, a higher key will have more envelope dynamics and a lower key will have less dynamics.

L2 ATTACK TIME

Uses key scale to control the attack time. With a positive value, a higher key will have a longer attack time and a lower key will have a shorter attack time.

In nature, lower instruments (baritone sax, for example) have a *longer* attack time than higher instruments (alto sax). Using *negative* amounts of this parameter will simulate this.

L3 DECAY1 TIME

Uses key scale to control the decay1 time. With a positive value, a higher key will have a longer decay time and a lower key will have a shorter time.

L4 RELEASE TIME

Uses key scale to control the decay1 time. With a positive value, a higher key will have a longer release time and a lower key will have a shorter time.

MODULATION BY VELOCITY:

R1 ENVELOPE LEVEL

Uses velocity to control the maximum amount of the envelope. With a positive value, a harder (louder) key will have more envelope dynamics and a softer key will have less dynamics.

R2 ATTACK TIME

Uses velocity to control the attack time. With a positive value, a harder (louder) key will have a longer attack time and a softer key will have a shorter attack time.

In nature, softer notes generally have a *longer* attack time than louder notes. Using *negative* amounts of this parameter will simulate this.

R3 DECAY1 TIME

Uses velocity to control the decay1 time. With a positive value, a harder (louder) key will have a longer decay time and a softer key will have a shorter time.

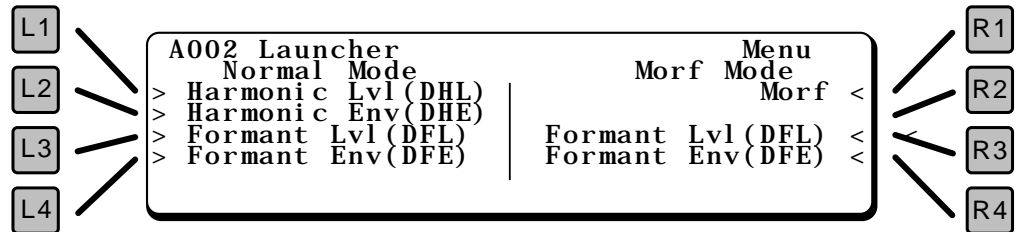
R4 RELEASE TIME

Uses attack velocity to control the release time. With a positive value, a faster key release will have a longer release time and a slower release will have a shorter time. Again, negative values of this parameter are more *natural*.

ADDITIVE

This section presents the editing parameters for Kawai's ADD harmonic synthesizer.

The first ADD screen presents seven submenus for navigation.



L1 HARMONIC LEVEL

Goes to DHL page, where the level of individual harmonics can be adjusted.

L2 HARMONIC ENVELOPE

Goes to DHE page, where the harmonics can be enveloped.

L3 FORMANT LEVEL

Goes to the DFL page, where the formant filter can be adjusted.

L4 FORMANT ENVELOPE

Goes to the DFE page, where the formant filter can be enveloped.

R1 MORF

Goes to the Morfing page, which is a harmonics programming assistant.

NORMAL VS MORF

There are two programming modes, Normal and Morf. Any additive source uses one or the other. The main difference is in how the Harmonic Envelopes are utilized. For this reason, if you change to Morf mode (by executing a morf), the DHE parameters are replaced by new Morf settings. Other sections are not affected.

R3 FORMANT LEVEL

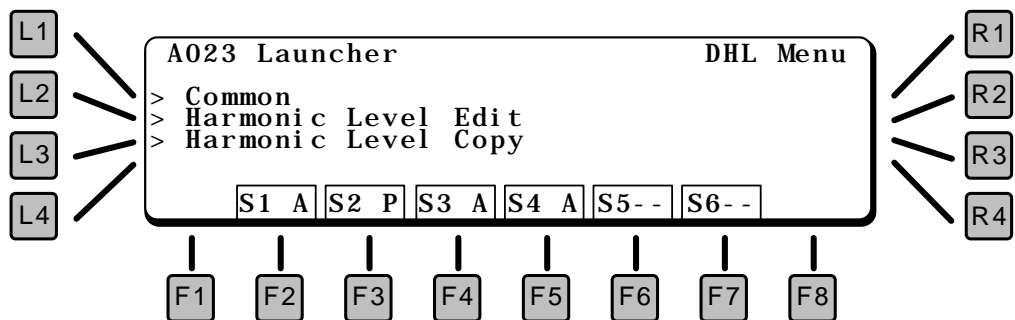
Goes to the DFL page, where the formant filter can be adjusted.

R4 FORMANT ENVELOPE

Goes to the DFE page, where the formant filter can be enveloped.

HARMONIC LEVEL (DHL)

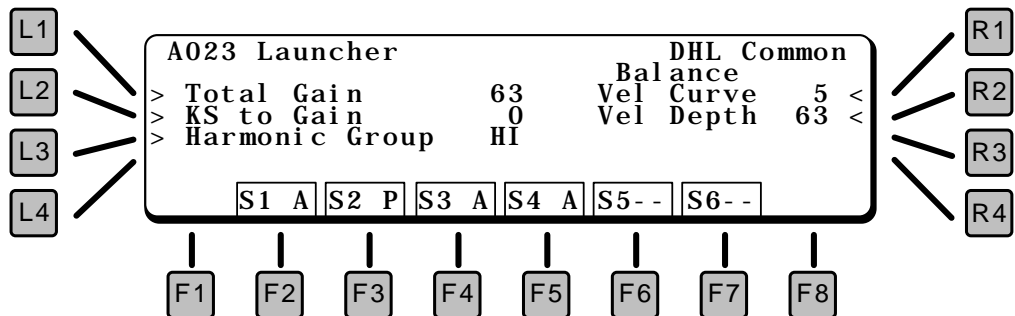
Selecting Harmonic Level from the previous page brings you to the DHL Menu page, where you can select pages for direct manipulation of the harmonic levels.



- L1 COMMON**
Edits parameters common to all harmonics.
- L2 HARMONIC LEVEL EDIT**
Goes to a visual display of harmonics, where individual harmonics can be adjusted.
- L3 HARMONIC LEVEL COPY**
Copies sets of harmonics from one patch to another.

COMMON

Edits parameters common to all harmonics.

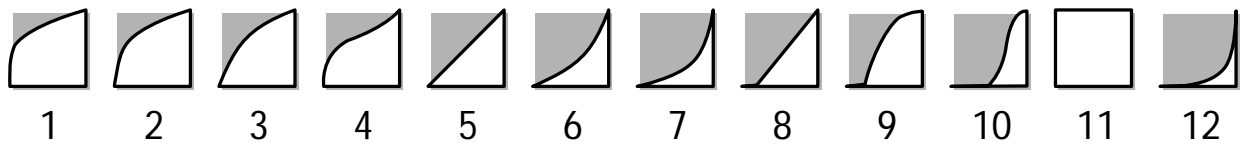


- L1 TOTAL GAIN**
This is the master level for this harmonic group.
- L2 KSTO GAIN**
This adjusts how much the Key Scale controls the gain of the harmonic group. With a positive value, high notes will have a higher gain than low notes.
- L3 HARMONIC GROUP**
In the K5000S, each source can use a harmonic bank of 64 harmonics. This parameter selects whether the first 64 harmonics (1 – 64, starting at the fundamental) or harmonics 65 – 128 are used.

By itself, the Hi harmonics group has a tonality similar to metallic percussion instruments.

R1 VELOCITY CURVE

12 velocity curves are available to adjust the response of the harmonic envelope to the touch of your playing. This curve is used for all sections of the patch. Curve #5 (below) equals an exact 1:1 correlation, the other curves weight the response in different directions.

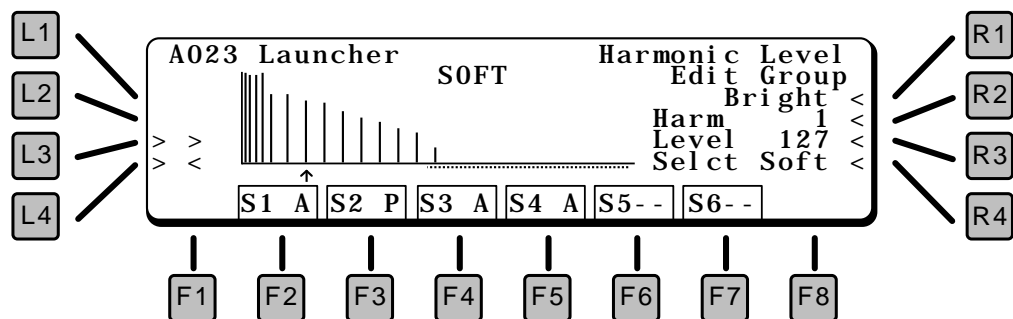


R2 VELOCITY DEPTH

This sets the velocity crossfade between the soft and loud harmonic groups.

HARMONIC LEVEL EDIT

Goes to a visual display of harmonics, where individual harmonics can be adjusted.



L3 NEXT HARMONIC

L4 PREVIOUS HARMONIC

These buttons select an individual harmonic. The small arrow under the harmonics displays which harmonic is selected, and its number and value can be seen on the right side of the screen (R2 and R3).

R1 EDIT GROUP

Since editing harmonics one at a time can become quite cumbersome, the Edit Group function allows you to select harmonics to modify *as a group*.

HARMONIC GROUPS

Harmonics can be grouped in the following categories. The dots underneath the harmonic bars show which harmonics are selected.

BRIGHT

The upper 32 harmonics.

DARK

The lower 32 harmonics.

ODD

The odd numbered harmonics.

EVEN

The even numbered harmonics.

OCT

Each harmonic tuned to an octave of the fundamental pitch: 1, 2, 4, 8, 16, 32, 64 (when lo is selected) / 128 (when hi is selected).

5TH

Each harmonic tuned to a fifth above of the fundamental pitch: 3, 6, 12, 24, 48 (when lo is selected) / 96 (when hi is selected).

ALL

All 64 harmonics.

EACH

Only the selected harmonic, the pointed to by the arrow under the harmonic display.

R2 HARMONIC NUMBER

Uses the Value dial to select a harmonic for display. The small arrow under the harmonics displays which harmonic is selected.

R3 LEVEL

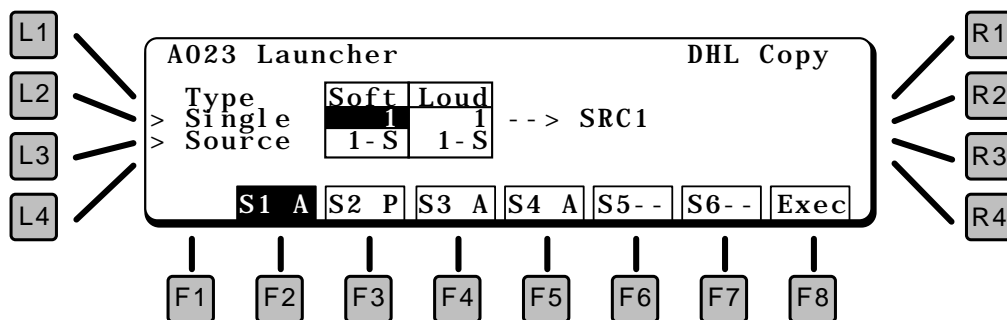
Adjusts the level of the selected harmonic(s).

R4 SELECT

Selects a harmonic group to edit (soft or loud). These two sets can be crossfaded by velocity.

HARMONIC LEVEL COPY

From this screen, you can copy sets of harmonics from one patch to another. Since there are so many parameters in a harmonic series, this makes creating and modifying patches less time consuming.



L2 SINGLE

Select the Patch to copy from. Pressing L2 switches between Soft and Loud.

L3 SOURCE

Select the Source from within the selected patch to copy from, 1 – 6. Pressing L3 switches between Soft and Loud variations.

*** = no copy. This means that this side (soft or loud) will not be copied.

F2~F7 DESTINATION

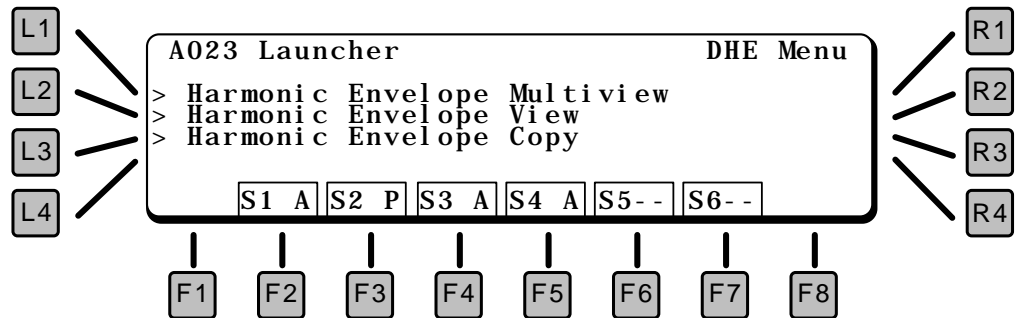
Press the F2~F7 buttons to select which source (of the current patch) that the copy will be made **to**.

F8 EXECUTE

Press this to make the copy.

HARMONIC ENVELOPE (DHE)

This screen is the menu for Harmonic Envelope functions.

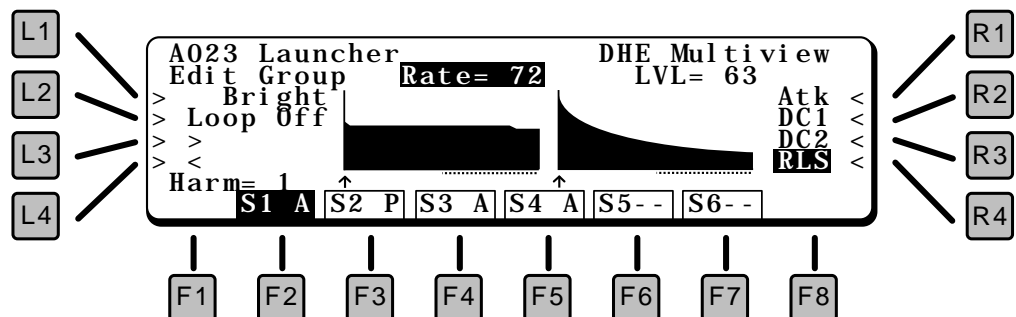


- L1 HARMONICS ENVELOPE MULTIVIEW**
Displays individual parameters for *all* 64 harmonic envelopes simultaneously.
- L2 HARMONICS ENVELOPE VIEW**
Displays all parameters of a *single* harmonic envelope.
- L3 HARMONICS ENVELOPE COPY**
Copies harmonic envelopes from a Single patch in memory to the current patch being edited.

HARMONIC ENVELOPE MULTIVIEW

The Harmonic Envelope Multiview screen shows individual segments of the harmonic envelope for all harmonics side by side. The display shows the rate on the left and the level on the right. The harmonics selected for editing are shown by the dots and the arrow underneath the graphs. Compare this screen to the Harmonic Envelope View screen (described on page !!!), which shows all segments of a single envelope.

The harmonic envelope starts at zero. However the Attack phase can go above *or* below zero and the release does not have to end at zero, like a DCA envelope does.



- L1 EDIT GROUP**
Since editing harmonics one at a time can become quite cumbersome, the Edit Group function allows you to select harmonics to modify *as a group*.

HARMONIC GROUPS

Harmonics can be grouped in the following categories. The dots underneath the harmonic bars show which harmonics are selected.

BRIGHT

The upper 32 harmonics.

DARK

The lower 32 harmonics.

ODD

The odd numbered harmonics.

EVEN

The even numbered harmonics.

OCT

Each harmonic tuned to an octave of the fundamental pitch: 1, 2, 4, 8, 16, 32, 64 (when lo is selected) / 128 (when hi is selected).

5TH

Each harmonic tuned to a fifth above of the fundamental pitch: 3, 6, 12, 24, 48 (when lo is selected) / 96 (when hi is selected).

ALL

All 64 harmonics.

EACH

Only the selected harmonic, the pointed to by the arrow under the harmonic display.

L2 LOOP

To enhance motion in the sound, the harmonic envelopes can loop among several settings during the sound's sustain.

OFF

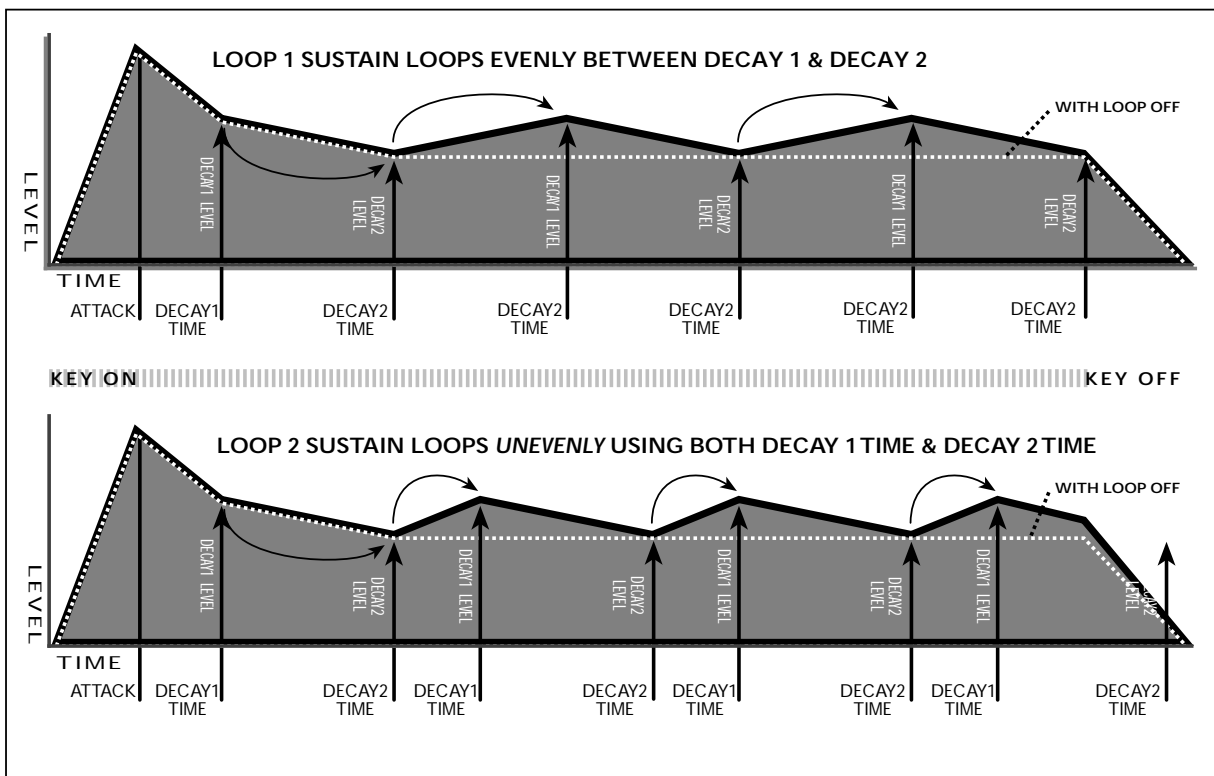
No loop. Envelope goes to the Decay 2 Level and sustains there, the same as the envelopes for the DCF and DCA.

LP1

Loops between Decay 1 Level and Decay 2 Level, at the Decay 2 Rate.

LP2

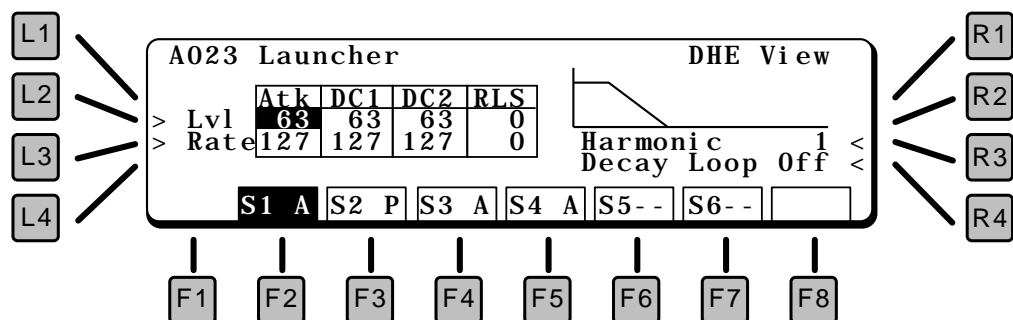
Loops between Decay 1 Level and Decay 2 Level, but uses *both* Decay 1 and Decay 2 Rates.



- L3 NEXT HARMONIC**
L4 PREVIOUS HARMONIC
 These buttons select an individual harmonic. The small arrow under the harmonics displays which harmonic is selected.
- R1 ATTACK (RATE & LEVEL)**
 Press R1 to switch between the Attack Rate and Attack Level. Use the Value dial to change the setting.
- R2 DECAY 1 (RATE & LEVEL)**
 Press R2 to switch between the Decay 1 Rate and Level. Use the Value dial to change the setting.
- R3 DECAY 2 (RATE & LEVEL)**
 Press R3 to switch between the Decay 2 Rate and Level. Use the Value dial to change the setting.
- R4 RELEASE (RATE & LEVEL)**
 Press R4 to switch between the Release Rate and Level. Use the Value dial to change the setting.

HARMONIC ENVELOPE VIEW

This display shows all the envelope parameters for a single harmonic on one screen, another way of looking at the harmonic envelopes.



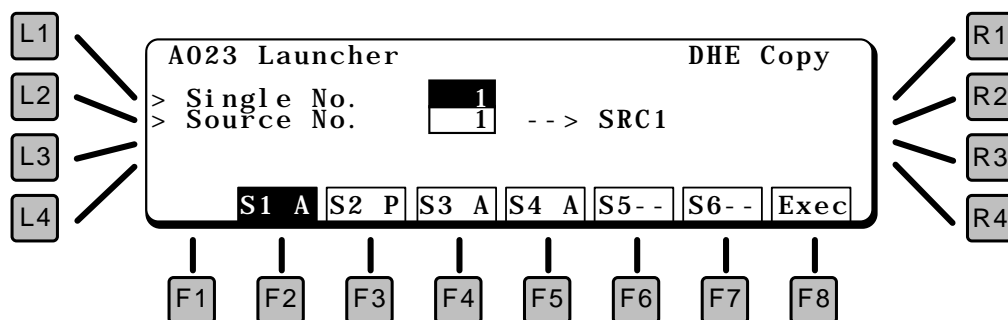
- L2 LEVEL**
 Press L2 to cycle through the level settings for Attack, Decay 1, Decay 2, and Release. Use the Value dial to change the setting.
- L3 RATE**
 Press L3 to cycle through the rate settings for Attack, Decay 1, Decay 2, and Release. Use the Value dial to change the setting.
- R3 HARMONIC**
 This selects the harmonic to modify. Each of the 64 harmonics has its own envelope.
- R4 DECAY LOOP**
 To enhance motion in the sound, the harmonic envelopes can loop among several settings during the sound's sustain. See the diagram on the previous page.
- OFF**
 No loop. Envelope goes to the Decay 2 Level and sustains there, the same as the envelopes for the DCF and DCA.
- LP1**
 Loops between Decay 1 Level and Decay 2 Level, at the Decay 2 Rate.

LP2

Loops between Decay 1 Level and Decay 2 Level, but uses *both* Decay 1 and Decay 2 Rates.

HARMONIC ENVELOPE COPY

From this screen, you can copy sets of harmonic envelopes from one patch into the current patch. Since there are so many parameters in a harmonic envelope, this makes creating and modifying patches less time consuming.



L1 SINGLE NUMBER

This sets the patch to copy the harmonic envelope *from*.

L2 SOURCE NUMBER

This sets the source from the Single patch (selected above) to copy from.

F2 – F7 DESTINATION SOURCE

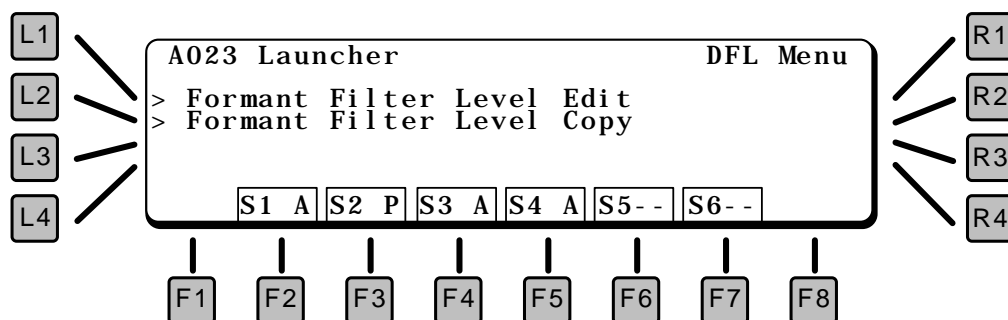
Press the Source function key to select which source the envelope will be copied *to*. The display shows the destination as --> SRC#.

F8 EXECUTE

Press this to make the copy.

