Eventide®
Eclipse™
Algorithms Manual

Part number: 141050 Manual Release 1.1 17 September, 2001
© 2001 Eventide, Inc., One Alsan Way, Little Ferry, NJ, 07643 USA

Harmonizer is a registered trademark of Eventide, Inc. for its audio special effects devices incorporating pitch shift.
Eclipse and Ultrashifter are trademarks of Eventide, Inc.

Eclipse Algorithms Manual – Contents

Introduction **5**

General details applying to many algorithms **6**

delays **7**

m_banddelays 7
m_bandtaps 8
m_chorusdelays 9
m_chorustaps 10
m_combdelays 11
m_combtaps 12
m_ringdelays 13
m_ringtaps 14
m_pandelays 15
st chorus delays 16
ducked delays 17
ultratap 2 18
mono loop (20) 19
mono loop (10) 19
dual loops (10) 20
dual loops (5) 20
mono reverse (20) 21
mono reverse (10) 21
dual reverse (10) 22
dual reverse (5) 22

dynamics **23**

dual compressors 23
dual noisegates 24
fm panner 25
fm trem 26

filters **27**

two band crossover 27
dual 4band para 28
dual 8 band EQ 29
dual filters 29
dual modfilters 30
stereo phaser 31
stereoizing phaser 32
dual sample/hold 33
vocal wa 34
10 band vocoder 35

plex **36**

large delay 8 plex 36

 © 2001 Eventide, Inc.

Eclipse Algorithms Manual- Contents

delay 8 plex 37
detune 4 plex 37
reverse 4 plex 38

preamps 39
fuzzADSRpre 39
bass pre 41
overdrive preamp 42
fuzz preamp 43
polydriver 44
fuzzpre wa/wammy 45
ez polyfuzz 46
polyfuzz 47

shifters 48
auto pitch correct 48
dual wammy 49
4 detuner*s* 50
reverse crystals 51
stereoshift 52
diatonicshift 2 52
multishift 2 54
dual diatonic 55
dual multishift 56
diatonic 4 57
multishift 4 58
dual modfreqshift 59

verbs 61
long reverb 8 61
reverb 8 62
reverb 16 62
dense room 16 62
dense room 8 63
s_diffusor 63
diffchorus 64

combos 65
fm modfilter/pan 65
LFO filter+pingpong 66
s/h filter+pingpong 67
manifold alpha 68
manifold beta 69
dual comp/de-ess 70
moddelays+verb8 72
multishift+verb8 73
diatonic+verb8 74

stereoshift+verb8 75

utilities 77
mute 77
thru 77
dither 77
oscillator (440) 78
chromatic tuner 79

 © 2001 Eventide, Inc.

Eclipse Algorithms Manual

Introduction

Some perusal of this manual may aid in general understanding, and assist in 'tweaking' or customizing the factory presets – however, in-depth study of the operation of the algorithms is only necessary for those who wish to get the most from the unit by creating their own presets.

The rest of this manual assumes some understanding of the structure and components of signal processing based effects, but such understanding is not otherwise necessary for normal operation of the Eclipse. People who tend mainly to load and tweak the factory effects can skip the rest of this manual if they so wish.

Each Eclipse preset is made up of one or two *algorithms*. The word *algorithm* can be defined as a "way of doing something." In Eclipse, it is a way to produce an effect – a block of signal processing elements, such as mixers, shifters, compressors, etc. Each of the algorithms can be a powerful and sometimes complex effect in itself.

The factory presets numbered 100-199 should be viewed as examples of the algorithms, and can be used as sources of the 'un-tweaked' algorithm for preset creation. In some cases their names are subtly different from those of the underlying algorithms – this is usually for display or readability purposes. The corresponding preset for each algorithm is given in parentheses below the title e.g. *(6 Chorusdelays)*

Some algorithms have very many parameters, many of which rarely need to be changed in normal use. For this reason, the most important parameters are usually brought out to *hotkeys* to allow greater accessibility. The assignment and naming of *hotkeys* is covered in the ***Operators Manual***.

 © 2001 Eventide, Inc.

General details applying to many algorithms

- With four voice stereo input delay and shifter effects, voices #1 and #3 are fed from the left input (channel #1), and voices #2 and #4 are fed from the right input (channel #2).
- All *LFO*s (Low Frequency Oscillators) may be re-triggered (synched) by an external audio source, by the front panel <TAP> button, MIDI 'start' commands or by MIDI BPM. These sources may be enabled from the modulation block (retrig) menu.
- all <t_parameters> signify *tap tempo* based rhythmic note value selection (dot 1/4, whole note, etc.) Hz, Sec, mS, etc. These are referenced from the global tempo, the 'modulation block' (taptime) parameters and external MIDIclock. Note that a 1/4 note is defined as the time between averaged <TAP> button hits.
- Many effects have a 'send' parameter - this is a link to automate the input signal remotely and can be set up as a 'send/volume pedal'.
- Unless noted otherwise, most delay times (delay and shifters) can be set to up to two seconds.
- Any pitch shift effect should be calibrated to the source signal. These effects can be program-material dependent, so some tweaking will often give better results, especially diatonic shifters, which usually need the key signature and scale to be specified.
- Any envelope/peak detector effect (including fm modulation effects) should be calibrated to the source material for the best results. This is usually a matter of adjusting for level and dynamics of the input signal.
- Any ADSR effect should be calibrated to the source material for best results. This is usually a matter of matching the dynamics of the input signal.
- Many algorithms have an “S” somewhere in their signal path. That’s the point at which the (SEND) or (MANUAL_P) level control operates.

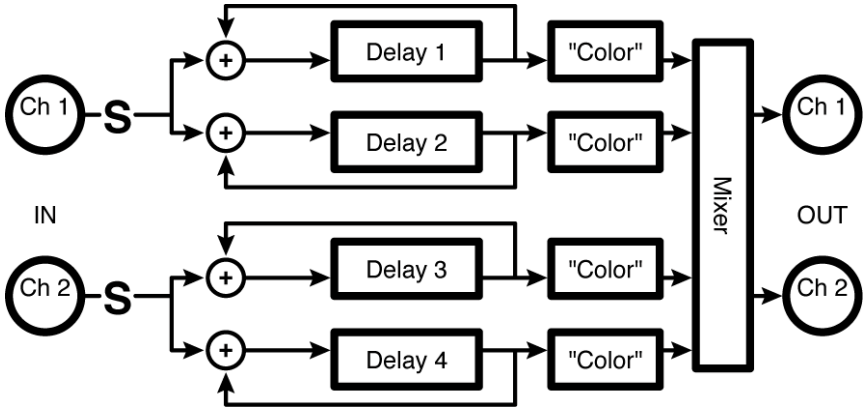
delays

m_banddelays

(10 4 Banddelays)

Four parallel delays with independent feedback paths feeding resonant bandpass filters. Tempo can be used to control delay time.

Stereo in, stereo out



***Parameters*:**

Masters	
Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the volume of the effect with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
m_Level	*Scales all the individual delay levels, effectively serving as a master volume.*
m_Delay	*Scales all the individual delay times, effectively serving as a master delay (e.g. if the four delays are set to 200ms, 150ms, 100ms, and 50ms, setting M_Delay to 50% cuts those times in half (100ms, 75ms, 50ms, and 25ms)).*
m_Freq	*Scales all the individual band frequencies, effectively serving as a master frequency.*
m_Q	*Scales all the individual band Q's, effectively serving as a master Q. High values give high resonance, low values give low resonance.*
m_Fback	*Scales all the individual delay feedbacks, effectively serving as a master feedback (i.e. if M_Fback is set to 0%, all the delays will have no feedback, regardless of their individual settings. Alternatively, you could also have no feedback with M_Fback set to 100% if you set each delay's feedback parameter to 0%.).*
m_Pan	*Scales all the individual delay pans, effectively serving as an image spread control (i.e. if M_Pan is set to 0%, all the delays will be panned center, regardless of their individual settings).*

Delay#^(x = 1, 2, 3, or 4)	
Level x	*Controls the level of delay x.*
Delay x	*Either reflects the physical delay time as entered by T_Delay x (given the current tempo) or allows you to enter the delay time in milliseconds.*
T_Delay x	*Controls delay x in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic delay control "off".*
Freqx	*Controls the frequency that delay x's bandpass filter ("Color") will center on.*

 © 2001 Eventide, Inc.

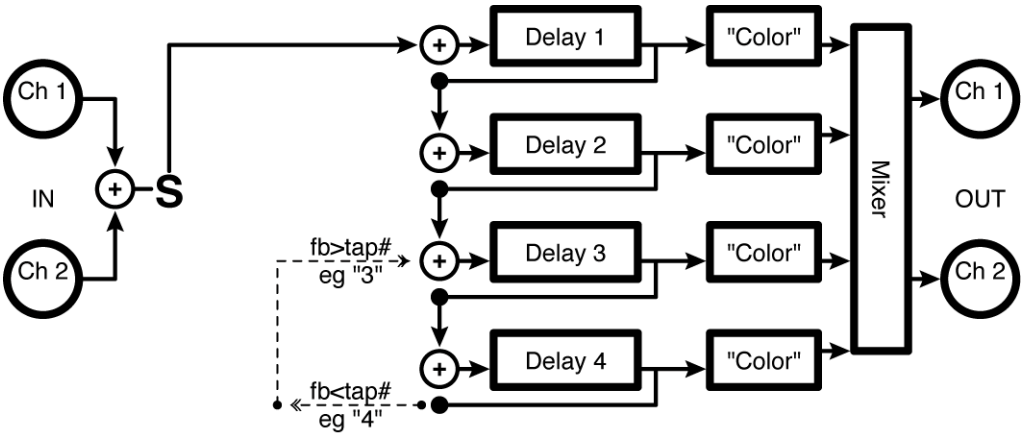
Qx	*Controls how sharp (resonant) said bandpass filter will be.*
Fback	*Controls how much of delay x's output is reapplied to its input.*
Panx	*Controls where in the stereo field delay x will appear (negative values scoot it left and positive values scoot it right).*

m_bandtaps

(105 Bandtaps)

Four series-connected delays with bandpass filters feeding a stereo mixer. A wide range of feedback options allows rhythmically complex and colorful patterns to be quickly and easily created. Tempo may be used to control delay times.

Summed in, stereo out



Parameters:

Masters	
Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the volume of the effect with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
m_Level	*Scales all the individual delay levels, effectively serving as a master volume.*
m_Delay	*Scales all the individual delay times, effectively serving as a master delay (e.g. if the four delays are set to 200ms, 150ms, 100ms, and 50ms, setting M_Delay to 50% cuts those times in half (100ms, 75ms, 50ms, and 25ms)).*
m_Freq	*Scales all the individual band frequencies, effectively serving as a master frequency.*
m_Q	*Scales all the individual band Q's, effectively serving as a master Q. High values give high resonance, low values give low resonance.*
Fback	*Scales all the individual delay feedbacks, effectively serving as a master feedback (i.e. if Fback is set to 0%, all the delays will have no feedback, regardless of their individual settings. Alternatively, you could also have no feedback with M_Fback set to 100% if you set each delay's feedback parameter to 0%.).*
Fb<tap#	*Selects which of the four delays will provide the output for feedback (e.g. as shown in the diagram, delay 4 has been selected).*
Fb>tap#	*Selects where the feedback output should be "re-injected" (e.g. as shown in the diagram, the feedback output will be "re-injected" into the input of delay 3).*
m_Pan	*Scales all the individual delay pans, effectively serving as an image spread control (i.e. if M_Pan is set to 0%, all the delays will be panned center, regardless of their individual settings).*

Delays^(x = 1, 2, 3, or 4)	
Tapx	*Either reflects the physical delay time of tap x as entered by T_Tap x (given the current tempo) or allows you to enter the delay time in milliseconds.*
T_Tap x	*Controls delay x in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic delay control "off".*
Level x	*Controls the level of delay x.*
Pan x	*Controls where in the stereo field the delay x output will appear. Negative values scoot it left and positive values scoot it right.*

Filters^(x = 1, 2, 3, or 4)	
Freq x	*Controls the frequency that delay x's bandpass filter ("Color") will center on.*
Q x	*Controls how sharp (resonant) said bandpass filter will be.*

m_chorusdelays

(106 Chorusdelays)

Four parallel delays with independent feedback paths feed choruses. Tempo can be used to control delay time and modulation rate.

Stereo in, stereo out

See “m_ banddelays” above for diagram.

Masters	
Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the volume of the effect with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
m_Level	*Scales all the individual delay levels, effectively serving as a master volume.*
m_Delay	*Scales all the individual delay times, effectively serving as a master delay (e.g. if the four delays are set to 200ms, 150ms, 100ms, and 50ms, setting M_Delay to 50% cuts those times in half (100ms, 75ms, 50ms, and 25ms)).*
m_Rate	*Scales all the individual delay sweep rates, effectively serving as a master rate.*
m_Depth	*Scales all the individual delay sweep depths, effectively serving as a master depth.*
m_Fback	*Scales all the individual delay feedbacks, effectively serving as a master feedback (i.e. if M_Fback is set to 0%, all the delays we have no feedback, regardless of their individual settings. Alternatively, you could also have no feedback with M_Fback set to 100% if you set each delay's feedback parameter to 0%.).*
m_Pan	*Scales all the individual delay pans, effectively serving as an image spread control (i.e. if M_Pan is set to 0%, all the delays will be panned center, regardless of their individual settings).*
Retrig	*Whenever the sweep rate is changed (either manually or by updating the tempo), the new rate is crossfaded with the old rate. The value of Retrig controls how long the crossfade is as a percentage of the old rate. Thus, a value of 100% means that the crossfade will be complete in one cycle of the old rate.*
Angle	*Given most configurations of the Eclipse, the sweep rate will "start over" when the tempo button is tapped or when an external sequence is started. Angle determines where in its waveform the sweep begins.*

Delay#1 (similarly 2, 3, and 4)	
Level1	*Controls the level of delay 1.*
Delay1	*Either reflects the physical delay time as entered by T_Delay1 (given the current tempo) or allows you to enter the delay time in milliseconds.*
T_Delay1	*Controls delay 1 in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic delay control "off”.*
Rate1	*Controls the sweep rate for delay 1 if T_Rate1 is set to "off" or reflects the physical sweep rate as selected by T_Rate1 and the system tempo.*

 © 2001 Eventide, Inc.

T_Rate1	*Controls the sweep rate of delay 1 in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic sweep generation "off".*
Depth1	*Controls the sweep depth of delay 1.*
Fback1	*Controls how much of delay 1's output is reapplied to its input.*
Pan1	*Controls where in the stereo field delay 1 will appear (negative values scoot it left and positive values scoot it right).*

m_chorustaps

(107 Chorustaps)

Four series-connected delays with choruses feeding a stereo mixer. A wide range of feedback options allows rhythmically complex and colorful patterns to be quickly and easily created. Tempo may be used to control delay times and modulation rates

Summed in, stereo out

See “m_ bandtaps” above for diagram

Masters

Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the volume of the effect with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
m_Level	*Scales all the individual delay levels, effectively serving as a master volume.*
m_Delay	*Scales all the individual delay times, effectively serving as a master delay (e.g. if the four delays are set to 200ms, 150ms, 100ms, and 50ms, setting M_Delay to 50% cuts those times in half (100ms, 75ms, 50ms, and 25ms)).*
m_Rate	*Scales all the individual delay sweep rates, effectively serving as a master rate.*
m_Depth	*Scales all the individual delay sweep depths, effectively serving as a master depth.*
Fback	*Scales all the individual delay feedbacks, effectively serving as a master feedback (i.e. if Fback is set to 0%, all the delays will have no feedback, regardless of their individual settings. Alternatively, you could also have no feedback with M_Fback set to 100% if you set each delay's feedback parameter to 0%.).*
Fb<tap#	*Selects which of the four delays will provide the output for feedback (e.g. as shown in the diagram, delay 4 has been selected).*
Fb>tap#	*Selects where the feedback output should be "reinjected" (e.g. as shown in the diagram, the feedback output will be "reinjected" into the input of delay 3).*
m_Pan	*Scales all the individual delay pans, effectively serving as an image spread control (i.e. if M_Pan is set to 0%, all the delays will be panned center, regardless of their individual settings).*
Retrig	*Whenever the sweep rate is changed (either manually or by updating the tempo), the new rate is crossfaded with the old rate. The value of Retrig controls how long the crossfade is as a percentage of the old rate. Thus, a value of 100% means that the crossfade will be complete in one cycle of the old rate.*
Angle	*Given most configurations of the Eclipse, the sweep rate will "start over" when the tempo button is tapped or when an external sequence is started. Angle determines where in its waveform the sweep begins.*

Delays^(x = 1, 2, 3, or 4)

Tapx	*Either reflects the physical delay time of tap x as entered by T_Tap x (given the current tempo) or allows you to enter the delay time in milliseconds.*
T_Tap x	*Controls delay x in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic delay generation "off".*
Level x	*Controls the level of delay x.*
Pan x	*Controls where in the stereo field delay x will appear (negative values scoot it left and positive values scoot it right).*

LFOs^(x = 1, 2, 3, or 4)	
Rate x	*Controls the sweep rate for delay x if T_Ratex is set to "off" or reflects the physical sweep rate as selected by T_Ratex and the system tempo.*
***T_*Rate x**	*Controls the sweep rate of delay x in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic sweep generation "off".*
Depth x	*Controls the sweep depth of delay x.*

m_combdelays

(108 Combdelays)

Four parallel delays with independent feedback paths feed resonators. Tempo can be used to control delay time.

Stereo in, stereo out

See “m_ banddelays” above for diagram.

Masters	
Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the volume of the effect with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
m_Level	*Scales all the individual delay levels, effectively serving as a master volume.*
m_Delay	*Scales all the individual delay times, effectively serving as a master delay (e.g. if the four delays are set to 200ms, 150ms, 100ms, and 50ms, setting M_Delay to 50% cuts those times in half (100ms, 75ms, 50ms, and 25ms)).*
m_Cmix	*Scales all the individual delay "comb-to-dry" ratios, effectively serving as a master "comb-to-dry" ratio.*
m_Comb	*Scales all the individual delay comb depths, effectively serving as a master comb depth. Changing the comb depth changes the timbre of the effect.*
m_Decay	*Scales all the individual delay comb "resonances", effectively serving as a master decay.*
m_Fback	*Scales all the individual delay feedbacks, effectively serving as a master feedback (i.e. if M_Fback is set to 0%, all the delays will have no feedback, regardless of their individual settings. Alternatively, you could also have no feedback with M_Fback set to 100% if you set each delay's feedback parameter to 0%.).*
m_Pan	*Scales all the individual delay pans, effectively serving as an image spread control (i.e. if M_Pan is set to 0%, all the delays will be panned center, regardless of their individual settings).*

Delay#1	
Level1	*Controls the level of delay 1.*
Delay1	*Either reflects the physical delay time as entered by T_Delay1 (given the current tempo) or allows you to enter the delay time in milliseconds.*
T_Delay1	*Controls delay 1 in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic delay generation "off".*
CMix1	*Controls the "comb-to-dry" ratio for delay line 1.*
Comb1	*Controls the comb depth for delay line 1; adjusts the timbre of the effect.*
Decay1	*Controls the comb "resonance" for delay line 1.*
Fback	*Controls how much of delay 1's output is reapplied to its input.*
Pan1	*Controls where in the stereo field delay 1 will appear (negative values scoot it left and positive values scoot it right).*

 © 2001 Eventide, Inc.

m_combtaps

(109 Combtaps)

Four series-connected delays with resonators feeding a stereo mixer. A wide range of feedback options allows rhythmically complex and colorful patterns to be quickly and easily created. Tempo may be used to control delay times.

Summed in, stereo out

See “m_ bandtaps” above for diagram.

Masters	
Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the volume of the effect with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
m_Level	*Scales all the individual delay levels, effectively serving as a master volume.*
m_Delay	*Scales all the individual delay times, effectively serving as a master delay (e.g. if the four delays are set to 200ms, 150ms, 100ms, and 50ms, setting M_Delay to 50% cuts those times in half (100ms, 75ms, 50ms, and 25ms)).*
m_Cmix	*Scales all the individual delay "comb-to-dry" ratios, effectively serving as a master "comb-to-dry" ratio.*
m_Comb	*Scales all the individual delay comb depths, effectively serving as a master comb depth. Changing the comb depth changes the timbre of the effect.*
m_Decay	*Scales all the individual delay comb "resonances", effectively serving as a master decay.*
Fback	*Scales all the individual delay feedbacks, effectively serving as a master feedback (i.e. if Fback is set to 0%, all the delays will have no feedback, regardless of their individual settings. Alternatively, you could also have no feedback with M_Fback set to 100% if you set each delay's feedback parameter to 0%.).*
***Fb*<tap#**	*Selects which of the four delays will provide the output for feedback (e.g. as shown in the diagram, delay 4 has been selected).*
***Fb*>tap#**	*Selects where the feedback output should be "reinjected" (e.g. as shown in the diagram, the feedback output will be "reinjected" into the input of delay 3).*
m_Pan	*Scales all the individual delay pans, effectively serving as an image spread control (i.e. if M_Pan is set to 0%, all the delays will be panned center, regardless of their individual settings).*

Delays^(x = 1, 2, 3, or 4)	
Tap x	*Either reflects the physical delay time of tap x as entered by T_Tap x (given the current tempo) or allows you to enter the delay time in milliseconds.*
***T_*Tap x**	*Controls delay x in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic delay generation "off".*
Level x	*Controls the level of delay x.*
Pan x	*Controls where in the stereo field delay x will appear (negative values scoot it left and positive values scoot it right).*

Combs^(x = 1, 2, 3, or 4)	
Cmix x	*Controls the "comb-to-dry" ratio for delay line x.*
Comb x	*Controls the comb depth for delay line x; adjusts the timbre of the effect.*
Decay x	*Controls the comb "resonance" for delay line x.*

m_ringdelays

(112 Ringdelays)

Four parallel delays with independent feedback paths feed frequency shifters (single sideband ring modulation). Tempo may be used to control delay times and ringing.

Stereo in, stereo out

See “m_ banddelays” above for diagram.

Masters	
Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the volume of the effect with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
m_Level	*Scales all the individual delay levels, effectively serving as a master volume.*
m_Delay	*Scales all the individual delay times, effectively serving as a master delay (e.g. if the four delays are set to 200ms, 150ms, 100ms, and 50ms, setting M_Delay to 50% cuts those times in half (100ms, 75ms, 50ms, and 25ms)).*
m_Fback	*Scales all the individual delay feedbacks, effectively serving as a master feedback (i.e. if M_Fback is set to 0%, all the delays will have no feedback, regardless of their individual settings Alternatively, you could also have no feedback with M_Fback set to 100% if you set each delay's feedback parameter to 0%.).*
m_Pan	*Scales all the individual delay pans, effectively serving as an image spread control (i.e. if M_Pan is set to 0%, all the delays will be panned center, regardless of their individual settings).*
m_Rmix	*Scales all the individual delay "ring-to-dry" ratios, effectively serving as a master "ring-to-dry" ratio.*
m_Ring	*Scales all the individual delay ring depths, effectively serving as a master ring depth. Changing the ring depth changes the timbre of the effect.*

Delay#1	
Level1	*Controls the level of delay 1.*
Delay1	*Either reflects the physical delay time as entered by T_Delay1 (given the current tempo) or allows you to enter the delay time in milliseconds.*
***T_*Delay1**	*Controls delay 1 in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic delay generation "off".*
RMix1	*Controls the "ring-to-dry" ratio for delay line 1.*
Ring1	*Either reflects the physical ring depth as entered by T_Ring1 (given the current tempo) or allows you to enter the ring depth in Hz.*
***T_*Ring1**	*Controls ring depth 1 in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic ring depth generation "off".*
Fback	*Controls how much of delay 1's output is reapplied to its input.*
Pan1	*Controls where in the stereo field delay 1 will appear (negative values scoot it left and positive values scoot it right).*

 © 2001 Eventide, Inc.

m_ringtaps

(113 Ringtaps)

Four series-connected delays with frequency shifters feeding a stereo mixer. A wide range of feedback options allows rhythmically complex and colorful patterns to be quickly and easily created. Tempo may be used to control delay times and ringing.

