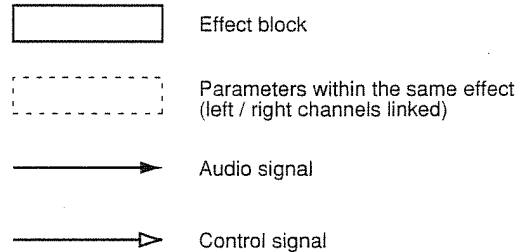


VS8F-2 Algorithm List

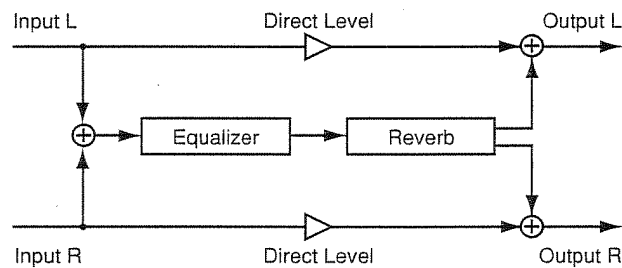
This section contains explanations of each algorithm. In the "Preset Patch list sheet," check the algorithm used by the Patch that you are starting with, and refer to this section for an explanation of the algorithm. For details on the function of each parameter, refer to the section "Function of Each Effect Parameter" (p. 110).



Reverb



This algorithm adds reverberation to simulate an acoustic space such as a hall or room. A three-band equalizer is provided on the input.



EQ (Equalizer) (p. 110)

Sw	Off, On
Low Gain	-12-12 dB
Low Freq	20-2000 Hz
Low Q	0.3-10.0
Low Type	Shlv, Peak
Mid Gain	-12-12 dB
Mid Freq	200-8000 Hz
Mid Q	0.3-10.0
High Gain	-12-12 dB
High Freq	1.4-20.0 kHz
High Q	0.3-10.0
Hi Type	Shlv, Peak
Level	0-100

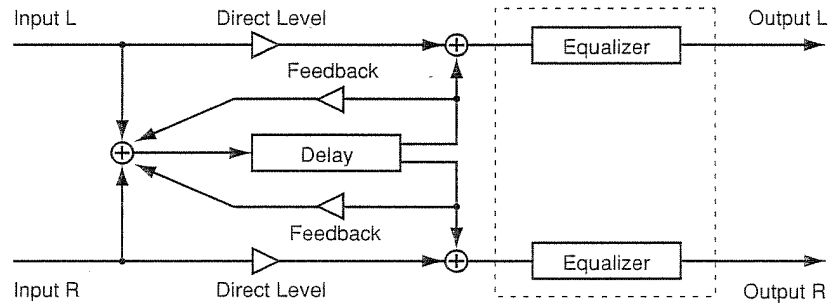
Reverb (p. 110)

Room Size	5-40 m
Time	0.1-32.0 sec
PreDLY	0-200 ms
Difusi	0-100
Densty	0-100
ERLvl	0-100
LF Damp Gain	-36-0 dB
LF Damp Freq	50-4000 Hz
HF Damp Gain	-36-0 dB
HF Damp Freq	1.0-20.0 kHz
HiCF	0.2-20.0 kHz
EfxLvl	-100-100
DirLvl	-100-100

Delay



This algorithm is a mono-input stereo-output delay. A three-band equalizer is provided on the output.



Delay (p. 111)

Sw	Off, On
Time	0–1200 ms
Shift	L1200–0–R1200 ms
Lch FeedbackLvl	-100–100
Rch FeedbackLvl	-100–100
LF Damp Gain	-36–0 dB
LF Damp Freq	50–4000 Hz
HF Damp Gain	-36–0 dB
HF Damp Freq	1.0–20.0 kHz
Lch EfxLvl	-100–100
Rch EfxLvl	-100–100
DirLvl	-100–100