FORMANT FILTER LEVEL (DFL)

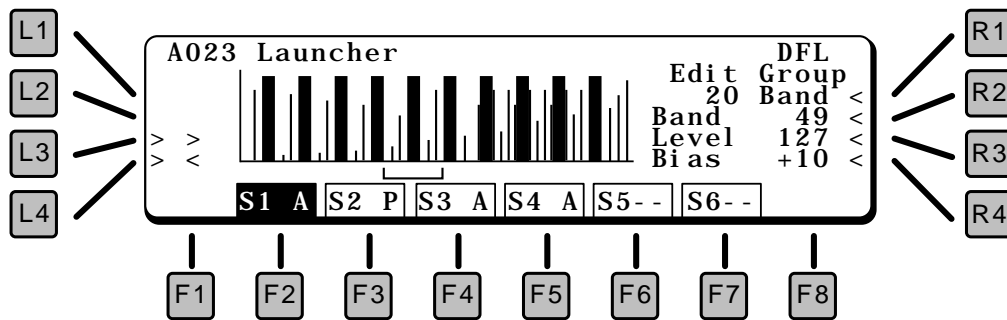
The K5000's Formant Filter is a 128-band graphic equalizer, which can be used to create additional additive effects.



The following chart shows the pitch and frequency of each filter band. The Bias control can be used to slide the entire range up and down.

CENTER FREQUENCY OF 128 BAND FORMANT FILTER (BIAS=0)											
<p>Band 70=440Hz. If the BIAS is set to +12, Band 70=220Hz. If the BIAS is set to -12, Band 70=880Hz. The Formant Filter Envelope value works the same as the BIAS. If the Formant Filter Env. is set to a minus value, the filter moves to the right.</p>											
Band	Freq.-Hz.	Key	Band	Freq.-Hz.	Key	Band	Freq.-Hz.	Key	Band	Freq.-Hz.	Key
1	8	C	33	52	G#	65	330	E	97	2093	C
2	9	C#	34	55	A	66	349	F	98	2217	C#
3	9	D	35	58	A#	67	370	F#	99	2349	D
4	10	D#	36	62	B	68	392	G	100	2489	D#
5	10	E	37	65	C	69	415	G#	101	2637	E
6	11	F	38	69	C#	70	440	A	102	2794	F
7	12	F#	39	73	D	71	466	A#	103	2960	F#
8	12	G	40	78	D#	72	494	B	104	3136	G
9	13	G#	41	82	E	73	523	C	105	3322	G#
10	14	A	42	87	F	74	554	C#	106	3520	A
11	15	A#	43	92	F#	75	587	D	107	3729	A#
12	15	B	44	98	G	76	622	D#	108	3951	B
13	16	C	45	104	G#	77	659	E	109	4186	C
14	17	C#	46	110	A	78	698	F	110	4435	C#
15	18	D	47	117	A#	79	740	F#	111	4699	D
16	19	D#	48	123	B	80	784	G	112	4978	D#
17	21	E	49	131	C	81	831	G#	113	5274	E
18	22	F	50	139	C#	82	880	A	114	5588	F
19	23	F#	51	147	D	83	932	A#	115	5920	F#
20	24	G	52	156	D#	84	988	B	116	6272	G
21	26	G#	53	165	E	85	1047	C	117	6645	G#
22	28	A	54	175	F	86	1109	C#	118	7040	A
23	29	A#	55	185	F#	87	1175	D	119	7459	A#
24	31	B	56	196	G	88	1245	D#	120	7902	B
25	33	C	57	208	G#	89	1319	E	121	8372	C
26	35	C#	58	220	A	90	1397	F	122	8870	C#
27	37	D	59	233	A#	91	1480	F#	123	9397	D
28	39	D#	60	247	B	92	1568	G	124	9956	D#
29	41	E	61	262	C	93	1661	G#	125	10548	E
30	44	F	62	277	C#	94	1760	A	126	11175	F
31	46	F#	63	294	D	95	1865	A#	127	11840	F#
32	49	G	64	311	D#	96	1976	B	128	12544	G

L1 FORMANT FILTER LEVEL EDIT



L3 NEXT

L4 PREVIOUS

These buttons select the next or previous group.

R1 EDIT GROUP

The filter bands can be grouped into the following categories. The bracket underneath the bars show which filter bands are selected. The range can be adjusted with the Band control, the level of the selected band with the level control.

GRAPHIC EQ

An eight-band graphic EQ, which creates the typical elliptical EQ pattern in each band.

20 BAND

Operates on 20 of the 128 formant filter bands at one time.

15 BAND

Operates on 15 of the 128 formant filter bands at one time.

10 BAND

Operates on 10 of the 128 formant filter bands at one time.

5 BAND

Operates on 5 of the 128 formant filter bands at one time.

ALL

All 128 Bands.

EACH

Only the selected frequency band, shown by the arrow under the display.

R2 BAND

The range of the filter band to be controlled can be adjusted using the Band control. The bracket shows the selected range.

R3 LEVEL

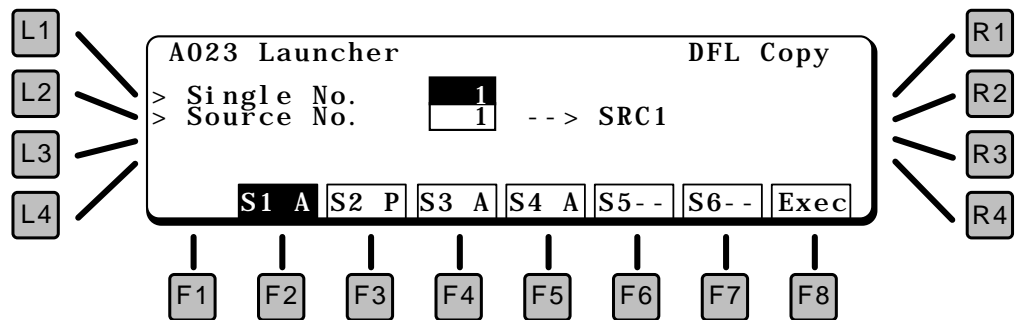
This adjusts the level of the selected band.

R4 BIAS

The frequencies of the entire formant filter can be moved up and down using the Bias control.

L2 FORMANT FILTER LEVEL COPY

This copies the formant filter settings from a Single patch in memory into the *current* Single patch.



L1 SINGLE NUMBER

This sets the patch to copy the formant filter level settings *from*.

L2 SOURCE NUMBER

This sets the source from the Single patch (selected above) to copy from.

F2 - F7 DESTINATION SOURCE

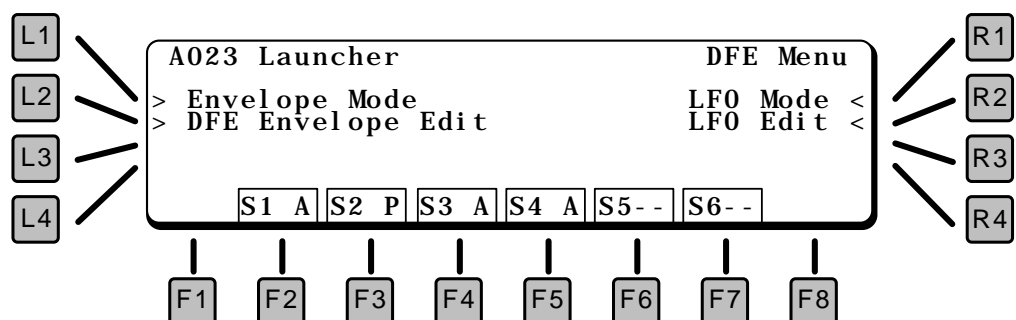
Press the Source function key to select which source the filter settings will be copied *to*. The display shows the destination as --> SRC#.

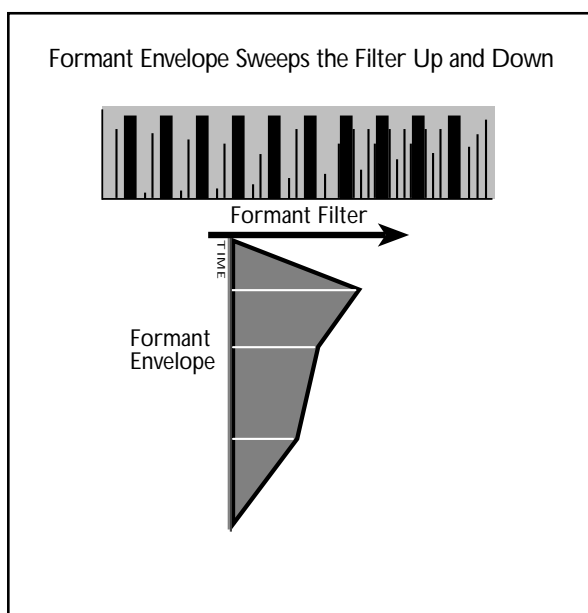
F8 EXECUTE

Press this to make the copy.

FORMANT ENVELOPE (DFE)

The formant filter can be swept up and down using an envelope generator or LFO, selected from this screen.

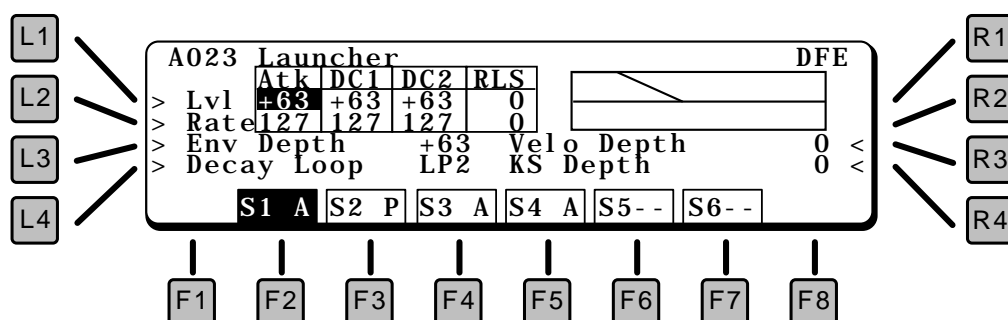




L2 DFE ENVELOPE EDIT

This page contains the parameters for the Formant Filter Envelope. There is one envelope per source.

The envelope diagram shows the visual result of the envelope settings on the page.



L1 LEVEL

Press L2 to cycle through the level settings for Attack, Decay 1, Decay 2, and Release. Use the Value dial to change the setting.

L2 RATE

Press L3 to cycle through the time settings for Attack, Decay 1, Decay 2, and Release. Use the Value dial to change the setting.

L3 ENV DEPTH

This is the master envelope depth control, which determines how much the envelope controls the filter.

L4 DECAY LOOP

To enhance motion in the sound, the harmonic envelopes can loop among several settings during the sound's sustain. See the diagram on page 43.

OFF

No loop. Envelope goes to the Decay 2 Level and sustains there, the same as the envelopes for the DCF and DCA.

LP1

Loops between Decay 1 Level and Decay 2 Level, at the Decay 2 Rate.

LP2

Loops between Decay 1 Level and Decay 2 Level, but uses *both* Decay 1 and Decay 2 Rates.

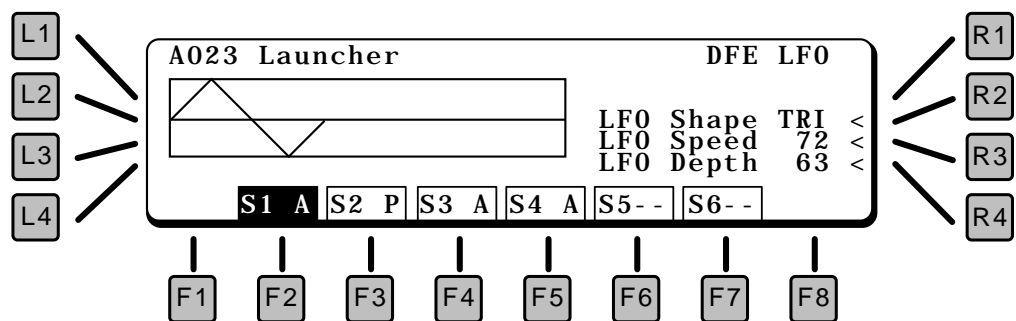
R3 VELO DEPTH

The key velocity can be used to adjust the amount of filter modulation by the envelope. With a positive value, the harder a key is played, the more the filter will be moved by the envelope.

R4 KS DEPTH

The key scale (which key is played) can also be used to adjust the amount of filter modulation by the envelope. With a positive value, the higher the note, the more the filter will be moved by the envelope.

R2 LFO EDIT



R2 LFO SHAPE

This selects the LFO waveform type:

TRI

Triangle

SAW

Sawtooth

RND

Random

R3 LFO SPEED

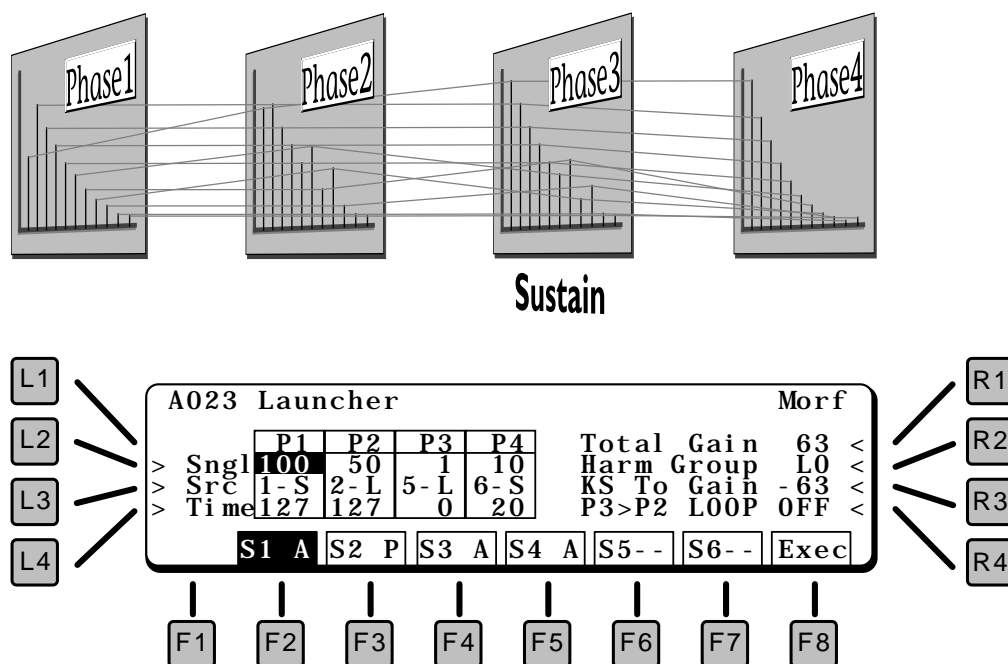
Sets the LFO speed.

R4 LFO DEPTH

Sets the initial LFO Depth.

MORF

Morfing lets you create new harmonic shapes by dissolving between four different harmonic *snapshots*. This is done by copying four sources from patches stored in the K5000S.



L2 SINGLE

This selects which *patch* the source will be copied from. Press this key repeatedly to cycle through the four phases (P1 – P4).

L3 SOURCE

This selects the *source* within the single patch (selected by L2) to copied. There are up to six sources, each of which contains a soft harmonic set (S), and a loud harmonic set (L). Press this key repeatedly to cycle through the four phases (P1 – P4).

L4 TIME

The transition between phases.

R1 TOTAL GAIN

The loudest harmonic will be set to this level, so it functions as a master level.

R2 HARMONIC GROUP

This selects the range of harmonics, 1–64 or 65–128.

R3 KSTO GAIN

Controls the level with the Key Scale. With a positive value, the harmonics will get louder as higher notes are played on the keyboard.

R4 P3>P2 LOOP

If OFF, the harmonics will move according to the selected on this screen, however they will *freeze* once the sustain point is reached. By turning ON the P3>P2 Loop, the harmonics will morf back and forth between phase 2 and phase 3 during sustain, creating constant motion and a more animated sound.

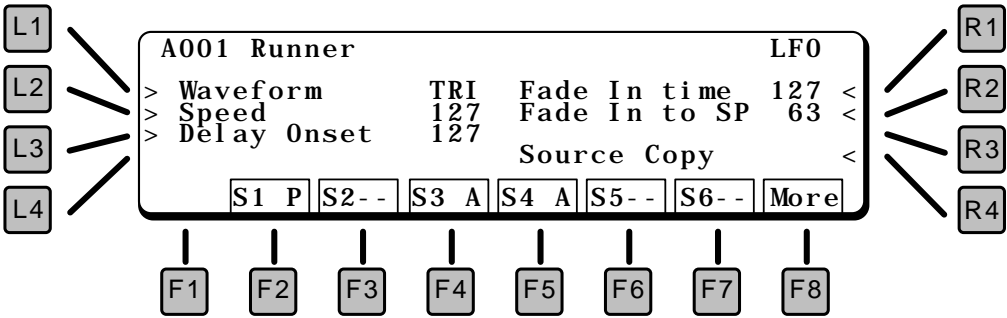
F8 EXECUTE

Creates the Morf.

LFO & COPY

The Low Frequency Oscillator is a slow moving (sub-audio) oscillator that is used to modify the DCO, DCF, or DCA to give vibrato and tremolo effects.

A Source Copy function is also included on this page.



L1 WAVEFORM

This selects the LFO waveform type:

- SIN
Sine
- TRI
Triangle
- SAW
Sawtooth
- SQR
Square
- RND
Random

L2 SPEED

Sets the LFO initial speed. The range is 0.1Hz to 18Hz.

L3 DELAY ONSET

This adds a delay before the LFO kicks in. The delay can be as long as 2 seconds.

R1 FADE IN TIME

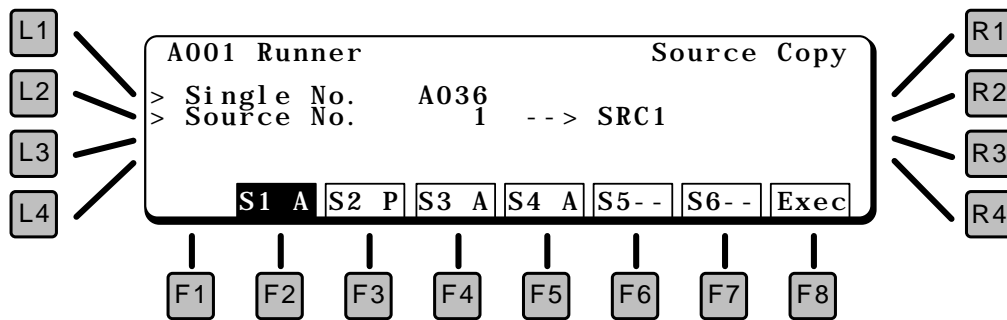
After the delay, this sets the amount of time that the LFO fades in to maximum amount.

R2 FADE IN TO SPEED

After the delay, the LFO gradually speeds up to the initial speed setting.

R3 SOURCE COPY

This lets you copy an *entire* source from another patch.



L1 SINGLE NUMBER

Select the Patch to copy from.

L2 SOURCE NUMBER

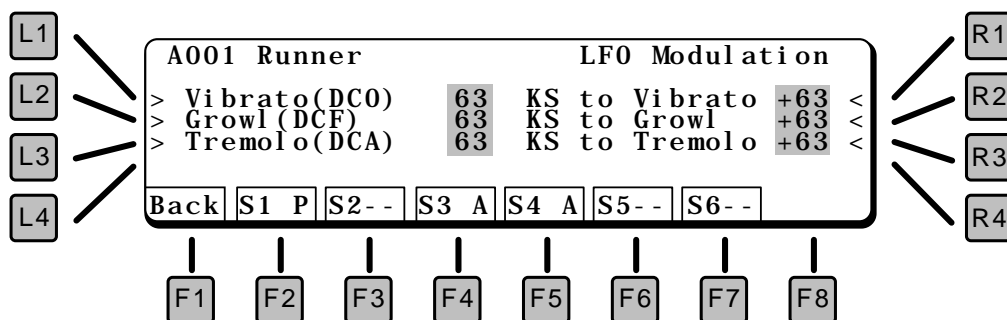
Select the Source from within the selected patch to copy from, 1 – 6.

F2 – F6 Selects the destination source (in the current patch) for the copy.

F8 EXEC

Executes the copy.

LFO MODULATION



L1 VIBRATO (DCO)

Controls the amount of LFO routed to the DCO, which causes vibrato.

L2 GROWL (DCF)

Controls the amount of LFO routed to the DCF, which causes growl.

L3 TREMOLO (DCA)

Controls the amount of LFO routed to the DCA, which causes tremolo.

R1 KEY SCALE TO VIBRATO

This scales the amount of vibrato depth according to the key played. With a positive value, the amount of vibrato increases as higher notes are played.

R2 KEY SCALE TO GROWL

This scales the amount of DCF growl according to the key played. With a positive value, the amount of growl increases as higher notes are played.

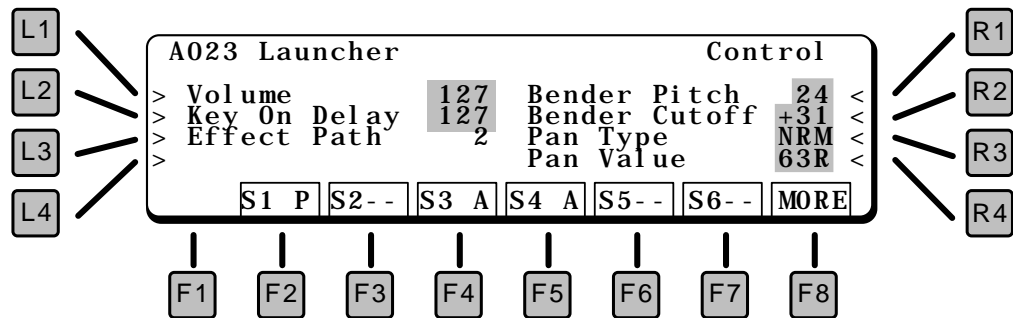
R3 KEY SCALE TO TREMOLO

This scales the amount of tremolo depth according to the key played. With a positive value, the amount of tremolo increases as higher notes are played.

CONTROL

The Control pages contain settings for real time control of the sound.

VOLUME, PITCH BEND, PAN



L1 VOLUME

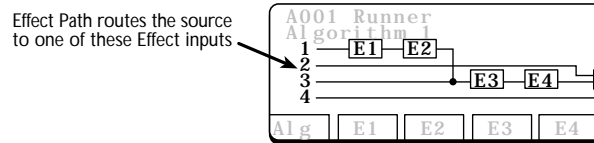
This is the master volume for the sound source.

L2 KEY ON DELAY

This sets a delay between the time the key is struck and the sound starts.

L3 EFFECT PATH

Routes this source to one of the four inputs to the effects section. For more on effects please see page !!!.



R1 BENDER PITCH

The maximum amount of pitch bend, in semitones.

R2 BENDER CUTOFF

The Pitch Bend control also can affect the filter. If you bend *up*, the filter cutoff goes up and the sound gets brighter. If you bend *down* the filter cutoff goes down and the sound gets darker.

R3 PAN TYPE

This sets the type of panning.

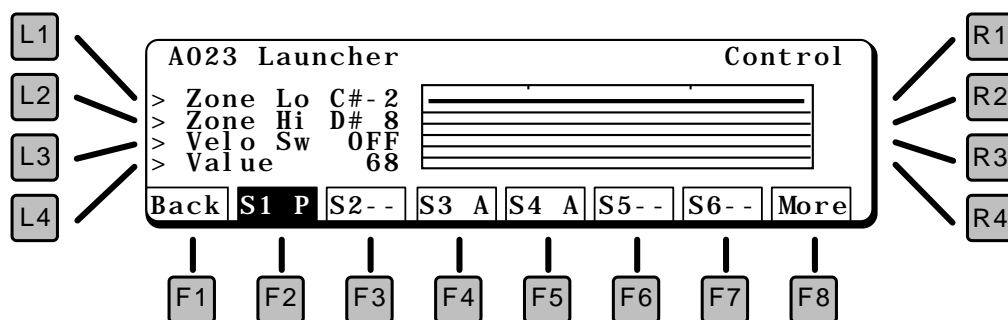
NRM (Normal) is a standard left to right pan, controlled by the Pan Value, below.

RND (Random) changes the panning randomly for each note played. This gives a feeling of an “ensemble of players” when used for a string patch, for example.

KS & -KS (Key Scale and Negative Key Scale) changes the panning depending upon the key played. KS pans from left to right, -KS pan from right to left. Using KS will simulate the natural panning of strings inside a piano.

- R4 PAN VALUE**
Places the sound left to right in the stereo field.
- F8 MORE**
Press to go to the Zone screen, below.

KEY AND VELOCITY ZONE

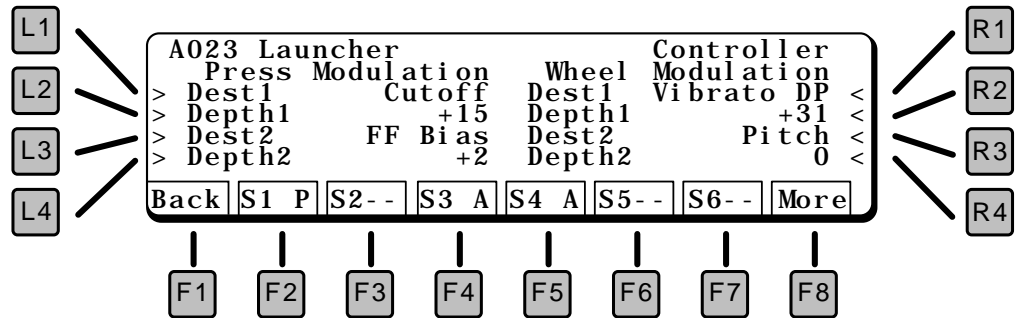


This screen has parameters for key and velocity range. Using these parameters, a sound can be limited to play in only a certain range of the keyboard, or only when a key is played hard or soft. By creating several sources, for example, one that plays on soft notes only and another that plays on hard notes only, a sound can be created with more lifelike variation.