Summed in, stereo out

See “m_bandtaps” above for diagram.

Masters	
Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the volume of the effect with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
m_Level	*Scales all the individual delay levels, effectively serving as a master volume.*
m_Delay	*Scales all the individual delay times, effectively serving as a master delay (e.g. if the four delays are set to 200ms, 150ms, 100ms, and 50ms, setting M_Delay to 50% cuts those times in half (100ms, 75ms, 50ms, and 25ms)).*
m_Rmix	*Scales all the individual delay "ring-to-dry" ratios, effectively serving as a master "ring-to-dry" ratio.*
m_Ring	*Scales all the individual delay ring depths, effectively serving as a master ring depth. Changing the ring depth changes the timbre of the effect.*
Fback	*Scales all the individual delay feedbacks, effectively serving as a master feedback (i.e. if Fback is set to 0%, all the delays will have no feedback, regardless of their individual settings. Alternatively, you could also have no feedback with M_Fback set to 100% if you set each delay's feedback parameter to 0%.).*
Fb<tap#	*Selects which of the four delays will provide the output for feedback (e.g. as shown in the diagram, delay 4 has been selected).*
Fb>tap#	*Selects where the feedback output should be "reinjected" (e.g. as shown in the diagram, the feedback output will be "reinjected" into the input of delay 3).*
m_Pan	*Scales all the individual delay pans, effectively serving as an image spread control (i.e. if M_Pan is set to 0%, all the delays will be panned center, regardless of their individual settings).*

Delays^(x = 1, 2, 3, or 4)	
Tap x	*Either reflects the physical delay time of tap x as entered by T_Tap x (given the current tempo) or allows you to enter the delay time in milliseconds.*
T_Tap x	*Controls delay x in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic delay generation "off".*
Level x	*Controls the level of delay x.*
Pan x	*Controls where in the stereo field the delay x output will appear (negative values scoot it left and positive values scoot it right).*

Rings^(x = 1, 2, 3, or 4)	
Rmix x	*Controls the "ring-to-dry" ratio for delay line 1.*
Ring1	*Either reflects the physical ring depth as entered by T_Ringx (given the current tempo) or allows you to enter the ring depth in Hz.*
T_Ring x	*Controls ring depth x in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic ring depth generation "off".*

m_pandelays

(114 Pandelays)

Four parallel delays with independent feedback paths may be panned across the stereo output. Tempo may be used to control delay times and pan sweep rates.

Stereo in, stereo out

See “m_ banddelays” above for diagram and parameters.

Masters	
Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the volume of the effect with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
m_Level	*Scales all the individual delay levels, effectively serving as a master volume.*
m_Delay	*Scales all the individual delay times, effectively serving as a master delay (e.g. if the four delays are set to 200ms, 150ms, 100ms, and 50ms, setting M_Delay to 50% cuts those times in half (100ms, 75ms, 50ms, and 25ms)).*
m_Fback	*Scales all the individual delay feedbacks, effectively serving as a master feedback (i.e. if M_Fback is set to 0%, all the delays will have no feedback, regardless of their individual settings. Alternatively, you could also have no feedback with M_Fback set to 100% if you set each delay's feedback parameter to 0%.).*
m_Rate	*Scales all the individual delay pan rates, effectively serving as a master rate.*
m_Depth	*Scales all the individual delay pan depths, effectively serving as a master depth.*
Retrig	*Whenever the pan rate is changed (either manually or by updating the tempo), the new rate is cross-faded with the old rate. The value of Retrig controls how long the cros-sfade is as a percentage of the old rate. Thus, a value of 100% means that the cross-fade will be complete in one cycle of the old rate.*
Angle	*Given most configurations of the Eclipse, the pan rate will "start over" when the tempo button is tapped or when an external sequence is started. Angle determines where in its waveform the sweep begins.*

Delay#1 (similarily 2,3,4)	
Level1	*Controls the level of delay 1.*
Delay1	*Either reflects the physical delay time as entered by T_Delay1 (given the current tempo) or allows you to enter the delay time in milliseconds.*
***T_*Delay1**	*Controls delay 1 in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic delay generation "off".*
Fback	*Controls how much of delay 1's output is reapplied to its input.*
Rate1	*Controls the pan rate for delay 1 if T_Rate1 is set to "off" or reflects the physical pan rate as selected by T_Rate1 and the system tempo.*
***T_*Rate1**	*Controls the pan rate of delay 1 in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic pan generation "off".*
Depth1	*Controls the pan depth of delay 1.*

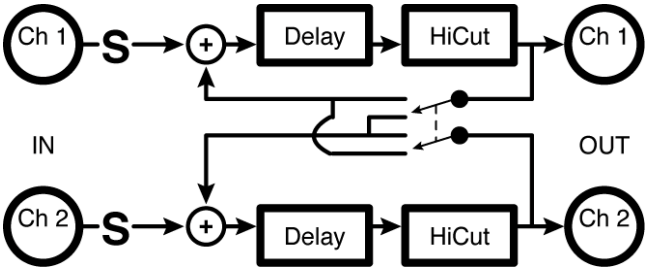
 © 2001 Eventide, Inc.

st chorus delays

(115 St Chorus)

Dual modulating delays with various feedback options are followed by a hi-cut filter. Tempo may be used to control the delay's sweep rate. Each delay may be set at up to two seconds, allowing longer delay times than similar effects. The left and right channels sweep in opposition.

Stereo in, stereo out



Delays	
Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the volume of the effect with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
Level	*Controls the output levels of both delays.*
Delay1	*Controls the delay time of delay 1 in milliseconds (no tempo function is available - this is a chorus effect, after all).*
Delay2	*Controls the delay time of delay 2 in milliseconds.*
Depth1	*Controls the depth of modulation for delay 1.*
Depth2	*Controls the depth of modulation for delay 2.*
Hicut	*Controls the lowpass filter cutoff frequency.*
Fback	*Controls how much of each delay's output gets reapplied to its own input or to the other delay's input.*
***FB* Type**	*Determines if the feedback from each delay will return to its own input or to the other delay's input.*
Image	*Controls how wide the stereo chorus image is.*

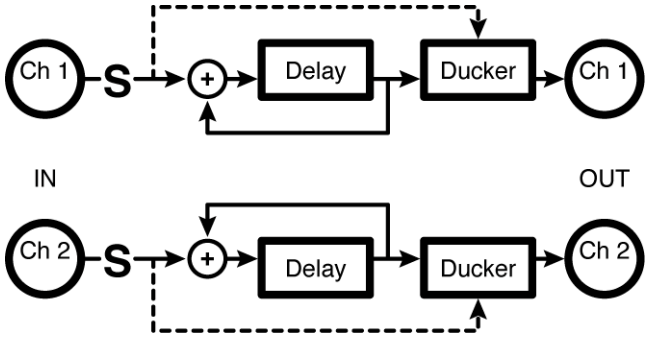
LFO	
Rate	*Controls the modulation rate if T_Rate1 is set to "off" or reflects the physical modulation rate as selected by T_Rate and the system tempo.*
***T*_Rate**	*Controls the modulation rate in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic modulation control "off".*
Shape	*Determines the shape of the modulating signal.*
Duty	*Controls the "duty cycle" of the modulating wave for any waveform other than "sine". For example, if you have selected "triangle" under Shape and set Duty to "0%", the triangle will morph to a sawtooth (very fast rise, slow fall). With Duty at "100%", the triangle will morph to a ramp (slow rise, very fast fall).*
Polarity	*When set to "unipolar", modulations add the value of Depth to Delay. When set to "bipolar", modulations add the value of Depth to Delay and subtract the value of Depth from Delay.*
Retrig	*Whenever **Rate** is changed (either manually or by updating the tempo), the new Rate is crossfaded with the old Rate. The value of Retrig controls how long the crossfade is as a percentage of the old Rate. Thus, a value of 100% means that the crossfade will be complete in one cycle of the old Rate.*
Angle	*Given most configurations of the Eclipse, the modulation will "start over" when the tempo button is tapped or when an external sequence is started. Angle determines where in its waveform the modulation begins.*

ducked delays

(116 DuckedDelays)

Two delay lines followed by a stereo compressor whose side-chain is fed by a sum of chan#1 and #2. Volume ducks/compresses delays out of the way. Be careful with compressor gain! Tempo may be used to control delay times.

Stereo in, stereo out



Delay	
Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the volume of the effect with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
Level	*Controls the output levels of both delays.*
Delay1	*Either reflects the physical delay time as entered by T_Delay1 (given the current tempo) or allows you to enter the delay time in milliseconds.*
Delay2	*Either reflects the physical delay time as entered by T_Delay2 (given the current tempo) or allows you to enter the delay time in milliseconds.*
T_Delay1	*Controls delay 1 in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic delay generation "off".*
T_Delay2	*Controls delay 2 in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic delay generation "off".*
Fback1	*Controls how much of delay 1's output is reapplied to its input.*
Fback2	*Controls how much of delay 2's output is reapplied to its input.*
Image	*Controls how wide the delay image is.*

Ducking	
Thresh	*Sets the input threshold above which compression of the delay signal takes place and below which the delay signal is left alone.*
Ratio	*Controls the input to output ratio for signals above the threshold. For example, "6:1" produces 1dB of output for every 6dB of input.*
Gain	*Adjusts the output level to improve gain structure.*
Attack	*Controls how quickly the compressor "clamps down" on a signal after it exceeds the threshold.*
Decay	*Controls how quickly the compressor "lets go" of a signal once it falls below the threshold.*
GR 1	*Displays how much gain reduction (compression) is taking place after delay 1.*
GR 2	*Displays how much gain reduction (compression) is taking place after delay 2.*

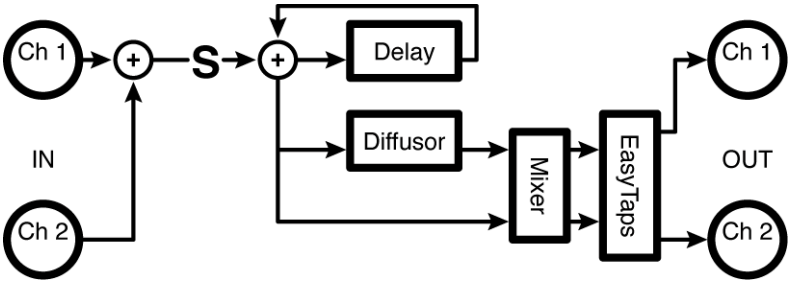
 © 2001 Eventide, Inc.

ultratap 2

(117 Ultratap 2)

This extension of a popular Eventide H3000 structure contains four serial two-second diffusors feeding a 36 tap, two-second *multitap* delay (*easytaps* below) and a tempo-controlled two-second feedback delay. It is great for pre-reverb or strange delay/reverberant effects.

Summed in, stereo out



Diffusor^(x = 1, 2, 3, 4)	
Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the volume of the effect with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
Dmix	*Controls the amount of diffusion.*
Coef x	*Controls the amount of feedback for diffusor x, which determines the "fuzziness" or "distinctness" of the diffusor.*
Diffusion	*A master feedback control for all the diffusors.*
DSize	*Controls the diffusor's "size" by scaling its delay times.*
Delay x	*Controls the total delay time for diffusor x.*

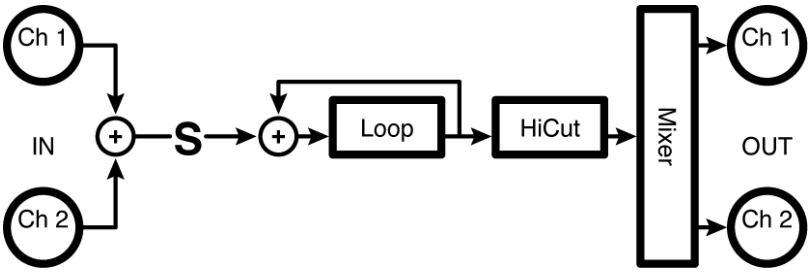
Multitap	
Level	*Controls the output level of the multitap delay.*
FBDelay	*Controls the delay time of the feedback delay.*
T_FBDela	*Controls the feedback delay in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic delay generation "off".*
Fback	*The amount of feedback applied to the feedback delay.*
# Taps	*Specifies the number of delay taps that the algorithm will use.*
Length	*Controls the total delay length.*
Random	*Controls the degree to which the Eclipse randomizes tap times to reduce resonance.*
DlyShape	*Controls the delay "shape" or tap length as a function of tap number.*
AmpShape	*Controls the amplitude "shape" or the level of each of tap as a function of tap number.*
PanShape	*Controls the pan "shape" or the panning of each tap as a function of tap number.*
AAlpha	*Controls the exponential shape of the amplitude only when AmpShape is set to "exp_inc" or "exp_dec".*
DAlpha	*Controls the exponential shape of the tap times only when DlyShape is set to "exp_inc" or "exp_dec".*

mono loop (20)

(119 Loop20)

This simple effect contains a mono 20-second delay with hi-cut filter and pan. Tempo may be used to control delay times.

Summed in, stereo out



Loops

Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the input to the loop with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
Level	*Controls the output level of the loop.*
Loop	*Either reflects the physical loop time as entered by T_Loop (given the current tempo) or allows you to enter the loop time in milliseconds.*
T_Loop	*Controls the length of the loop in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic loop generation "off".*
Hicut	*Controls the lowpass filter cutoff frequency.*
Pan	*Pans the loop in the stereo field.*
Loop	*Monitors the input to the loop*

mono loop (10)

(118 Loop10)

This version of "mono loop (20)" is suitable for use at 96kHz sampling.

Summed in, stereo out

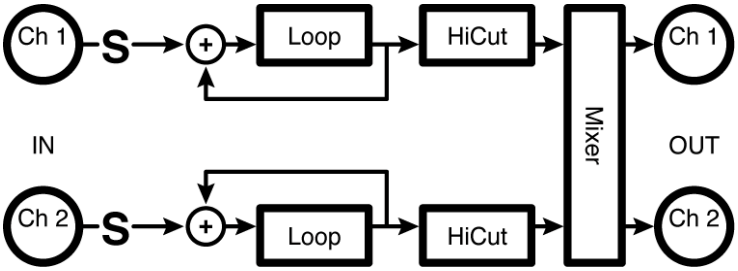
See "mono loop (20)" above for diagram and parameters.

 © 2001 Eventide, Inc.

dual loops (10)

(121 DualLoop10)

A true stereo version of “mono loop (20).”
Stereo in, stereo out



Master

Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the input to the loop with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
Level	*Controls the output level of both loops.*
Loop	*Either reflects the physical loop time of both loops as entered by T_Loop (given the current tempo) or allows you to enter the loop time in milliseconds.*
T_Loop	*Controls the length of both loops in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic loop generation "off".*
Fback	*Controls how much of each loop's output is reapplied to its input or the other loop's input.*
FB Type	*Determines if the feedback from each loop will return to its own input or to the other loop's input.*
Hicut	*Controls the lowpass filter cutoff frequency.*
Image	*Controls how wide the loop image is.*
Loop1	*Monitors the input to loop 1.*
Loop2	*Monitors the input to loop 2.*

Loop#1

Parameters similar to those described under “Mono Loop” above, dedicated to Loop 1; changes made here can be overwritten by those made under Master and vice versa (the most recently entered value "wins")

Loop#2

Parameters similar to those described under “Mono Loop” above, dedicated to Loop 2; changes made here can be overwritten by those made under Master and vice versa (the most recently entered value "wins")

dual loops (5)

(120 DualLoop5)

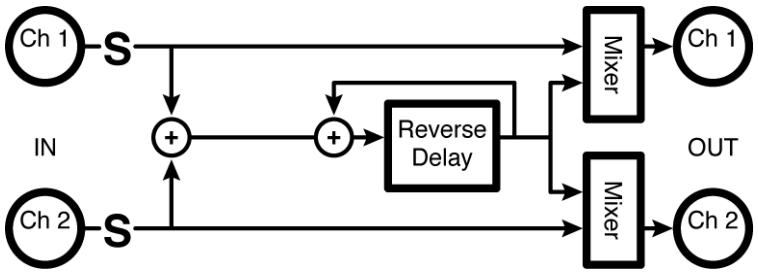
This version of “dual loops (10)” is suitable for use at 96kHz sampling.
Stereo in, stereo out

See “dual loops (10)” above for diagram and parameters.

mono reverse (20)

(122 Reverse10)

This algorithm is a mono 20-second *reverse delay*. A *reverse delay* is unique in that the <tap> button or other trigger source can both set the delay time and trigger playback from the unit.. This means that the first button press starts filling the delay, while the second press starts backwards playback. Think of it as a reverse sampler or looper. Tempo may be used to control delay times.
Summed in, stereo out



Reverse

Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the input to the loop with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
Mix	*Controls the wet-to-dry ratio. If set to "0%", you won't hear any effect, while if set to "100%" you'll hear nothing but effect.*
Delay	*Either reflects the physical reverse time as entered by T_Delay (given the current tempo) or allows you to enter the reverse time in milliseconds.*
T_Delay	*Controls the length of the reverse in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic reverse generation "off".*
Regen	*Controls the feedback around the Reverse Delay, i.e. how much of its output is reapplied to its input.*
XFade	*Controls the length of crossfade between successive samples (reversed chunks).*
Mute	*Sets the delay time below which the reverse output will be muted (prevents tempo changes from creating a ridiculously short reverse loop).*
Trigger	*Causes reversed playback to start immediately.*

mono reverse (10)

(123 Reverse20)

This version of "mono reverse (20)" is suitable for use at 96kHz sampling.
Summed in, stereo out

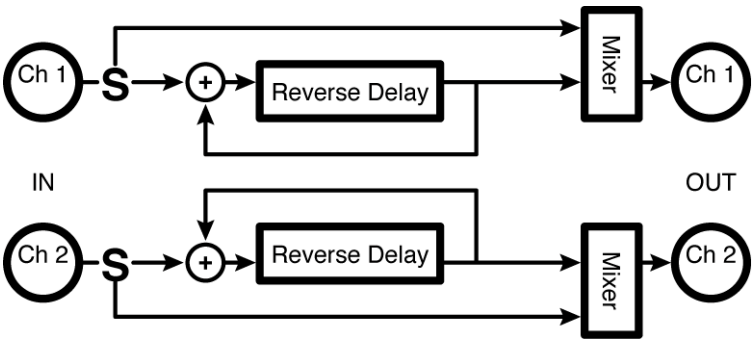
See "mono reverse (20)" above for diagram and parameters.

 © 2001 Eventide, Inc.

dual reverse (10)

(125 DualReverse10)

This is a 10-second true stereo version of “mono reverse (20).”
Stereo in, stereo out



Master

Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the input to the loop with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
Mix	*Controls the wet-to-dry ratio. If set to "0%", you won't hear any effect. If set to "100%" you'll hear nothing but effect.*
Delay	*Either reflects the physical reverse time as entered by T_Delay (given the current tempo) or allows you to enter the reverse time in milliseconds if T_Delay is set to "Off".*
***T_*Delay**	*Controls the length of the reverse in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic reverse generation "off". The actual reverse time displayed under Delay is a function of this control and the current system tempo.*
Fback	*Controls how much of the reverse's output is reapplied to its input.*
Mute	*Sets the delay time below which the reverse output will be muted (prevents tempo changes from creating a ridiculously short reverse loop).*
XFade	*Controls the length of crossfade between successive samples (reversed chunks).*

Rev#1

Parameters similar to those described above, dedicated to Loop 1; changes made here can be overwritten by those made under Master and vice versa (the most recently entered value "wins")

Rev#2

Parameters similar to those described above, dedicated to Loop 2; changes made here can be overwritten by those made under Master and vice versa (the most recently entered value "wins")

Trigger	*Causes reversed playback to start immediately.*

dual reverse (5)

(124 DualReverse5)

This five-second true stereo version of “mono reverse (20)” is suitable for use at 96kHz sampling.
Stereo in, stereo out

See “dual reverse (10)” above for diagram and parameters.

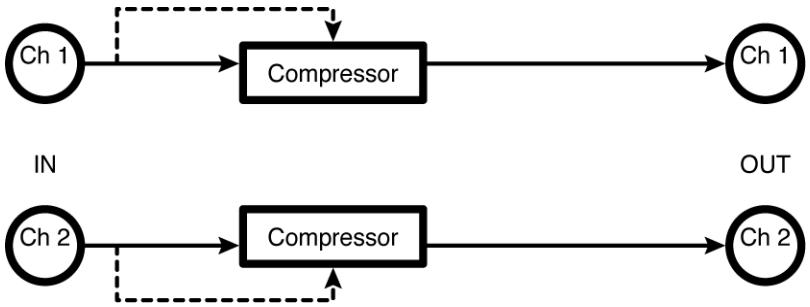
dynamics

dual compressors

(126 StereoComp)

A pair of independent “soft knee” compressors featuring 'master' and individual channel parameters as well as metering of gain reduction.