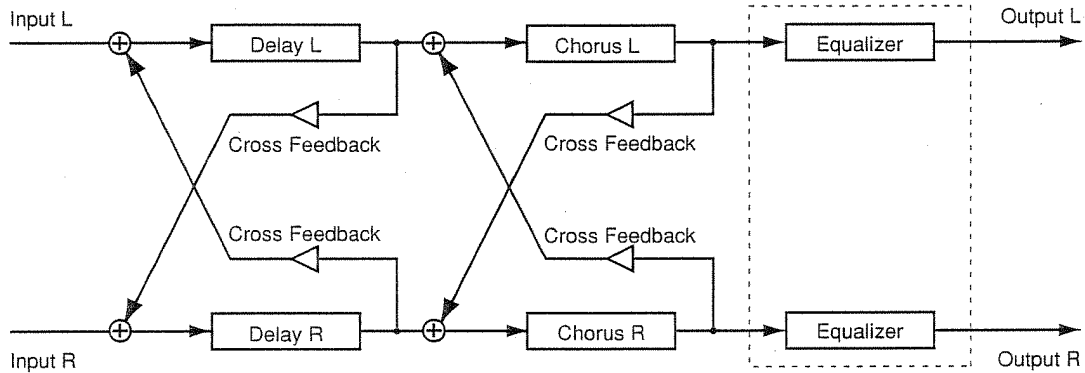
EQ (Equalizer) (p. 110)

Sw	Off, On
Low Gain	-12–12 dB
Low Freq	20–2000 Hz
Low Q	0.3–10.0
Low Type	Shlv, Peak
Mid Gain	-12–12 dB
Mid Freq	200–8000 Hz
Mid Q	0.3–10.0
High Gain	-12–12 dB
High Freq	1.4–20.0 kHz
High Q	0.3–10.0
Hi Type	Shlv, Peak
Level	0–100

StDly-Chorus (Stereo Delay Chorus)



This algorithm connects a stereo delay and a stereo chorus in series. A three-band equalizer is provided on the output.



Delay (p. 111)

Sw	Off, On
Time	0–500 ms
Shift	L500–0–R500 ms
Lch FeedBackLvl	-100–100
Rch FeedBackLvl	-100–100
Lch CrossFeedbackLvl	-100–100
Rch CrossFeedback Lvl	-100–100
EfxLvl	-100–100
DirLvl	-100–100

Chorus (p. 112)

Sw	Off, On
Rate	0.1–10.0 Hz
Depth	0–100
PreDLY	0–50 ms
Lch FeedbackLvl	-100–100
Rch FeedbackLvl	-100–100
Lch CrossFeedbackLvl	-100–100
Rch CrossFeedbackLvl	-100–100
EfxLvl	-100–100
DirLvl	-100–100

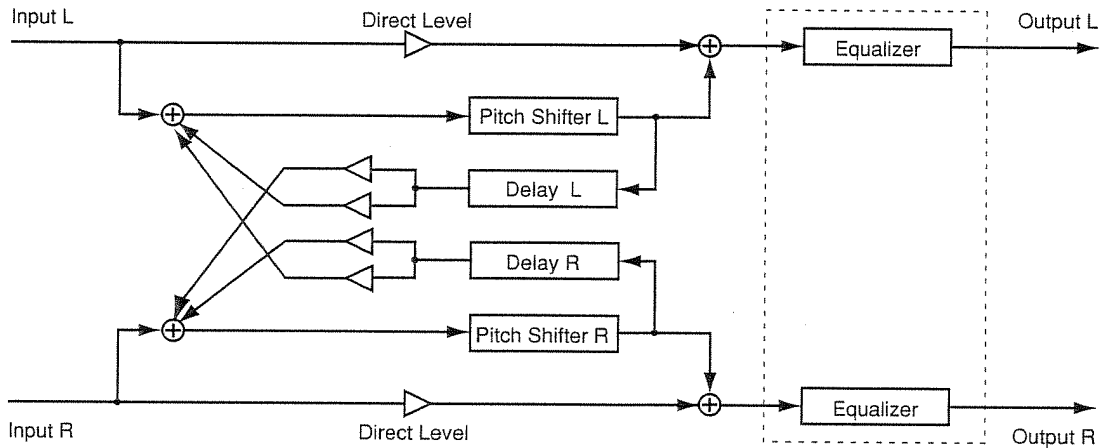
EQ (Equalizer) (p. 110)

Sw	Off, On
Low Gain	-12–12 dB
Low Freq	20–2000 Hz
Low Q	0.3–10.0
Low Type	Shlv, Peak
Mid Gain	-12–12 dB
Mid Freq	200–8000 Hz
Mid Q	0.3–10.0
High Gain	-12–12 dB
High Freq	1.4–20.0 kHz
High Q	0.3–10.0
Hi Type	Shlv, Peak
Level	0–100

StPS-Delay (Stereo Pitch Shifter Delay)



This algorithm is a stereo pitch shifter with feedback delay. A three-band equalizer is provided on the output.