- L1 ZONE LO**
Sets the lowest note that will be played. The keyboard graphic visually shows the range.
- L2 ZONE HI**
Sets the highest note that will be played.
- L3 VELOCITY SWITCH**
Sets the velocity range. At Loud, only hard (loud) notes will sound. At Soft, only soft notes will sound. When set to OFF, the velocity switch is turned off and notes play at all velocity levels.
- L4 VALUE**
Sets the threshold between high and low velocity. This is the MIDI velocity number.
- F1 BACK**
Press to return to the previous screen.
- F8 MORE**
Press to go to the controller screen, below.

CONTROLLERS

The next two screens contain settings for aftertouch pressure, modulation wheel, and expression pedal control of the sound. Following these is a screen for Assignable Controllers.



PRESSURE MODULATION

Channel Pressure, or *aftertouch*, can be routed to two destinations simultaneously (actually a *third* destination is possible by using the Assignable Controllers, page !!!).

- L1 DESTINATION 1**
Selects the destination for the modulation. The destination can be any of those listed below.
- L2 DEPTH 1**
Sets the amount of the modulation. This can be positive or negative.
- L3 DESTINATION 2**
Selects the destination for the modulation. The destination can be any of those listed below.
- L4 DEPTH 2**
Sets the amount of the modulation. This can be positive or negative.

WHEEL MODULATION

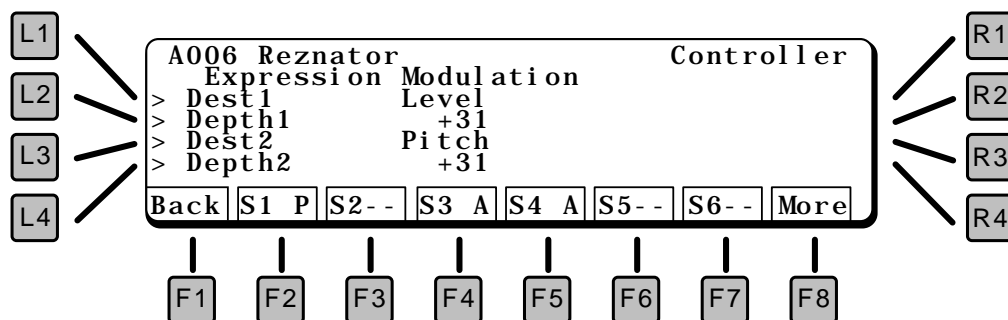
The Modulation Wheel can be routed to two destinations simultaneously (actually a *third* destination is possible by using the Assignable Controllers, page !!!!). The Modulation Wheel is MIDI Controller 1.

- R1 DESTINATION 1**
Selects the destination for the modulation. The destination can be any of those listed below.
- R2 DEPTH 1**
Sets the amount of the modulation. This can be positive or negative.
- R3 DESTINATION 2**
Selects the destination for the modulation. The destination can be any of those listed below.
- R4 DEPTH 2**
Sets the amount of the modulation. This can be positive or negative.

- F1 BACK**
Press to return to the previous screen.
- F8 MORE**
Press to go to the expression pedal modulation screen, below.

EXPRESSION PEDAL

This screen contains settings for control of the sound using the expression pedal (MIDI controller 11).



- L1 DESTINATION 1**
Selects the destination for the modulation. The destination can be any of those listed below.
- L2 DEPTH 1**
Sets the amount of the modulation. This can be positive or negative.
- L3 DESTINATION 2**
Selects the destination for the modulation. The destination can be any of those listed below.
- L4 DEPTH 2**
Sets the amount of the modulation. This can be positive or negative.
- F1 BACK**
Press to return to the previous screen.
- F8 MORE**
Press to go to the Assignable Controller screen, below.

MODULATION DESTINATIONS

Any of the modulation sources on these pages can be routed to any of the following destinations:

PITCH

Modifies the pitch. With a positive value, increasing the control makes the pitch go up, with a negative value, increasing the control makes the pitch go down.

CUTOFF

Modifies the filter cutoff. With a positive value, increasing the control makes the sound brighter, with a negative value, increasing the control makes the sound darker.

LEVEL

Modifies the volume. With a positive value, increasing the control makes the sound louder, with a negative value, increasing the control makes the sound softer.

VIBRATO DEPTH

Adds Vibrato (LFO controls pitch). This parameter sets the amount of vibrato.

GROWL DEPTH

Adds Growl (LFO controls filter). This parameter sets the amount of growl.

TREMOLO DEPTH

Adds Tremolo (LFO controls volume). This parameter sets the amount of tremolo.

LFO SPEED

Modifies the LFO speed. With a positive value, increasing the control makes the LFO faster, with a negative value, increasing the control makes the LFO slower.

ATTACK TIME

Controls the DCF & DCA Attack time. With a positive value, a higher key will have a longer attack time and a lower key will have a shorter attack time.

DECAY1 TIME

Controls the DCF & DCA Decay1 time. With a positive value, a higher key will have a longer decay time and a lower key will have a shorter time.

RELEASE TIME

Controls the DCF & DCA Release time. With a positive value, a higher key will have a longer release time and a lower key will have a shorter time.

VELOCITY OFFSET

Scales the velocity, plus and minus.

RESONANCE

Controls the amount of filter resonance.

PANPOT

Controls the Left/Right panning of the sound

FORMANT FILTER BIAS

This control adjusts the Formant Filter Bias.

FORMANT FILTER ENV/LFO DEPTH

This control adjusts the Formant Filter LFO Depth.

FORMANT FILTER ENV/LFO SPEED

This control adjusts the Formant Filter LFO Speed.

HARMONICS LO

Controls the level of the lower harmonics. This does not adjust the *low notes*, rather it adjusts the *low end* of any note.

HARMONICS HI

Controls the level of the upper harmonics. This does not adjust the *high notes*, rather it adjusts the *high end* of any note.

HARMONICS EVEN

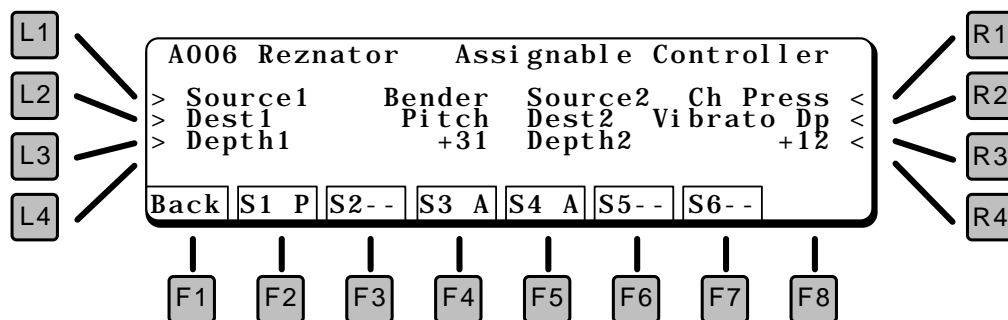
Controls the level of the even harmonics.

HARMONICS ODD

Controls the level of the odd harmonics, including the *fundamental*, or base pitch.

ASSIGNABLE CONTROLLER

Two additional controllers can be used for modulation. The controllers are assigned from the following screen.



L1 SOURCE1

Selects the source for the modulation. The source can be any of those listed below.

L2 DESTINATION1

Selects the destination for the modulation. The destination can be any of those listed on page !!!.

L3 DEPTH1

Sets the amount of the modulation. This can be positive or negative.

R1 SOURCE2

Selects the source for the modulation. The source can be any of those listed below.

R2 DESTINATION2

Selects the destination for the modulation. The destination can be any of those listed on page !!!.

R3 DEPTH2

Sets the amount of the modulation. This can be positive or negative.

ASSIGNABLE CONTROLLER SOURCES

The following sources can be used for modulation:

BENDER

The Pitch Bend wheel.

CH PRESS (CHANNEL PRESSURE)

Aftertouch pressure (per channel).

WHEEL

The Modulation Wheel

EXPRESS (EXPRESSION PEDAL)

The Expression Pedal, MIDI Controller 11

MIDI VOLUME

The MIDI Volume command, MIDI Controller 7

PANPOT

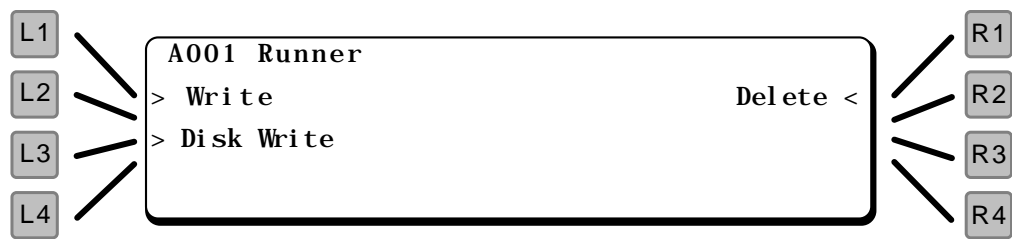
The MIDI Pan command, MIDI Controller 10

G CONT 1 ~ 8 (GENERAL CONTROLLERS 1 ~ 8)

The eight MIDI General Purpose Controllers – controller numbers 16–19 & 80–83.

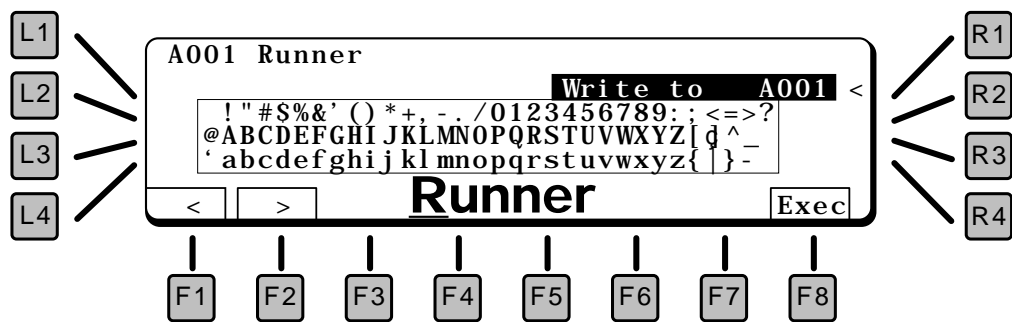
WRITE

After editing, save your sound by pressing the WRITE button in the COMMON section of the front panel. The following screen appears.



L1 WRITE

This saves your patch to the internal memory area.



R1 WRITE LOCATION

Use the Value dial to select a location to save your patch.

NOTE:

If the message "Memory Full" appears on the display, select another bank (A or D) or use the Disk Write function (below) instead.

F1/F2 CHARACTER

This names the patch. Use the F1 and F2 keys to select a character in the name (moves the cursor), and the Value dial to select a letter.

F8 EXECUTE

Stores the patch.

L3 DISK WRITE

You can also write ADD Patches to disk. This is useful if your internal memory is full.



F1/F2 CHARACTER

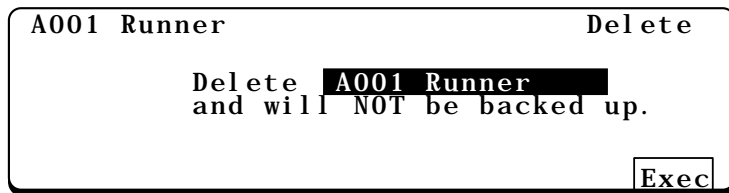
This names the file on the disk. Use the F1 and F2 keys to select a character in the name (moves the cursor), and the Value dial to select a letter.

F8 EXECUTE

Press Execute to save the file. It will be saved with the file extension shown after the name.

R1 DELETE

Since there is not a fixed number of ADD patches in the Single Bank, you may need to delete patches to make room for new ones.



Use the Value dial to choose the patch to delete, and press F8 (Execute). Sure? Press F8 to continue.

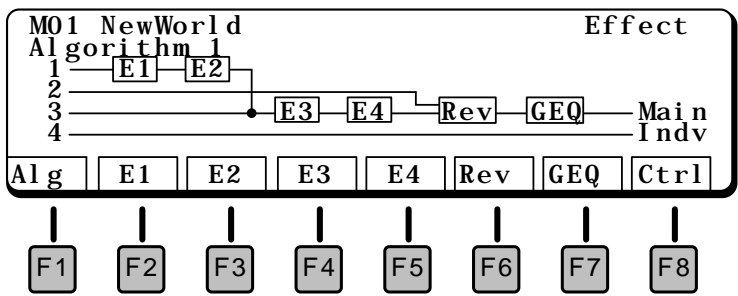
EFFECT SECTION

The Effect section contains the settings for the digital effects generator.

There is one Effect generator for the entire K5000. When in Single mode, the entire effect generator is available for the sound. When in Multi mode, the effects settings of the Single patch are disregarded, and the Multi effects settings are used instead.

EFFECT PAGE PARAMETERS

The main effects page displays a block diagram of the algorithm selected.



VALUE DIAL ALGORITHM SELECT

The algorithm can be selected by turning the Value dial. In Single mode, press R1 to access the Algorithm select.

F1 ALGORITHM PAGE

Returns to the Algorithm Page, *this page*, from other effects pages.

F2 E1 (EFFECT 1)

Goes to the edit parameters for the Effect 1 block. Any of the effects blocks can be assigned one of 36 different effects, which include a variety of delays, chorus, flanging, and distortion. The available controls vary from one effect to another.

See page !!! for a description of the 36 available effect types.

F3 E2 (EFFECT 2)

Goes to the edit parameters for the Effect 2 block.

F4 E3 (EFFECT 3)

Goes to the edit parameters for the Effect 3 block.

F5 E4 (EFFECT 4)

Goes to the edit parameters for the Effect 4 block.

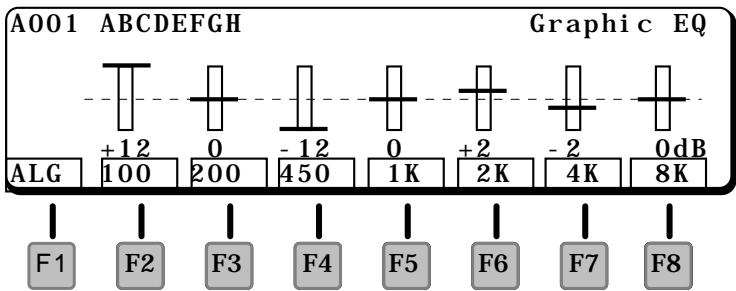
F6 REVERB

Goes to the edit parameters for the Reverb block. The reverb block can be assigned one of 11 different reverb types, which include a variety of rooms, halls and, plates. The available controls vary from one reverb type to another.

See page !!! for a description of the available reverb types.

F7 GRAPHIC EQ

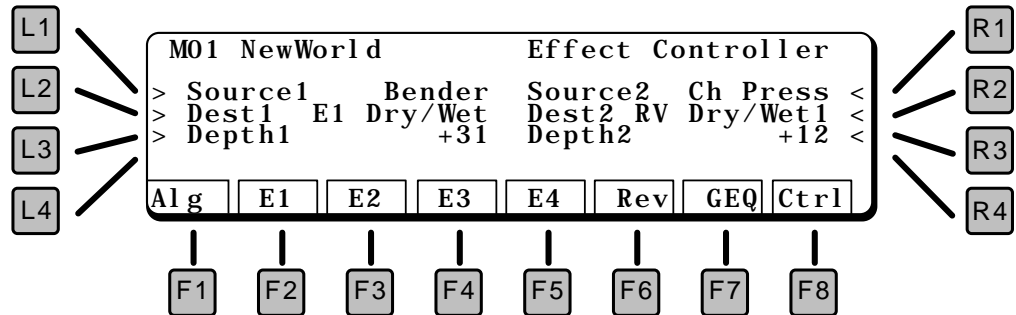
Goes to the edit parameters for the Graphic EQ block.



Use the F2 through F8 keys to select an EQ band, and the Value dial to change the amount. The slider will change to visually indicate the setting, the number underneath shows the exact amount.

F8 CONTROL

Goes to the Effect Controller page. Two controllers can be used to control effect or reverb depth. An expression pedal could be used to add reverb or aftertouch pressure could be used to add chorusing.



L1 SOURCE1

Selects the source for the modulation. The source can be any of those listed below.

L2 DESTINATION 1

Selects the destination for the modulation. This can be the level of the reverb, or a modulatable parameter in one of the four effects blocks (Effect1 – Effect4).

L3 DEPTH1

Sets the amount of the modulation. This can be positive or negative.

R1 SOURCE2

Selects the source for the modulation. The source can be any of those listed below.

R2 DESTINATION2

Selects the destination for the modulation. This can be the level of the reverb, or a modulatable parameter in one of the four effects blocks (Effect1 – Effect4).

R3 DEPTH2

Sets the amount of the modulation. This can be positive or negative.

MODULATION SOURCES

The sources that can be used to control the effects are:

BENDER

The Pitch Bend wheel.

CH PRESS (CHANNEL PRESSURE)

Aftertouch pressure (per channel).

WHEEL

The Modulation Wheel

EXPRESS (EXPRESSION PEDAL)

The Expression Pedal

MIDI VOLUME

The MIDI Volume commend, MIDI Controller 7

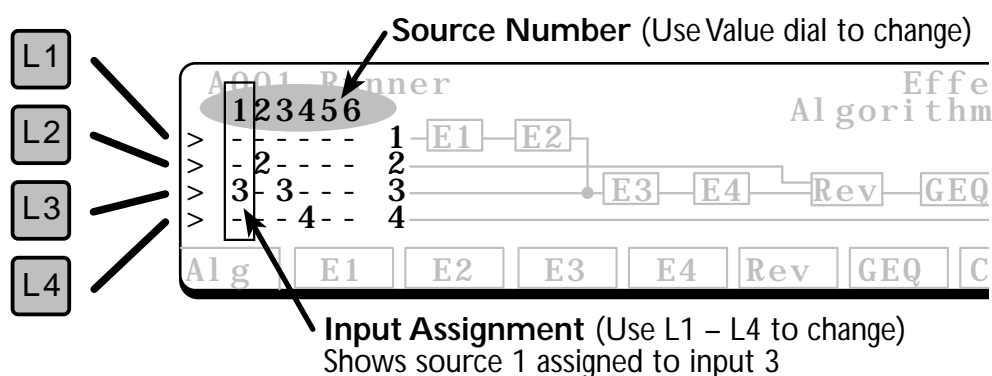
PANPOT

The MIDI Pan commend, MIDI Controller 10

SOURCE ASSIGNMENT GRID (SINGLE PATCH ONLY)

In Single mode, the Source Assignment Grid on the left side of the screen is used to connect the (up to) six sources in each patch to the four inputs of the effect algorithm.

Press any of the left hand buttons to access the Source Assignment Grid.



VALUE DIAL

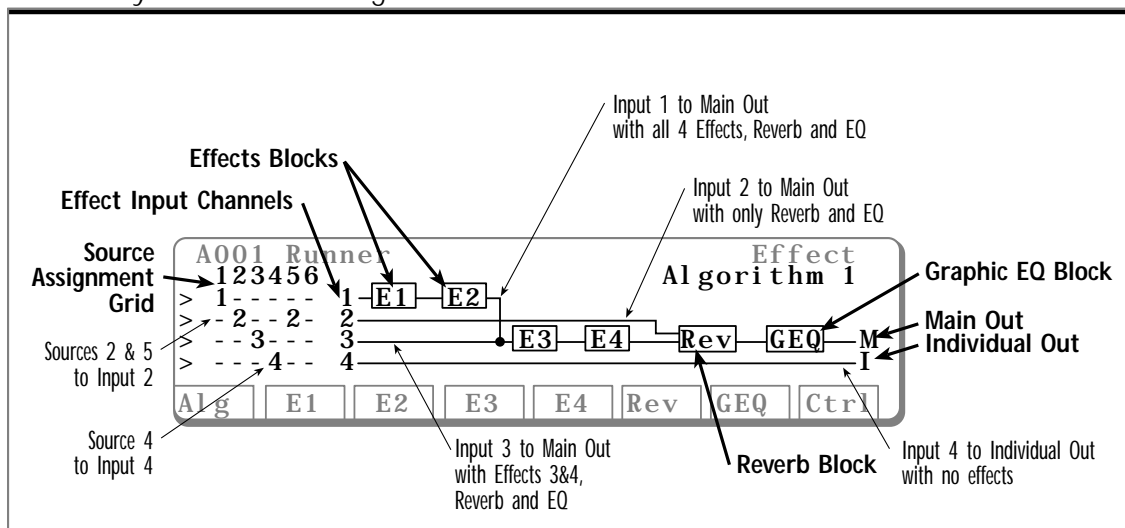
Selects which source to assign. Sources 1 through 6 are displayed, but only the sources actually used in the Single patch can be assigned.

- L1 INPUT 1 ASSIGN
- L2 INPUT 2 ASSIGN
- L3 INPUT 3 ASSIGN
- L4 INPUT 4 ASSIGN

After selecting a source with the value dial, press the L1, L2, L3, or L4 buttons to assign that source to input 1, 2, 3, or 4, respectively. The number 1, 2, 3, or 4 is displayed in the column indicating its assignment.

ALGORITHMS

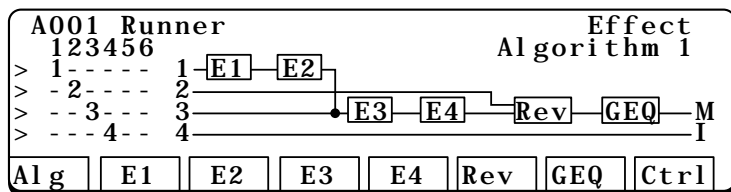
Anatomy of an Effect Algorithm



The Value dial (R1) selects the effect algorithm to be used. There are four different algorithms available, and the arrangement of the effects blocks varies depending upon the algorithm chosen.

There are four input channels into the effects algorithms. In Single mode, the left of the block diagram shows the Source Assignment Grid, with controls routing of each source to the input channels. In Multi or Compose mode, the assignment of each single section to the four input channels is controlled by the Effect Path function in the Section menu.

ALGORITHM 1



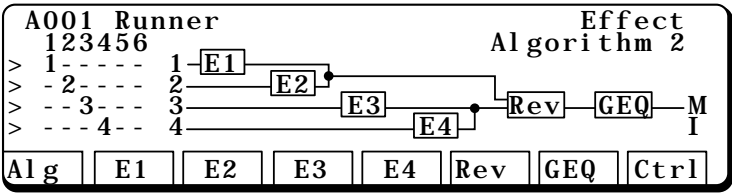
Input 1 passes through all four effects blocks, on its way to the reverb, EQ and main outputs. It merges with input 3 after the second effects block.

Input 2 goes directly to the reverb block, EQ, and main outputs. It has its own wet/dry mix in the reverb block.

Input 3 passes through two of the four effects blocks, on its way to the reverb, EQ and main outputs.

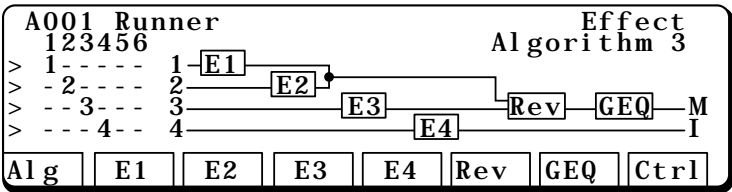
Input 4 goes directly to the Individual outputs without any effect, reverb or EQ. This is useful for sending sounds directly out of the K5000S for external signal processing.

ALGORITHM 2



In this algorithm, each input goes through its own effects block, then the four are paired together for reverb and EQ.

ALGORITHM 3

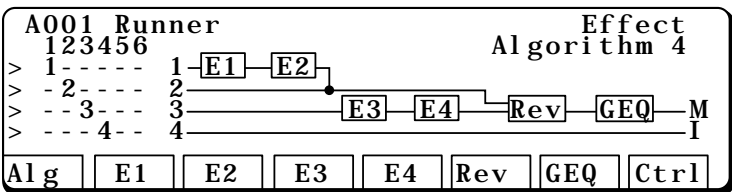


In this algorithm, each input goes through its own effects block, then 1, 2, and 3 are Multined for reverb and EQ.

Input 3 has its own wet/dry mix in the reverb block.

After passing through its effect, Input 4 goes directly to the Individual outputs. This could be useful for a Bass sound running through a phaser, but without reverb.

ALGORITHM 4



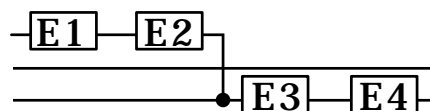
Input 1 passes through the E1 and E2 effects blocks, on its way to the reverb, EQ and main outputs. It merges with input 2 after the second effects block.

Input 2 goes directly to the reverb block, EQ, and main outputs.