Dual mono in, dual mono out



Master

Thresh	*Sets the input threshold above which compression of the signal takes place and below which the signal is left alone.*
S Knee	*Controls the width of the "soft knee". The soft knee is a region above the threshold over which the ratio transitions from 1:1 to the selected Ratio. It smoothes out the compression.*
Ratio	*Controls the input to output ratio for signals above the threshold. For example, "6:1" produces 1dB of output for every 6dB of input.*
Gain	*Adjusts the output level to improve gain structure.*
Attack	*Controls how quickly the compressor "clamps down" on a signal after it exceeds the threshold.*
Decay	*Controls how quickly the compressor "lets go" of a signal once it falls below the threshold.*
GR 1	*Displays how much gain reduction (compression) is taking place after delay 1.*
GR 2	*Displays how much gain reduction (compression) is taking place after delay 2.*

Comp#1

Parameters similar to those described above, dedicated to compressor 1; changes made here can be overwritten by those made under Master and vice versa (the most recently entered value "wins")

Comp#2

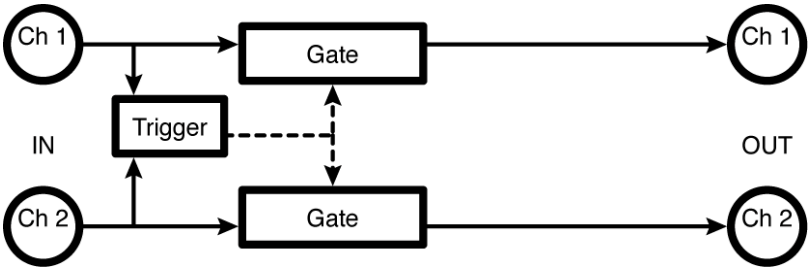
Parameters similar to those described above, dedicated to compressor 2; changes made here can be overwritten by those made under Master and vice versa (the most recently entered value "wins")

 © 2001 Eventide, Inc.

dual noisegates

(127 DualGates)

This is a stereo noise gate with 'master' and individual channel parameters.
Stereo in, stereo out



Master

Trigg	*Selects which input or inputs trigger the gate to open.*
Thresh	*Sets the input threshold that the trigger must exceed to open the gate.*
Attack	*Controls how quickly the gate opens up once the trigger exceeds the threshold.*
Decay	*Controls how quickly the gate closes once the trigger falls below the threshold.*
Hyster	*Controls the "hysteresis": how far the trigger must fall below the threshold before the gate will open. Higher values prevent spurious triggering.*
***GT** 1*	*Displays the dynamics of gate 1: if the bar is empty, the gate is closed. If the bar is full, the gate is open. Intermediate values represent varying levels of gain reduction.*
***GT** 2*	*Displays the dynamics of gate 2: if the bar is empty, the gate is closed. If the bar is full, the gate is open. Intermediate values represent varying levels of gain reduction.*

Gate#1

Parameters similar to those described above, dedicated to gate 1; changes made here can be overwritten by those made under Master and vice versa (the most recently entered value "wins")

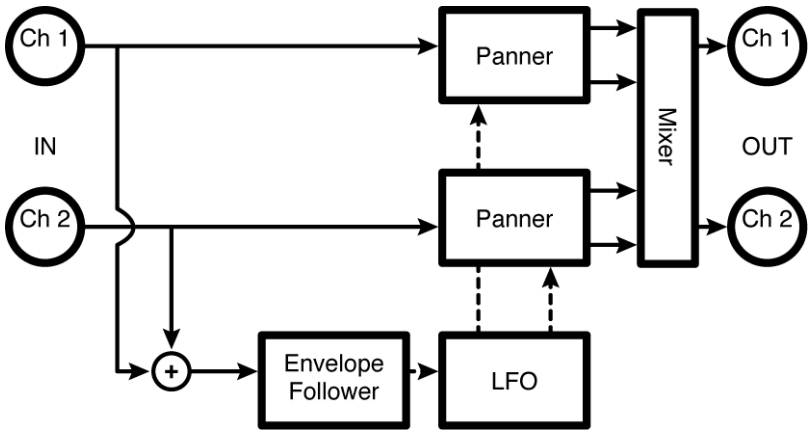
Gate#2

Parameters similar to those described above, dedicated to gate 2; changes made here can be overwritten by those made under Master and vice versa (the most recently entered value "wins")

fm panner

(128 FM Panner)

Simple panning with envelope-controlled fm modulation of sweep.
Stereo in, stereo out



FM Pan	
Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the volume of the effect with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
Depth	*Amount of panning, relative to the output stereo field width.*
Width	*Actual width of output stereo field.*
Mode	*Determines if the effect will behave like a panner ("sync") or like a tremolo ("oppose").*

LFO	
Rate	*Controls the modulation rate if T_Rate1 is set to "off".*
T_Rate	*Controls the modulation rate in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic modulation generation "off".*
FMRate	*Analogous to Rate, except that this pertains to modulation of the LFO's signal (not to modulation of the panner directly).*
T_FMRate	*Analogous to T_Rate, except that this pertains to modulation of the LFO's signal (not to modulation of the panner directly).*
Shape	*Determines the shape of the modulating signal.*
Duty	*Controls the "duty cycle" of the modulating wave for any waveform other than "sine". For example, if you have selected "triangle" under Shape and set Duty to "0%", the triangle will morph to a sawtooth (very fast rise, slow fall). With Duty at "100%", the triangle will morph to a ramp (slow rise, very fast fall).*
Retrig	*Whenever Rate is changed (either manually or by updating the tempo), the new Rate is crossfaded with the old Rate. The value of Retrig controls how long the crossfade is as a percentage of the old Rate. Thus, a value of 100% means that the crossfade will be complete in one cycle of the old Rate.*
Angle	*Given most configurations of the Eclipse, the modulation will "start over" when the tempo button is tapped or when an external sequence is started. Angle determines where in its waveform the modulation begins.*

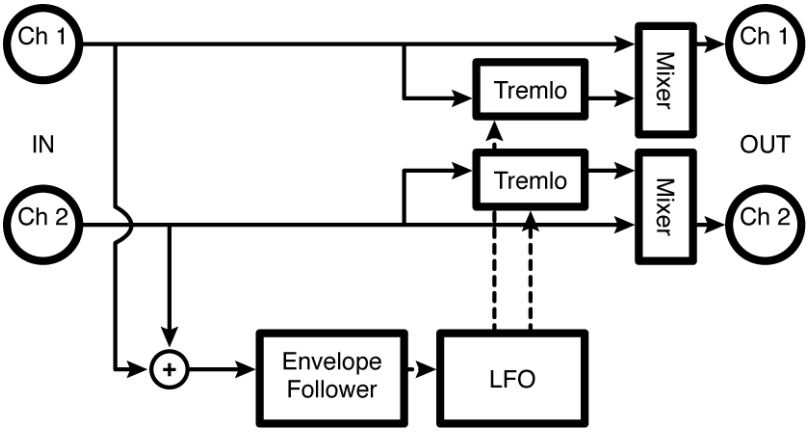
Env	
Sens	*Controls how sensitive the envelope follower is; alter this parameter to change the "depth" of the FM effect.*
Attack	*Controls how fast the envelope follower will track an increase in volume.*
Decay	*Controls how fast the envelope follower will track a decrease in volume.*

 © 2001 Eventide, Inc.

fm trem

(129 FM Trem)

A simple tremolo with envelope-controlled fm modulation of sweep.
Stereo in, stereo out



FM Trem	
Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the volume of the effect with MIDI, a volume pedal, or some other external or internal source, this is the place to do it. No zippering allowed.*
Mix	*Controls the ratio between the dry and wet (tremolo) signal.*
Depth	*Controls the depth of the modulation. If Mix is at "0%", this effectively controls the volume.*
Mode	*Determines if the effect will behave like a tremolo ("sync") or like a panner ("oppose").*

LFO	
Rate	*Controls the modulation rate if T_Rate1 is set to "off" or reflects the physical modulation rate as selected by T_Rate.*
T_Rate	*Controls the modulation rate in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic modulation generation "off".*
FMRate	*Analogous to Rate, except that this pertains to modulation of the LFO's signal (not to modulation of the tremolo directly).*
T_FMRate	*Analogous to T_Rate, except that this pertains to modulation of the LFO's signal (not to modulation of the tremolo directly).*
Shape	*Determines the shape of the modulating signal.*
Retrig	*Whenever Rate is changed (either manually or by updating the tempo), the new Rate is crossfaded with the old Rate. The value of Retrig controls how long the crossfade is as a percentage of the old Rate. Thus, a value of 100% means that the crossfade will be complete in one cycle of the old Rate.*
Angle	*Given most configurations of the Eclipse, the modulation will "start over" when the tempo button is tapped or when an external sequence is started. Angle determines where in its waveform the modulation begins.*

Env	
Sens	*Controls how sensitive the envelope follower is; alter this parameter to change the "depth" of the FM effect.*
Attack	*Controls how fast the envelope follower will track an increase in volume.*
Decay	*Controls how fast the envelope follower will track a decrease in volume.*

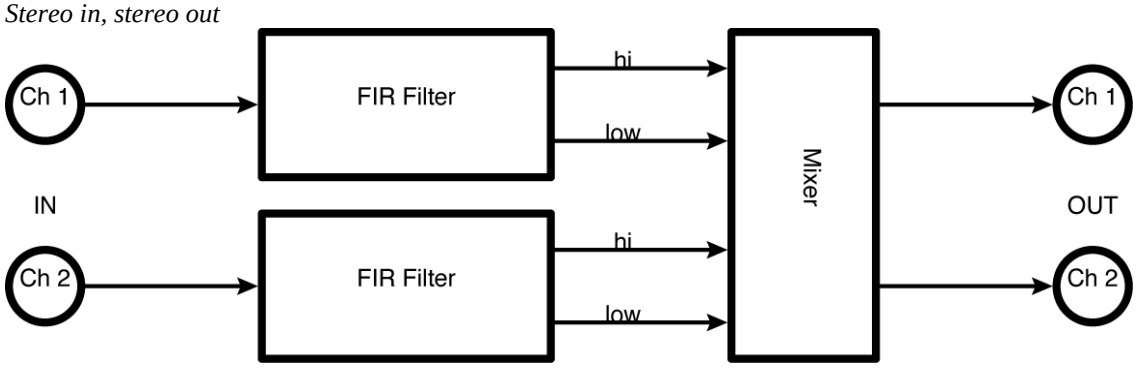
filters

two band crossover

(130 2BandXover)

This two-band crossover includes pan parameters for the 'hi' and 'low' outputs for each channel.

Stereo in, stereo out



X-Over

X-Over	*Selects the frequency at which the crossover divides the signal.*
Type	*Selects the "windowing" type. In critical applications, A/B for best results.*

Mixer

Lows1	*Controls the level of channel 1's low frequencies.*
Highs1	*Controls the level of channel 1's high frequencies.*
Lows2	*Controls the level of channel 2's low frequencies.*
Highs2	*Controls the level of channel 2's high frequencies.*
Low1Pan	*Controls where in the output stereo field channel 1's low frequencies end up.*
Hi1Pan	*Controls where in the output stereo field channel 1's high frequencies end up.*
Low2Pan	*Controls where in the output stereo field channel 2's low frequencies end up.*
Hi2Pan	*Controls where in the output stereo field channel 2's high frequencies end up.*

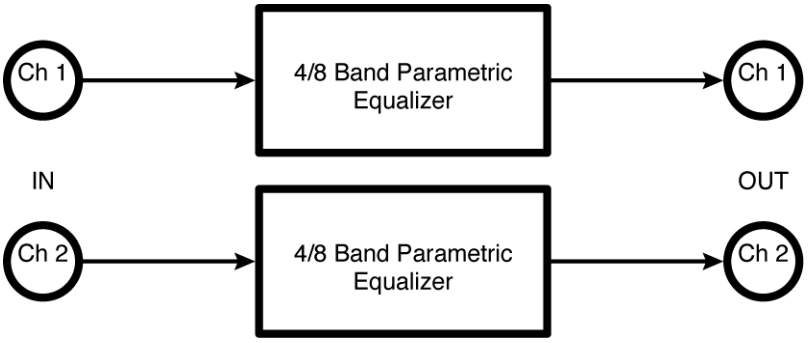
 © 2001 Eventide, Inc.

dual 4band para

(131 Dual 4B Parametric)

This stereo four-band equalizer has 'master' and individual channel parameters. In addition, band #1 is selectable between lowpass and bandpass, while band #4 can be either bandpass or highpass.

Stereo in, stereo out



Masters

Band#1

Level1 *Controls the boost or cut of band 1.*

Freq1 *Controls the center frequency or cut-off frequency of band 1.*

Q1 *Controls the bandwidth or resonance of band 1.*

Type1 *Controls whether band one behaves as a bandpass filter or as a lowpass filter (other bands are either dedicated bandpass filters or allow for highpass filtering as well).*

Band#2

Parameters similar to those described above, dedicated to band 2.

Band#***3***

Parameters similar to those described above, dedicated to band 3.

Band#4

Parameters similar to those described above, dedicated to band 4.

EQ#1

Parameters similar to those described above, dedicated to EQ 1; changes made here can be overwritten by those made under Master and vice versa (the most recently entered value "wins")

EQ#2

Parameters similar to those described above, dedicated to EQ 2; changes made here can be overwritten by those made under Master and vice versa (the most recently entered value "wins")

dual 8 band EQ

(132 Dual8Band Eq)

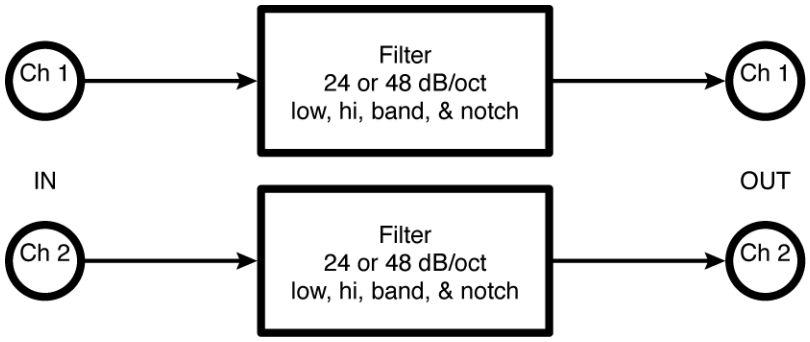
This stereo eight-band equalizer has 'master' and individual channel parameters as well as a single bandwidth parameter.
Stereo in, stereo out

See “dual 4band para” above for diagram and parameters.

dual filters

(133 Dual Filters)

This algorithm offers 'master' and individual channel parameters. The filter type may be selected from lowpass, hipass, bandpass or notch, while the slope may be either 24 or 48 dB per octave.
Stereo in, stereo out



Master

Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the input to the loop with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
Gain	*Controls the output gain of the filters.*
Freq	*Controls the center frequency or cutoff frequency.*
Q	*Controls the bandwidth or resonance.*
Type	*Selects the type of filter.*
Order	*Selects the "steepness" of the filter.*

Filter#1

Parameters similar to those described above, dedicated to Filter 1; changes made here can be overwritten by those made under Master and vice versa (the most recently entered value "wins")

Filter#2

Parameters similar to those described above, dedicated to Filter 2; changes made here can be overwritten by those made under Master and vice versa (the most recently entered value "wins")

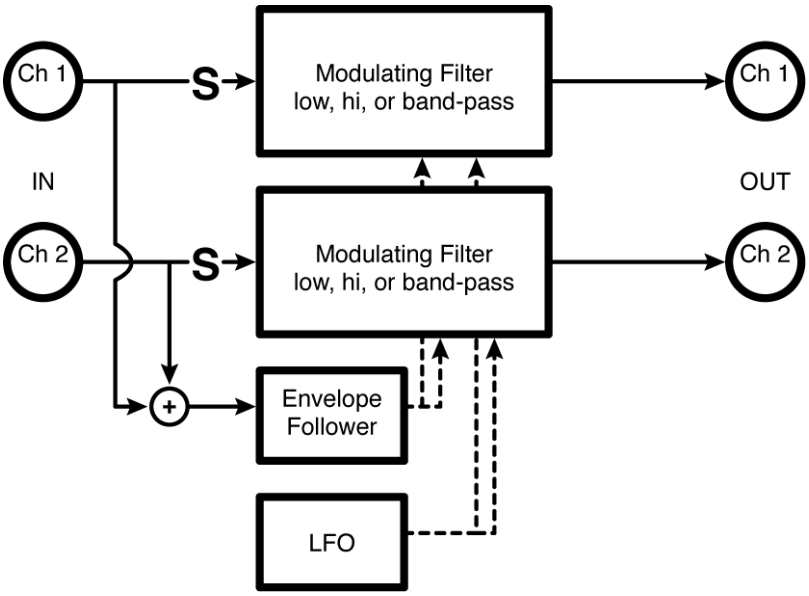
 © 2001 Eventide, Inc.

dual modfilters

(134 Dual Modfilters)

This modulated filter algorithm offers 'master' and individual channel parameters, with a 'mode' selector for modulation (one of *LFO*, envelope or pedal), as well as 'freq' and 'q' modulation. The envelope follower may be triggered from either input.

Stereo in, stereo out



Master	
Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the input to the loop with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
Mode	*Selects whether the LFO, the envelope generator, or an external pedal will modulate the filters.*
Rate	*Controls the LFO modulation rate if T_Rate1 is set to "off" or reflects the physical LFO modulation rate as selected by T_Rate and the system tempo.*
T_Rate	*Controls the LFO modulation rate in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic LFO modulation generation "off".*
Type	*Selects the type of filter.*
FAttack	*Controls how quickly the filter frequency will track an increase in the modulation source level.*
FDecay	*Controls how quickly the filter frequency will track a decrease in the modulation source level.*
QAttack	*Controls how quickly the filter Q will track an increase in the modulation source level.*
QDecay	*Controls how quickly the filter Q will track a decrease in the modulation source level.*
Freq	*Controls the "baseline" center frequency or cutoff frequency.*
Fmod	*Controls how far from the "baseline" the cutoff frequency will deviate in response to the modulation signal.*
Q	*Controls the "baseline" bandwidth or resonance.*
Qmod	*Controls how far from the "baseline" the Q will deviate in response to the modulation signal.*

Env	
Env	*Determines which input or inputs the envelope follower will track.*
Sens	*Controls how sensitive the envelope follower is; alter this parameter to change the "depth" of the FM effect.*

Retrig *Whenever the LFO Rate is changed (either manually or by updating the tempo), the new Rate is crossfaded with the old Rate. The value of Retrig controls how long the crossfade is as a percentage of the old Rate. Thus, a value of 100% means that the crossfade will be complete in one cycle of the old Rate.*

Angle *Given most configurations of the Eclipse, LFO modulation will "start over" when the tempo button is tapped or when an external sequence is started. Angle determines where in its waveform the LFO begins.*

Filter#1

Most parameters similar to those described above, dedicated to Filter 1; changes made here can be overwritten by those made under Master and vice versa (the most recently entered value "wins")

Man_Ped1 *Allows users without an external pedal to modulate the effect from the front panel.*

Filter#2

Most parameters similar to those described above, dedicated to Filter 2; changes made here can be overwritten by those made under Master and vice versa (the most recently entered value "wins")

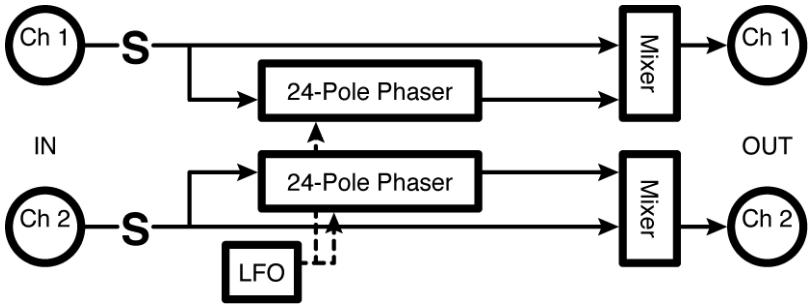
Man_Ped1 *Allows users without an external pedal to modulate the effect from the front panel.*

stereo phaser

(135 St Phaser)

This simple stereo phase shifter allows the number of poles to be selected from 3 to 24, allowing great control over the strength of the effect. A 'mode' selector is provided for choice of modulation input between *LFO* and pedal.

Stereo in, stereo out



Phaser

Send *Adjusts the level at 'S' in the diagram. If you want to modulate the volume of the effect with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*

Mix *Controls the ratio between the dry and wet (phased) signal. Set to "50%" if the dry signal won't be mixed in later (e.g. in a guitar rig).*

Mode *Selects whether the LFO or an external pedal will modulate the filters.*

Depth *Controls the depth of the phase effect.*

Fback *Controls how much of each phaser's output is reapplied to its input for exaggerated phasing.*

#Poles *Determines how many "poles" the phaser's filters will use. More poles: more pronounced effect.*

Sweep *Determines if the modulation signal to each phaser is in phase ("sync") or out of phase ("oppose").*

Man_Ped *Allows users without an external pedal to modulate the effect from the front panel.*

LFO

Rate *Controls the modulation rate if T_Rate1 is set to "off" or reflects the physical modulation rate as selected by T_Rate and the system tempo.*

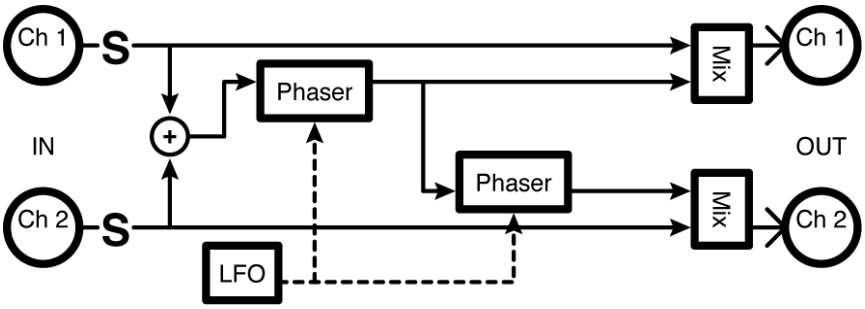
 © 2001 Eventide, Inc.

T_Rate	*Controls the modulation rate in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic modulation generation "off".*
Shape	*Determines the shape of the modulating signal.*
Duty	*Controls the "duty cycle" of the modulating wave for any waveform other than "sine". For example, if you have selected "triangle" under Shape and set Duty to "0%", the triangle will morph to a sawtooth (very fast rise, slow fall). With Duty at "100%", the triangle will morph to a ramp (slow rise, very fast fall).*
Retrig	*Whenever Rate is changed (either manually or by updating the tempo), the new Rate is crossfaded with the old Rate. The value of Retrig controls how long the crossfade is as a percentage of the old Rate. Thus, a value of 100% means that the crossfade will be complete in one cycle of the old Rate.*
Angle	*Given most configurations of the Eclipse, the modulation will "start over" when the tempo button is tapped or when an external sequence is started. Angle determines where in its waveform the modulation begins.*

stereoizing phaser

(136 StereoizingPhaser)

Two phase shifters tapped off the 9th pole (left) and the 12th pole (right) create a credible stereo field.
Summed in, stereo out



Phaser	
Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the volume of the effect with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
Mix	*Controls the ratio between the dry and wet (phased) signal. Set to "50%" if the dry signal won't be mixed in later (e.g. in a guitar rig).*
Mode	*Selects whether the LFO or an external pedal will modulate the filters.*
Depth	*Controls the depth of the phase effect.*
Fback	*Controls how much of each phaser's output is reapplied to its input for exaggerated phasing.*
Man_Ped	*Allows users without an external pedal to modulate the effect from the front panel.*

LFO	
Rate	*Controls the modulation rate if T_Rate1 is set to "off" or reflects the physical modulation rate as selected by T_Rate and the system tempo.*
T_Rate	*Controls the modulation rate in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic modulation generation "off".*
Shape	*Determines the shape of the modulating signal.*
Duty	*Controls the "duty cycle" of the modulating wave for any waveform other than "sine". For example, if you have selected "triangle" under Shape and set Duty to "0%", the triangle will morph to a sawtooth (very fast rise, slow fall). With Duty at "100%", the triangle will morph to a ramp (slow rise, very fast fall).*

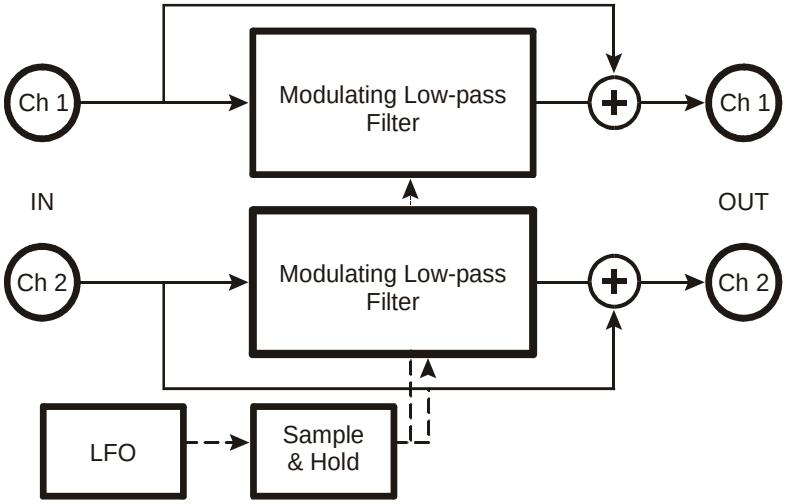
Retrig	*Whenever Rate is changed (either manually or by updating the tempo), the new Rate is crossfaded with the old Rate. The value of Retrig controls how long the crossfade is as a percentage of the old Rate. Thus, a value of 100% means that the crossfade will be complete in one cycle of the old Rate.*
Angle	*Given most configurations of the Eclipse, the modulation will "start over" when the tempo button is tapped or when an external sequence is started. Angle determines where in its waveform the modulation begins.*

dual sample/hold

(137 DualSamp/Hold)

This unusual effect features dual low pass filters driven by a rhythmic control. It features 'master' and individual channel parameters. In addition there are controls for 'min/max' frequency and bandwidth as well as 'resonance'. The 'flux' parameter smoothes out changes.