PShift (Pitch Shifter Delay) (p. 113)

Sw	Off, On
Lch Croma Pitch	-12-12
Lch Fine Pitch	-100-100
Rch Croma Pitch	-12-12
Rch Fine Pitch	-100-100
Lch PreDly	0-50 ms
Rch PreDly	0-50 ms
Lch FBDly	0-500 ms
Rch FBDly	0-500 ms
Lch FeedBackLvl	-100-100
Rch FeedBackLvl	-100-100
Lch CrossFeedBackLvl	-100-100
Rch CrossFeedBackLvl	-100-100
EfxLvl	-100-100
DirLvl	-100-100

EQ (Equalizer) (p. 110)

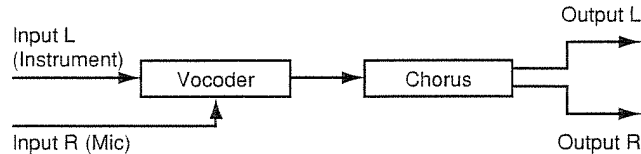
Sw	Off, On
Low Gain	-12-12 dB
Low Freq	20-2000 Hz
Low Q	0.3-10.0
Low Type	Shlv, Peak
Mid Gain	-12-12 dB
Mid Freq	200-8000 Hz
Mid Q	0.3-10.0
High Gain	-12-12 dB
High Freq	1.4-20.0 kHz
High Q	0.3-10.0
Hi Type	Shlv, Peak
Level	0-100

Vocoder



This algorithm is a ten-band vocoder. The instrumental sound will be split into ten frequency bands, and processed according to the frequency characteristics of the audio signal.

To use the vocoder, Effect Pan for the instrument channel should be set to "L63" (send/return) or select "insL" (insert) so that input an instrumental sound into the left channel. Similarly, Effect Pan for the vocal channel should be set to "R63" (send/return) or select "insR" (insert) so that input a vocal sound into the right channel.



Voc (Vocoder) (p. 113)

Char 1	0-100
Char 2	0-100
Char 3	0-100
Char 4	0-100
Char 5	0-100
Char 6	0-100
Char 7	0-100
Char 8	0-100
Char 9	0-100
Char 10	0-100

Cho (Chorus) (p. 112)

Sw	Off, On
Rate	0.1-10.0 Hz
Depth	0-100
PreDLY	0-50 ms
FBLvl	-100-100
EfxLvl	-100-100
DirLvl	-100-100

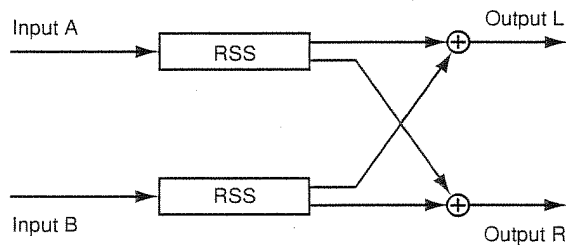
2ch RSS (2-channel RSS)



This algorithm lets you specify the spatial placement of each of the input channels. When using this algorithm, do not allow the direct sound to be output.

To use INPUT A for the input, Effect Pan for the channel should be set to "L63" (send/return) or select "InsL" (insert). To use INPUT B for the input, Effect Pan for the channel should be set to "R63" (send/return) or select "InsR" (insert).

? RSS (p. 64)



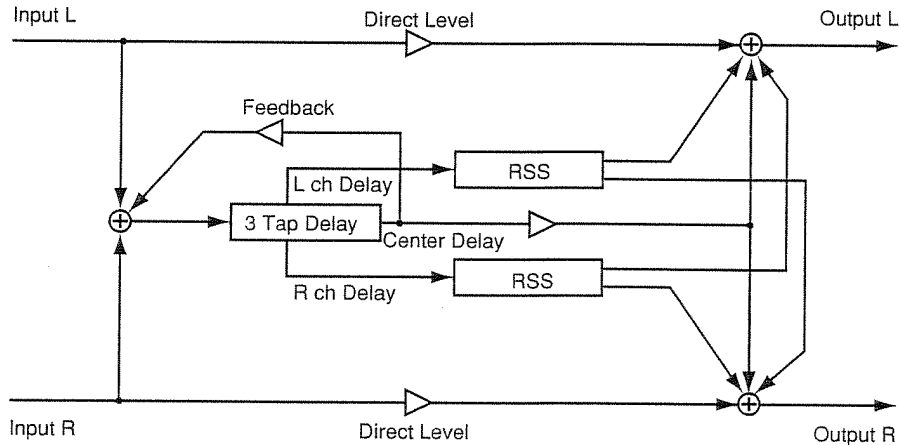
RSS A/RSS B (p. 113)