Input 3 passes through E3 and E4 of the four effects blocks, on its way to the reverb, EQ and main outputs. It has its own wet/dry mix in the reverb block.

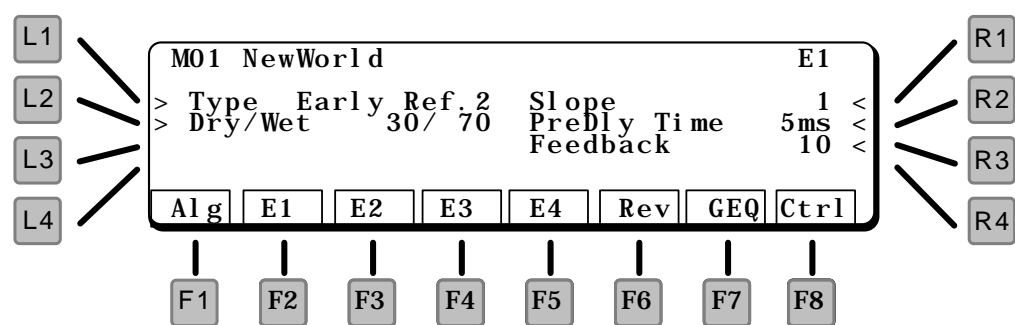
Input 4 goes directly to the Individual outputs without any effect, reverb or EQ.

EFFECT TYPES



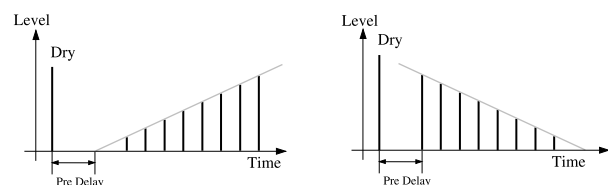
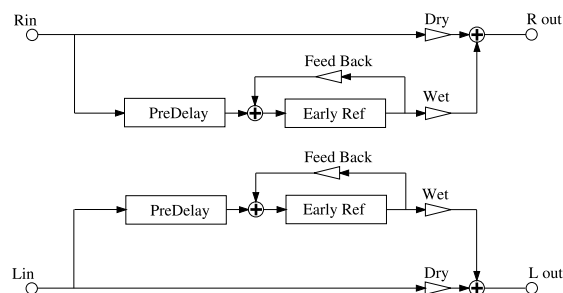
The four effects blocks represent individual effects. Any of the effects blocks can be assigned one of 36 different effects, which include a variety of delays, chorus, flanging, and distortion. The available controls vary from one effect to another.

EARLY REFLECTION 1 EARLY REFLECTION 2



L1 TYPE

Selects the type of effect. Early Reflection 1 has a shorter reflection time than Early Reflection 2.



L2 DRY/WET

Controls the ratio between the original sound (dry) and the effected sound (wet).

R1 SLOPE

This softens the reflection by changing the delay amplitudes. See diagram.

R2 PREDELAY TIME

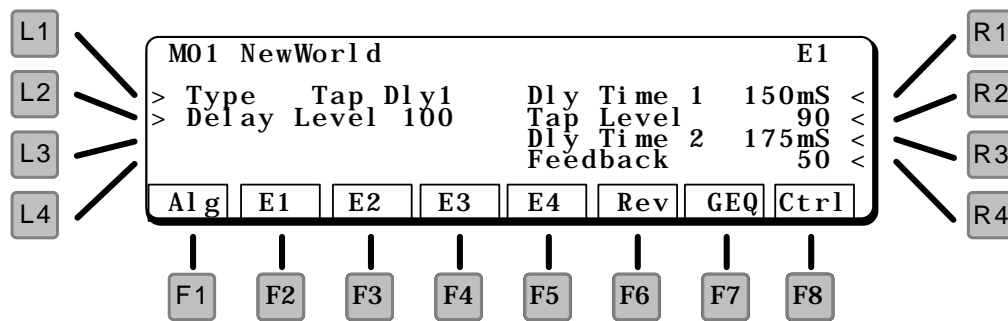
The amount of delay time before the effect.

R3 FEEDBACK

Amount of delay looped back into the input. This creates a repeating delay.

TAP DELAY 1

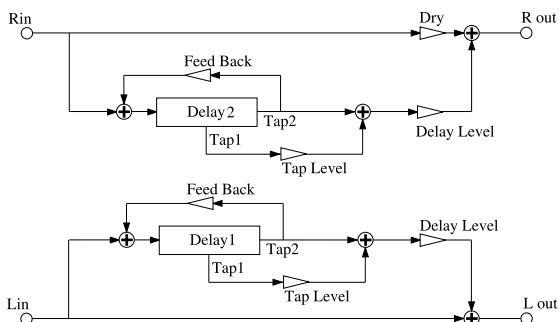
TAP DELAY 2



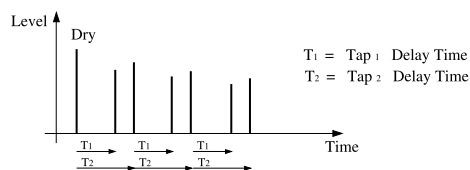
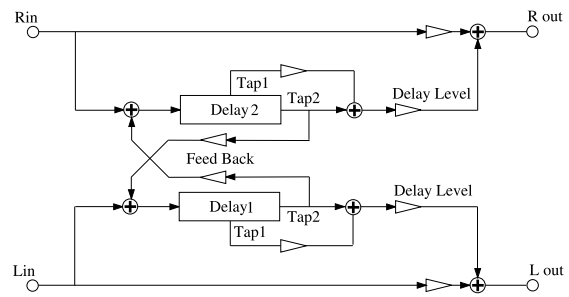
L1 TYPE

Selects the type of effect.

TAP DELAY 1



TAP DELAY 2



L2 DELAY LEVEL

Master level of this effect block.

R1 DELAY TIME 1

The delay time for delay 1.

R2 TAP LEVEL

The level of delay 1.

R3 DELAY TIME 2

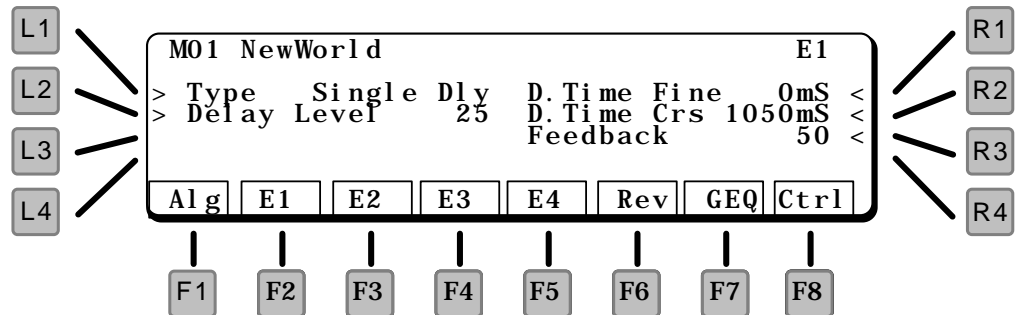
The delay time for delay 2.

R4 FEEDBACK

Amount of delay looped back into the input. This creates a repeating delay. The original sound (input) and Delay 1 are repeated together at the delay 2 time.

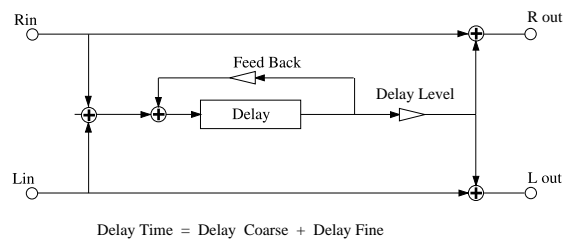
SINGLE DELAY

This effect has a single delay, with a fine time adjustment for synchronizing to the beat.



L1 TYPE

Selects the type of effect.



L2 DELAY LEVEL

Master level of this effect block.

R1 DELAY TIME FINE

Adjusts the delay time in 1 mS increments, from 0 - 9 mS.

R2 DELAY TIME COARSE

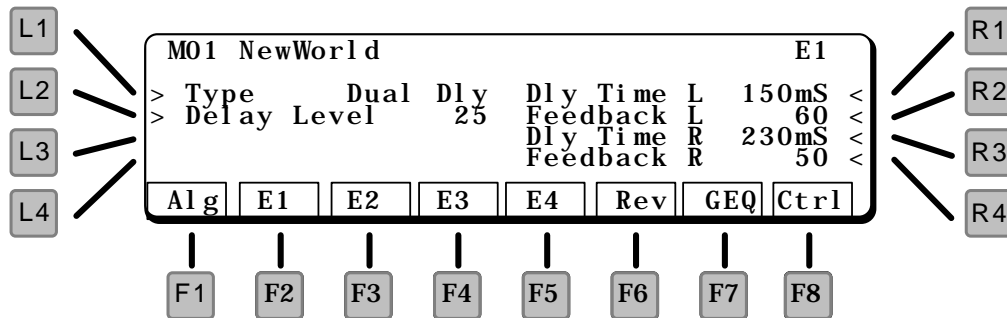
Adjusts the delay time in 10mS increments, from 0 - 1270 mS. (1.27 seconds)

R3 FEEDBACK

Amount of delay looped back into the input. This creates a repeating delay.

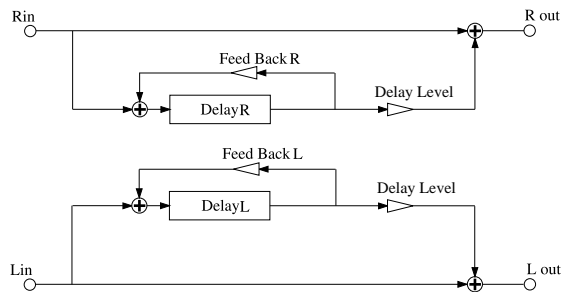
DUAL DELAY

This effect has two delays, panned hard left and right.



L1 TYPE

Selects the type of effect.



L2 DELAY LEVEL

Master level of this effect block.

R1 DELAY TIME LEFT

Adjusts the delay time from 0 - 720mS.

R2 FEEDBACK LEFT

Amount of delay looped back into the input. This creates a repeating delay.

R3 DELAY TIME RIGHT

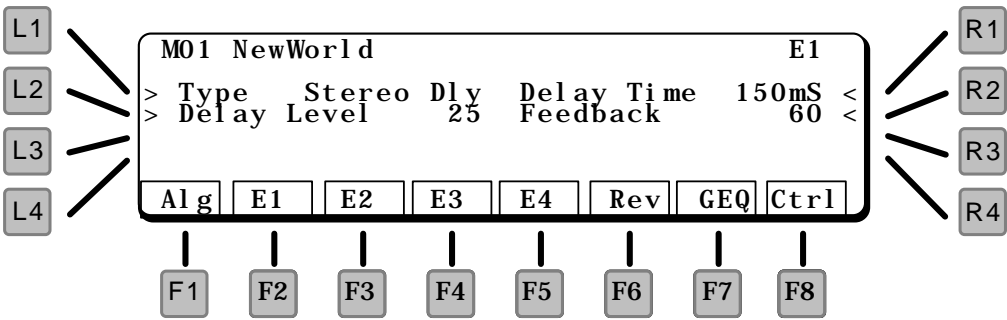
Adjusts the delay time from 0 - 720mS.

R4 FEEDBACK RIGHT

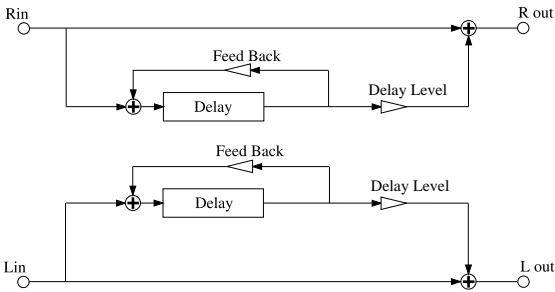
Amount of delay looped back into the input. This creates a repeating delay.

STEREO DELAY

This is a single stereo delay. Repeats maintain the same stereo panning as the original signal.



L1 TYPE
Selects the type of effect.



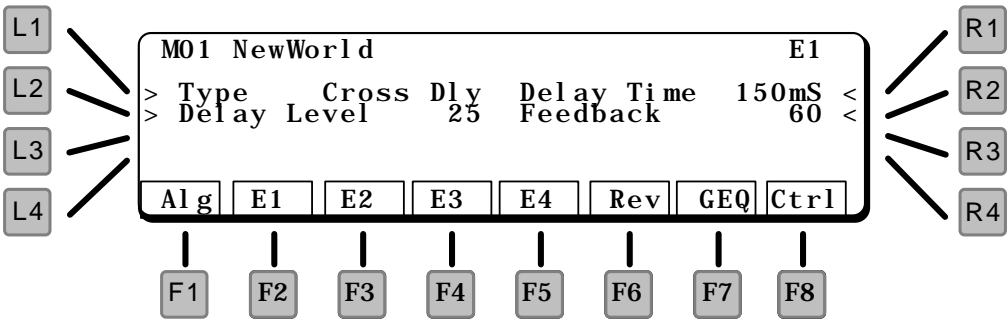
L2 DELAY LEVEL
Master level of this effect block.

R1 DELAY TIME
Adjusts the delay time from 0 - 720 mS.

R2 FEEDBACK
Amount of delay looped back into the input. This creates a repeating delay.

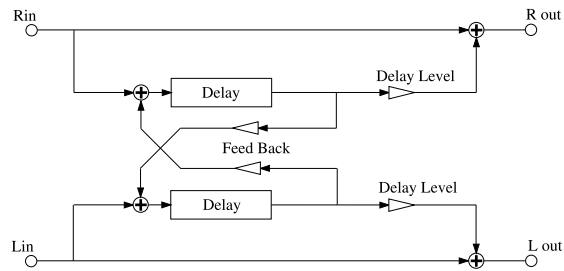
CROSS DELAY

Cross Delay is a single delay, with repeats alternating left and right.



L1 TYPE

Selects the type of effect.



L2 DELAY LEVEL

Master level of this effect block.

R1 DELAY TIME

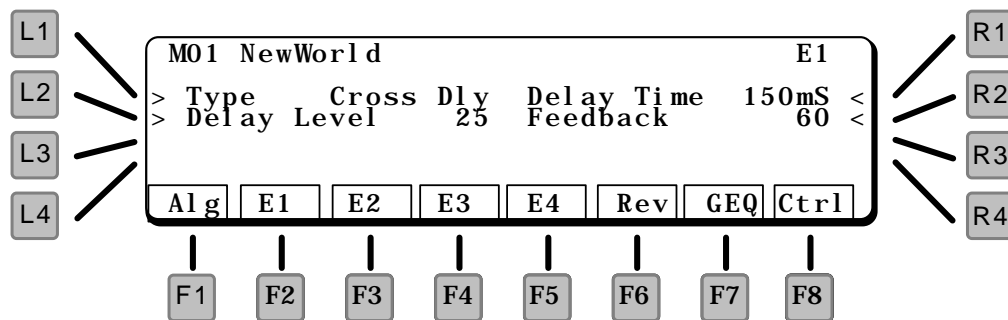
Adjusts the delay time from 0 - 720 mS.

R2 FEEDBACK

Amount of delay looped back into the input. This creates a repeating delay.

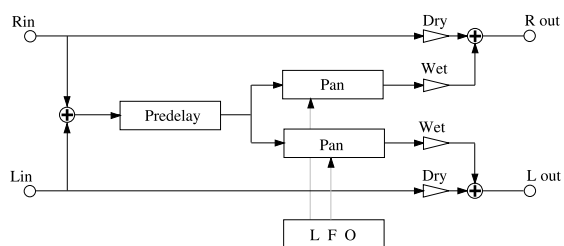
AUTO PAN

Auto Pan moves the input source back and forth across the stereo field.



L1 TYPE

Selects the type of effect.



L2 DRY/WET

Controls the ratio between the original (dry) and the panned sound (wet).

R1 SPEED

Adjusts the panning speed.

R2 DEPTH

Controls how wide the panning is.

R3 PREDELAY TIME

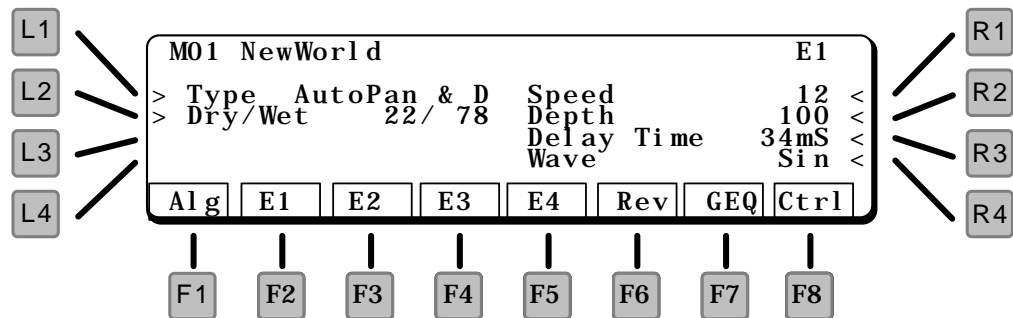
Adds a delay (up to 100mS) before the panned sound starts

R4 WAVE

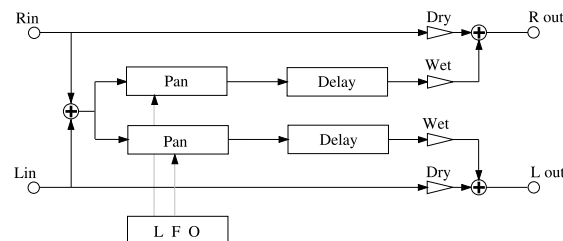
Selects the LFO waveform used to control the panning. The choices are SINE or TRIangle.

AUTO PAN & DELAY

Auto Pan moves the input source back and forth across the stereo field, with an added delay.

**L1 TYPE**

Selects the type of effect.

**L2 DRY/WET**

Controls the ratio between the original (dry) and the panned sound (wet).

R1 SPEED

Adjusts the panning speed.

R2 DEPTH

Controls how wide the panning is.

R3 DELAY TIME

Delays the panned sound (up to 200mS) The repeating delay does not pan.

R4 WAVE

Selects the LFO waveform used to control the panning. The choices are SINE or TRIangle.

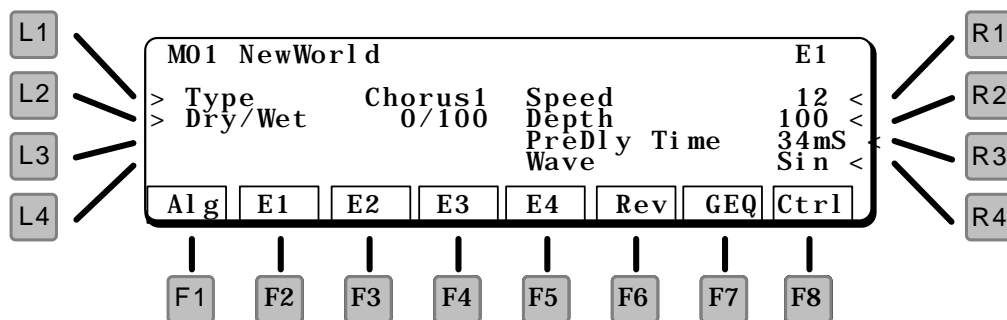
CHORUS 1

CHORUS 2

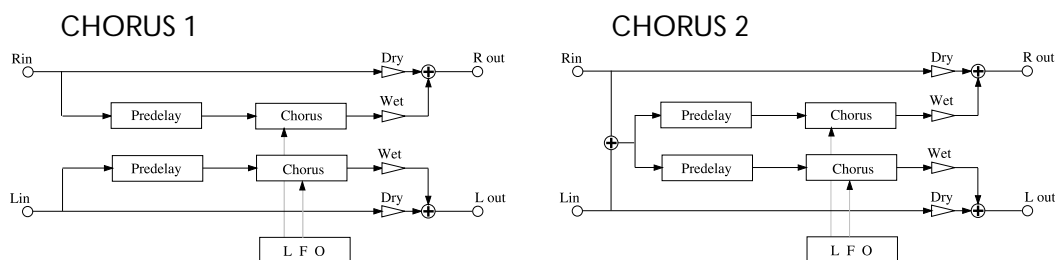
Chorus is a slight detune of the sound, which adds depth and richness to the sound. Great for guitars, electric pianos, organs, strings, choirs.

Chorus 1 is a true stereo in / stereo out chorus – the left and right channels are independent.

Chorus 2 is a mono in / stereo out chorus – the left and right channels are summed together before entering a stereo chorus unit.



L1 TYPE
Selects the type of effect.



L2 DRY/WET
Controls the ratio between the original (dry) and the chorused sound (wet).

R1 SPEED
Adjusts the chorus speed.

R2 DEPTH
Controls how wide the detune is.

R3 PREDELAY TIME
Adds a delay (up to 100mS) before the chorus sound starts.

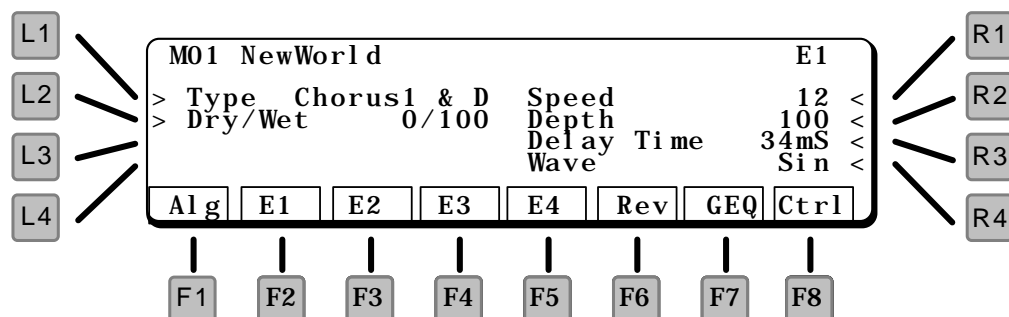
R4 WAVE
Selects the LFO waveform used to control the panning. The choices are SINE or TRIangle.

CHORUS 1 & DELAY

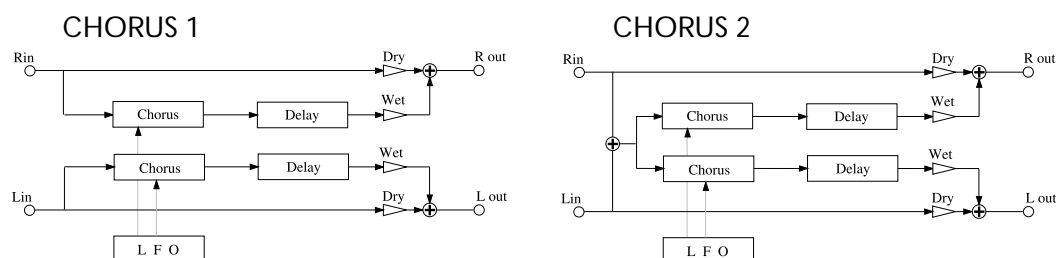
CHORUS 2 & DELAY

Chorus 1 is a true stereo in / stereo out chorus – the left and right channels are independent.

Chorus 2 is a mono in / stereo out chorus – the left and right channels are summed together before entering a stereo chorus unit.



L1 TYPE
Selects the type of effect.



L2 DRY/WET
Controls the ratio between the original (dry) and the chorused sound (wet).

R1 SPEED
Adjusts the chorus speed.

R2 DEPTH
Controls how wide the detune is.

R3 DELAY TIME
Adds a repeating delay of the chorused sound (up to 200mS) .

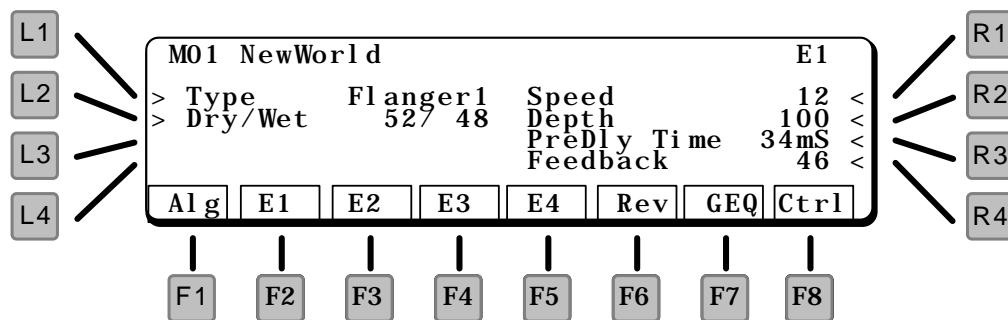
R4 WAVE
Selects the LFO waveform used to control the panning. The choices are SINE or TRIangle.

FLANGER 1

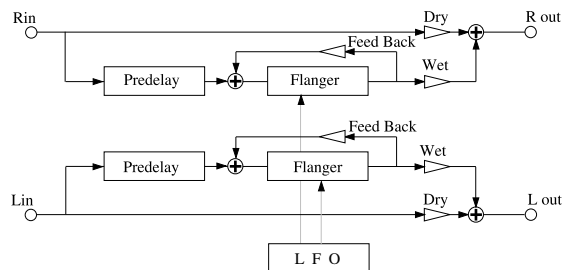
FLANGER 2

Flange is a slight detune of the sound, with an airy phasing, which adds depth to the sound. Great for guitars and electric pianos.