Stereo in, stereo out



Master	
Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the input to the loop with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
Mix	*Controls the ratio between the dry and wet (S/H) signal.*
***F* Min**	*Sets the minimum frequency for the Sample and Hold.*
***F* Max**	*Sets the maximum frequency for the Sample and Hold.*
Reson	*Controls the filter resonance.*
Flux	*Controls how quickly the filter moves between "notes".*
Rate	*Controls the modulation rate if T_Rate is set to "off" or reflects the physical modulation rate as selected by T_Rate and the system tempo.*
T_Rate	*Controls the modulation rate in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic modulation generation "off".*
Retrig	*Whenever Rate is changed (either manually or by updating the tempo), the new Rate is crossfaded with the old Rate. The value of Retrig controls how long the crossfade is as a percentage of the old Rate. Thus, a value of 100% means that the crossfade will be complete in one cycle of the old Rate.*
Angle	*Given most configurations of the Eclipse, the modulation will "start over" when the tempo button is tapped or when an external sequence is started. Angle determines where in its waveform the modulation begins.*

 © 2001 Eventide, Inc.

S/H#1

Parameters similar to those described above, dedicated to Sample and Hold 1; changes made here can be overwritten by those made under Master and vice versa (the most recently entered value "wins")

S/H#2

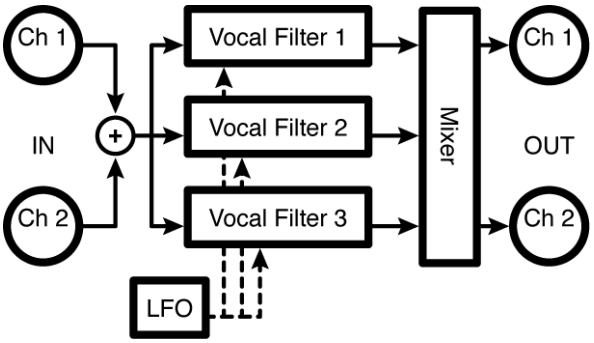
Parameters similar to those described above, dedicated to Sample and Hold 2; changes made here can be overwritten by those made under Master and vice versa (the most recently entered value "wins")

vocal wa

(138 VocalizedWa)

This notorious Eventide effect contains three filter channels used as ‘vowel’ or ’formant’ selectors, with individual level and pan controls. In addition, a 'mode' selector allows modulation from either an *LFO* or a pedal.

Summed in, stereo out



Vowels

Mode	*Selects whether the LFO or an external pedal will modulate the filters.*
Vowel1	*Selects one of the filter "vowels".*
Vowel2	*Selects the second filter "vowel".*
Q	*Controls the bandwidth of the filters.*
QMod	*Controls how much the Q changes with modulation.*
Man_Ped	*Allows users without an external pedal to modulate the effect from the front panel.*

LFO

Rate	*Controls the modulation rate if T_Rate1 is set to "off" or reflects the physical modulation rate as selected by T_Rate and the system tempo.*
T_Rate	*Controls the modulation rate in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic modulation generation "off".*
Shape	*Determines the shape of the modulating signal.*
Duty	*Controls the "duty cycle" of the modulating wave for any waveform other than "sine". For example, if you have selected "triangle" under Shape and set Duty to "0%", the triangle will morph to a sawtooth (very fast rise, slow fall). With Duty at "100%", the triangle will morph to a ramp (slow rise, very fast fall).*
Retrig	*Whenever Rate is changed (either manually or by updating the tempo), the new Rate is crossfaded with the old Rate. The value of Retrig controls how long the crossfade is as a percentage of the old Rate. Thus, a value of 100% means that the crossfade will be complete in one cycle of the old Rate.*

Angle *Given most configurations of the Eclipse, the modulation will "start over" when the tempo button is tapped or when an external sequence is started. Angle determines where in its waveform the modulation begins.*

Mixer^(x = 1, 2, 3)

Level x *Controls the level of filter x.*

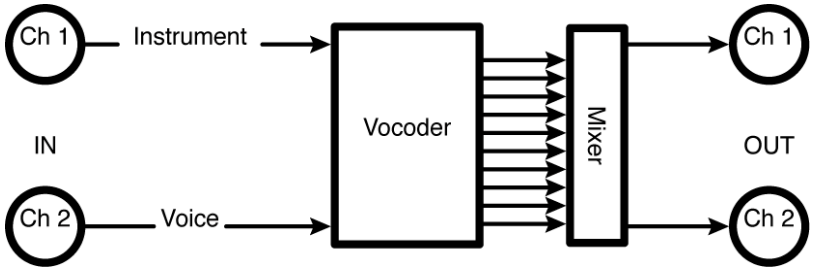
Pan x *Positions the image of filter x in the stereo field.*

10 band vocoder

(139 Vocoder10)

A vocoder allows the characteristics of one signal to be superimposed on another; for example a guitar can be made to 'sing,' or a choir-like effect can be produced by using a noise source as the instrument.

The left input (channel #1) or and internal noise source feeds carrier (instrument), while right input (channel #2) feeds the modulator (voice). The output is the sum of ten frequency bands from 20Hz to 20kHz, with 'level' and 'pan' for each band.
Dual in, stereo out



Cal

Carrier *Determines if the spectrum supplied by input 2 (voice) will be applied to "noise" or to the signal supplied at input 1 ("left in").*

L Gain *Controls the level of the left input (instrument).*

R Gain *Controls the level of the right input (voice).*

Q/Res *Controls the bandwidth of each filter. Lower values deliver a louder, albeit less distinct effect.*

Attack *Controls how quickly the envelope follower on each filter will track an increase in the right input (voice).*

Decay *Controls how quickly the envelope follower on each filter will track a decrease in the right input (voice).*

Freqs^(x = 1, 2, ..., 10)

Freq *x* *Controls the center frequency for band filter x. Avoid centering on frequencies outside the range of the right input (voice) - it's just a waste of a filter!*

Mixer

Levels^(x = *1, 2, ..., 10*)

M_Level *Scales all the individual band filter levels, effectively serving as a master volume.*

Levelx *Controls the level of band filter* x.

Pans^(x = *1, 2, ..., 10*)

M_Pan *Scales all the individual band filter pans, effectively controlling the stereo spread.*

Panx *Controls the stereo placement of band filter* x.

 © 2001 Eventide, Inc.

plex

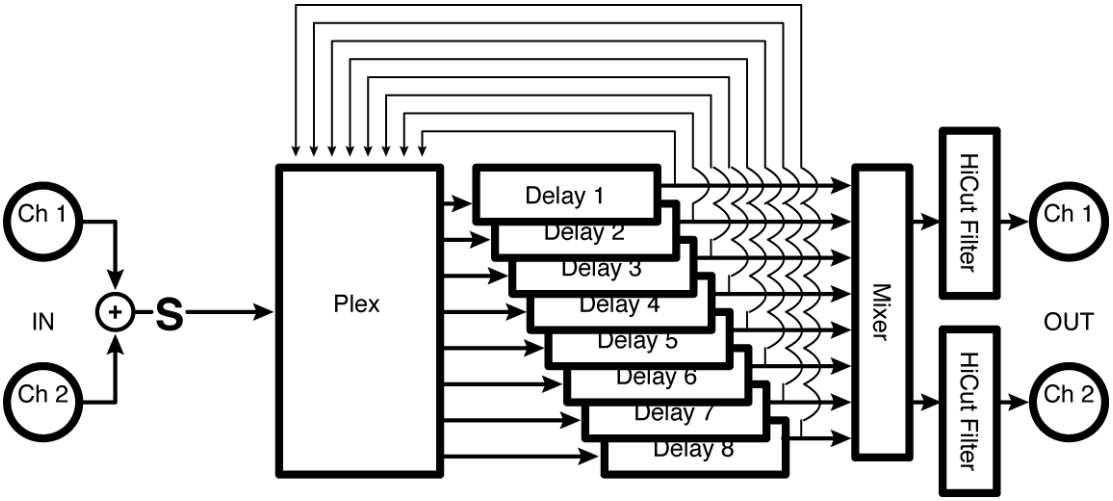
A plex *is the feedback* network *of a reverb.*

large delay 8 plex

(141 LrgDelay8Plex)

This plex has eight two second modulating delay lines with 'level' and 'pan' parameters for each independent output.

Summed in, stereo out



Masters	
Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the volume of the effect with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
Level	*Controls the output level.*
Decay	*Controls the delay feedback, effectively the reverb time.*
Size	*Scales the individual delay times, effectively altering the "room size".*
HiCut	*Controls the output level of a high shelving filter.*
LowCut	*Controls the output level of a low shelving filter.*
HiFreq	*Controls the cutoff frequency of the high shelving filter.*
LowFreq	*Controls the cutoff frequency of the low shelving filter.*
Depth	*Controls the depth of delay modulation for a chorus effect.*
Rate	*Controls the modulation rate if T_Rate1 is set to "off" or reflects the physical modulation rate as selected by T_Rate and the system tempo.*
T_Rate	*Controls the modulation rate in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic modulation generation "off".*
Image	*Scales all the individual delay pans, effectively controlling the stereo spread.*
Retrig	*Whenever Rate is changed (either manually or by updating the tempo), the new Rate is crossfaded with the old Rate. The value of Retrig controls how long the crossfade is as a percentage of the old Rate. Thus, a value of 100% means that the crossfade will be complete in one cycle of the old Rate.*

Angle *Given most configurations of the Eclipse, the modulation will "start over" when the tempo button is tapped or when an external sequence is started. Angle determines where in its waveform the modulation begins.*

Plex

Delays^***(x = 1, 2, ..., 8)***

Delayx *Sets the delay time for delay* x.

Mixer^***(x = 1, 2, ..., 8)***

Levelx *Controls the level of delay* x.

Panx *Controls the stereo placement of delay* x.

delay 8 plex

(140 Delay8Plex)

This one has eight 660 mS modulating delay lines with 'level' and 'pan' parameters for each independent output.

Summed in, stereo out

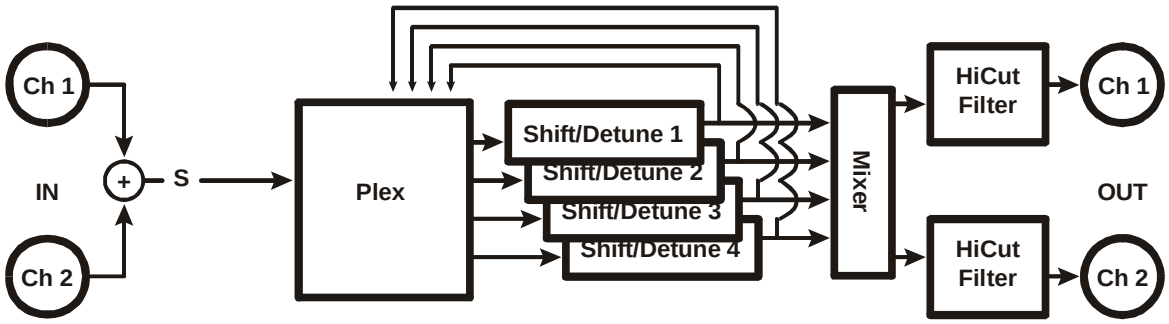
See “large delay 8 plex” above for diagram and parameters.

detune 4 plex

(142 Detune4Plex)

This one has four 660 mS *detuner*s in addition to 'level' and 'pan' parameters for each independent output.

Summed in, stereo out



Masters

Send *Adjusts the level at 'S' in the diagram. If you want to modulate the volume of the effect with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*

Level *Controls the output level.*

Decay *Controls the delay feedback, effectively the reverb time.*

Size *Scales the individual delay times, effectively altering the "room size".*

HiCut *Controls the output level of a high shelving filter.*

LowCut *Controls the output level of a low shelving filter.*

HiFreq *Controls the cutoff frequency of the high shelving filter.*

 © 2001 Eventide, Inc.

LowFreq *Controls the cutoff frequency of the low shelving filter.*

Detune *Scales all the individual detune amounts, effectively serving as a master detune.*

Length *Controls the delay time of the detune pitchshifters.*

Image *Scales all the individual delay pans, effectively controlling the stereo spread.*

Detune^(x = 1, 2, 3, 4)

Detunex *Controls the pitchshift of detuner x.*

Delayx *Controls the delay time of pitchshift x.*

Mixer^(x = 1, 2, 3, 4)

Levelx *Controls the level of detuner x.*

Panx *Controls the stereo placement of detuner x.*

reverse 4 plex

(143 Reverse4Plex)

This one adds four two-second reverse shifters as well as 'level' and 'pan' parameters for each independent output.

Summed in, stereo out

See “detune 4 plex” above for diagram.

Masters

Send *Adjusts the level at 'S' in the diagram. If you want to modulate the volume of the effect with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*

Level *Controls the output level.*

Decay *Controls the reverse feedback.*

Size *Scales the individual reverse times, effectively altering the "room size".*

Pitch *Scales all the individual reverse shifters.*

HiCut *Controls the output level of a high shelving filter.*

LowCut *Controls the output level of a low shelving filter.*

HiFreq *Controls the cutoff frequency of the high shelving filter.*

LowFreq *Controls the cutoff frequency of the low shelving filter.*

Image *Scales all the individual delay pans, effectively controlling the stereo spread.*

Plex

Pitch^***(x = 1, 2, 3, 4)***

Pitchx *Controls the pitch of reverse shifter* x.

Delays^***(x = 1, 2, 3, 4)***

Delayx *Controls the delay time of reverse shifter* x.

Mixer^***(x = 1, 2, 3, 4)***

Levelx *Controls the level of reverse shifter* x.

Panx *Controls the stereo placement of reverse shifter* x.

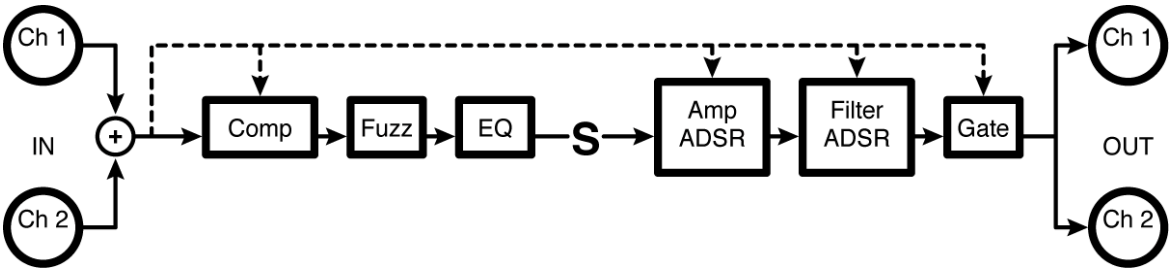
preamps

fuzzADSRpre

(144 FuzzADSRPreamp)

This instrument preamp has compression, by-passable fuzz, EQ, remote 'volume pedal' and gate, as well as an ADSR controlled amp and an ASDR controlled filter for synth emulation.

Summed in, summed out



PreAmp

Comp

Thresh	*Sets the input threshold above which compression takes place and below which the signal is left alone.*
Gain	*Adjusts the output level to improve gain structure.*
Attack	*Controls how quickly the compressor "clamps down" on a signal after it exceeds the threshold.*
Decay	*Controls how quickly the compressor "lets go" of a signal once it falls below the threshold.*
Ratio	*Controls the input to output ratio for signals above the threshold. For example, "6:1" produces 1dB of output for every 6dB of input.*

Fuzz

Fuzz	*Selects distortion "in" or "out".*
Drive	*Controls how much input (drive) is sent to the distortion. The greater the input, the greater the distortion.*
Level	*Controls the output level of the distortion.*
Flux	*Controls the distortion "slew rate" to change its timbre, or how "in your face" it sounds.*
HiCut	*Controls the cutoff frequency of a gentle lowpass filter.*

EQ

Trim	*Controls the input level to the EQ.*
Low	*Controls the low EQ boost/cut.*
Mid	*Controls the mid EQ boost/cut.*
High	*Controls the high EQ boost/cut.*
Low	*Controls the low EQ center frequency.*
Mid	*Controls the mid EQ center frequency.*
High	*Controls the high EQ center frequency.*

Manual_P *Allows users without an external pedal to modulate the effect from the front panel.*

 © 2001 Eventide, Inc.

Gate

G Thresh *Sets the input threshold that the signal must exceed to open the gate.*

G Attack *Controls how quickly the gate opens up once the signal exceeds the threshold.*

G Decay *Controls how quickly the gate closes once the signal falls below the threshold.*

A ADSR Controls the ADSR which modulates the Amp

Sens *Controls the sensitivity of the A and F ADSR triggers.*

Retrig *Determines the crossfade time between the old modulation level and the new modulation level when the A ADSR is retriggered.*

***A* DLevel** *Controls the level of the initial A ADSR peak as a percentage of the total possible modulation output.*

***A* SLevel** *Controls the level of the sustain portion of the A ADSR as a percentage of the total possible modulation output.*

***A* Attack** *Controls the attack time.*

***A* Decay** *Controls the decay time.*

***A* Sustain** *Controls the sustain time.*

***A* Releas** *Controls the release time.*

Peak

Attack *Smoothes the rise time of the signal that triggers the A and F ADSRs.*

Decay *Smoothes the fall time of the signal that triggers the A and F ADSRs.*

Filter

Filter

Freq *Controls the "baseline" center frequency or cutoff frequency.*

Fmod *Controls how far from the "baseline" the cutoff frequency will deviate in response to the F ADSR modulation signal.*

Q *Controls the "baseline" bandwidth or resonance.*

Qmod *Controls how far from the "baseline" the Q will deviate in response to the F ADSR modulation signal.*

Type *Selects the type of filter.*

F ADSR – controls the Filter ADSR

Sens *Controls the sensitivity of the A and F ADSR triggers – this is the same control as above, duplicated for convenience.*

Retrig *Determines the crossfade time between the old modulation level and the new modulation level when the F ADSR is retriggered.*

F DLevel *Controls the level of the initial F ADSR peak as a percentage of the total possible modulation output.*

F SLevel *Controls the level of the sustain portion of the F ADSR as a percentage of the total possible modulation output.*

F Attack *Controls the attack time.*

F Decay *Controls the decay time.*

F Sustain *Controls the sustain time.*

F Releas *Controls the release time.*

Peak - same controls as above, duplicated for convenience

Attack *Smoothes the rise time of the signal that triggers the A and F ADSRs.*

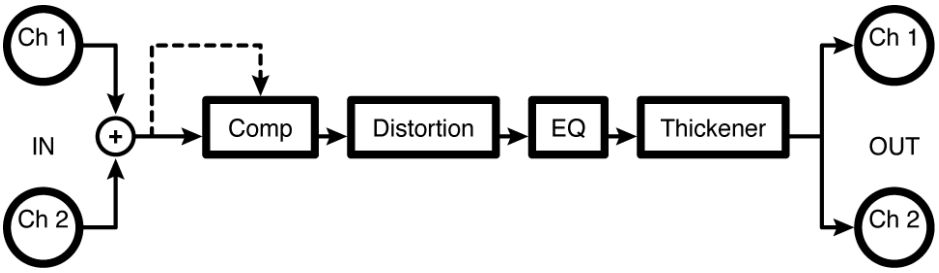
Decay *Smoothes the fall time of the signal that triggers the A and F ADSRs.*

bass pre

(145 BassPreamp)

A simple preamp configuration with compression, three-band EQ, class A distortion, and a 'thickener' parameter.

Summed in, summed out



Comp	
Thresh	*Sets the input threshold above which compression of the signal takes place and below which the signal is left alone.*
Ratio	*Controls the input to output ratio for signals above the threshold. For example, "6:1" produces 1dB of output for every 6dB of input.*
Attack	*Controls how quickly the compressor "clamps down" on a signal after it exceeds the threshold.*
Decay	*Controls how quickly the compressor "lets go" of a signal once it falls below the threshold.*

Tone	
Trim	*Controls the input level to the EQ.*
Low	*Controls the low EQ boost/cut.*
Mid	*Controls the mid EQ boost/cut.*
High	*Controls the high EQ boost/cut.*
Thicken	*Controls the amount of "thickener". Slather it on...*
Distort	*Controls how much input (drive) is sent to the distortion. The greater the input, the greater the distortion.*

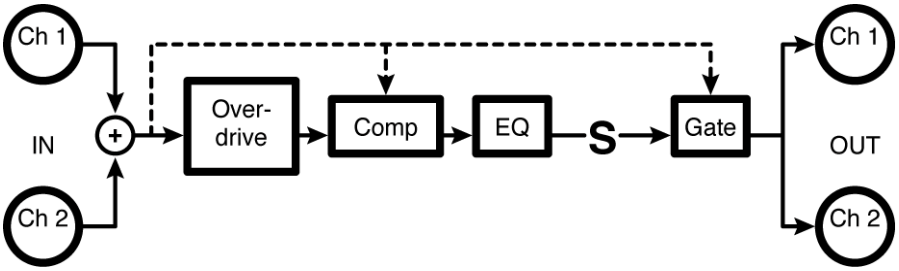
 © 2001 Eventide, Inc.

overdrive preamp

(146 OverdrivePreamp)

Instrument preamp with compression, bypassable fuzz, EQ, remote 'volume pedal' and gate. This flavor is an overdrive effect and is much more interactive with the source signal.