Azimuth	-180-180°
Elevation	-90-90°

Delay RSS



This algorithm is a delay with three independent delay sounds. RSS is connected to each output, left and right, and the sound of the left channel is placed 90 degrees left, and the sound of the right channel is placed 90 degrees right. Feedback can be applied to the output of the center delay.



DlyRSS (Delay RSS) (p. 113)

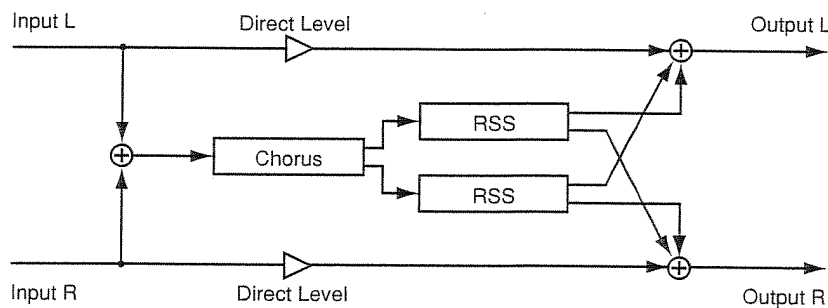
Time	0–1200 ms
Shift	L1200–0–R1200 ms
C.Time	0–1200 ms
RSSLvl	0–100
C-Lvl	0–100

LF Damp Gain	-36–0 dB
LF Damp Freq	50–4000 Hz
HF Damp Gain	-36–0 dB
HF Damp Freq	1.0–20.0 kHz
FBLvl	-100–100
EfxLvl	-100–100
DirLvl	-100–100

Chorus RSS



This algorithm is a chorus with RSS connected to the output. The sound of the left channel is placed 90 degrees left, and the sound of the right channel is placed 90 degrees right.



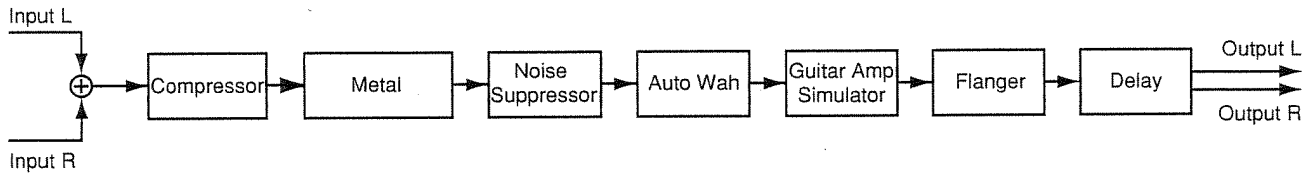
ChORSS (Chorus RSS) (p. 113)

Rate	0.1–10.0 Hz
Depth	0–100
EfxLvl	-100–100
DirLvl	-100–100

GuitarMulti1 (Guitar Multi 1)



This algorithm is a multi-effect for guitar.



Comp (Compressor) (p. 114)

Sw	Off, On
Sustain	0–100
Attack	0–100
Tone	-50–50
Level	0–100

Metal (p. 114)

Sw	Off, On
Low Gain	-100–100
Mid Gain	-100–100
Hi Gain	-100–100
Level	0–100

NS (Noise Suppressor) (p. 115)

Sw	Off, On
Thresh	0–100
Release	0–100

Wah (Auto Wah) (p. 115)

Sw	Off, On
Mode	LPF, BPF
Pol	Down, Up
Sens	0–100
Freq	0–100
Peak	0–100
Rate	0.1–10.0 Hz
Depth	0–100
Level	0–100

Sim (Guitar Amp Simulator) (p. 115)

Sw	Off, On
Mode	Small, BuiltIn, 2Stack, 3Stack

Flg (Flanger) (p. 115)