In Flanger 1, the flange control is 180° out of phase between the left and right channels. In Flanger 2, the flange control is *in* phase between the left and right channels.



L1 TYPE
Selects the type of effect.



L2 DRY/WET
Controls the ratio between the original (dry) and the flanged sound (wet).

R1 SPEED
Adjusts the flanger speed.

R2 DEPTH
Controls how wide the detune is.

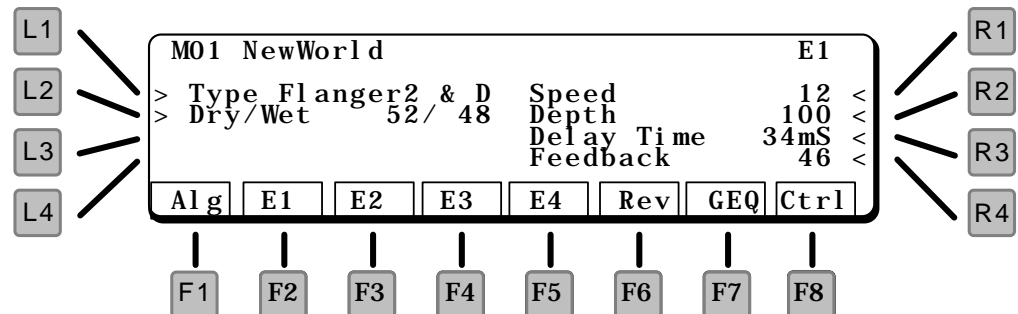
R3 PREDELAY TIME
Adds a delay (up to 100mS) before the flanger starts.

R4 FEEDBACK
Controls the feedback of the flanging sound.

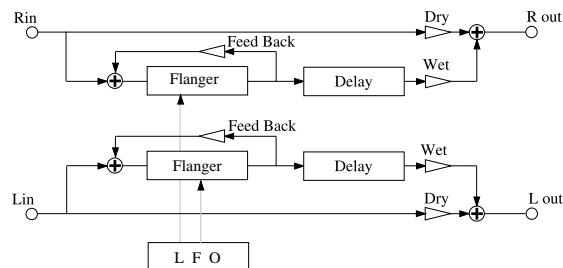
FLANGER 1 & DELAY

FLANGER 2 & DELAY

In Flanger 1, the flange control is 180° out of phase between the left and right channels. In Flanger 2, the flange control is in phase between the left and right channels.



L1 TYPE
Selects the type of effect.



L2 DRY/WET
Controls the ratio between the original (dry) and the flanged sound (wet).

R1 SPEED
Adjusts the flanger speed.

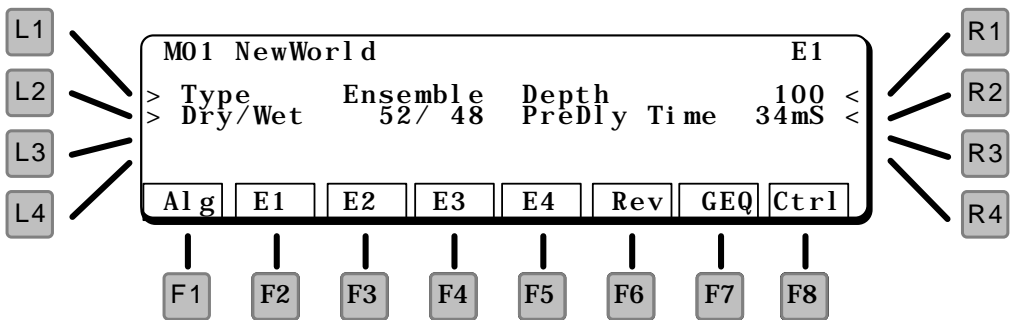
R2 DEPTH
Controls how wide the detune is.

R3 DELAY TIME
Adds a repeating delay of the flanged sound (up to 200mS).

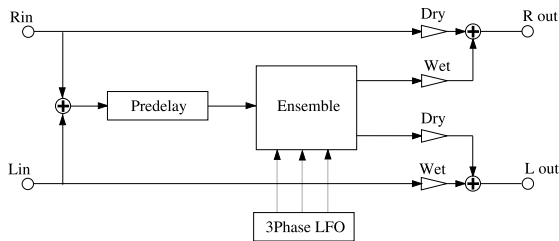
R4 FEEDBACK
Controls the feedback of the flanging sound. Does not affect the delay.

ENSEMBLE

Ensemble is a three phase chorus, with each of the three chorus units at a different phase and frequency. This gives a slightly richer sound than the Celeste effect, below.

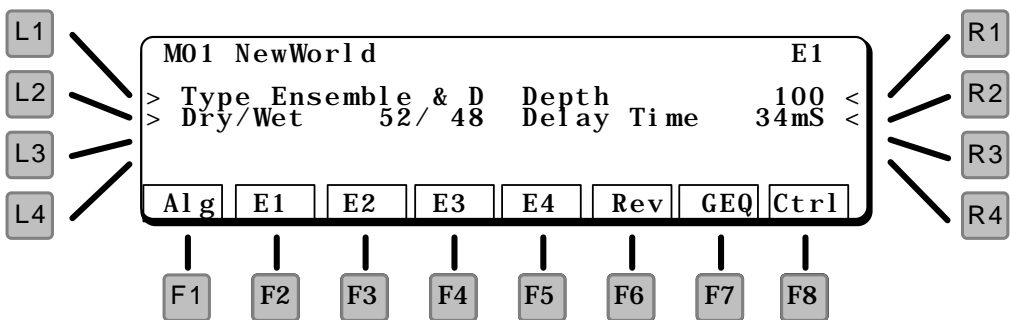


L1 TYPE
Selects the type of effect.

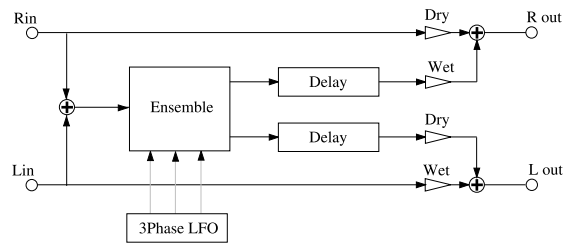


- L2 DRY/WET**
Controls the ratio between the original (dry) and the chorused sound (wet).
- R1 DEPTH**
Adjusts the amount of effect.
- R2 PREDELAY TIME**
Adds a delay (up to 100ms) before the ensemble starts.

ENSEMBLE & DELAY



L1 TYPE
Selects the type of effect.



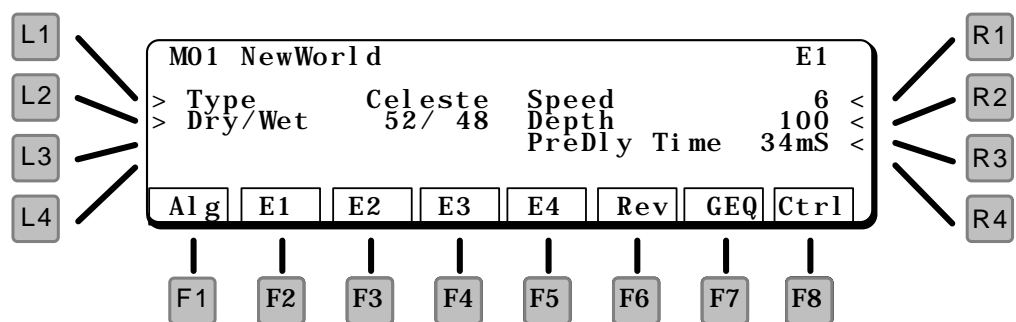
L2 DRY/WET
Controls the ratio between the original (dry) and the chorused sound (wet).

R1 DEPTH
Adjusts the ensemble depth.

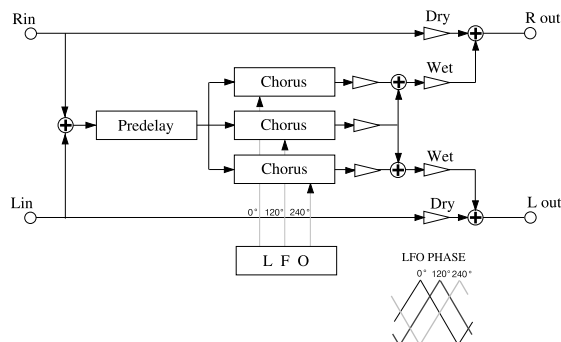
R2 DELAY TIME
Adds a repeating delay of the Ensemble sound (up to 200mS).

CELESTE

Celeste is a three phase chorus, with each of the three chorus units at a different phase.



L1 TYPE
Selects the type of effect.

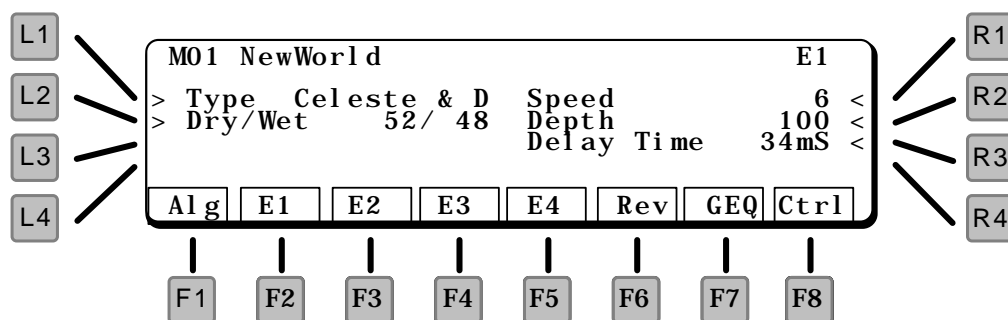


L2 DRY/WET
Controls the ratio between the original (dry) and the chorused sound (wet).

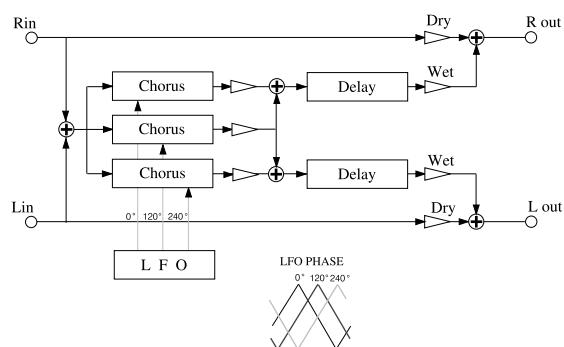
R1 SPEED
Adjusts the ensemble speed.

- R2 DEPTH**
Controls how wide the detune is.
- R3 PREDELAY TIME**
Adds a delay (up to 100mS) before the celeste starts.

CELESTE & DELAY



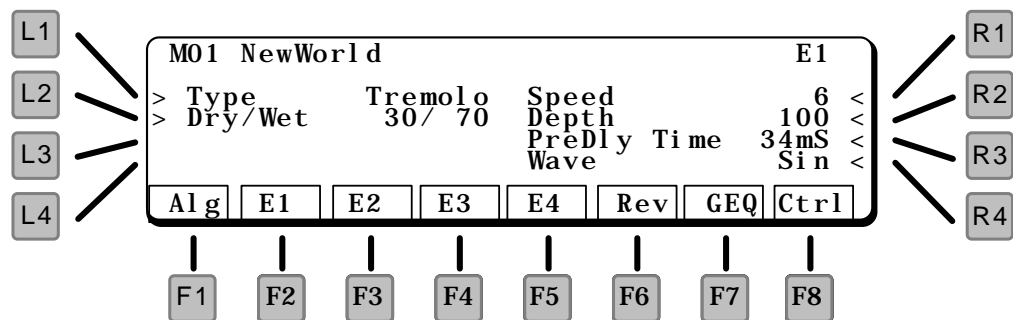
- L1 TYPE**
Selects the type of effect.



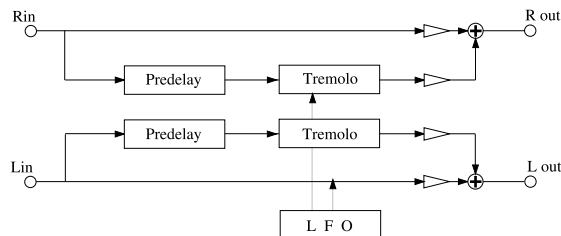
- L2 DRY/WET**
Controls the ratio between the original (dry) and the chorused sound (wet).
- R1 SPEED**
Adjusts the ensemble speed.
- R2 DEPTH**
Controls how wide the detune is.
- R3 DELAY TIME**
Adds a repeating delay of the Celeste sound (up to 200mS).

TREMOLO

Tremolo changes the volume of the sound, making it louder and softer. Can be used for surf guitar sounds.



L1 TYPE
Selects the type of effect.



L2 DRY/WET
Controls the ratio between the original (dry) and the tremolo sound (wet).

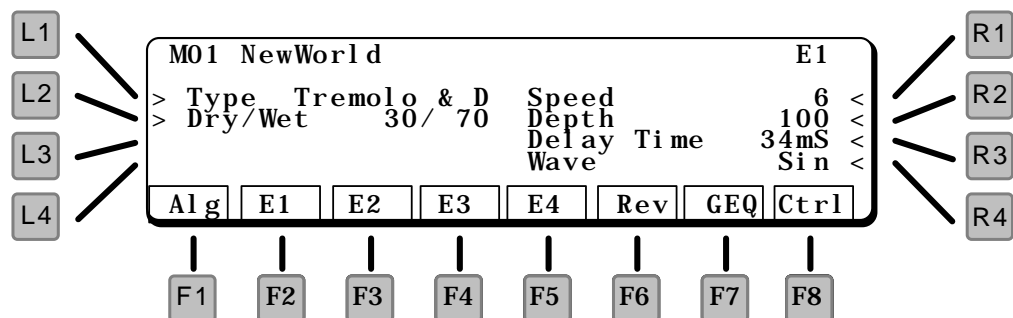
R1 SPEED
Adjusts the tremolo speed.

R2 DEPTH
Controls how deep the tremolo is.

R3 PREDELAY TIME
Adds a delay (up to 100mS) before the tremolo starts.

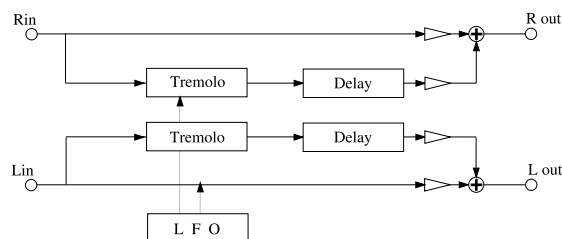
R4 WAVE
Selects the LFO waveform used to control the tremolo. The choices are SINE or TRIangle.

TREMOLO & DELAY



L1 TYPE

Selects the type of effect.



L2 DRY/WET

Controls the ratio between the original (dry) and the tremolo sound (wet).

R1 SPEED

Adjusts the tremolo speed.

R2 DEPTH

Controls how deep the tremolo is.

R3 DELAY TIME

Adds a repeating delay of the tremolo sound (up to 200ms).

R4 WAVE

Selects the LFO waveform used to control the tremolo. The choices are SINE or TRIangle.

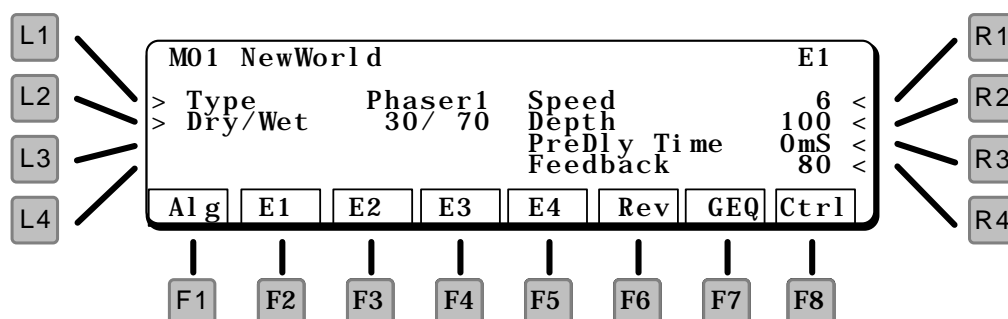
PHASER 1

PHASER 2

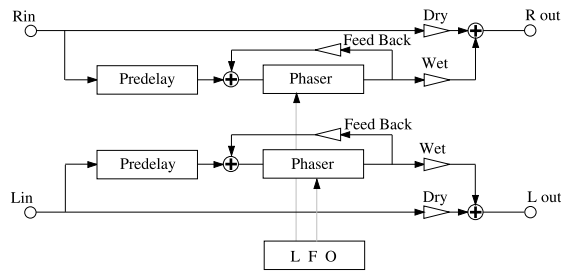
The phaser creates a phase change in the sound, adding motion to the sound. Good for any sustain sounds, such as strings and organ, as well as for electric pianos and other vintage guitar sounds.

Phaser 1 is a true stereo in / stereo out phase shifter – the left and right channels are independent.

Phaser 2 is a mono in / stereo out phase shifter – the left and right channels are summed together before go into to a stereo phase shifter.



L1 TYPE
Selects the type of effect.



L2 DRY/WET
Controls the ratio between the original (dry) and the phaser sound (wet).

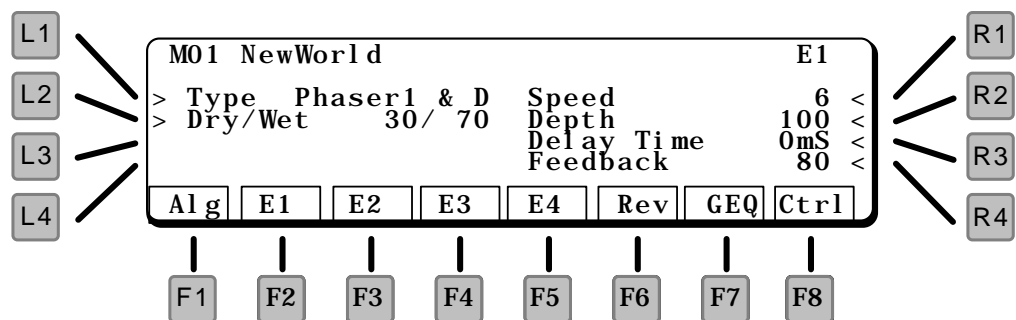
R1 SPEED
Adjusts the phaser speed.

R2 DEPTH
Controls how wide the phasing is.

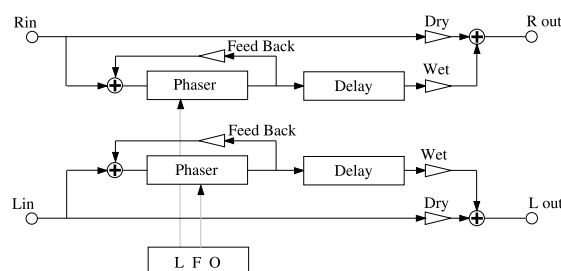
R3 PREDELAY TIME
Adds a delay (up to 100mS) before the phasing starts.

R4 FEEDBACK
Feeds the sound back into itself, creating a longer sustained sound.

PHASER 1 & DELAY PHASER 2 & DELAY



L1 TYPE
Selects the type of effect.

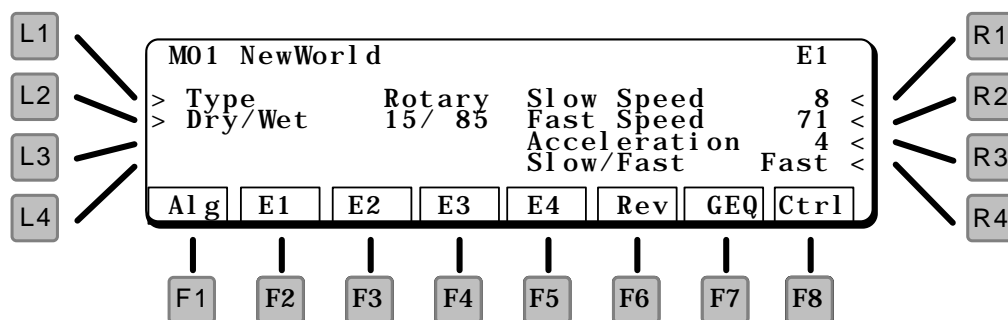


L2 DRY/WET
Controls the ratio between the original (dry) and the phaser sound (wet).

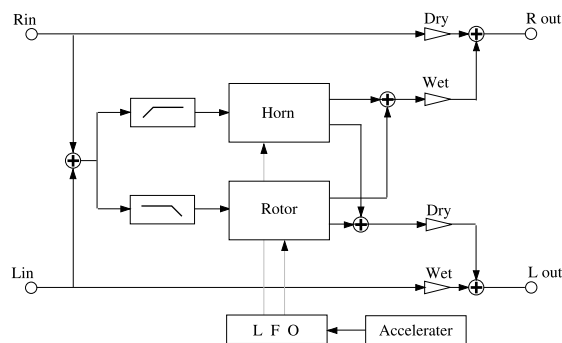
- R1 SPEED**
Adjusts the phaser speed.
- R2 DEPTH**
Controls how wide the phasing is.
- R3 DELAY TIME**
Adds a repeating delay of the phaser sound (up to 200mS).
- R4 FEEDBACK**
Feeds the sound back into itself, creating a longer sustained sound.

ROTARY

This offers a two speed phasing effect, designed to simulate the slow and fast switching of an organ rotary speaker.



- L1 TYPE**
Selects the type of effect.



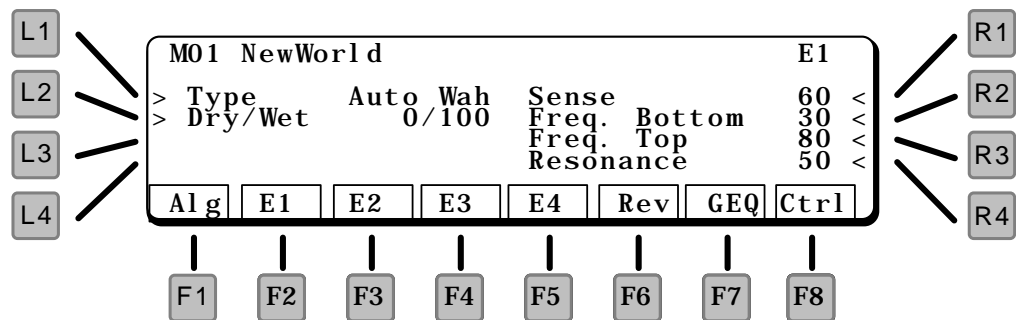
- L2 DRY/WET**
Controls the ratio between the original (dry) and the rotary sound (wet).
- R1 SLOW SPEED**
Adjusts the slow rotary speed.
- R2 FAST SPEED**
Adjusts the fast rotary speed.
- R3 ACCELERATION**
Controls the time it takes to switch from slow to fast or fast to slow.

R4 SLOW/FAST SWITCH

Changes between slow and fast. When this parameter is changed, the rotary changes to the other speed at a rate determined by the Acceleration parameter. You can control this parameter using the Effect Controller, page 81.

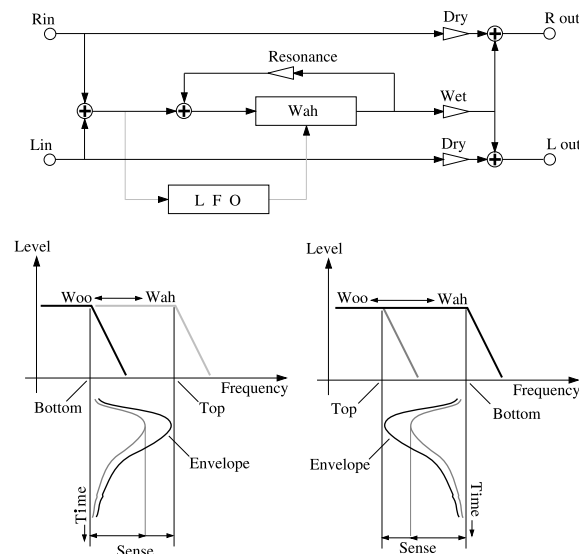
AUTO WAH

The Auto Wah sweeps the filter up and down on note attack, simulating a wah pedal.



L1 TYPE

Selects the type of effect.



L2 DRY/WET

Controls the ratio between the original (dry) and the wah sound (wet).

R1 SENSE

Adjusts the sensitivity of the wah effect to the key velocity. The harder the note is played, the higher the wah will sweep.

R2 FREQUENCY BOTTOM

Sets the starting and ending filter point.

R3 FREQUENCY TOP

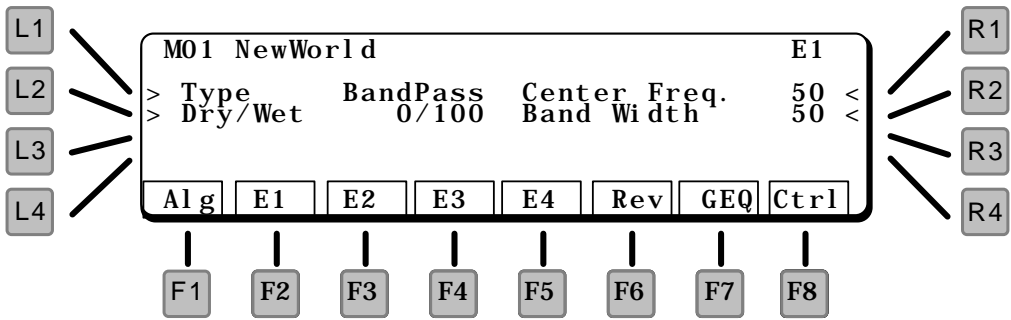
Sets the peak point of the filter sweep.