Summed in, summed out



PreAmp

OD

Fuzz	*Selects distortion "in" or "out".*
Drive	*Controls how much input (drive) is sent to the distortion. The greater the input, the greater the distortion.*
Level	*Controls the output level of the distortion.*
Flux	*Controls the distortion "slew rate" to change its timbre, or how "in your face" it sounds.*
HiCut	*Controls the cutoff frequency of a gentle lowpass filter.*

Comp

Thresh	*Sets the input threshold above which compression takes place and below which the signal is left alone.*
Gain	*Adjusts the output level to improve gain structure.*
Attack	*Controls how quickly the compressor "clamps down" on a signal after it exceeds the threshold.*
Decay	*Controls how quickly the compressor "lets go" of a signal once it falls below the threshold.*
Ratio	*Controls the input to output ratio for signals above the threshold. For example, "6:1" produces 1dB of output for every 6dB of input.*

EQ

Trim	*Controls the input level to the EQ.*
Mid1	*Controls the mid1 EQ center frequency.*
Mid1	*Controls the mid1 EQ boost/cut.*
Mid2	*Controls the mid2 EQ center frequency.*
Mid2	*Controls the mid2 EQ boost/cut.*

Gate

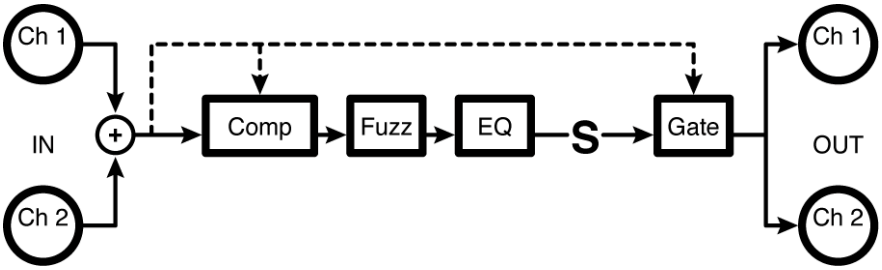
G Thresh	*Sets the input threshold that the signal must exceed to open the gate.*
G Attack	*Controls how quickly the gate opens up once the signal exceeds the threshold.*
G Decay	*Controls how quickly the gate closes once the signal falls below the threshold.*

Manual_P *Allows users without an external pedal to modulate the effect from the front panel.*

fuzz preamp

(147 FuzzPreamp)

This instrument preamp has compression, bypass-able fuzz, EQ, remote 'volume pedal' and gate.
Summed in, summed out



PreAmp

Comp

Thresh	*Sets the input threshold above which compression takes place and below which the signal is left alone.*
Gain	*Adjusts the output level to improve gain structure.*
Attack	*Controls how quickly the compressor "clamps down" on a signal after it exceeds the threshold.*
Decay	*Controls how quickly the compressor "lets go" of a signal once it falls below the threshold.*
Ratio	*Controls the input to output ratio for signals above the threshold. For example, "6:1" produces 1dB of output for every 6dB of input.*

Fuzz

Fuzz	*Selects distortion "in" or "out".*
Freq	*Controls the frequency of a pre-drive band EQ.*
Filter	*Controls the mix of the pre-drive filter.*
Q	*Controls the bandwidth or resonance of the pre-drive filter.*
Drive	*Controls how much input (drive) is sent to the distortion. The greater the input, the greater the distortion.*
Level	*Controls the output level of the distortion.*
Flux	*Controls the distortion "slew rate" to change its timbre, or how "in your face" it sounds.*
HiCut	*Controls the cutoff frequency of a gentle lowpass filter.*

EQ

Trim	*Controls the input level to the EQ.*
Low	*Controls the low EQ boost/cut.*
Mid	*Controls the mid EQ boost/cut.*
High	*Controls the high EQ boost/cut.*
Low	*Controls the low EQ center frequency.*
Mid	*Controls the mid EQ center frequency.*
High	*Controls the high EQ center frequency.*

 © 2001 Eventide, Inc.

Gate

G Thresh *Sets the input threshold that the signal must exceed to open the gate.*

G Attack *Controls how quickly the gate opens up once the signal exceeds the threshold.*

G Decay *Controls how quickly the gate closes once the signal falls below the threshold.*

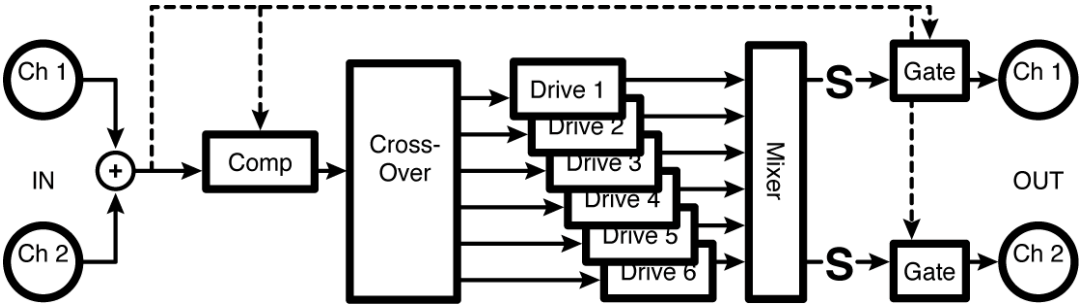
Manual_P *Allows users without an external pedal to modulate the effect from the front panel.*

polydriver

(148 PolyDriver)

A compressor feeds six bandpassed class A drivers mixed to stereo leading to a remote 'volume pedal' and gate.

Summed in, stereo out



PreAmp

Comp

Thresh *Sets the input threshold above which compression takes place and below which the signal is left alone.*

Gain *Adjusts the output level to improve gain structure.*

Attack *Controls how quickly the compressor "clamps down" on a signal after it exceeds the threshold.*

Decay *Controls how quickly the compressor "lets go" of a signal once it falls below the threshold.*

Ratio *Controls the input to output ratio for signals above the threshold. For example, "6:1" produces 1dB of output for every 6dB of input.*

Drives

Trim *Controls the input level to the distortion.*

Drive 1..6 *Controls the drive level of drive* 1 to 6.

Filters

Freq 1..6 *Controls the center frequency for band filter* 1 thru 6.

Q *Controls the bandwidth for all six band filters.*

HiCut *Controls the cutoff frequency of a gentle lowpass filter.*

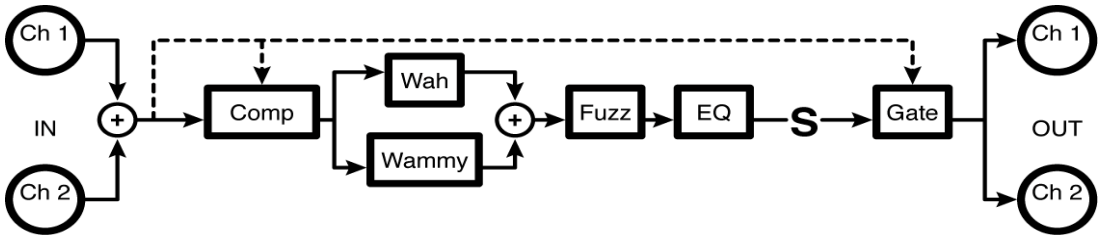
Pans

Pan 1..6 *Controls the stereo position for band* 1 thru 6.

fuzzpre wa/wammy

(149 FuzzWaWammyPre)

This is an instrument preamp with compression, bypass-able fuzz, EQ, remote 'volume pedal' and gate. This flavor has 'wah-wah' and 'wammy' effects. You can choose which effect is controlled by the 'pedal.'
Summed in, summed out



PreAmp

Comp

Thresh	*Sets the input threshold above which compression takes place and below which the signal is left alone.*
Gain	*Adjusts the output level to improve gain structure.*
Attack	*Controls how quickly the compressor "clamps down" on a signal after it exceeds the threshold.*
Decay	*Controls how quickly the compressor "lets go" of a signal once it falls below the threshold.*
Ratio	*Controls the input to output ratio for signals above the threshold. For example, "6:1" produces 1dB of output for every 6dB of input.*

Fuzz

Fuzz	*Selects distortion "in" or "out".*
Drive	*Controls how much input (drive) is sent to the distortion. More input, more distortion.*
Level	*Controls the output level of the distortion.*
Flux	*Controls the distortion "slew rate" to change its timbre, or how "in your face" it sounds.*
HiCut	*Controls the cutoff frequency of a gentle lowpass filter.*

EQ

Trim	*Controls the input level to the EQ.*
Low	*Controls the low EQ boost/cut.*
Mid	*Controls the mid EQ boost/cut.*
High	*Controls the high EQ boost/cut.*
Low	*Controls the low EQ center frequency.*
Mid	*Controls the mid EQ center frequency.*
High	*Controls the high EQ center frequency.*

Gate

G Thresh	*Sets the input threshold that the signal must exceed to open the gate.*
G Attack	*Controls how quickly the gate opens up once the signal exceeds the threshold.*
G Decay	*Controls how quickly the gate closes once the signal falls below the threshold.*

Pedals

Effect	*Select which effect the external foot pedal will control: "volume", "wammy" (pitch shifter), or "wawa".*

 © 2001 Eventide, Inc.

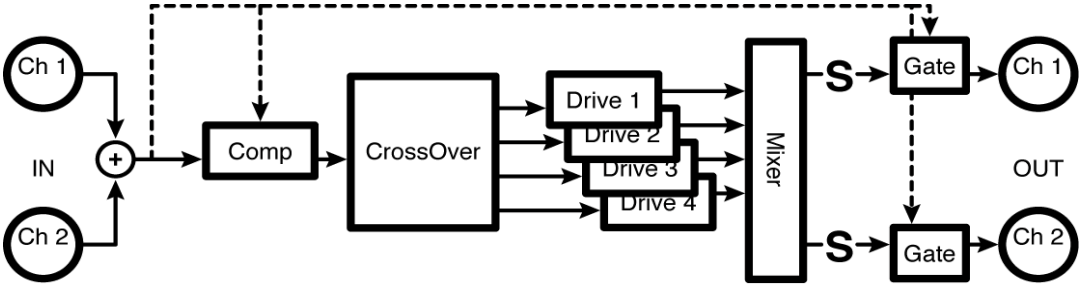
Heel	*Determines the "wammy" pitch when the pedal is at the heel position.*
Toe	*Determines the "wammy" pitch when the pedal is at the toe position.*
Delay	*Controls the "wammy" pitchshifter delay time.*
Freq	*Controls the "baseline" center frequency or cutoff frequency for the "wawa".*
Fmod	*Controls how far from the "baseline" the cutoff frequency will deviate in response to the modulation signal for the "wawa".*
Q	*Controls the "baseline" bandwidth or resonance for the "wawa".*
Qmod	*Controls how far from the "baseline" the Q will deviate in response to the modulation signal for the "wawa".*
LowNote	*Determines the lowest note the "wammy" pitchshifter will correctly shift. Set as high as possible for best results.*
XFade	*Controls the crossfade between old "wammy" pitchshift values and new pitchshift values.*
Manual_P	*Allows users without an external pedal to modulate the effect from the front panel.*

ez polyfuzz

(150 EZPolyFuzz)

A compressor feeds a four-band *polyfuzz* (each band feeds individual distortion elements). This one has simplified parameters.

Summed in, stereo out



PreAmp

Comp

Thresh	*Sets the input threshold above which compression takes place and below which the signal is left alone.*
Gain	*Adjusts the output level to improve gain structure.*
Attack	*Controls how quickly the compressor "clamps down" on a signal after it exceeds the threshold.*
Decay	*Controls how quickly the compressor "lets go" of a signal once it falls below the threshold.*
Ratio	*Controls the input to output ratio for signals above the threshold. For example, "6:1" produces 1dB of output for every 6dB of input.*

PolyFuzz

Tone	*Controls the overall tone of the distortion (higher values are brighter).*
Q	*Controls the bandwidth of all the band filters.*
Drive	*Controls how much input (drive) is sent to the distortion. More input, more the distortion.*
Flux	*Controls the distortion "slew rate" to change its timbre, or how "in your face" it sounds.*
Level	*Controls the output level of the distortion.*
Image	*Controls the stereo spread of the effect.*
HiCut	*Controls the cutoff frequency of a gentle lowpass filter.*

Gate

G Thresh *Sets the input threshold that the signal must exceed to open the gate.*

G Attack *Controls how quickly the gate opens up once the signal exceeds the threshold.*

G Decay *Controls how quickly the gate closes once the signal falls below the threshold.*

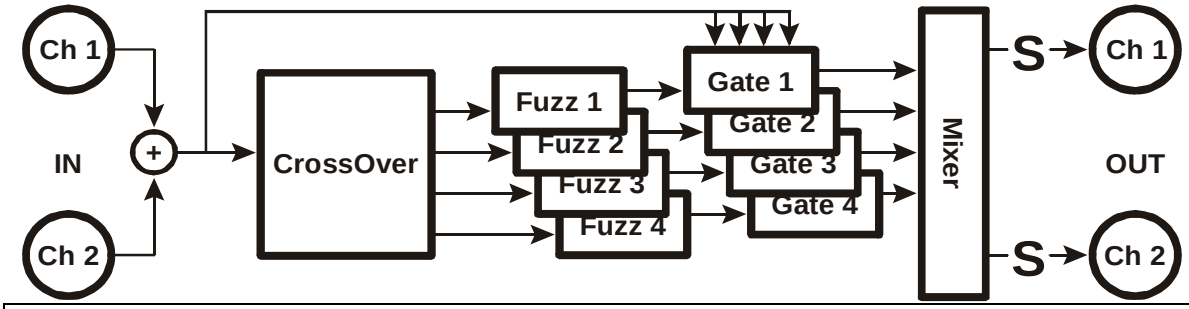
Manual_P *Allows users without an external pedal to modulate the effect from the front panel.*

polyfuzz

(151 PolyFuzz)

Here the compressor feeds a four band gated *polyfuzz* (each band feeds individual distortion elements). This one has individual parameters.

Summed in, stereo out



PolyFuzz

Filters^(x = 1, 2, 3, 4)

Freq x *Controls the center frequency for band filter* x.

Q x *Controls the bandwidth for band filter* x.

Fuzz^(x = 1, 2, 3, 4)

Drive x *Controls how much input (drive) from band filter* x *is sent to the distortion. The greater the input, the greater the distortion.*

Level x *Controls the output level of drive* x.

HiCuts^(x = 1, 2, 3, 4)

Flux x *Controls the distortion "slew rate" of drive* x *to change its timbre, or how "in your face" it sounds.*

HiCut x *Controls the cutoff frequency of a gentle lowpass filter after drive* x.

Image^(x = 1, 2, 3, 4)

Pan x *Controls where in the stereo field drive* x *will appear (negative values scoot it left and positive values scoot it right).*

Gates^(x = 1, 2, 3, 4)

Thresh *Sets the input threshold that the signal must exceed to open the gate.*

Attack x *Controls how quickly the gate after drive* x *opens up once the signal exceeds the threshold.*

Decay x *Controls how quickly the gate after drive* x *closes once the signal falls below the threshold.*

Manual_P *Allows users without an external pedal to modulate the effect from the front panel.*

 © 2001 Eventide, Inc.

shifters

A diatonic pitch shifter shifts the musical pitch of an audio signal while maintaining the proper harmonic relationship to a diatonic scale. To accomplish this, the user specifies the desired key, scale and musical interval. The pitch shifter takes care of finding out what note is being played and automatically adjusts the amount of pitch shift so that the resultant note is in-key.

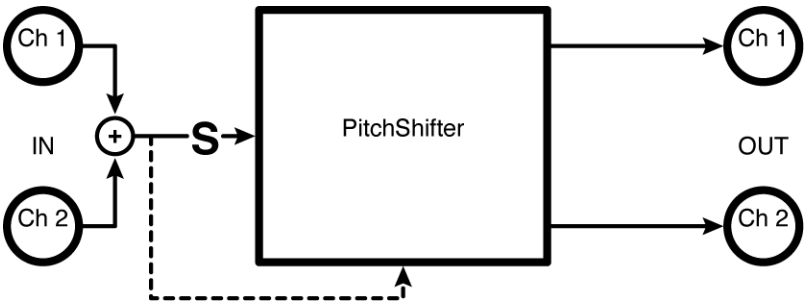
In general, the operation of any shifter can be improved by optimizing the setting of the 'low note' parameter, which defines the lowest note that the shifter recognizes. This should be set low for polyphonic material such as guitar, and higher for vocals.

The 'xfade' parameter can usually be left alone – greater values may increase smoothness at the cost of blurring transients, lower values may add roughness.

auto pitch correct

(158 AutoCorrect)

This algorithm is essentially a diatonic shifter with independent delay parameters. Set as 'chromatic.'
Summed in, stereo out



Meter	
Error	*Monitors how far off the Eclipse believes the input is from "correct".*
Fixed	*Monitors how far the Eclipse is bending (or fixing) the input to correct the error.*

Shift	
Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the volume of the effect with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
Quant	*Determines the level of "quantization", or how close the Eclipse will bring an "off" note to "perfection".*
Tune	*Controls the detector's calibration, allowing for deviation from A-440 tuning.*
Key	*Selects the key that the corrector references (if a scale is in fact selected under Scale).*
Scale	*Selects the scale that the corrector references.*
Glide	*Controls how quickly the shifter slides between shift values.*
Delay L	*Controls the left channel shifter delay time.*
Delay R	*Controls the right channel shifter delay time.*
Level L	*Controls the left channel output level.*
Level R	*Controls the right channel output level.*

Cal

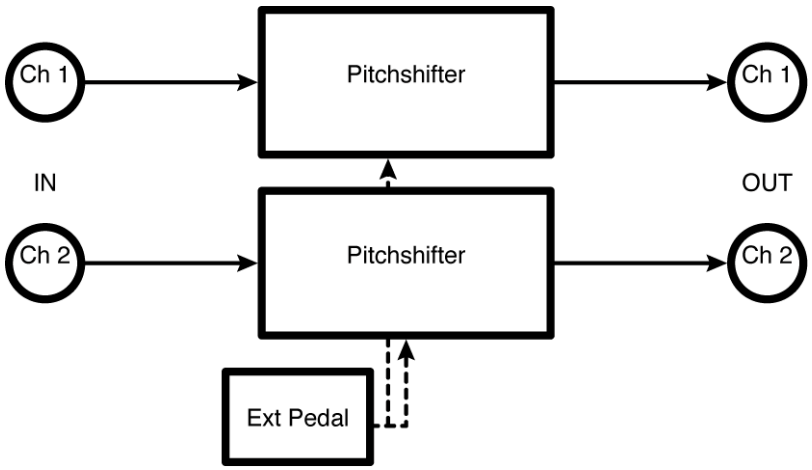
LowNote	*Determines the lowest note the pitchshifter will correctly shift. Set as high as possible for best results.*
Source	*Optimizes the corrector for either "vocal" or "instrument" input.*
XFade	*Controls the crossfade between old pitchshift values and new pitchshift values.*

dual wammy

(159 DualWammy)

This externally controlled shifter has 'master' and individual channel parameters. Pitch and modulation are set up as 'heel/toe' parameters.

Stereo in, stereo out



Master

Bypass	*Selects "fx in" or "fx out".*
Man_Wam	*Allows users without an external pedal to modulate the effect from the front panel.*
Heel	*Determines the "wammy" pitch when the pedal is at the heel position.*
Toe	*Determines the "wammy" pitch when the pedal is at the toe position.*
Delay	*Controls the "wammy" pitchshifter delay time.*
LowNote	*Determines the lowest note the "wammy" pitchshifter will correctly shift. Set as high as possible for best results.*
XFade	*Controls the crossfade between old "wammy" pitchshift values and new pitchshift values.*

Wammy#1

Parameters similar to those described above, dedicated to "wammy" pitchshifter 1; changes made here can be overwritten by those made under Master and vice versa (the most recently entered value "wins")

Wammy#2

Parameters similar to those described above, dedicated to "wammy" pitchshifter 2; changes made here can be overwritten by those made under Master and vice versa (the most recently entered value "wins")

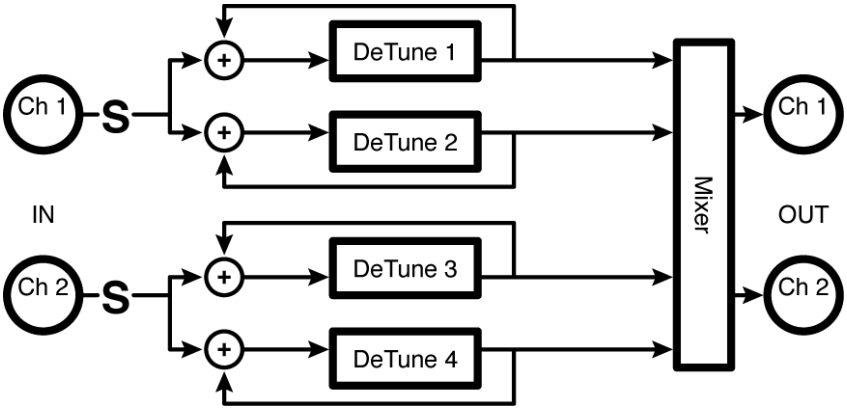
 © 2001 Eventide, Inc.

4 detuners

(160 4Detuners)

There are four 660 mS *detuner*s with independent feedback paths. 'Tightness' is a master length/splice parameter.

Stereo in, stereo out



Masters	
Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the volume of the effect with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
m_Level	*Scales all the individual detune levels, effectively serving as a master volume.*
m_Pitch	*Scales all the individual detune amounts, effectively serving as a master pitch.*
m_Delay	*Scales all the individual detune delay times, effectively serving as a master delay (e.g. if the four delays are set to 200ms, 150ms, 100ms, and 50ms, setting M_Delay to 50% cuts those times in half (100ms, 75ms, 50ms, and 25ms)).*
m_Fback	*Scales all the individual detune delay feedbacks, effectively serving as a master feedback (i.e. if M_Fback is set to 0%, all the delays will have no feedback, regardless of their individual settings. Alternatively, you could also have no feedback with M_Fback set to 100% if you set each delay's feedback parameter to 0%.).*
m_Pan	*Scales all the individual detune pans, effectively serving as an image spread control (i.e. if M_Pan is set to 0%, all the delays will be panned center, regardless of their individual settings).*
Tightnes	*Controls the "length" of the detuner. Shorter values yield tighter, albeit glitched results. Longer values yield deglitched, albeit "looser" results. Find the happy medium!*

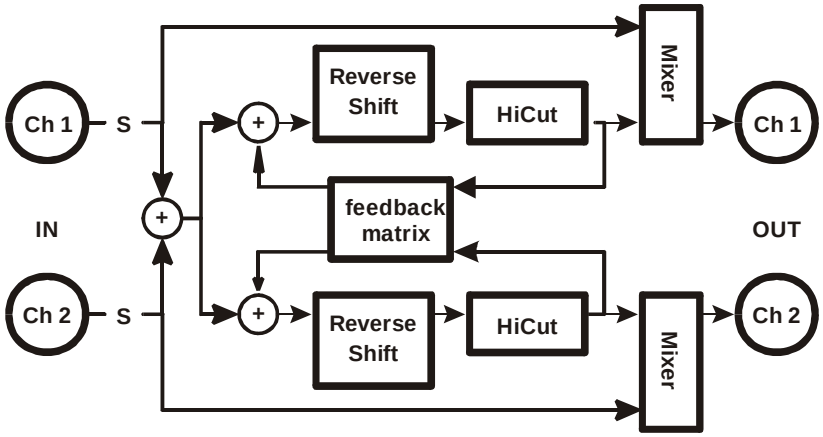
Shift^(x = 1, 2, 3, 4)	
Detune x	*Controls the detune amount of detune x.*
Level x	*Controls the level of detune x.*
Delay x	*Controls the delay time of detune x.*
Fback x	*Controls how much of detune x's output is reapplied to its input.*
Pan x	*Controls where in the stereo field detune x will appear.*

reverse crystals

(161 ReverseCrystals)

Here we have two five second reverse shifters where the feedback signal can be the sum of the outputs, the channel output or the other channel for ‘crisscross’ effects. Note that the delay times are independent of the splice length (keep at 0 ms for splicing referenced to actual delay perceived).