R4 RESONANCE

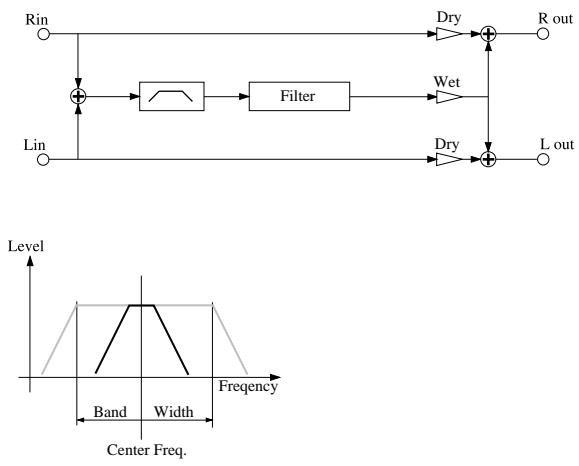
Adjusts the filter resonance, for more of a pronounced "wah" effect.

BANDPASS

The Bandpass effect filters out sound above and below the filter point. This can be used to create “telephone” sound, for example, or music playing out of a small radio.



L1 TYPE
Selects the type of effect.



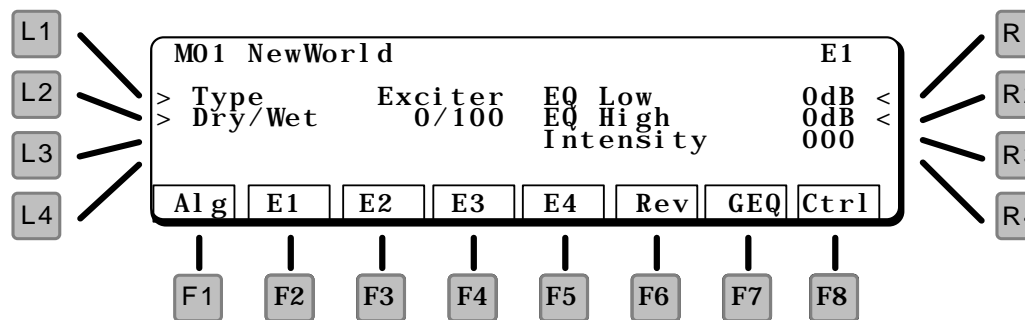
L2 DRY/WET
Controls the ratio between the original (dry) and the filtered sound (wet).

R1 CENTER FREQUENCY
Adjusts the center point for the bandpass filter.

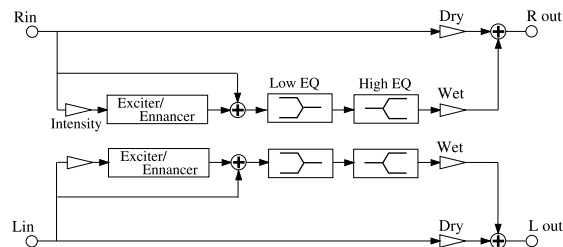
R2 BAND WIDTH
Adjusts how wide the filtering will be on either side of the Center Frequency.

EXCITER

The Exciter emphasizes high frequencies to make a sound more easily discernible in a mix. The exciter uses to distortion to achieve its emphasis.



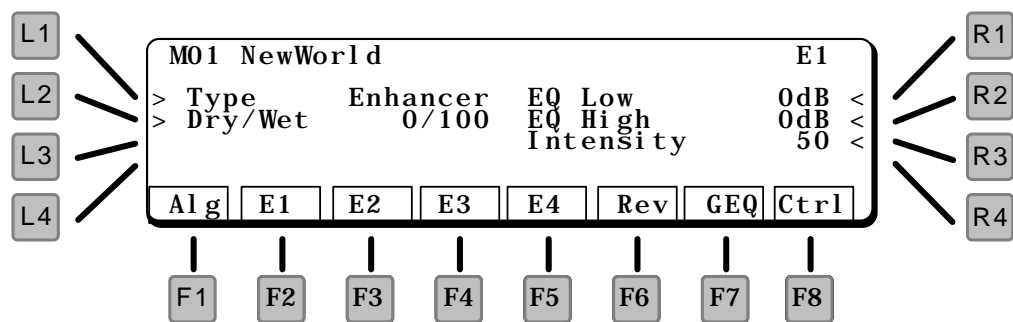
L1 TYPE
Selects the type of effect.



- L2 DRY/WET**
Controls the ratio between the original (dry) and the excited sound (wet).
- R1 EQ LOW**
Adjust frequencies below the exciter point.
- R2 EQ HIGH**
Adjust frequencies above the exciter point.
- R3 INTENSITY**
Adjusts the amount of exciter effect.

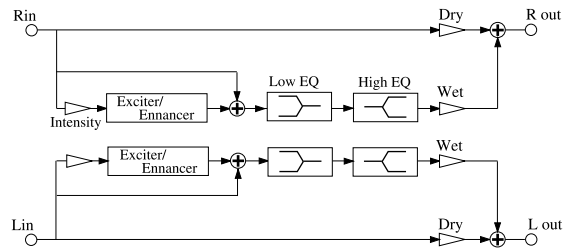
ENHANCER

The Enhancer emphasizes high frequencies to make a sound more easily discernible in a mix. The Enhancer uses to phase shift and filtering to achieve its emphasis.



L1 TYPE

Selects the type of effect.



L2 DRY/WET

Controls the ratio between the original (dry) and the enhanced sound (wet).

R1 EQ LOW

Adjust frequencies below the enhanced point.

R2 EQ HIGH

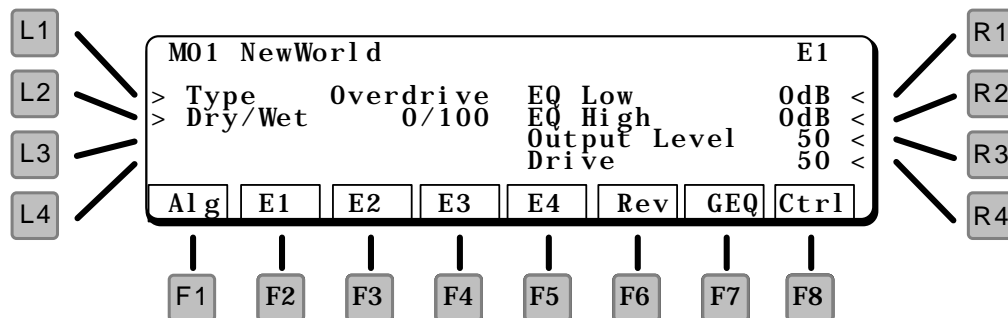
Adjust frequencies above the enhanced point.

R3 INTENSITY

Adjusts the amount of enhancement.

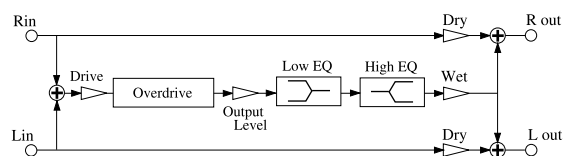
OVERDRIVE

The overdrive effect adds distortion and sustain for electric guitar “fuzz” type sounds. It is a softer type of distortion than the Distortion effect, below.



L1 TYPE

Selects the type of effect.



L2 DRY/WET

Controls the ratio between the original (dry) and the distorted sound (wet).

R1 EQ LOW

Adjusts the low frequencies of the overdrive effect.

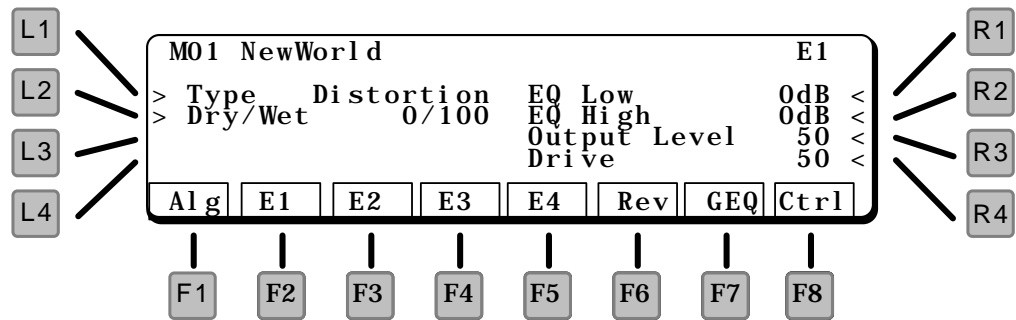
R2 EQ HIGH

Adjusts the high frequencies of the overdrive effect.

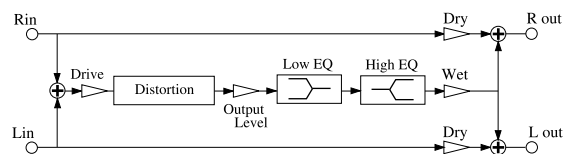
- R3 OUTPUT LEVEL**
Adjusts the level of the overdrive effect.
- R4 DRIVE**
Adjusts the amount of distortion.

DISTORTION

The distortion effect adds a harder distortion and sustain for electric guitar “fuzz” type sounds.



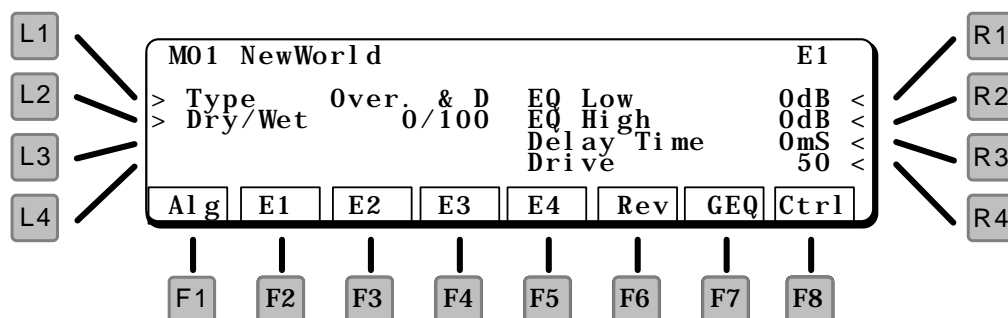
- L1 TYPE**
Selects the type of effect.



- L2 DRY/WET**
Controls the ratio between the original (dry) and the distorted sound (wet).
- R1 EQ LOW**
Adjusts the low frequencies of the distortion effect.
- R2 EQ HIGH**
Adjusts the high frequencies of the distortion effect.
- R3 OUTPUT LEVEL**
Adjusts the level of the distortion effect.
- R4 DRIVE**
Adjusts the amount of distortion.

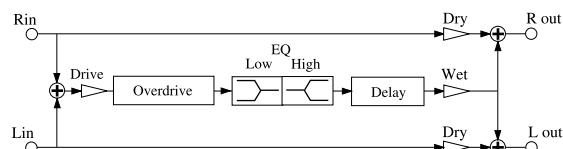
OVERDRIVE & DELAY

Overdrive & Delay adds a slap echo delay to the overdrive sound. The result is an even longer sustained distortion sound.



L1 TYPE

Selects the type of effect.



L2 DRY/WET

Controls the ratio between the original (dry) and the distorted sound (wet).

R1 EQ LOW

Adjusts the low frequencies of the overdrive effect.

R2 EQ HIGH

Adjusts the high frequencies of the overdrive effect.

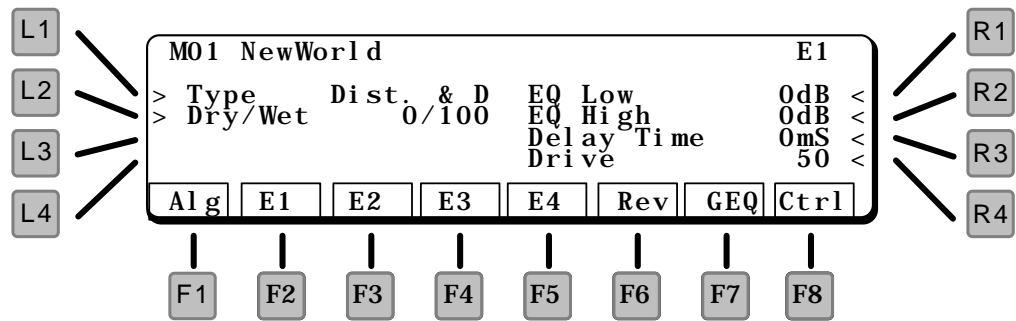
R3 DELAY TIME

Adjusts the time of the delay (up to 200mS).

R4 DRIVE

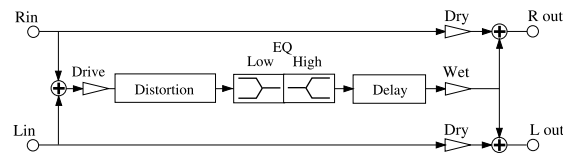
Adjusts the amount of distortion.

DISTORTION & DELAY



L1 TYPE

Selects the type of effect.



L2 DRY/WET

Controls the ratio between the original (dry) and the distorted sound (wet).

R1 EQ LOW

Adjusts the low frequencies of the overdrive effect.

R2 EQ HIGH

Adjusts the high frequencies of the overdrive effect.

R3 DELAY TIME

Adjusts the time of the delay (up to 200mS).

R4 DRIVE

Adjusts the amount of distortion.

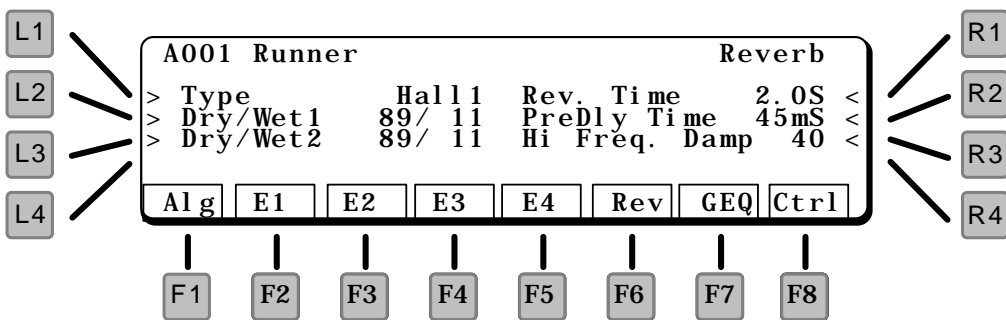
REVERB TYPES

Rev

The Reverb block represents reverberation effects. Any of eleven different reverb types can be assigned, which include a variety of rooms, halls, and plates. The available controls vary from one effect to another.

As can be seen from the block diagram, there are two inputs to the reverb section. Each reverb screen has a pair of Wet/Dry parameters, one for each input. These two *reverb sends* allow you to adjust the reverb balance for each input independently.

- HALL 1
- HALL 2
- HALL 3

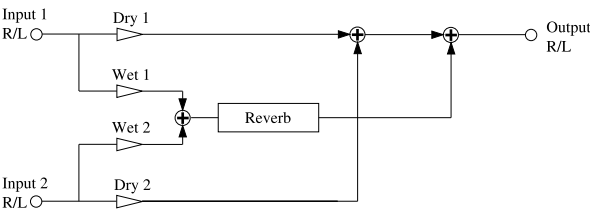


L1 TYPE
Selects the type of effect.

HALL 1
Standard Hall

HALL 2
Small Hall

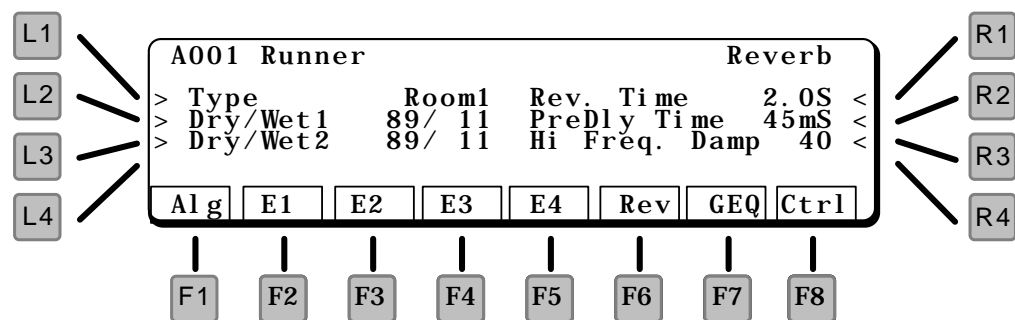
HALL 3
Bright Hall



L2 DRY/WET 1
Controls the ratio between the original sound (dry) and the reverberated sound (wet) for the *top input* in the algorithm.

- L3 DRY/WET 2**
Controls the ratio between the original sound (dry) and the effected sound (wet) for the *bottom input* in the algorithm.
- R1 REVERB TIME**
Total reverberation time, in seconds.
- R2 PREDELAY TIME**
The amount of delay time before the effect.
- R3 HIGH FREQUENCY DAMPING**
In most natural acoustic spaces, high frequencies are absorbed faster than low frequencies. High Frequency Damping simulates this phenomenon by causing the high frequencies to die out faster. The more damping, the faster they die out – and sounds like there is more carpet or drapes in the room. Concrete room? Set the damping to 1.

ROOM 1
ROOM 2
ROOM 3

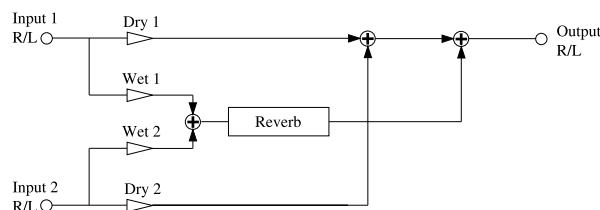


- L1 TYPE**
Selects the type of effect.

ROOM 1
Standard Room

ROOM 2
Large Room

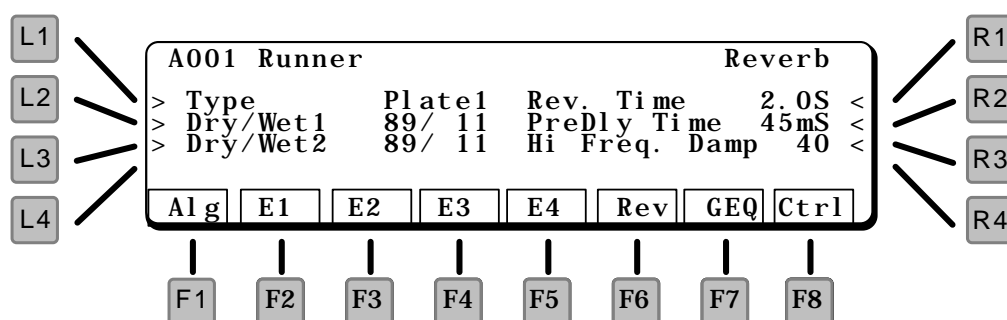
ROOM 3
Bright Room



- L2 DRY/WET 1**
Controls the ratio between the original sound (dry) and the reverberated sound (wet) for the *top input* in the algorithm.

- L3 DRY/WET 2**
Controls the ratio between the original sound (dry) and the effected sound (wet) for the *bottom input* in the algorithm.
- R1 REVERB TIME**
Total reverberation time, in seconds.
- R2 PREDELAY TIME**
The amount of delay time before the effect.
- R3 HIGH FREQUENCY DAMPING**
In most natural acoustic spaces, high frequencies are absorbed faster than low frequencies. High Frequency Damping simulates this phenomenon by causing the high frequencies to die out faster.

PLATE 1
PLATE 2
PLATE 3

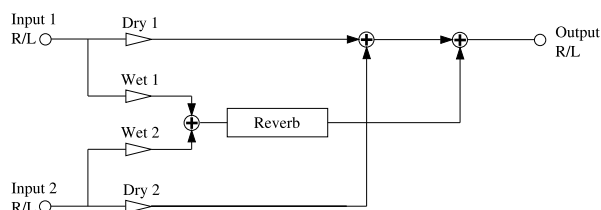


- L1 TYPE**
Selects the type of effect.

PLATE 1
Large Plate

PLATE 2
Small Plate

PLATE 3
Mellow Plate

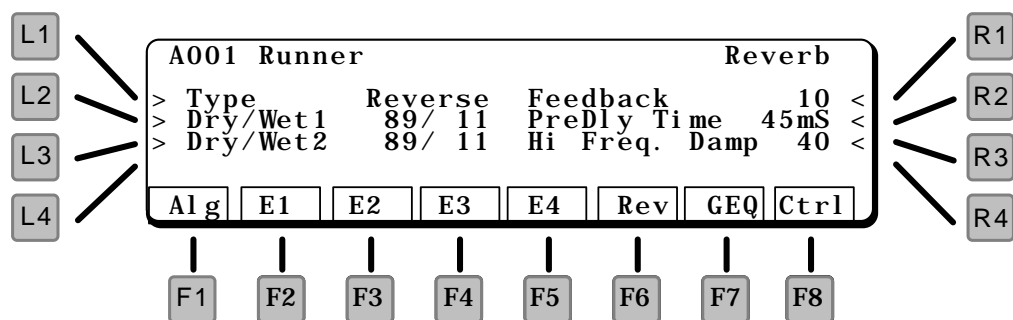


- L2 DRY/WET 1**
Controls the ratio between the original sound (dry) and the reverberated sound (wet) for the *top input* in the algorithm.
- L3 DRY/WET 2**
Controls the ratio between the original sound (dry) and the effected sound (wet) for the *bottom input* in the algorithm.

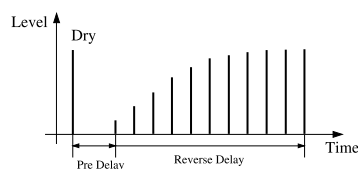
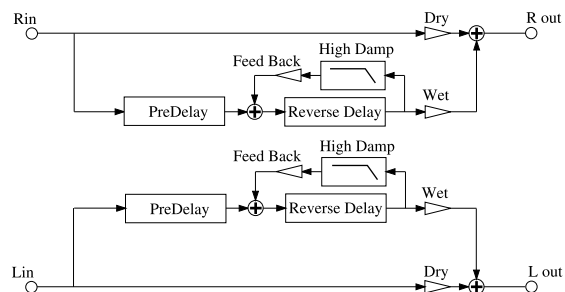
- R1 REVERB TIME**
Total reverberation time, in seconds.
- R2 PREDELAY TIME**
The amount of delay time before the effect.
- R3 HIGH FREQUENCY DAMPING**
In most natural acoustic spaces, high frequencies are absorbed faster than low frequencies. High Frequency Damping simulates this phenomenon by causing the high frequencies to die out faster.

REVERSE

Instead of decaying as natural reverb does, reverse reverb builds up as shown in the diagram below.



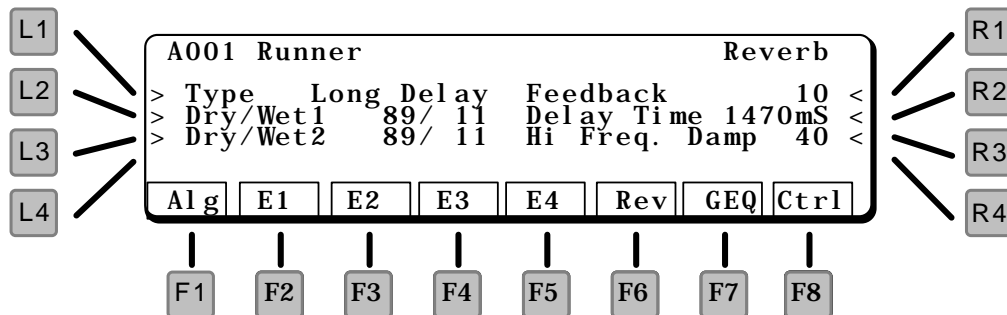
- L1 TYPE**
Selects the type of effect.



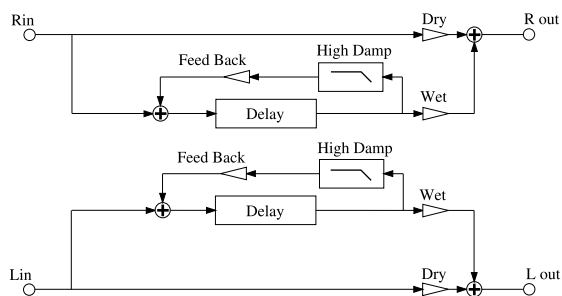
- L2 DRY/WET 1**
Controls the ratio between the original sound (dry) and the reverberated sound (wet) for the *top input* in the algorithm.
- L3 DRY/WET 2**
Controls the ratio between the original sound (dry) and the effected sound (wet) for the *bottom input* in the algorithm.
- R1 FEEDBACK**
Amount of delay looped back into the input. This creates a repeating delay.

- R2 PREDELAY TIME**
The amount of delay time before the effect.
- R3 HIGH FREQUENCY DAMPING**
Attenuates high frequencies from each repeat.