Stereo in, stereo out



Masters	
Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the input to the loop with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
Mix	*Controls the wet-to-dry ratio. If set to "0%", you won't hear any "crystals". If set to "100%" you'll hear nothing but "crystals".*
m_Fback	*Scales all the individual delay feedbacks, effectively serving as a master feedback (i.e. if M_Fback is set to 0%, all the delays will have no feedback, regardless of their individual settings. Alternatively, you could also have no feedback with M_Fback set to 100% if you set each delay's feedback parameter to 0%.).*
FB Type	*Determines if the feedback from each "crystal" will return to its own input, to the other delay's input, or to both.*
Hicut	*Controls the lowpass filter cutoff frequency.*

Crystals^(x = 1, 2)	
Pitch x	*Controls the pitch of reverse shifter x.*
Fback x	*Controls how much of reverse shifter x's output is reapplied to its input.*
Length x	*Controls the audible delay time. Either reflects this time as entered by the T_Length to its right (given the current tempo) or allows you to enter the delay time in milliseconds.*
T_Length	*Controls the audible delay time. Controls this time in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic delay generation "off".*
Delay x	*Controls the pitchshifting delay (typically very short). Either reflects the physical delay time as entered by T_Delayx (given the current tempo) or allows you to enter the delay time in milliseconds .*
***T_Delay* x**	*Controls the pitchshifting delay (typically very short). Controls delay x in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic delay generation "off".*

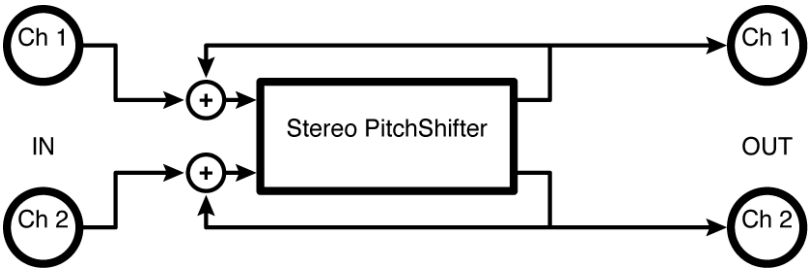
 © 2001 Eventide, Inc.

stereoshift

(162 St Shifter)

This phase-coherent, non-diatonic shifter has simple controls. It is designed to preserve the stereo 'image' of the input signal.

Stereo in, stereo out



Shift

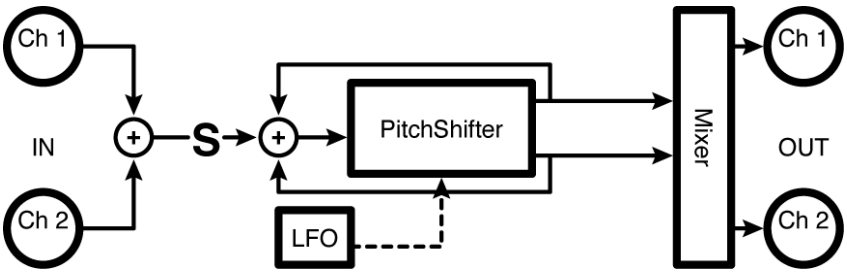
Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the volume of the effect with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
Level	*Controls the output level.*
Pitch	*Controls the amount of pitchshift effect.*
Delay	*Controls the delay time for optimal performance.*
Fback	*Controls how much of the pitchshifter's output is reapplied to its input.*
LowNote	*Determines the lowest note the pitchshifter will correctly shift. Set as high as possible for best results.*
XFade	*Controls the crossfade between old pitchshift values and new pitchshift values.*

diatonicshift 2

(163 DiatonicShift2)

A single two-voice diatonic shifter whose feedback path is the sum of both outputs, with 'master' and individual parameters. *LFO* and external modulation are available.

Summed in, stereo out



Masters

Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the volume of the effect with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
m_Level	*Scales both pitchshifter levels, effectively serving as a master volume.*
m_Dly	*Scales both delay times, effectively serving as a master delay.*
m_Mod	*Scales both modulation amounts, effectively serving as a... you guessed it.*

m_Pan *Scales both pitchshifter pans, effectively serving as an image spread control.*

Cal	
Tune	*Controls the detector's calibration, allowing for deviation from A-440 tuning.*
Key	*Selects the key that the detector references (if a scale is in fact selected under Scale).*
Scale	*Selects the scale that the detector references.*
Quant	*Determines the level of "quantization", or how close the Eclipse will bring an "off" note to "perfection".*
LowNote	*Determines the lowest note the pitchshifter will correctly shift. Set as high as possible for best results.*
XFade	*Controls the crossfade between old pitchshift values and new pitchshift values.*
Glide	*Controls how quickly the shifter slides between shift values.*

Shift^(x = 1, 2)	
Pitch x	*Controls the amount of pitchshift effect for pitchshifter x.*
Mod x	*Controls the amount of pitch modulation for a vibrato effect.*
***Manual_*M**	*Allows users without an external pedal to modulate the effect from the front panel.*
Delay x	*Either reflects the physical delay time as entered by T_Delayx (given the current tempo) or allows you to enter the delay time in milliseconds .*
***T_Delay* x**	*Controls delay x in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic delay generation "off".*

LFO	
Mode	*Selects whether the LFO will modulate each shifter in phase ("lfo sync") or out of phase ("lfo oppose"). Also allows an external source to modulate the shifters ("manual/ext").*
Rate	*Controls the modulation rate if T_Rate is set to "off" or reflects the physical modulation rate as selected by T_Rate and the system tempo.*
***T_*Rate**	*Controls the modulation rate in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic modulation generation "off".*
Shape	*Determines the shape of the modulating signal.*
Duty	*Controls the "duty cycle" of the modulating wave for any waveform other than "sine". For example, if you have selected "triangle" under Shape and set Duty to "0%", the triangle will morph to a sawtooth (very fast rise, slow fall). With Duty at "100%", the triangle will morph to a ramp (slow rise, very fast fall).*
Retrig	*Whenever **Rate** is changed (either manually or by updating the tempo), the new Rate is crossfaded with the old Rate. The value of **Retrig** controls how long the crossfade is as a percentage of the old Rate. Thus, a value of 100% means that the crossfade will be complete in one cycle of the old Rate.*
Angle	*Given most configurations of the Eclipse, the modulation will "start over" when the tempo button is tapped or when an external sequence is started. Angle determines where in its waveform the modulation begins.*

Mix^(x = 1, 2)	
Level x	*Controls the output level of pitch shifter x.*
Pan x	*Controls the stereo placement of pitch shifter x.*
Fback x	*Controls how much of pitch shifter x's output is reapplied to its input.*

 © 2001 Eventide, Inc.

multishift 2

(164 MultiShift2)

A single two-voice, non-diatonic shifter whose feedback path is the sum of both outputs, with 'master' and individual parameters. *LFO* and external modulation are available.
Summed in, stereo out

See “diatonic 2” above for diagram.

Masters

Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the volume of the effect with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
m_Level	*Scales both pitchshifter levels, effectively serving as a master volume.*
m_Pitch	*Scales both pitch shift amounts, effectively serving as a master pitch.*
m_Mod	*Scales both modulation amounts, effectively serving as a master modulation amount.*
m_Dly	*Scales both delay times, effectively serving as a master delay.*
m_Pan	*Scales both pitchshifter pans, effectively serving as an image spread control.*

Cal

LowNote	*Determines the lowest note the pitchshifter will correctly shift. Set as high as possible for best results.*
XFade	*Controls the crossfade between old pitchshift values and new pitchshift values.*

Shift^(x = 1, 2)

Pitch x	*Controls the amount of pitchshift effect for pitchshifter x.*
Mod x	*Controls the amount of pitch modulation for a vibrato effect.*
Delay x	*Either reflects the physical delay time as entered by T_Delayx (given the current tempo) or allows you to enter the delay time in milliseconds .*
***T_Delay* x**	*Controls delay x in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic delay generation "off".*
Manual_M	*Allows users without an external pedal to modulate the effect from the front panel.*

LFO

Mode	*Selects whether the LFO will modulate each shifter in phase ("lfo sync") or out of phase ("lfo oppose"). Also allows an external source to modulate the shifters ("manual/ext").*
Rate	*Controls the modulation rate if T_Rate is set to "off" or reflects the physical modulation rate as selected by T_Rate and the system tempo.*
***T_*Rate**	*Controls the modulation rate in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic modulation generation "off".*
Shape	*Determines the shape of the modulating signal.*
Duty	*Controls the "duty cycle" of the modulating wave for any waveform other than "sine". For example, if you have selected "triangle" under Shape and set Duty to "0%", the triangle will morph to a sawtooth (very fast rise, slow fall). With Duty at "100%", the triangle will morph to a ramp (slow rise, very fast fall).*
Retrig	*Whenever Rate is changed (either manually or by updating the tempo), the new Rate is crossfaded with the old Rate. The value of Retrig controls how long the crossfade is as a percentage of the old Rate. Thus, a value of 100% means that the crossfade will be complete in one cycle of the old Rate.*
Angle	*Given most configurations of the Eclipse, the modulation will "start over" when the tempo button is tapped or when an external sequence is started. Angle determines where in its waveform the modulation begins.*

Mix^(x = 1, 2)

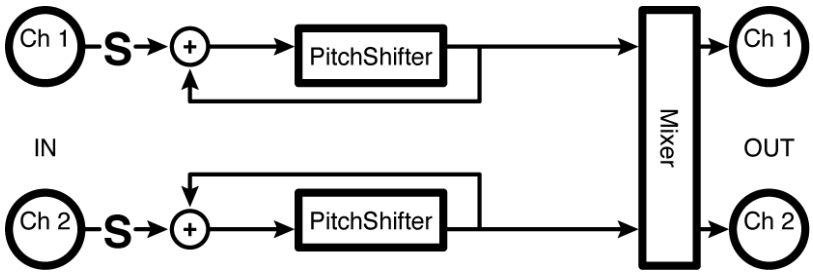
Level x	*Controls the output level of pitch shifter x.*
Pan x	*Controls the stereo placement of pitch shifter x.*
Fback x	*Controls how much of pitch shifter x's output is reapplied to its input.*

dual diatonic

(165 DualDiatonic)

Here we have dual two-voice diatonic shifters with individual feedback paths as well as 'master' and individual channel parameters.

Stereo in, stereo out



Masters

Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the volume of the effect with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
m_Level	*Scales both pitchshifter levels, effectively serving as a master volume.*
m_Dly	*Scales both delay times, effectively serving as a master delay.*
m_Mod	*Scales both modulation amounts, effectively serving as a... you guessed it.*
m_Pan	*Scales both pitchshifter pans, effectively serving as an image spread control.*

Cal

Tune	*Controls the detector's calibration, allowing for deviation from A-440 tuning.*
Key	*Selects the key that the detector references (if a scale is in fact selected under Scale).*
Scale	*Selects the scale that the detector references.*
Quant	*Determines the level of "quantization", or how close the Eclipse will bring an "off" note to "perfection".*
LowNote	*Determines the lowest note the pitchshifter will correctly shift. Set as high as possible for best results.*
XFade	*Controls the crossfade between old pitchshift values and new pitchshift values.*
Glide	*Controls how quickly the shifter slides between shift values.*

Shift^(x = 1, 2)

Pitch x	*Controls the amount of pitchshift effect for pitchshifter x.*
Mod x	*Controls the amount of pitch modulation for a vibrato effect.*
Manual_M	*Allows users without an external pedal to modulate the effect from the front panel.*
Delay x	*Either reflects the physical delay time as entered by T_Delayx (given the current tempo) or allows you to enter the delay time in milliseconds .*
***T_*Delay x**	*Controls delay x in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic delay generation "off".*

 © 2001 Eventide, Inc.

LFO

Mode *Selects whether the LFO will modulate each shifter in phase ("lfo sync") or out of phase ("lfo oppose"). Also allows an external source to modulate the shifters ("manual/ext").*

Rate *Controls the modulation rate if T_Rate is set to "off" or reflects the physical modulation rate as selected by T_Rate and the system tempo.*

T_Rate *Controls the modulation rate in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic modulation generation "off".*

Shape *Determines the shape of the modulating signal.*

Duty *Controls the "duty cycle" of the modulating wave for any waveform other than "sine". For example, if you have selected "triangle" under Shape and set Duty to "0%", the triangle will morph to a sawtooth (very fast rise, slow fall). With Duty at "100%", the triangle will morph to a ramp (slow rise, very fast fall).*

Retrig *Whenever Rate is changed (either manually or by updating the tempo), the new Rate is crossfaded with the old Rate. The value of Retrig controls how long the crossfade is as a percentage of the old Rate. Thus, a value of 100% means that the crossfade will be complete in one cycle of the old Rate.*

Angle *Given most configurations of the Eclipse, the modulation will "start over" when the tempo button is tapped or when an external sequence is started. Angle determines where in its waveform the modulation begins.*

Mix^(x = 1, 2)

Level x *Controls the output level of pitch shifter x.*

Pan x *Controls the stereo placement of pitch shifter x.*

Fback x *Controls how much of pitch shifter x's output is reapplied to its input.*

dual multishift

(166 DualMultishift)

This algorithm offers dual two-voice non-diatonic shifters with individual feedback paths as well as 'master' and individual channel parameters.

Stereo in, stereo out

See “dual diatonic” above for diagram.

Masters

Send *Adjusts the level at 'S' in the diagram. If you want to modulate the volume of the effect with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*

m_Level *Scales both pitchshifter levels, effectively serving as a master volume.*

m_Pitch *Scales both pitch shift amounts, effectively serving as a master pitch.*

m_Mod *Scales both modulation amounts, effectively serving as a master modulation amount.*

m_Dly *Scales both delay times, effectively serving as a master delay.*

m_Pan *Scales both pitchshifter pans, effectively serving as an image spread control.*

Cal

LowNote *Determines the lowest note the pitchshifter will correctly shift. Set as high as possible for best results.*

XFade *Controls the crossfade between old pitchshift values and new pitchshift values.*

Shift^(x = 1, 2)

Pitch x *Controls the amount of pitchshift effect for pitchshifter x.*

Mod x *Controls the amount of pitch modulation for a vibrato effect.*

Delay x	*Either reflects the physical delay time as entered by T_Delayx (given the current tempo) or allows you to enter the delay time in milliseconds .*
***T_*Delay x**	*Controls delay x in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic delay generation "off".*
Manual_M	*Allows users without an external pedal to modulate the effect from the front panel.*

LFO

Mode	*Selects whether the LFO will modulate each shifter in phase ("lfo sync") or out of phase ("lfo oppose"). Also allows an external source to modulate the shifters ("manual/ext").*
Rate	*Controls the modulation rate if T_Rate is set to "off" or reflects the physical modulation rate as selected by T_Rate and the system tempo.*
***T_*Rate**	*Controls the modulation rate in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic modulation generation "off".*
Shape	*Determines the shape of the modulating signal.*
Duty	*Controls the "duty cycle" of the modulating wave for any waveform other than "sine". For example, if you have selected "triangle" under Shape and set Duty to "0%", the triangle will morph to a sawtooth (very fast rise, slow fall). With Duty at "100%", the triangle will morph to a ramp (slow rise, very fast fall).*
Retrig	*Whenever Rate is changed (either manually or by updating the tempo), the new Rate is crossfaded with the old Rate. The value of Retrig controls how long the crossfade is as a percentage of the old Rate. Thus, a value of 100% means that the crossfade will be complete in one cycle of the old Rate.*
Angle	*Given most configurations of the Eclipse, the modulation will "start over" when the tempo button is tapped or when an external sequence is started. Angle determines where in its waveform the modulation begins.*

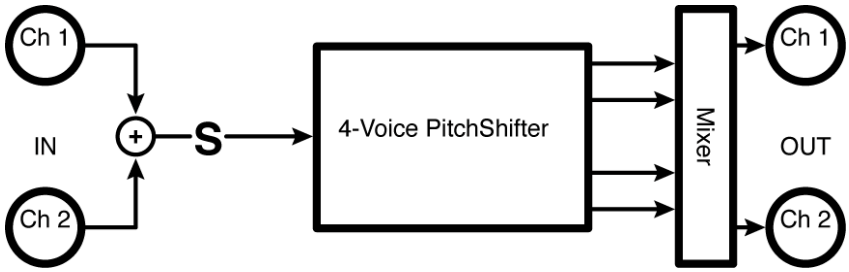
Mix^(x = 1, 2)

Level x	*Controls the output level of pitch shifter x.*
Pan x	*Controls the stereo placement of pitch shifter x.*
Fback x	*Controls how much of pitch shifter x's output is reapplied to its input.*

diatonic 4

(167 DiatonicShift4)

This single four-voice diatonic shifter has 'master' and individual parameters (except 'pitch').
Summed in, stereo out



Masters

Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the volume of the effect with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
m_Level	*Scales both pitchshifter levels, effectively serving as a master volume.*
m_Dly	*Scales both delay times, effectively serving as a master delay.*
m_Pan	*Scales both pitchshifter pans, effectively serving as an image spread control.*

 © 2001 Eventide, Inc.

Cal

Tune	*Controls the detector's calibration, allowing for deviation from A-440 tuning.*
Key	*Selects the key that the detector references (if a scale is in fact selected under Scale).*
Scale	*Selects the scale that the detector references.*
Quant	*Determines the level of "quantization", or how close the Eclipse will bring an "off" note to "perfection".*
LowNote	*Determines the lowest note the pitchshifter will correctly shift. Set as high as possible for best results.*
XFade	*Controls the crossfade between old pitchshift values and new pitchshift values.*
Glide	*Controls how quickly the shifter slides between shift values.*

Shift^(x = 1, 2, 3, 4)

Pitchx	*Controls the amount of pitchshift effect for pitchshifter x.*
Modx	*Controls the amount of pitch modulation for a vibrato effect.*
Manual_M	*Allows users without an external pedal to modulate the effect from the front panel.*
Delayx	*Either reflects the physical delay time as entered by T_Delayx (given the current tempo) or allows you to enter the delay time in milliseconds .*
***T_*Delayx**	*Controls delay x in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic delay generation "off".*

Mix^(x = 1, 2, 3, 4)

Level x	*Controls the output level of pitch shifter x.*
Pan x	*Controls the stereo placement of pitch shifter x.*

multishift 4

(168 MultiShift4)

A single four voice non-diatonic shifter with 'master' and individual parameters.
Summed in, stereo out

See “diatonic 4” above for diagram.

Masters

Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the volume of the effect with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
m_Level	*Scales both pitchshifter levels, effectively serving as a master volume.*
m_Pitch	*Scales both pitch shift amounts, effectively serving as a master pitch.*
m_Dly	*Scales both delay times, effectively serving as a master delay.*
m_Pan	*Scales both pitchshifter pans, effectively serving as an image spread control.*

Cal

LowNote	*Determines the lowest note the pitchshifter will correctly shift. Set as high as possible for best results.*
XFade	*Controls the crossfade between old pitchshift values and new pitchshift values.*

Shift^(x = 1, 2)

Pitch x	*Controls the amount of pitchshift effect for pitchshifter x.*
Delay x	*Either reflects the physical delay time as entered by T_Delayx (given the current tempo) or allows you to enter the delay time in milliseconds .*
***T_*Delay x**	*Controls delay x in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic delay generation "off".*

Manual_M *Allows users without an external pedal to modulate the effect from the front panel.*

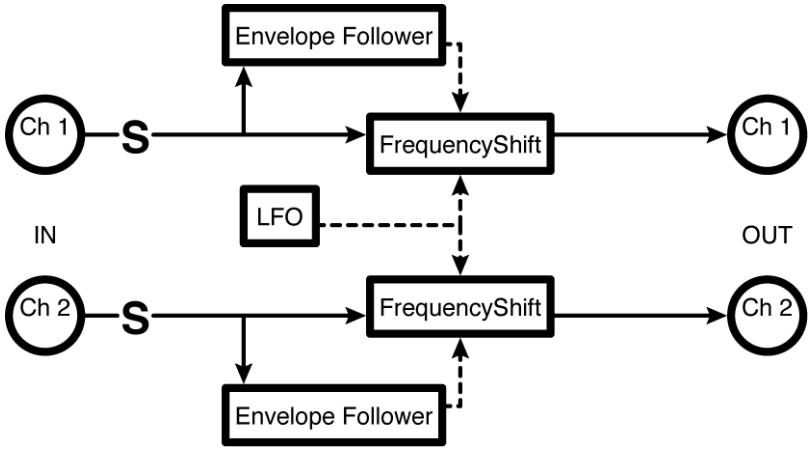
Mix^(x = 1, 2)	
Level x	*Controls the output level of pitch shifter x.*
Pan x	*Controls the stereo placement of pitch shifter x.*

dual modfreqshift

(170 ModFreqShift)

This two-channel algorithm contains sweepable ring modulators, controlled by 'master' and individual channel parameters. The 'mode' selector allows the modulation source to be selected from *LFO*, envelope or pedal.

Stereo in, stereo out



Master	
Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the volume of the effect with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
Mix	*Determines the wet (ring mod) to dry ratio for both rings (you can overwrite this value under Ring#1 or Ring#2.*
Mode	*Selects whether the LFO, the envelope generator, or an external pedal will modulate both rings (you can overwrite this value under Ring#1 or Ring#2).*
m_Rate	*Scales the individual LFO rates.*
m_Ring	*Scales the individual ring amounts.*
m_Mod	*Scales the individual modulation amounts.*
Man_Ped	*Allows users without an external pedal to modulate the effect from the front panel.*

Env/LFO	
Env	*Determines which input or inputs the envelope follower will track.*
Sens	*Controls how sensitive the envelope follower is; alter this parameter to match the average input level to the amount of modulation desired.*
Attack	*Controls how quickly the envelope follower will track an increase at its input.*
Decay	*Controls how quickly the envelope follower will track a decrease at its input.*
Shape	*Determines the shape of the modulating signal.*

 © 2001 Eventide, Inc.

Duty	*Controls the "duty cycle" of the modulating wave for any waveform other than "sine". For example, if you have selected "triangle" under Shape and set Duty to "0%", the triangle will morph to a sawtooth (very fast rise, slow fall). With Duty at "100%", the triangle will morph to a ramp (slow rise, very fast fall).*
Retrig	*Whenever Rate is changed (either manually or by updating the tempo), the new Rate is crossfaded with the old Rate. The value of Retrig controls how long the crossfade is as a percentage of the old Rate. Thus, a value of 100% means that the crossfade will be complete in one cycle of the old Rate.*
Angle	*Given most configurations of the Eclipse, the modulation will "start over" when the tempo button is tapped or when an external sequence is started. Angle determines where in its waveform the modulation begins.*

Ring#1

Mix1	*Determines the wet (ring mod) to dry ratio for ring 1 (you can overwrite this value under Master).*
Mode1	*Selects whether the LFO, the envelope generator, or an external pedal will modulate ring 1 (you can overwrite this value under Master).*
Rate1	*Controls the modulation rate for ring 1 if T_Rate1 is set to "off" or reflects the physical modulation rate as selected by T_Rate1 and the system tempo.*
***T_*Rate**	*Controls the modulation rate on ring 1 in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic modulation generation "off".*
Ring1	*Either reflects the physical ring depth as entered by T_Ring1 (given the current tempo) or allows you to enter the ring depth in Hertz if T_Ring1 is set to "Off".*
***T_*Ring1**	*Controls ring depth 1 in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic ring depth generation "off". The actual ring depth displayed under Ring1 is a function of this control and the current system tempo.*
RMod1	*Controls how much the ring depth varies in response to the modulation source.*
Man_Ped1	*Allows users without an external pedal to modulate the effect from the front panel.*

Ring#2

Parameters analogous to Ring#1.

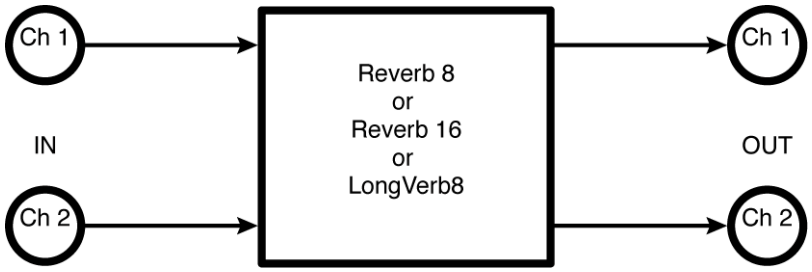
verbs

A diffusor *creates a dense field of delay repeats that is typically used to create* reverberator *structures - it may also be thought of as essentially a chain of series-connected* allpass *filters.*
A reverb *proper usually consists of a* pre-delay*, to give early reflections, followed by a number of reverb* lines*, which are delay sections with multiple feedback loops. Usually, a reverb with more lines will be smoother and more natural sounding.*

long reverb 8

(175 LongVerb8)

This reverb has a long decay with eight two-second lines. Decay time is controlled by tempo (*rdecay*).
Stereo in, stereo out



Verb	
Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the volume of the effect with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
***R* Level**	*Controls the output level.*
RDecay	*Either reflects the physical reverb decay as entered by T_RDecay (given the current tempo) or allows you to enter the reverb decay in seconds if T_RDecay is set to "Off".*
***T_*RDecay**	*Controls the reverb decay in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic decay generation "off".*
RSize	*Controls the reverb's room size by scaling the actual delay times.*
PreDly	*Controls how long the predelay is. Predelay is inserted before the reverb because in a real room, reverb arrives at a listener's ears some time after the dry sound. The larger the room, the longer the lag.*
HiCut	*Controls the cut of a high-frequency shelving EQ.*
LowCut	*Controls the cut of a low-frequency shelving EQ.*
HiFreq	*Controls the frequency at which the high-frequency shelving EQ begins to act.*
LowFreq	*Controls the frequency at which the low-frequency shelving EQ begins to act.*
Depth	*Controls how much individual delay times will vary in response to the LFO controlled by Rate. Determines the "thickness" of the chorus effect.*
Rate	*Scales each delay's LFO rate, effectively serving as a master rate.*
Span	*Scales each delay's pan setting, effectively controlling the image width.*
Glide	*Controls how quickly delay times arrive at new values when individual delay times are adjusted (either directly or via RSize).*

 © 2001 Eventide, Inc.

reverb 8

(174 Reverb 8)

A short reverb with eight 200-mS lines. Decay time is controlled by tempo.
Stereo in, stereo out

See “long reverb 8” above for diagram and parameters.

reverb 16

(176 Reverb 16)

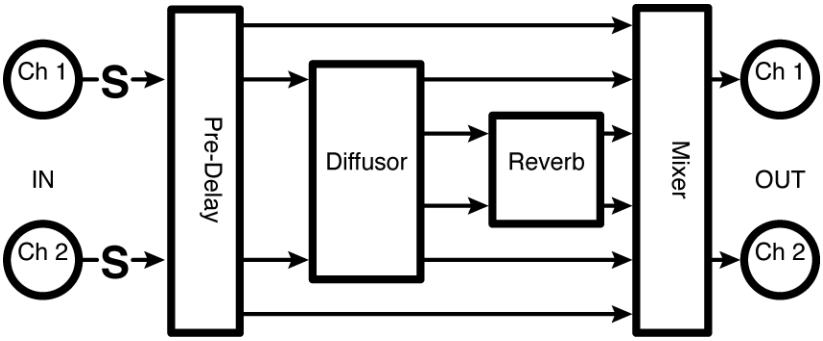
A dense reverb with sixteen 200-mS lines. Decay time is controlled by tempo.
Stereo in, stereo out

See “long reverb 8” above for diagram and parameters.

dense room 16

(178 DenseRoom16)

This dense reverb offers a stereo 200-mS predelay to give early reflection signals. The predelay also feeds two four-part 500-mS diffusors which in turn feed a reverb with sixteen 200-ms lines. (This is an extension of the popular Eventide H3000 structure.) The final out put is a mix of the predelay signals (*early*), the diffusor output (*position*) and the reverb output. Decay time is controlled by tempo.
Stereo in, stereo out



Verb	
Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the volume of the effect with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
***R* Level**	*Controls the output level.*
Early	*Controls the level of the pre-delay signal, utilized as an early reflection (in a real room, the first, relatively coherent reflection off of the nearest surface).*
Position	*Controls the apparent position in the “room”, or how deep you are into the reverberant field.*
Diffusion	*A master feedback control for the diffusors, controlling their "fuzziness" or "distinctness.”*
DSize	*Controls the diffusor's "size" by scaling its delay times.*
RDecay	*Either reflects the physical reverb decay as entered by T_RDecay (given the current tempo) or allows you to enter the reverb decay in seconds if T_RDecay is set to "Off".*

***T_*RDecay**	*Controls the reverb decay in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic decay generation "off".*
RSize	*Controls the reverb's room size by scaling the actual delay times.*
PreDly	*Controls how long the predelay is. Predelay is inserted before the reverb because in a real room, reverb arrives at a listener's ears some time after the dry sound. The larger the room, the longer the lag.*
HiCut	*Controls the cut of a high-frequency shelving EQ.*
LowCut	*Controls the cut of a low-frequency shelving EQ.*
HiFreq	*Controls the frequency at which the high-frequency shelving EQ begins to act.*
LowFreq	*Controls the frequency at which the low-frequency shelving EQ begins to act.*
Depth	*Controls how much individual delay times will vary in response to the LFO controlled by Rate. Determines the "thickness" of the chorus effect.*
Rate	*Scales each delay's LFO rate, effectively serving as a master rate.*
Span	*Scales each delay's pan setting, effectively controlling the image width.*
Glide	*Controls how quickly delay times arrive at new values when individual delay times are adjusted (either directly or via RSize).*

dense room 8

(177 DenseRoom 8)

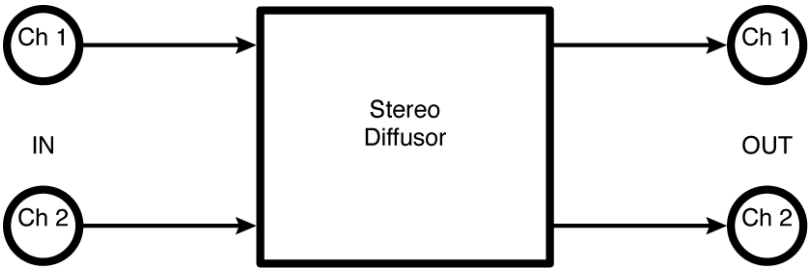
This reverb is similar to “dense room 16,” above, with only eight reverb lines.
Stereo in, stereo out

See “dense room 16” above for diagram and parameters.

s_diffusor

(180 St Diffusor)

This algorithm contains two four-part 500-mS diffusors.
Stereo in, stereo out



Verb

Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the volume of the effect with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
Level	*Controls the output level.*
Diffusion	*A master feedback control for the diffusors, controlling their "fuzziness" or "distinctness.”*
DSize	*Controls the diffusor's "size" by scaling its delay times.*

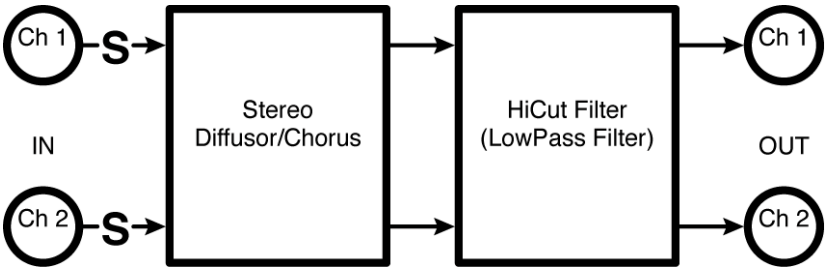
 © 2001 Eventide, Inc.

diffchorus

(181 Diffchorus)

This algorithm contains two four-part 500-mS diffusors with internal modulation to randomize the effect. An adjustable high-cut filter may be used to smooth out the result.

Stereo in, stereo out



Diffusor

Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the volume of the effect with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
Level	*Controls the output level.*
Diffusion	*A master feedback control for the diffusors, controlling their "fuzziness" or "distinctness."*
DSize	*Controls the diffusor's "size" by scaling its delay times.*
Depth	*Controls how much individual delay times will vary in response to the LFO controlled by Rate. Determines the "thickness" of the chorus effect.*
Rate	*Scales each delay's LFO rate, effectively serving as a master rate.*
HiCut	*Controls the cutoff frequency of a gentle low-pass filter.*
Span	*Scales each delay's pan setting, effectively controlling the image width.*
Glide	*Controls how quickly delay times arrive at new values when individual delay times are adjusted (either directly or via RSize).*

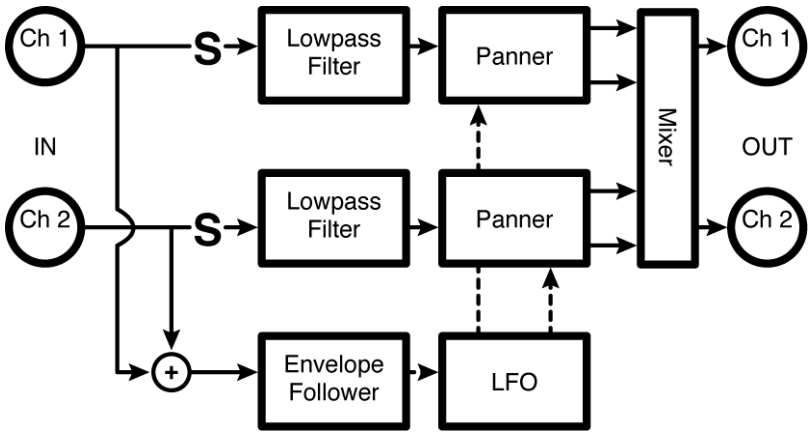
combos

fm modfilter/pan

(152 FmFilterPan)

This algorithm consists of a modulated filter feeding a panner. The modulation source for both the filter and the panner is controlled by the envelope of the input.

Stereo in, stereo out



Filt/Pan	
Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the input to the loop with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
Level	*Controls the output level of the filter..*
Freq	*Controls the "baseline" center frequency or cutoff frequency.*
Fmod	*Controls how far from the "baseline" the cutoff frequency will deviate in response to the modulation signal.*
Q	*Controls the "baseline" bandwidth or resonance.*
Qmod	*Controls how far from the "baseline" the Q will deviate in response to the modulation signal.*
Pan	*Determines if the modulation will work in phase ("sync") or out of phase ("oppose").*

LFO	
Rate	*Controls the modulation rate if T_Rate1 is set to "off" or reflects the physical modulation rate as selected by T_Rate and the system tempo.*
***T_*Rate**	*Controls the modulation rate in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic modulation generation "off".*
FMRate	*Analogous to Rate, except that this pertains to modulation of the LFO's signal (not to modulation of the panner directly).*
***T_*FMRate**	*Analogous to T_Rate, except that this pertains to modulation of the LFO's signal (not to modulation of the panner directly).*
Shape	*Determines the shape of the modulating signal.*
Duty	*Controls the "duty cycle" of the modulating wave for any waveform other than "sine". For example, if you have selected "triangle" under Shape and set Duty to "0%", the triangle will morph to a sawtooth (very fast rise, slow fall). With Duty at "100%", the triangle will morph to a ramp (slow rise, very fast fall).*

 © 2001 Eventide, Inc.

Polarity *When set to "unipolar", modulations add the value of Fmod to Freq. When set to "bipolar", modulations add the value of Fmod to Freq and subtract the value of Fmod from Freq (the same goes for Q and Qmod).*

Retrig *Whenever Rate is changed (either manually or by updating the tempo), the new Rate is crossfaded with the old Rate. The value of Retrig controls how long the crossfade is as a percentage of the old Rate. Thus, a value of 100% means that the crossfade will be complete in one cycle of the old Rate.*

Angle *Given most configurations of the Eclipse, the modulation will "start over" when the tempo button is tapped or when an external sequence is started. Angle determines where in its waveform the modulation begins.*

Env

Sens *Controls how sensitive the envelope follower is; alter this parameter to change the "depth" of the FM effect.*

Attack *Controls how fast the envelope follower will track an increase in volume.*

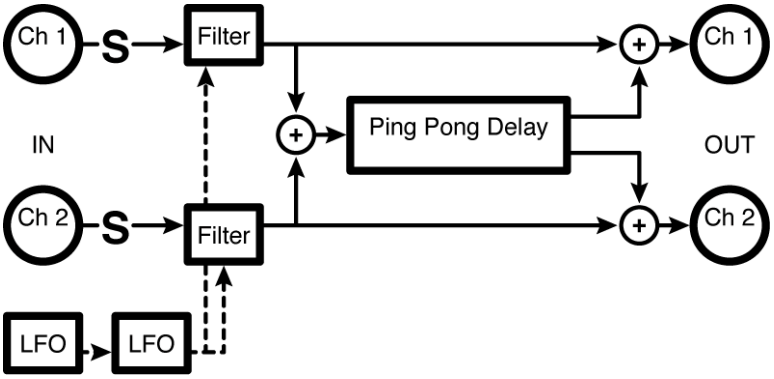
Decay *Controls how fast the envelope follower will track a decrease in volume.*

LFO filter+pingpong

(153 LfoFilter+Pong)

This effect consists of two filters modulated by two *LFO*s. The first LFO controls the rate of modulation, while the second controls the depth of that modulation, giving a sort of vintage synth effect. The stereo output of these filters is then mixed with the dry input signal, and summed to feed a ping-pong delay with pre-delay. Tempo controls rates and delay times.

Stereo in, stereo out



Mod^(x = 1, 2)

Rate x *Controls LFO x's modulation rate if T_Ratex is set to "off" or reflects the physical LFO modulation rate as selected by T_Ratex and the system tempo.*

T_Rate x *Controls LFO x's modulation rate in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic LFO modulation generation "off".*

Wave x *Determines the shape of filter x's modulating signal.*

Retrig *Whenever Rate is changed (either manually or by updating the tempo), the new Rate is crossfaded with the old Rate. The value of Retrig controls how long the crossfade is as a percentage of the old Rate. Thus, a value of 100% means that the crossfade will be complete in one cycle of the old Rate.*

Angle *Given most configurations of the Eclipse, the LFOs will "start over" when the tempo button is tapped or when an external sequence is started. Angle determines where in their waveform the LFOs begin.*

Filter	
Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the volume of the effect with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
Mix	*Controls the ratio between the dry and wet (filtered) signal.*
Freq	*Controls the "baseline" cutoff frequency.*
Fmod	*Controls how far from the "baseline" the cutoff frequency will deviate in response to the modulation signal.*
Q	*Controls the "baseline" resonance.*
Qmod	*Controls how far from the "baseline" the Q will deviate in response to the modulation signal.*

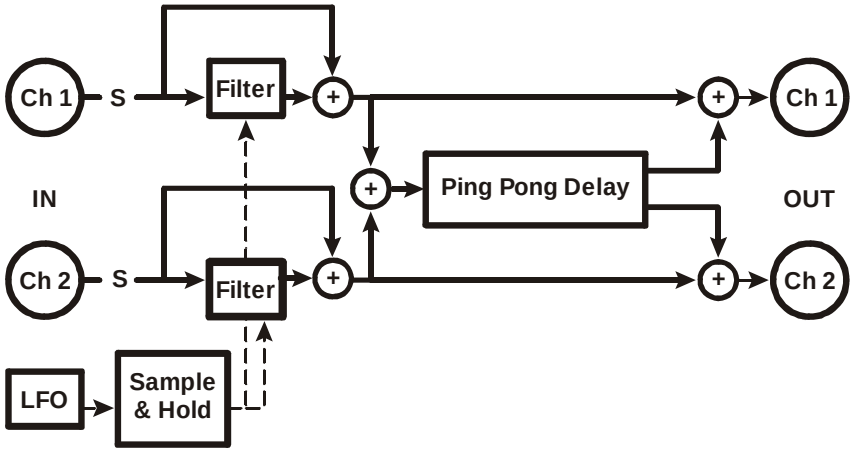
Delays	
Level	*Controls the output level of the ping pong delay.*
PDelay	*Either reflects the physical pre-delay time as entered by T_PDelay (given the current tempo) or allows you to enter the pre-delay time in milliseconds if T_PDelay is set to "Off".*
***T_*PDelay**	*Controls the pre-delay in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic pre-delay generation "off".*
Pong	*Either reflects the physical pong time as entered by T_Pong (given the current tempo) or allows you to enter the pong time in milliseconds if T_Pong is set to "Off".*
***T_*Pong**	*Controls the pong in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic pong generation "off". The actual pong time displayed under Pong is a function of this control and the current system tempo.*
FBack	*Controls how much of the pong's output is reapplied to its input.*

s/h filter+pingpong

(154 S/HFilter+Pong)

The output of stereo sample-and-hold filters is mixed with the dry input signal, and are also summed to feed a ping-pong delay with pre-delay. Tempo controls rates and delay times.

Stereo in, stereo out



S/H	
Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the input to the loop with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
Mix	*Controls the ratio between the dry and wet (S/H) signal.*
***F* Min**	*Sets the minimum frequency for the Sample and Hold.*

 © 2001 Eventide, Inc.

***F* Max**	*Sets the maximum frequency for the Sample and Hold.*
Reson	*Controls the filter resonance.*
Flux	*Controls how quickly the filter moves between "notes".*
Rate	*Controls the modulation rate if T_Rate is set to "off" or reflects the physical modulation rate as selected by T_Rate and the system tempo.*
***T*_Rate**	*Controls the modulation rate in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic modulation generation "off".*
Retrig	*Whenever Rate is changed (either manually or by updating the tempo), the new Rate is crossfaded with the old Rate. The value of Retrig controls how long the crossfade is as a percentage of the old Rate. Thus, a value of 100% means that the crossfade will be complete in one cycle of the old Rate.*
Angle	*Given most configurations of the Eclipse, the modulation will "start over" when the tempo button is tapped or when an external sequence is started. Angle determines where in its waveform the modulation begins.*

Delays

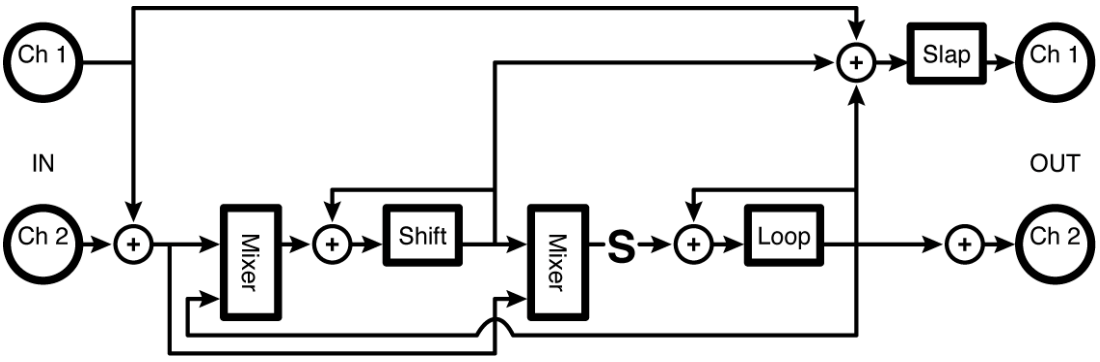
Level	*Controls the output level of the ping pong delay.*
PDelay	*Either reflects the physical pre-delay time as entered by T_PDelay (given the current tempo) or allows you to enter the pre-delay time in milliseconds if T_PDelay is set to "Off".*
T_PDelay	*Controls the pre-delay in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic pre-delay generation "off".*
Pong	*Either reflects the physical pong time as entered by T_Pong (given the current tempo) or allows you to enter the pong time in milliseconds if T_Pong is set to "Off".*
T_Pong	*Controls the pong in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic pong generation "off".*
FBack	*Controls how much of the pong's output is reapplied to its input.*

manifold alpha

(155 ManifoldAlpha)

This is a pitch-shifting loop and slap delay. A mixer at the shifter input selects between the source and the loop signals, while another mixer at the loop input selects between the source and the shifted signals. Both outputs (pitch and loop) are then mixed with the left input (channel #1) and fed to the slap delay output on the left side, while the loop and pitch also get fed directly to the right output. Tempo may be used to control delay as well as loop and slap length.

Summed in, stereo out



Shift

***S* InMix**	*Controls what percentage of the pitchshifter's input comes from the right input ("0%") and what percentage comes from the loop output ("100%").*

***S* Input**	*Controls the input level to the pitchshifter.*
***S* Level**	*Controls the output level of the pitchshifter.*
Pitch	*Controls the amount of pitchshifting.*
Delay	*Either reflects the pitchshifter's physical delay time as entered by T_Delay (given the current tempo) or allows you to enter the delay time in milliseconds if T_Delay is set to "Off".*
***T*_Delay**	*Controls the pitchshifter delay in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic delay generation "off".*
***S* Fback**	*Controls how much of the pitchshifter's output is reapplied to its input.*
LowNote	*Determines the lowest note the pitchshifter will correctly shift. Set as high as possible for best results.*
Delay	*Controls the crossfade between old pitchshift values and new pitchshift values.*

Loop

Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the input to the loop with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
***L* InMix**	*Controls what percentage of the loop's input comes from the right input ("0%") and what percentage comes from the pitchshifter output ("100%").*
***L* Input**	*Controls the input level to the loop.*
***L* Level**	*Controls the output level of the loop.*
Loop	*Either reflects the physical loop time as entered by #Bars (given the current tempo) or allows you to enter the loop time in milliseconds if #Bars is left untouched and the system tempo is not updated (it's better to use #Bars, OK?).*
#Bars	*Controls the length of the loop in terms of bars. The actual loop time displayed under Loop is a function of this control and the current system tempo.*
***L* Fback**	*Controls how much of the loop's output is reapplied to its input.*

Slap

***D* Level**	*Controls the output level of the slap delay.*
Delay	*Either reflects the physical delay time as entered by T_Delay (given the current tempo) or allows you to enter the delay time in milliseconds if T_Delay is set to "Off".*
***T*_Delay**	*Controls the delay in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic delay generation "off". The actual delay time displayed under Delay is a function of this control and the current system tempo.*

manifold beta

(156 ManifoldBeta)

This algorithm is essentially a version of “manifold alpha,” but it uses a reverse shifter rather than the normal (forward) pitch shifter.

Summed in, stereo out

See “manifold alpha” above for diagram.