LONG DELAY



- L1 TYPE**
Selects the type of effect.



- L2 DRY/WET 1**
Controls the ratio between the original sound (dry) and the delayed sound (wet) for the *top input* in the algorithm.
- L3 DRY/WET 2**
Controls the ratio between the original sound (dry) and the delayed sound (wet) for the *bottom input* in the algorithm.
- R1 FEEDBACK**
Amount of delay looped back into the input. This creates a repeating delay.
- R2 DELAY TIME**
Adjusts the delay time in 10mS increments, from 200 - 1470 mS. (1.47 seconds)
- R3 HIGH FREQUENCY DAMPING**
Attenuates high frequencies from each repeat.

MULTI SECTION

Multi Patches are *combinations* of up to four Single patches. They can be arranged in layers, key splits, velocity splits, multiple channels or any combination.

MULTI PLAY

Pressing the Multi key on the right side of the keyboard brings up the Multi Play window.

M07		Moonrise	
Chimera	Runner	SynStrg1	G00M
1 1ch	2 1ch	3 1ch	4 1ch
0 96	+12 97	0 104	0 120
Trns Vol	Trns Vol	Trns Vol	Trns Vol

The name of the Multi patch is displayed as well as the name, MIDI channel, transpose, and volume for each Single patch that it contains.

SELECTING MULTI PATCHES

To select one of the 64 Multi patches, use the Patch Select keys 0 through 9 on the right side of the panel. To change banks, use the Patch Select keys 00 through 06. The Bank menu screen appears as shown below.

Multi Bank Menu			
M10	Komradds	M15	E- Normus
M11	Addalogg	M16	Raunch
M12	Addalogg2	M17	TakeOver
M13	CashFlow	M18	Frostbyt
M14	W1NBRASS	M19	Wi lder

This screen lists the patches in the selected bank. To select one press the 0-9 key corresponding to the last digit of the patch number. A different patch will play, with the display as shown at the top of this section.

MODIFYING MULTI PATCHES

In Multi Play mode, the transposition and volume of each single patch can be adjusted. Press one of the F keys as described below, then use the value dial to change the setting.

M07		Moonrise	
Chimera	Runner	SynStrg1	G00M
1 1ch	2 1ch	3 1ch	4 1ch
0 96	+12 97	0 104	0 120
Trns Vol	Trns Vol	Trns Vol	Trns Vol

F1

F2

F3

F4

F5

F6

F7

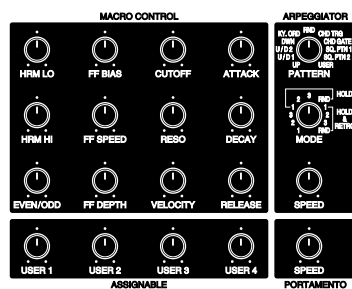
F8

F1 TRANSPOSE SECTION 1

This parameter adjusts the pitch of Section 1, in semitones. To raise a sound one octave, set the transpose to 12; to lower it one octave, set the transpose to -12.

- F2 VOLUME SECTION 1**
This parameter adjusts the volume of Section 1.
- F3 TRANSPOSE SECTION 2**
This parameter adjusts the pitch of Section 2, in semitones.
- F4 VOLUME SECTION 2**
This parameter adjusts the volume of Section 2.
- F5 TRANSPOSE SECTION 3**
This parameter adjusts the pitch of Section 3, in semitones.
- F6 VOLUME SECTION 3**
This parameter adjusts the volume of Section 3.
- F7 TRANSPOSE SECTION 4**
This parameter adjusts the pitch of Section 4, in semitones.
- F8 VOLUME SECTION 4**
This parameter adjusts the volume of Section 4.

USING THE MACRO CONTROLS



As in Single mode, the Macro and Assignable Controls on the left of the instrument are also available for instant edit in Multi mode. These controls are described on page 23. *They affect only the selected Single patch* (and others on the same MIDI channel), and add and subtract from the original values contained in each Single patch.

The arpeggiator settings also only affect the selected Single patch, and others on the same MIDI channel.

MULTI EDIT

Pressing EDIT brings up the Multi Edit Menu, below.



L1 COMMON

This jumps to the Common edit, below.

L2 SECTION

This jumps to Section edit, discussed on the next page.

L3 EFFECT

Jumps to the Effect section, page !!!.

NOTE:

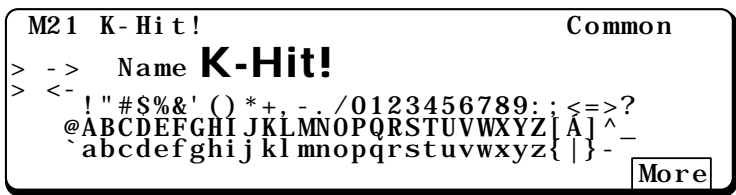
Press EXIT to return to the Multi Edit Menu.

EXITING EDIT MODE

From the Multi Edit Menu, press EXIT. An alert message appears, asking if you want to “Save and Quit”. Press WRITE to save and quit to Multi Play mode, or F8 (Quit) to return to Multi Play mode without saving. To continue editing, press EDIT.

COMMON

Enter the name of the Multi patch from this page.



L1 and L2 select which character is selected, the Value dial selects the desired letter or number.

F8 MORE

This advances to the Volume page.

M21 K- Hit!	Common
> Volume	120
Back	

L1 VOLUME

This sets the master volume for the Multi patch.

F1 BACK

This returns to the Name page.

SECTION

The Section pages contain parameters to setup each of the four sections of a Multi Patch.

L1	<div> <div>M07 Moonrise</div> <div>Section</div> <div> > Single A053 Chimera > Sec Volume 97 Receive Ch > Sec Pan 27L Transpose > Effect Path 1 Fine </div> <div> Sec1 Sec2 S--3 S--4 More </div> </div>	R1
L2		R2
L3		R3
L4		R4

F1	F2	F3	F4	F5	F6	F7	F8
----	----	----	----	----	----	----	----

SELECTING A SECTION

The Section parameters are duplicated for each section in a Multi patch. To select a section, press the function key for the desired section (F2 – F5). In the display above, Section 1 is selected.

ENABLING / MUTING SECTIONS

Turning individual sections on and off is useful for editing. In addition, many Multi patches do not need all four sections enabled.

With the desired section selected (highlighted), press the section function key again (F2 – F5). The Section will turn on or off each time the function button is pressed.

In the display above, Sections 1 and 2 are enabled (Sec1), Sections 3 and 4 are muted (S--4). The “ec” changes to “--” when a section is muted.

SECTION MENU FUNCTIONS

L1 SINGLE PATCH

Selects the Single patch for this section.

L2 SECTION VOLUME

Adjusts the volume for the section.

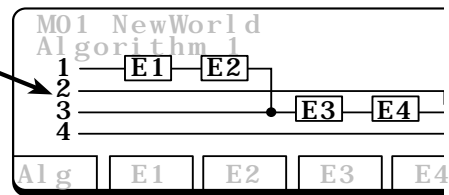
L3 SECTION PAN

Adjusts the stereo pan for the section.

L4 EFFECT PATH

Routes this section to one of the four inputs of the effects section. For more on the Effects, please see page !!!.

Effect Path routes the Section to one of these Effect inputs



R2 SECTION CHANNEL

Sets the MIDI receive channel for the section. By setting each section to a different channel, the K5000S can play up to four independent parts when controlled from an external sequencer or computer.

R3 TRANSPOSE

Adjusts the transposition of the selected section, in semitone increments. A transposition of +12 is one octave higher.

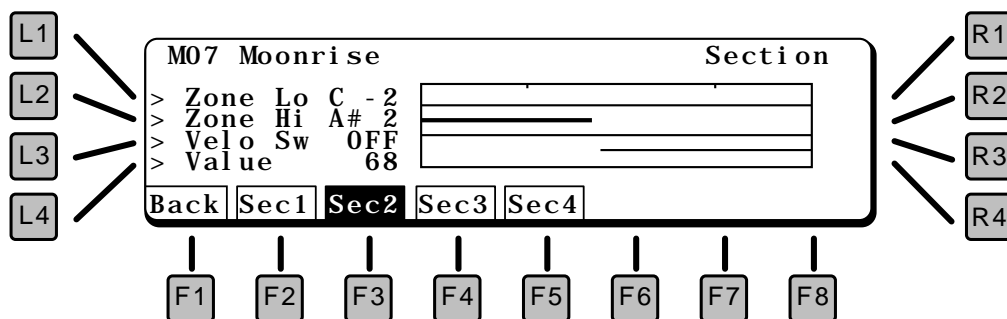
R4 FINE

Adjusts the tuning of the section.

F8 MORE

Jumps to the Zone screen, below.

SECTION KEY AND VELOCITY ZONES



L1 ZONE LO

Sets the lowest note that will be played. The keyboard graphic visually shows the range. The selected section is highlighted.

L2 ZONE HI

Sets the highest note that will be played.

R1 VELOCITY SWITCH

Sets the velocity range. At Loud, only hard (loud) notes will sound. At Soft, only soft notes will sound. When set to OFF, the velocity switch is turned off and notes play at all velocity levels.

R2 VALUE

Sets the threshold between high and low velocity. This is the MIDI velocity number.

F1 BACK

Press to return to the previous screen.

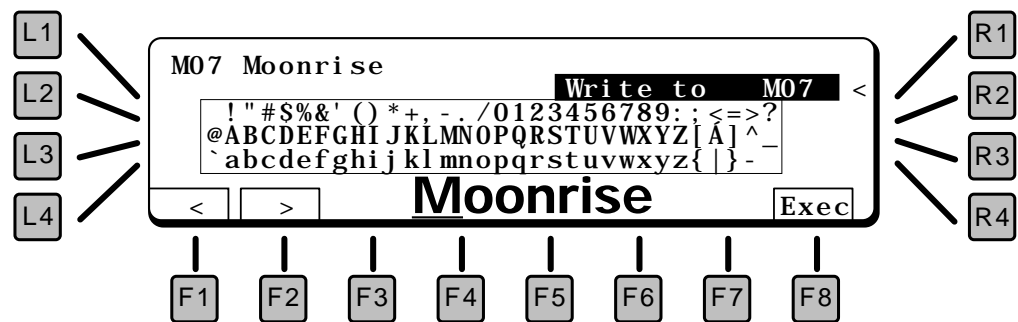
WRITE

After editing, save your Multi by pressing the WRITE button in the COMMON section of the front panel. The following screen appears.



L1 WRITE

This saves your patch to the internal memory area.



R1 WRITE LOCATION

Use the Value dial to select a location to save your patch.

F1/F2 CHARACTER

This names the patch. Use the F1 and F2 keys to select a character in the name (moves the cursor), and the Value dial to select a letter.

F8 EXECUTE

Stores the patch.

COMMON

The Common area of the front panel, to the left of the LCD, contains controls for parameters that concern the entire instrument.

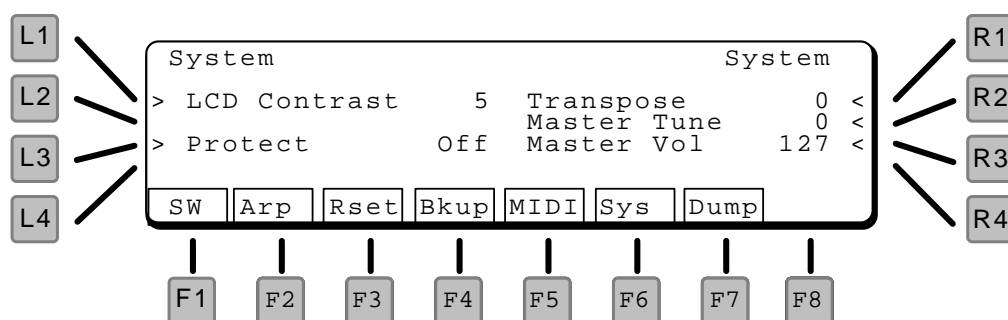
SYSTEM SECTION

The System pages offer preference settings, that control the general behavior of the K5000S.

The seven Function keys (F1 – F7) jump between the seven sections of the System parameters.

- F1 FSW**
Goes to the Switch page.
- F2 ARPEGGIATOR**
Goes to the Arpeggiator page.
- F3 RESET**
Goes to the reset page.
- F4 BACKUP**
Goes to the Backup page.
- F5 MIDI**
Goes to the System MIDI page.
- F6 SYSTEM**
Goes back to the main System page, below.
- F7 DUMP**
Goes to the MIDI Data Dump page.

SYSTEM

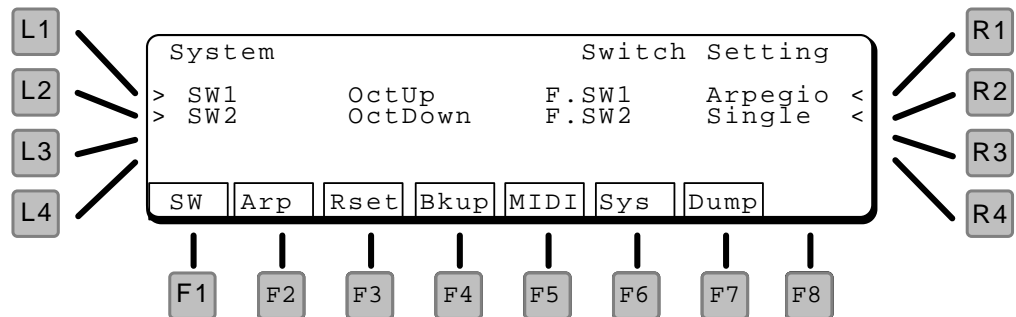


- L1 LCD CONTRAST**
This adjusts the contrast of the LCD display. Adjust it so the display can be seen clearly.
- L3 PROTECT**
This turns on the memory protect for the internal program memory. When Protect is on, sound programs can not be saved to internal memory.
- R1 TRANSPOSE**
Master Transpose for the instrument.

- R2 MASTERTUNE**
Master Tune for the instrument.
- R3 MASTERVOLUME**
This sets the MIDI master volume for the instrument, MIDI controller 7.

FSW (PROGRAMMABLE SWITCHES)

On this page, the functions of the programmable switches (under the disk drive) and programmable footswitch jacks (on the rear panel) can be set.



THE AVAILABLE SETTINGS ARE:

SINGLE

Set by Single Patch parameters. See page !!! for available settings.

ARPEGGIO

Turns the arpeggiator on and off, same as the Arpeggiator button on the front panel.

OCTUP

Transposes the keyboard up an octave.

OCTDOWN

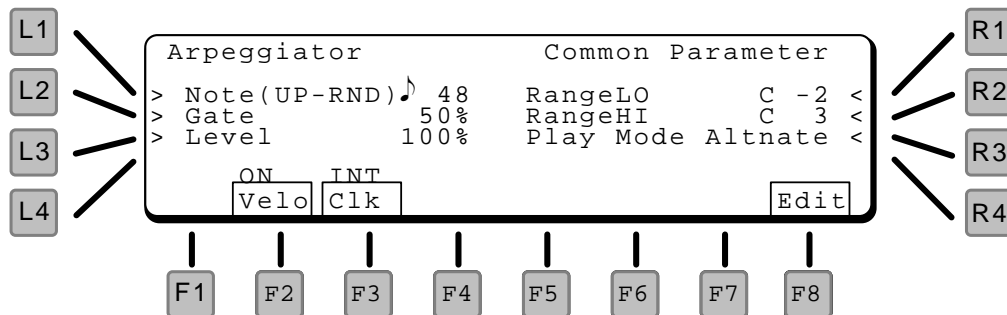
Transposes the keyboard down an octave.

- L1 SWITCH1**
Selects the function for Switch 1.
- L2 SWITCH2**
Selects the function for Switch 2.
- R1 FOOTSWITCH1**
Selects the function for Footswitch 1.
- R2 FOOTSWITCH2**
Selects the function for Footswitch 2.

ARPEGGIATOR

One of the unique features of the K5000S is its programmable Arpeggiator, which allows a sophisticated level of programming.

COMMON PARAMETERS



L1 NOTE VALUE

This sets the note value for the arpeggiator when in Up, Down, Up/Down, Key Order, and Random modes – quarter, eighth, sixteenth notes, etc. The settings are based on a clock resolution of 96 pulses per quarter note. This results in the following possible settings:

	96	Quarter Note
	64	Quarter Note Triplet
	48	Eighth Note
	32	Eighth Note Triplet
	24	Sixteenth Note
	16	Sixteenth Note Triplet
	12	Thirty-second note

L2 GATE

This sets the duration of each note as a percentage of arpeggio time. At 100%, each note will be gated up to the start of the next note. At 50%, the gate duration will be half of the time to the next arpeggio note.

L3 LEVEL

This sets the level of each note as a percentage of the keyed velocity.

R1 RANGE LO

Sets the low note of the arpeggiator range. For example, you can set the lowest two octaves for the arpeggiator, then play over the arpeggio with the rest of the keyboard.

R2 RANGE HI

Sets the high note of the arpeggiator range.

R3 PLAY MODE

The Sequence Pattern settings (SQ.PTN1, SQ.PTN2) have a programmed number of “arpeggio positions”. This parameter determines what happens if there are fewer notes to arpeggiate than positions.

REST

The extra positions are filled with rests.

LAST

The last note repeats to fill the extra positions.

FIRST

The first note repeats to fill the extra positions.

ALTERNATE

The played notes are repeated in reverse order to fill the extra positions. If the repeated notes go back all the way to the beginning, more notes will be repeated again, this time from the beginning.

F2 VELOCITY

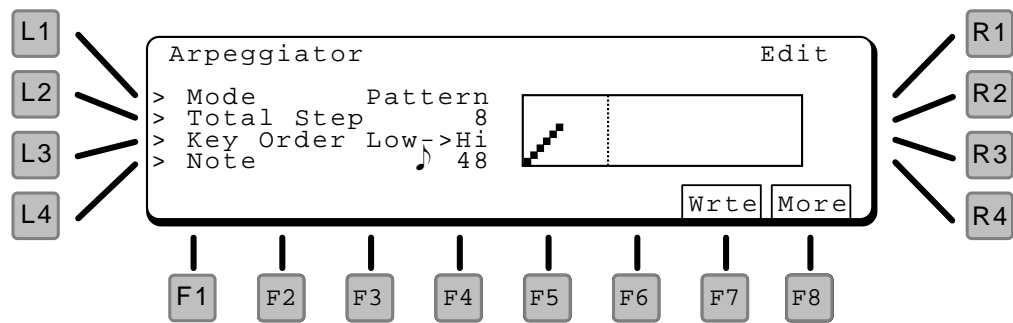
This turns on velocity sensitivity for the arpeggiator. If On each note will play according to key velocity. If Off all notes will play at the same velocity.

F3 CLOCK

This sets the arpeggiator clock source. If set to EXT, the arpeggiator will advance in time with an external sequencer or computer.

ARPEGGIATOR EDIT

In the next two pages you can program your own arpeggio patterns. You can adjust timing, level, and gate time, to create a rhythmic sequence pattern – you select notes by playing the keyboard.



L1 MODE

There are three playback modes:

PATTERN

Notes play one at a time, with velocity controlled by the keyboard and note length (timing) controlled by the arpeggiator. You can program up to four part harmony on each step.

TRIGGER

All notes play together according to the programmed pattern. You can program velocity and timing.

GATER

You can program the volume level and length for each step, creating a rhythmic character to the chord.

L2 TOTAL STEP

This is the number of steps in the pattern. If fewer notes are played, the pattern will either insert rests or repeat notes according to the setting on page !!!.

L3 KEY ORDER

KEY ON








Notes are arpeggiated in the order in which they are played on the keyboard.

LOW->HI

Notes are arpeggiated from low to high pitch.

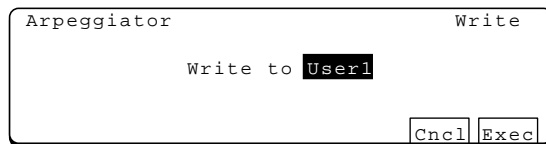
L4 NOTE

This sets the note value for the arpeggiator when in Up, Down, and Random modes – quarter, eighth, sixteenth notes, etc. The settings are based on a clock resolution of 96 pulses per quarter note. This results in the following possible settings:

	96	Quarter Note
	64	Quarter Note Triplet
	48	Eighth Note
	32	Eighth Note Triplet
	24	Sixteenth Note
	16	Sixteenth Note Triplet
	12	Thirty-second note

F7 WRITE

Writes the arpeggio settings to memory. The following dialog box appears:



Choose one of the eight arpeggio memory locations using the Value dial. Press Exec to continue.

Are you sure? Press F8 to continue, F1 to cancel.

NOTE:

If you exit the arpeggiator without saving, you will be prompted to save the arpeggio settings.



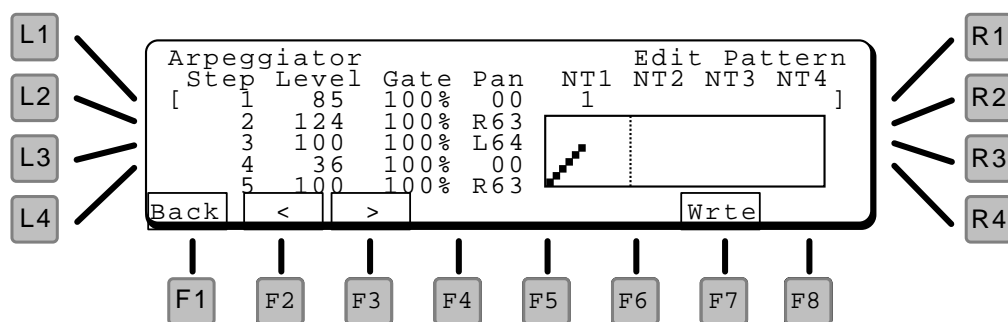
Press F1 to discard your changes, F8 to go to the Write screen above.

F8 MORE

Goes to the arpeggio pattern editor, below.

ARPEGGIO PATTERN EDIT

On this screen you can edit the arpeggio pattern itself.



Use the arrow keys (F2 & F3) to navigate left to right in the parameter list.

STEP

This is the step number of the pattern, 1 to a maximum of 32. With Step highlighted, turn the value dial to navigate through the steps in the pattern.

DIFFERENTIATING NOTES AND STEPS

When you play a chord on the keyboard, each note is assigned a number – from bottom to top, or in the order played. These note numbers normally correspond exactly with the step numbers – the arpeggiated sequence, to give the typical ascending note arpeggiator effect.

However, the K5000S arpeggiator does not have to maintain this correspondence, as explained below. You can arrange the notes in any combination you want – which gives you the ability to preprogram a sequence pattern and then control it live from the keyboard.

LEVEL

The level of the note to be played on this step.

REST

If the Level is turned all the way down, a rest is applied to this step.

REPEAT

If the Level is turned all the way up, the arpeggio repeats up to the Total Step duration of the arpeggio.

NOTE:

Repeat cannot be select for the first step of the arpeggio.

GATE

This sets the duration of the note as a percentage of arpeggio time. At 100%, the note will be gated up to the start of the next note. At 50%, the gate duration will be half of the time to the next note.

PAN

This sets the panning of the selected note step. If the Pan is turned down all the way, “---” appears and no panning is applied.

NT1 ~ NT4 (NOTE 1 ~ NOTE 4)

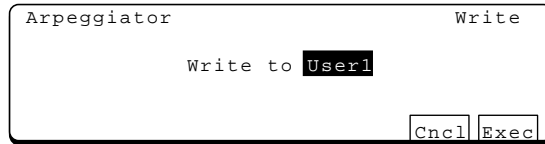
These parameters control which note(s) play on each step.

Up to four notes can actually play on each step – this is where the note vs. step issue becomes important. Normally the NT1 parameter has the same value as the Step Number.

For example, if you wanted to maintain a continuous bass not underneath the rest of the arpeggio, you would set NT1 to 1 on *every* step, then set NT2 equal to the step number on each step. The result: a two voice arpeggio with one voice playing all the notes, the other playing only the lowest (or first) note.

F7 WRITE

Saves the arpeggio settings. There are eight user arpeggio memories. Choose the desired memory location using the Value dial, then press F8 to execute.



Are you sure? Press F8 to continue, F1 to cancel.

NOTE:

If you exit the arpeggiator without saving, you will be prompted to save the arpeggio settings.



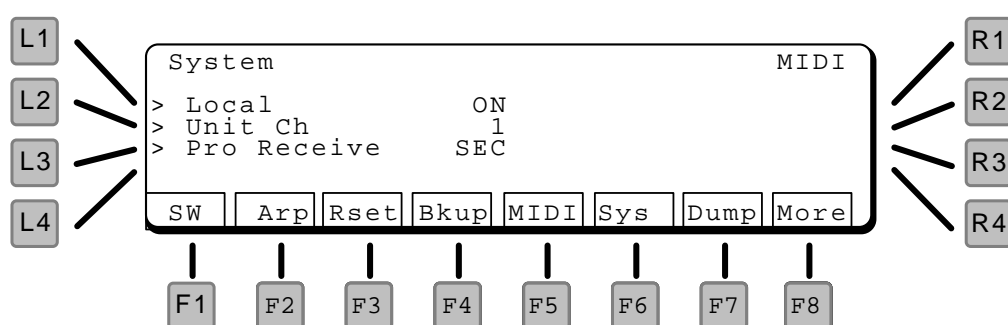
Press F1 to discard your changes, F8 to go to the Write screen above.