Reverse

***S* InMix**	*Controls what percentage of the pitchshifter's input comes from the right input ("0%") and what percentage comes from the loop output ("100%").*
***S* Input**	*Controls the input level to the pitchshifter.*
***S* Level**	*Controls the output level of the pitchshifter.*
Pitch	*Controls the amount of pitchshifting.*

 © 2001 Eventide, Inc.

Length	*Either reflects the pitchshifter's physical delay time as entered by T_Delay (given the current tempo) or allows you to enter the delay time in milliseconds if T_Delay is set to "Off".*
T_Length	*Controls the pitchshifter delay in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic delay generation "off".*
Delay	*Controls the pitchshifting delay (typically very short).*
S Fback	*Controls how much of the pitchshifter's output is reapplied to its input.*
LowNote	*Determines the lowest note the pitchshifter will correctly shift. Set as high as possible for best results.*
Delay	*Controls the crossfade between old pitchshift values and new pitchshift values.*

Loop	
Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the input to the loop with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
L InMix	*Controls what percentage of the loop's input comes from the right input ("0%") and what percentage comes from the pitchshifter output ("100%").*
L Input	*Controls the input level to the loop.*
L Level	*Controls the output level of the loop.*
Loop	*Either reflects the physical loop time as entered by #Bars (given the current tempo) or allows you to enter the loop time in milliseconds if #Bars is left untouched and the system tempo is not updated (it's better to use #Bars, OK?).*
#Bars	*Controls the length of the loop in terms of bars. The actual loop time displayed under Loop is a function of this control and the current system tempo.*
L Fback	*Controls how much of the loop's output is reapplied to its input.*

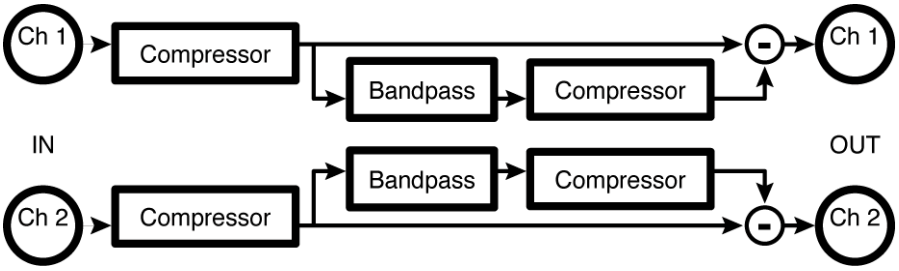
Slap	
D Level	*Controls the output level of the slap delay.*
Delay	*Either reflects the physical delay time as entered by T_Delay (given the current tempo) or allows you to enter the delay time in milliseconds if T_Delay is set to "Off".*
T_Delay	*Controls the delay in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic delay generation "off".*

dual comp/de-ess

(157 VocalProcess)

Here we have dual compressors feeding filters which then feed further compressors. It is set up as compressors into de-essers, and has ‘master’ as well as individual parameters.

Stereo in, stereo out



Master

M_Comp

Thresh	*Sets the input threshold above which compression of the signal takes place and below which the signal is left alone.*
S Knee	*Controls the width of the "soft knee". The soft knee is a region above the threshold over which the ratio transitions from 1:1 to the selected Ratio. It smoothes out the compression.*
Ratio	*Controls the input to output ratio for signals above the threshold. For example, "6:1" produces 1dB of output for every 6dB of input.*
Gain	*Adjusts the output level to improve gain structure.*
Attack	*Controls how quickly the compressor "clamps down" on a signal after it exceeds the threshold.*
Decay	*Controls how quickly the compressor "lets go" of a signal once it falls below the threshold.*
GR 1	*Displays how much gain reduction (compression) is taking place after delay 1.*
GR 2	*Displays how much gain reduction (compression) is taking place after delay 2.*

M_Filter

Freq	*Controls the center frequency of the filter used for frequency-conscious compression.*
Q	*Controls the bandwidth of the filter.*
Type	*Selects the type of filter used for frequency-conscious compression (this is usually set to "bandpass").*

M_D/S C^These controls affect the frequency-conscious compressor

D Thresh	*Sets the input threshold above which frequency-conscious compression of the signal takes place and below which the signal is left alone.*
D S Knee	*Controls the width of the "soft knee". The soft knee is a region above the threshold over which the ratio transitions from 1:1 to the selected Ratio. It smoothes out the compression.*
D Ratio	*Controls the input to output ratio for signals above the threshold. For example, "6:1" produces 1dB of output for every 6dB of input.*
D Gain	*Adjusts the output level to improve gain structure.*
D Attack	*Controls how quickly the frequency-conscious compressor "clamps down" on a signal after it exceeds the threshold.*
D Decay	*Controls how quickly the frequency-conscious compressor "lets go" of a signal once it falls below the threshold.*
D/S 1	*Displays how much frequency-conscious gain reduction (compression) is taking place after delay 1.*
D/S 2	*Displays how much frequency-conscious gain reduction (compression) is taking place after delay 2.*

Chan#1

Parameters similar to those described above, dedicated to compressor 1; changes made here can be overwritten by those made under Master and vice versa (the most recently entered value "wins")

Chan#2

Parameters similar to those described above, dedicated to compressor 2; changes made here can be overwritten by those made under Master and vice versa (the most recently entered value "wins")

 © 2001 Eventide, Inc.

moddelays+verb8

(183 Chordlys+Verb8)

Four delays feed into an eight-line reverb. The tempo affects the delay times, sweep rate and reverb decay time (*rdecay*).

Stereo in, stereo out

M_Delays	
Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the volume of the effect with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
***D* Level**	*Controls the dry delay output level (but does not affect the delay level sent to the reverb).*
***Dly*>Verb**	*Controls the delay level sent to the reverb (but does not affect the dry delay output level).*
m_Delay	*Scales all the individual delay times, effectively serving as a master delay (e.g. if the four delays are set to 200ms, 150ms, 100ms, and 50ms, setting M_Delay to 50% cuts those times in half (100ms, 75ms, 50ms, and 25ms)).*
m_Depth	*Scales all the individual delay sweep depths, effectively serving as a master depth.*
m_Fback	*Scales all the individual delay feedbacks, effectively serving as a master feedback.*

Delays^(x = 1, 2, 3, 4)	
Delay x	*Either reflects the physical delay time as entered by T_Delayx (given the current tempo) or allows you to enter the delay time in milliseconds .*
T_*Delay** *x	*Controls delay x in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic delay generation "off".*
Fback x	*Controls how much of delay x's output is reapplied to its input.*

Mods^(x = 1, 2, 3, 4)	
Depth x	*Controls the sweep depth of delay x.*
Rate	*Controls the sweep rate if T_Rate is set to "off" or reflects the physical sweep rate as selected by T_Rate and the system tempo.*
T_Rate	*Controls the sweep rate in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic sweep generation "off". The actual sweep rate displayed under Rate is a function of this control and the current system tempo.*
Shape	*Determines the shape of the modulating signal.*
Retrig	*Whenever the sweep rate is changed (either manually or by updating the tempo), the new rate is crossfaded with the old rate. The value of **Retrig** controls how long the crossfade is as a percentage of the old rate. Thus, a value of 100% means that the crossfade will be complete in one cycle of the old rate.*
Angle	*Given most configurations of the Eclipse, the modulation will "start over" when the tempo button is tapped or when an external sequence is started. Angle determines where in its waveform the modulation begins.*

Verb	
R Level	*Controls the reverb output level.*
RDecay	*Either reflects the physical reverb decay as entered by T_RDecay (given the current tempo) or allows you to enter the reverb decay in seconds if T_RDecay is set to "Off".*
T_RDecay	*Controls the reverb decay in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic decay generation "off".*
RSize	*Controls the reverb's room size by scaling the actual delay times.*
PreDly	*Controls how long the predelay is. Predelay is inserted before the reverb because in a real room, reverb arrives at a listener's ears some time after the dry sound. The larger the room, the longer the lag.*
HiCut	*Controls the cut of a high-frequency shelving EQ.*
LowCut	*Controls the cut of a low-frequency shelving EQ.*

HiFreq *Controls the frequency at which the high-frequency shelving EQ begins to act.*

LowFreq *Controls the frequency at which the low-frequency shelving EQ begins to act.*

Depth *Controls how much individual delay times will vary in response to the LFO controlled by Rate. Determines the "thickness" of the chorus effect.*

Rate *Scales each delay's LFO rate, effectively serving as a master rate.*

Span *Scales each delay's pan setting, effectively controlling the image width.*

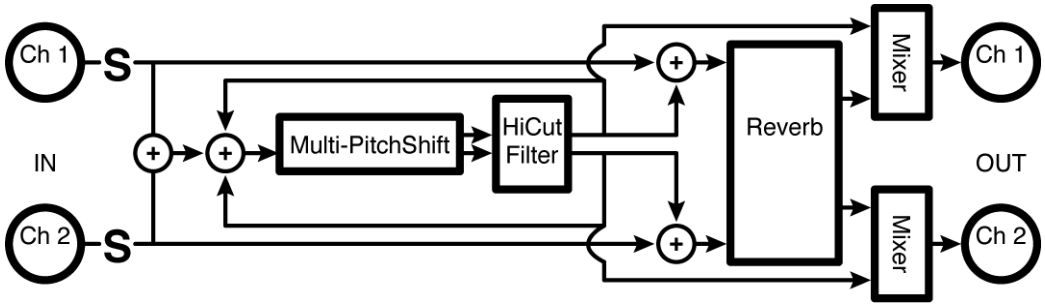
Glide *Controls how quickly delay times arrive at new values when individual delay times are adjusted (either directly or via RSize).*

multishift+verb8

(184 Mshift+Reverb8)

In this combination effect, a two-voice shifter feeds a reverb, with mixers at the reverb input and the final outputs. Tempo controls delay times and reverb decay times.

Stereo in, stereo out



Masters

Send *Adjusts the level at 'S' in the diagram. If you want to modulate the volume of the effect with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*

***S* Level** *Controls the dry pitchshifter output level (but does not affect the pitchshifter level sent to the reverb).*

***Mix*>Verb** *Controls the pitchshifter level sent to the reverb (but does not affect the dry pitchshifter output level).*

***S* HiCut** *Controls the cutoff frequency of a lowpass filter placed after the pitchshifter.*

Cal

LowNote *Determines the lowest note the pitchshifter will correctly shift. Set as high as possible for best results.*

XFade *Controls the crossfade between old pitchshift values and new pitchshift values.*

Shift^(x = 1, 2)

Pitch x *Controls the amount of pitchshift effect for pitchshifter x.*

Delay x *Either reflects the physical delay time as entered by T_Delayx (given the current tempo) or allows you to enter the delay time in milliseconds .*

***T_Delay* x** *Controls delay x in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic delay generation "off".*

Fback x *Controls how much of pitch shifter x's output is reapplied to its input.*

Mod x *Controls the amount of pitch modulation for a vibrato effect.*

***Man_Mod* x** *Allows users without an external pedal to modulate the effect from the front panel.*

Verb

***R* Level** *Controls the reverb output level.*

 © 2001 Eventide, Inc.

RDecay	*Either reflects the physical reverb decay as entered by T_RDecay (given the current tempo) or allows you to enter the reverb decay in seconds if T_RDecay is set to "Off".*
T_RDecay	*Controls the reverb decay in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic decay generation "off".*
RSize	*Controls the reverb's room size by scaling the actual delay times.*
PreDly	*Controls how long the predelay is. Predelay is inserted before the reverb because in a real room, reverb arrives at a listener's ears some time after the dry sound. The larger the room, the longer the lag.*
HiCut	*Controls the cut of a high-frequency shelving EQ.*
LowCut	*Controls the cut of a low-frequency shelving EQ.*
HiFreq	*Controls the frequency at which the high-frequency shelving EQ begins to act.*
LowFreq	*Controls the frequency at which the low-frequency shelving EQ begins to act.*
Depth	*Controls how much individual delay times will vary in response to the LFO controlled by Rate. Determines the "thickness" of the chorus effect.*
Rate	*Scales each delay's LFO rate, effectively serving as a master rate.*
Span	*Scales each delay's pan setting, effectively controlling the image width.*
Glide	*Controls how quickly delay times arrive at new values when individual delay times are adjusted (either directly or via RSize).*

diatonic+verb8

(185 Dshift+Reverb8)

This algorithm is similar to “multishift+verb8,” differing in that a two-voice diatonic shifter replaces the normal shifter.

Stereo in, stereo out

See “multishift+verb8” above for diagram.

Masters

Send	*Adjusts the level at 'S' in the diagram. If you want to modulate the volume of the effect with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*
S Level	*Controls the dry pitchshifter output level (but does not affect the pitchshifter level sent to the reverb).*
***Mix*>Verb**	*Controls the pitchshifter level sent to the reverb (but does not affect the dry pitchshifter output level).*

Cal

Tune	*Controls the detector's calibration, allowing for deviation from A-440 tuning.*
Key	*Selects the key that the detector references (if a scale is in fact selected under Scale).*
Scale	*Selects the scale that the detector references.*
Quant	*Determines the level of "quantization", or how close the Eclipse will bring an "off" note to "perfection".*
LowNote	*Determines the lowest note the pitchshifter will correctly shift. Set as high as possible for best results.*
XFade	*Controls the crossfade between old pitchshift values and new pitchshift values.*
Glide	*Controls how quickly the shifter slides between shift values.*

Shift^(x = 1, 2)

Pitch x	*Controls the amount of pitchshift effect for pitchshifter x.*
Delay x	*Either reflects the physical delay time as entered by T_Delayx (given the current tempo) or allows you to enter the delay time in milliseconds .*

***T_Delay* x** *Controls delay x in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic delay generation "off".*

Mod x *Controls the amount of pitch modulation for a vibrato effect.*

***Man_Mod* x** *Allows users without an external pedal to modulate the effect from the front panel.*

Verb

***R* Level** *Controls the reverb output level.*

RDecay *Either reflects the physical reverb decay as entered by T_RDecay (given the current tempo) or allows you to enter the reverb decay in seconds if T_RDecay is set to "Off".*

***T*_RDecay** *Controls the reverb decay in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic decay generation "off".*

RSize *Controls the reverb's room size by scaling the actual delay times.*

PreDly *Controls how long the predelay is. Predelay is inserted before the reverb because in a real room, reverb arrives at a listener's ears some time after the dry sound. The larger the room, the longer the lag.*

HiCut *Controls the cut of a high-frequency shelving EQ.*

LowCut *Controls the cut of a low-frequency shelving EQ.*

HiFreq *Controls the frequency at which the high-frequency shelving EQ begins to act.*

LowFreq *Controls the frequency at which the low-frequency shelving EQ begins to act.*

Depth *Controls how much individual delay times will vary in response to the LFO controlled by Rate. Determines the "thickness" of the chorus effect.*

Rate *Scales each delay's LFO rate, effectively serving as a master rate.*

Span *Scales each delay's pan setting, effectively controlling the image width.*

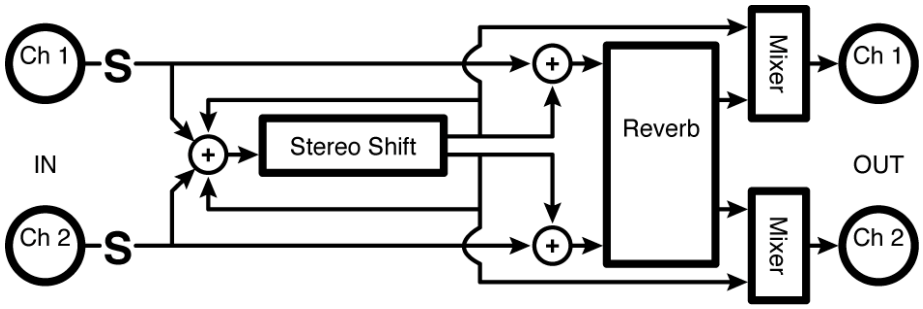
Glide *Controls how quickly delay times arrive at new values when individual delay times are adjusted (either directly or via RSize).*

stereoshift+verb8

(186 Stshift+Reverb8)

This algorithm is similar to “multishift+verb8,” differing in that the shifter is a single voice true stereo unit.

Stereo in, stereo out



Pitch

Send *Adjusts the level at 'S' in the diagram. If you want to modulate the volume of the effect with MIDI, a volume pedal, or some other external or internal source, this is a fantastic place to do it. You won't get zippering.*

***S* Level** *Controls the dry pitchshifter output level (but does not affect the pitchshifter level sent to the reverb).*

***Mix*>Verb** *Controls the pitchshifter level sent to the reverb (but does not affect the dry pitchshifter output level).*

Pitch *Controls the amount of pitchshift effect.*

 © 2001 Eventide, Inc.

Delay	*Controls the pitchshifter delay time.*
Fback	*Controls how much of the pitchshifter's output is reapplied to its input.*
LowNote	*Determines the lowest note the pitchshifter will correctly shift. Set as high as possible for best results.*
XFade	*Controls the crossfade between old pitchshift values and new pitchshift values.*

Verb	
R Level	*Controls the reverb output level.*
RDecay	*Either reflects the physical reverb decay as entered by T_RDecay (given the current tempo) or allows you to enter the reverb decay in seconds if T_RDecay is set to "Off".*
T_RDecay	*Controls the reverb decay in rhythmic terms (1/4 note, 1/8th note, etc.) or turns rhythmic decay generation "off".*
RSize	*Controls the reverb's room size by scaling the actual delay times.*
PreDly	*Controls how long the predelay is. Predelay is inserted before the reverb because in a real room, reverb arrives at a listener's ears some time after the dry sound. The larger the room, the longer the lag.*
HiCut	*Controls the cut of a high-frequency shelving EQ.*
LowCut	*Controls the cut of a low-frequency shelving EQ.*
HiFreq	*Controls the frequency at which the high-frequency shelving EQ begins to act.*
LowFreq	*Controls the frequency at which the low-frequency shelving EQ begins to act.*
Depth	*Controls how much individual delay times will vary in response to the LFO controlled by Rate. Determines the "thickness" of the chorus effect.*
Rate	*Scales each delay's LFO rate, effectively serving as a master rate.*
Span	*Scales each delay's pan setting, effectively controlling the image width.*
Glide	*Controls how quickly delay times arrive at new values when individual delay times are adjusted (either directly or via RSize).*

utilities

mute

(100 Mute_Series, 101 Mute_Xfade)

This is a 'do-nothing' algorithm with no internal connections. Its purpose is to fill the second engine of a single algorithm parallel preset.

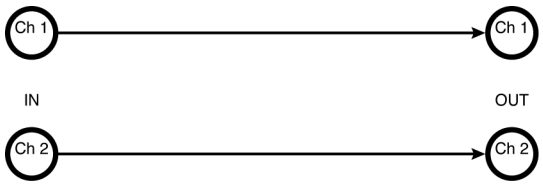
Stereo in, nothing out

thru

(102 Thru_Series, 103 Thru_Xfade)

As the name suggests, the inputs are passed through to the outputs. This is can be useful for troubleshooting and testing, or to fill the second engine of a single algorithm series preset.

Stereo in, stereo out

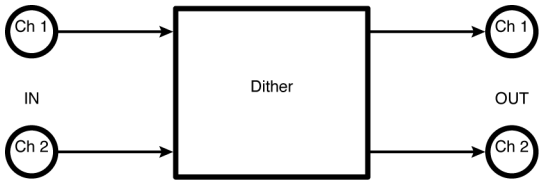


dither

(190 Dither)

A simple dithering algorithm that can be used to reduce the number of output bits to 16, 18 or 20 without adding distortion. The user can choose between rectangular (uniform) or triangular distribution.

Stereo in, stereo out



Operate

Bits *Controls the number of output bits. Match this to the bit depth of the device connected to the Eclipse's digital output.*

Type *Selects triangle or rectangle dither noise. Stick with triangle unless you know that your audio has already been processed with rectangular dither.*

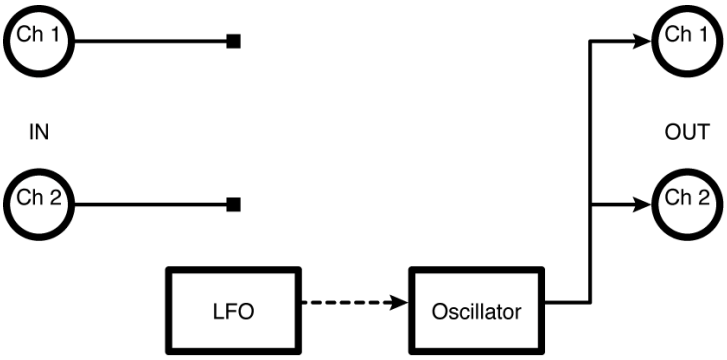
 © 2001 Eventide, Inc.

oscillator (440)

(191 OSC440)

A general purpose sweepable and modulatable oscillator. The default configuration gives a constant (A)440 Hz tone.

Nothing in, summed out



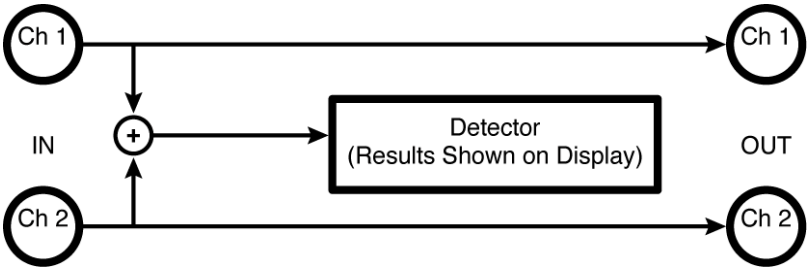
Osc

Level	*Controls the oscillator output level.*
Freq	*Controls the frequency of the oscillator.*
FMod	*Controls how much the frequency modulator (FM) will affect the oscillator.*
Shape	*Selects the waveform of the oscillator.*
Duty	*Controls the "duty cycle" of the oscillator for any Shape other than "sine". For example, if you have selected "triangle" under Shape and set Duty to "0%", the triangle will morph to a sawtooth (very fast rise, slow fall). With Duty at "100%", the triangle will morph to a ramp (slow rise, very fast fall).*
FM Rate	*Controls the rate of the frequency modulator (set it to some multiple of the oscillator's frequency to create interesting timbres).*
FM Shape	*Selects the waveform of the frequency modulator.*
FM Duty	*Controls the frequency modulator's duty cycle.*

chromatic tuner

(192 Tuner)

This useful chromatic tuner has sharp/flat metering as well as a display of error amount. It displays pitch (from middle C) and the true frequency. The inputs are passed through unprocessed to the outputs.
Stereo in, stereo out



Detector

-|+	*Displays how far from in tune the input is.*
Note	*Displays the closest note to that being supplied at the input.*
OutBy	*Displays how far from in tune the input is (in cents).*
Pitch	*Displays how far the input is from middle C.*
Freq	*Displays the root frequency of the input.*
Cal	*Calibrates the tuner for music that doesn't conform to A-440.*

Cal^(Calibrates the detector for optimal results)

LowNote	*Determines the lowest note the detector will correctly identify. Set as high as possible for best results.*
HighNote	*Determines the highest note the detector will correctly identify. Set as low as possible for best results.*
Pitch	*Displays how far the input is from middle C.*
Freq	*Displays the root frequency of the input.*

 © 2001 Eventide, Inc.