RESET

This function reloads all patches from the backup Flash memory. This would only be necessary to restore original patches after receiving a MIDI data dump or playing a MIDI sequence with recorded MIDI patch data.

BACKUP

This function saves all patches in memory to the backup Flash memory area. This is only necessary to save a MIDI data dump, since the patch dump data is written to the working RAM memory only.



L1 LOCAL

Sets MIDI Local Control. If ON the keyboard and sequencer are attached to the sound generator. If off, the keyboard/sequencer and sound module are separated. Turning off local control is useful when an external MIDI sequencer is used.

L2 UNIT CHANNEL (SYSTEM CHANNEL)

This sets the basic MIDI channel for the unit. This is the channel that will be transmitted by the keyboard, and the channel on which Normal program changes will be received.

L3 PROGRAM RECEIVE

Sets the mode for receiving program changes.

NORMAL

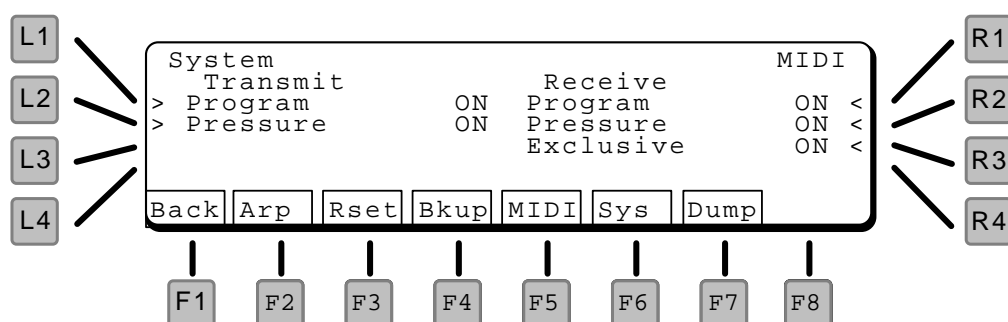
A received program change message causes the instrument to change patches.

SECTION

Within a Multi patch, a received program change message changes only the Single patch assigned to that channel.

F8 MORE

Goes to the next page of parameters.



L1 TRANSMIT PROGRAM

If on, the K5000S will transmit program changes.

L2 TRANSMIT PRESSURE

If on, the K5000S will transmit aftertouch pressure.

R1 RECEIVE PROGRAM

If on, the K5000S will receive program changes.

R2 RECEIVE PRESSURE

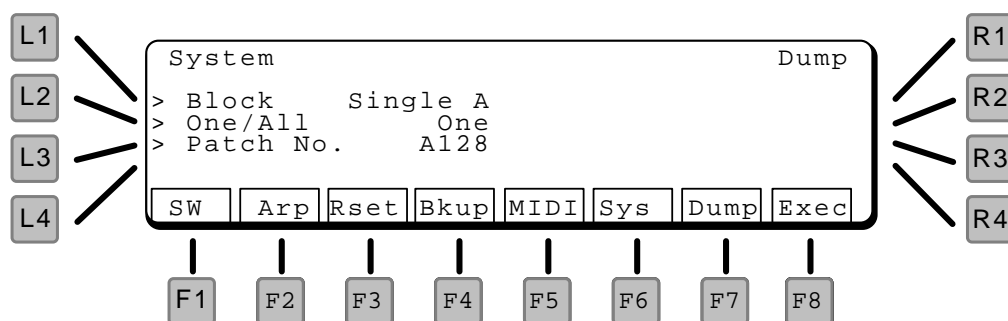
If on, the K5000S will receive aftertouch pressure.

R3 RECEIVE EXCLUSIVE

If on, the K5000S will receive system exclusive messages.

DUMP

This page is used to initiate a MIDI System Exclusive file transfer. The program data is transmitted across MIDI.



L1 BLOCK

Selects which sound block to transfer.

BLOCKS

SINGLE

A Single sound bank (A or D).

MULTI

Multi combination sound bank

L2 ONE/ALL

Selects a single program or all the programs in the selected block.

L3 PATCH NUMBER

If One is selected above, this parameter selects the individual patch to dump.

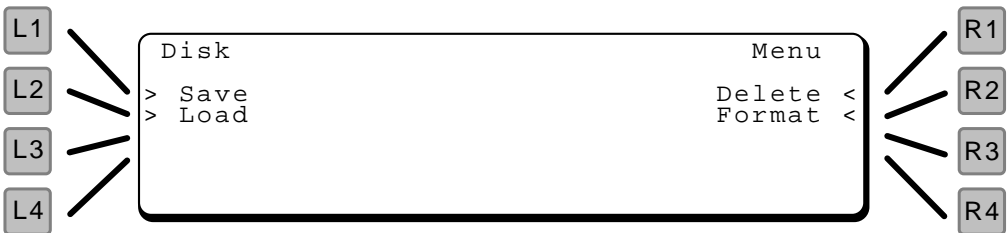
F8 EXECUTE

Initiates the data transfer. *Are You Sure?* Press YES (F8) to start, NO (F1) to cancel.

DISK SECTION

The Disk pages enable you to save your work on floppy disks. Whether to backup your patches, save a song for a studio date, load new sounds for another project, you'll find the K5000S's disk is your gateway to the outside world.

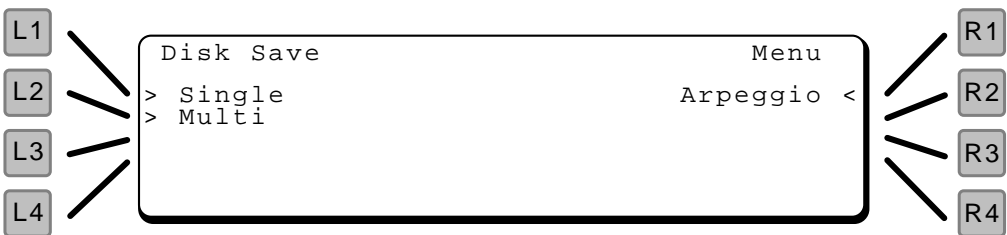
Pressing DISK on the front panel brings up the Disk Menu screen, below.



There are four options for saving, loading, and deleting files, as well as for formatting new diskettes.

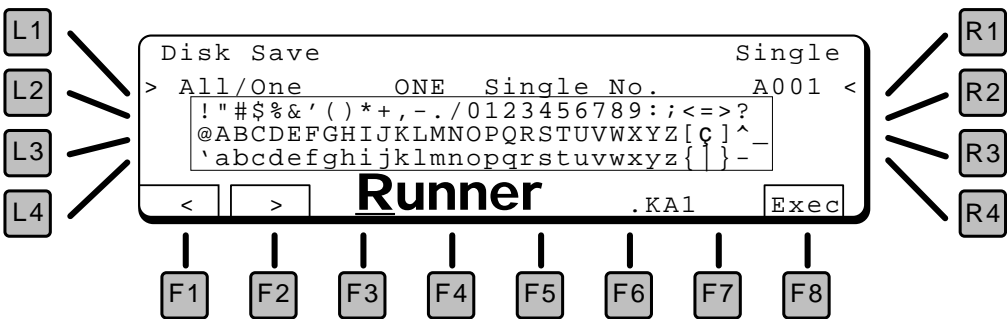
L1 SAVE

This section is for saving the various types of files in the K5000S to disk. Choose one of the options as described below.



L1 SAVE SINGLE

You can save individual Single patches or an entire bank to disk.



L1 ALL/ONE

Choose ALL the patches in a bank, or just ONE.

NOTE:

The single bank selected before entering the Disk Section will be the only bank available.

R1 SINGLE NO.

If you want to save one patch to disk, select the patch number here.

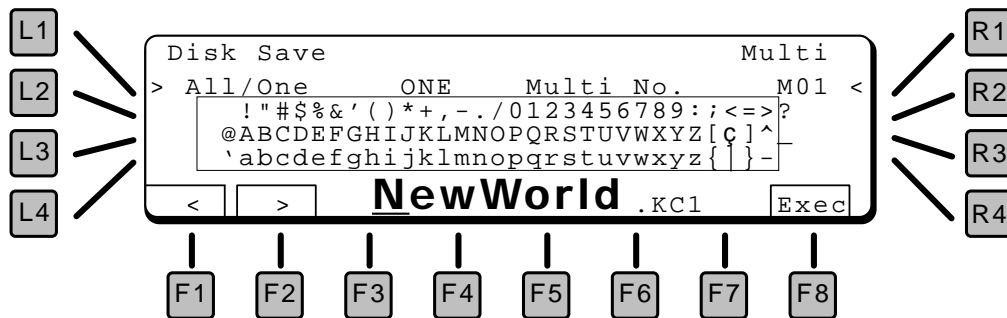
F1/F2 CHARACTER

This names the file on the disk. Use the F1 and F2 keys to select a character in the name (moves the cursor), and the Value dial to select a letter.

F8 EXECUTE

Press Execute to save the file. It will be saved with the file extension shown after the name. See page !!! for a list of K5000S file types.

L2 SAVE MULTI



L1 ALL/ONE

Choose the entire MULTI bank, or just ONE Multi patch.

R1 MULTI NO.

If you want to save one patch to disk, select the patch number here.

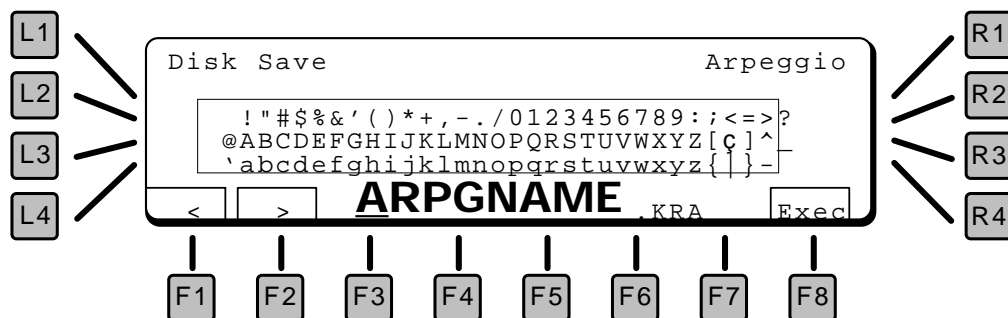
F1/F2 CHARACTER

This names the file on the disk. Use the F1 and F2 keys to select a character in the name (moves the cursor), and the Value dial to select a letter.

F8 EXECUTE

Press Execute to save the file. It will be saved with the file extension shown after the name. See page !!! for a list of K5000S file types.

L3 SAVE ARPEGGIO PATTERN



F1/F2 CHARACTER

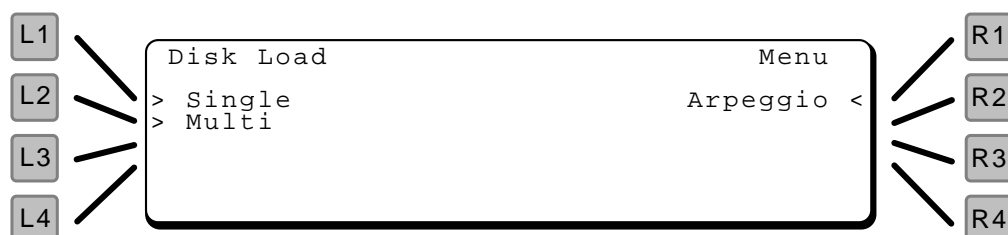
This names the file on the disk. Use the F1 and F2 keys to select a character in the name (moves the cursor), and the Value dial to select a letter.

F8 EXECUTE

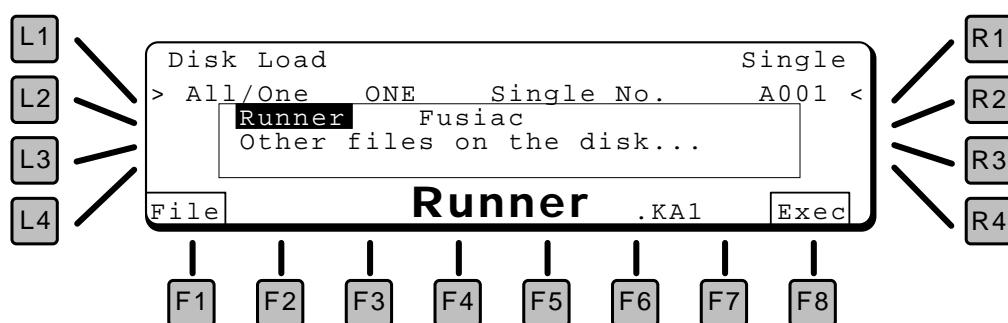
Press Execute to save the file. It will be saved with the file extension shown after the name. See page !!! for a list of K5000S file types.

L2 LOAD

This section is for loading the various types of files into the K5000S from disk. Choose one of the options as described below.



This shows the Load Single procedure. The others are similar.



L1 ALL/ONE

Choose a patch bank file (.KAA) or a file with only ONE patch (.KA1).

R1 SINGLE NO.

This is the destination location for the file.

F1 FILE

This scrolls through the files on the disk that match the selected file type. Use the Value dial to select the desired file.

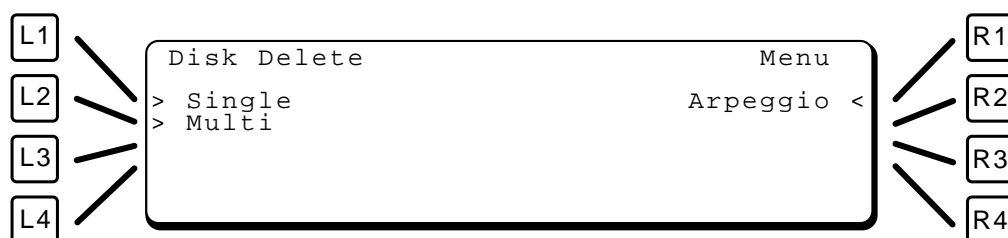
F8 EXECUTE

Press Execute to load the file.

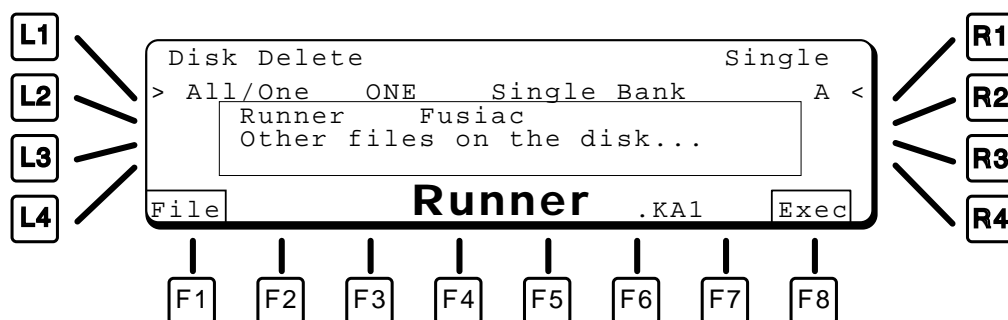
MAC / WIN 95 USERS NOTE:

All file names must be in standard DOS 8+3 letter format or it will not be recognized.

R1 DELETE



This shows the Delete Single procedure. The others are similar.



L1 ALL/ONE

Choose a patch bank file (.KAA) or a file with only ONE patch (.KA1).

R1 SINGLE BANK

Select the type of Single bank to delete: A or D.

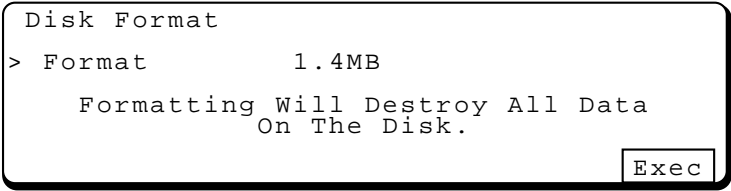
F1 FILE

This scrolls through the files on the disk that match the selected file type. Use the Value dial to select the desired file.

F8 EXECUTE

Press Execute to delete the file from the disk.

R2 FORMAT



This formats a disk to be used by the K5000S. The K5000S uses the same format as IBM compatible PCs. If a diskette is already formatted in standard PC format, then it is not necessary to reformat the disk.

- L1 FORMAT TYPE**
Choose the type of disk you wish to format: 1.4MB for High Density diskettes (2HD), 720KB for older Double Density diskettes (2DD).
- F8 EXECUTE**
This starts the format process. Press F8 to continue, F1 to cancel.

FILE FORMAT LIST

The following file formats can be read and written by the K5000S:

FUNCTION	DATA	FILE TYPE	FILE NAME	EXAMPLE	READ/WRITE
Save/Load	Single ADD	One	*.KA1	A32	o
		All	*.KAA	A1-A64	o
	Multi (or Combi)	One	*.KC1	M1	o
		All	*.KCA	M1-M64	o
	Arpeggio	All	*.KRA		o
Operating System	Program		K5000SR.SYS		Read Only

APPENDIX

PCM WAVE LIST

No.	Group	Wave Name	No.	Group	Wave Name	No.	Group	Wave Name	No.	Group	Wave Name
1	Piano	OldUp1r1	70	DistHarm	Harmnics	139	Ahh	ChorAah1	201	Perc 2	Kalimba1
2		OldUp1r2	71	Banjo	Dulcimer2	140		Voice1	202		Agogo
3		Gr.Piano	72		Banjo	141		Halo Pad1	203		WoodBlok
4		WidPiano	73	Sitar	Sitar	142		Echoes	204		Melo.Tom
5		Br.Piano	74	Shami	Shamisen	143		ChorAah2	205		Syn.Drum
6		Hnkytonk1	75	Koto	Koto	144		ChorAah3	206		E.Percus
7		E.Grand1	76		TaishoK11	145		Sweep2	207		Scratch
8		Hnkytonk2	77		TaishoK12	146		RockOrgn2	208		E.Tom1
9		E.Grand2	78	Harp	Harp1	147	Bright Ahh	Choir1	209		E.Tom2
10		E.Grand3	79		Harp2	148		Halo Pad2	210		Castanet
11		Metallic1	80	AcBass	Ac.Bass1	149		Chiff2	211		TaikoDrm
12	EP	E.Piano1	81		Ac.Bass2	150		Bright2	212		RevCymb1
13		60's EP	82		Ac.Bass3	151	Doo	Voi Ooh1	213		WndChime
14		E.Piano2	83	FingBass	FngBass1	152		SynVoice	214	Noise	BrthNoiz
15	Digi EP	E.Piano3	84		Ac.Bass4	153		NewAge2	215		Flute3
16		E.Piano4	85		FngBass2	154		Choir2	216		Recorder1
17	Clavi	Clavi1	86		TubeBass2	155		Goblns1	217		PanFlute2
18	Organ	Drawbar1	87	PickBass	PickBass1	156		Voi Ooh2	218		Ocarina1
19		Drawbar2	88		MutePick1	157	Brass	Orchstra2	219		Flute4
20		DetunOr1	89		PickBass2	158		Oct.Bras1	220		DrawBar4
21		Drawbar3	90		MutePick2	159		BrasSect1	221		Piccolo2
22		PercOrg1	91	Fretless	Fretless	160		Brass1	222		TenorSax2
23		PercOrg2	92	Slap Bass	SlapBas1	161		Oct.Bras2	223		BrthTenr2
24		ChrcOrg1	93		FunkGtr1	162	OrchHit	Orch Hit1	224		Seashore
25		ChrcOrg2	94		FunkGtr2	163		Orch Hit2	225		Wind
26	Percussion	Celesta1	95		SlapBas2	164	Trumpet	WarmTrmp	226		FretNoiz
27		Vibe	96		SlapBas3	165		Trumpet	227		GtCtNiz1
28		Glocken1	97		SlapBas4	166		Tuba1	228		GtCtNiz2
29		Marimba	98	SynBass	SynBass1	167	Trombone	DublBone	229		StrgSlap
30		Glocken2	99		SynBass2	168		Tuba2	230	SFX	Rain2
31		NewAge1	100		SynBass3	169		TromBone	231		Thunder
32		Xylophon	101		SynBass4	170		BrasSect2	232		Stream1
33		TubulBel	102		HouseBass1	171	MuteTpt	Mute Tp	233		Stream2
34		Stl Drum	103		HouseBass2	172	Horn	FrenchHr1	234		Bubble
35		Timpani1	104		SynBass5	173		FrenchHr2	235		Bird1
36		CncertBD1	105	Violin	Violn	174	SAX	SprnoSax	236		Bird2
37	NylonGtr	NylonGt1	106		Fiddle	175		Bassoon1	237		Dog
38		Ukulele	107		SlwVioln	176		AltoSax1	238		HorseGalp
39		NylonGt2	108	Viola	Viola	177		AltoSax2	239		Tel1
40		Nyln + Stl	109	Cello	Cello	178		TenorSax1	240		DoorCreak
41		Atmosphr1	110		Contra1	179		BrthTenr1	241		Door
42	SteelGtr	SteelGt1	111		Contra2	180		Brass2	242		Helicopter
43		Sci-F11	112	Strings	Strings1	181		Bari Sax	243		CarEngine
44		Mandolin1	113		Strings2	182	Oboe	EnglHorn	244		CarStop
45		Mandolin2	114		Orchestra1	183		Bassoon2	245		CarPass
46		SteelGt2	115		Strings3	184		Oboe	246		CarCrash
47		12strGtr1	116		Strings4	185		Winds1	247		Siren
48		12strGtr2	117		Bright1	186		Winds2	248		Train
49		Dulcimer1	118		Atmosphr2	187		Shanai1	249		JetPlan
50	JazzGtr	JazzGtr1	119		Sweep1	188		Bag Pipe1	250		StarShip
51	CleanGtr	CleanGtr1	120	Pizz	Pizzicto1	189	Clarinet	Clarinet	251		Applause1
52		Hi.E.Gtr1	121		Pizzicto2	190		Winds3	252		Applause2
53		ChorusGtr	122	SynStr	SynStrg1	191	Flute	Flute1	253		Laughing
54		TubeBass1	123		SynBras1	192		Winds4	254		Screaming
55	ClnGtrHead	CleanGtr2	124		SynStrg2	193		Calliope1	255		Punch
56		Hi.E.Gtr2	125		Poly Syn1	194		Flute2	256		HeartBeat
57	MuteGtr	MuteGtr1	126		Rain1	195		Piccolo1	257		FootStep
58	OvdGtr	OvrDrive1	127		Soundtrk1	196	PanFlute	PanFlute1	258		Gun
59		ResO.D.1	128		Soundtrk2	197	Bottle	Bottle	259		MachinGun
60		OvrDrive2	129		SynBass5	198		Calliope2	260		LaserGun
61		ResO.D.2	130		SynStrg3	199		Voice2	261		Explosion
62	DistGtr	Distortd	131		SynStrg4	200	Shk8	Shakhach	262		Omni1
63		Charang1	132		SynBras2				263		Omni2
64		Charang2	133		SynBras3				264		Rain3
65		FeedbkGt1	134		Chiff1				265		MuteGtr2
66		PowerGtr1	135		Fifth1				266		MusicBox1
67		Res.Dist	136		Fifth2						
68		RockOrgn1	137		Metallic2						
69		PowerGtr2	138		Sci-F12						

CYCLICAL (LOOPING) WAVE LIST

No.	Group	Wave Name	No.	Group	Wave Name	No.	Group	Wave Name	No.	Group	Wave Name
267	Sine	Sine	285	Square	SquarLd1	306	Organ,	ReedOrgn2	325	SynBass	SynBass6
268		Bowed1	286		SquarLd2	307	continued	Accord.1	326		SynBass7
269		ConcrtBD2	287		SquarLd3	308		Accord.2	327		SynBass8
270		FngBass3	288		SquarLd4	309		Accord.3	328	SynBrass	SynBras4
271		FeedbkGt2	289		Dist.Sqr1	310		Accord.4	329		SynBras5
272		Timpani2	290		Dist.Sqr2	311		TangoAcd1	330		Warm1
273	Saw	SawLead1	291	EP	E.Piano5	312		TangoAcd2	331		Warm2
274		Dr.Solo1	292		E.Piano6	313		Harmnica	332	Synth	Bowed2
275		Dr.Solo2	293		E.Piano7	314	Bell	Celesta2	333		Sweep3
276		SawLead2	294	Clavi	Clavi2	315		MusicBox2	334		Sweep4
277		DistClav1	295	Harpsicd	Hrpschrd1	316		Crystal1	335		Goblins2
278		DistClav2	296		Hrpschrd2	317		Crystal2	336	Wind	Whistle1
279		DstSawLd1	297	Organ	PercOrg3	318		Kalimba2	337		Whistle2
280		DstSawLd2	298		Drawbar5	319		TnklBell1	338		Ocarina2
281		Bass&Ld1	299		DetunOr2	320		TnklBell2	339		Recorder2
282		Bass&Ld2	300		DetunOr3	321	JazzGtr	JazzGtr2	340		Bag Pipe2
283		Poly Syn2	301		60'sOrg	322		MelowGt1	341		Shanai2
284		SawLead3	302		CheseOrg	323		Hawaiian			
			303		PercOrg4	324		MelowGt2			
			304		ChrcOrg3						
			305		ReedOrgn1						