Sw	Off, On
Rate	0.1–10.0 Hz
Depth	0–100
Manual	0–100
Reso	0–100

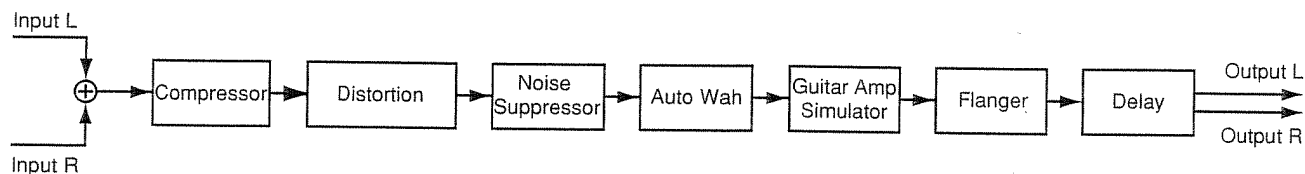
Dly (Delay) (p. 111)

Sw	Off, On
Time	0–1000 ms
Shift	L1000–0–R1000 ms
FBTime	0–1000 ms
FBLvl	-100–100
EfxLvl	-100–100
DirLvl	-100–100

GuitarMulti2 (Guitar Multi 2)



This algorithm is a multi-effect for guitar.



Comp (Compressor) (p. 114)

Sw Off, On
 Sustain 0-100
 Attack 0-100
 Tone -50-50
 Level 0-100

Dstr (Distortion) (p. 114)

Sw Off, On
 Gain 0-100
 Tone 0-100
 Level 0-100

NS (Noise Suppressor) (p. 115)

Sw Off, On
 Thresh 0-100
 Release 0-100

Wah (Auto Wah) (p. 115)

Sw Off, On
 Mode LPF, BPF
 Pol Down, Up
 Sens 0-100
 Freq 0-100
 Peak 0-100
 Rate 0.1-10.0 Hz
 Depth 0-100
 Level 0-100

Sim (Guitar Amp Simulator) (p. 115)

Sw Off, On
 Mode Small, BuiltIn, 2Stack, 3Stack

Flg (Flanger) (p. 115)

Sw Off, On
 Rate 0.1-10.0 Hz
 Depth 0-100
 Manual 0-100
 Reso 0-100

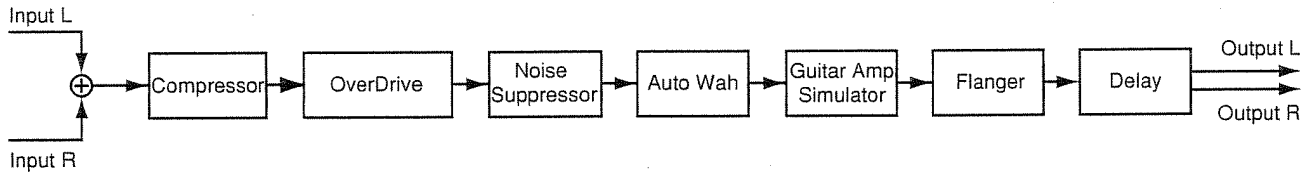
Dly (Delay) (p. 111)

Sw Off, On
 Time 0-1000 ms
 Shift L1000-0-R1000 ms
 FBTime 0-1000 ms
 FBLvl -100-100
 EfxLvl -100-100
 DirLvl -100-100

GuitarMulti3 (Guitar Multi 3)



This algorithm is a multi-effect for guitar.



Comp (Compressor) (p. 114)

Sw Off, On
 Sustain 0–100
 Attack 0–100
 Tone -50–50
 Level 0–100

Ovd (OverDrive) (p. 114)

Sw Off, On
 Gain 0–100
 Tone 0–100
 Level 0–100

NS (Noise Suppressor) (p. 115)

Sw Off, On
 Thresh 0–100
 Release 0–100

Wah (Auto Wah) (p. 115)

Sw Off, On
 Mode LPF, BPF
 Pol Down, Up
 Sens 0–100
 Freq 0–100
 Peak 0–100
 Rate 0.1–10.0 Hz
 Depth 0–100
 Level 0–100

Sim (Guitar Amp Simulator) (p. 115)

Sw Off, On
 Mode Small, BuiltIn, 2Stack, 3Stack

Flg (Flanger) (p. 115)

Sw Off, On
 Rate 0.1–10.0 Hz
 Depth 0–100
 Manual 0–100
 Reso 0–100

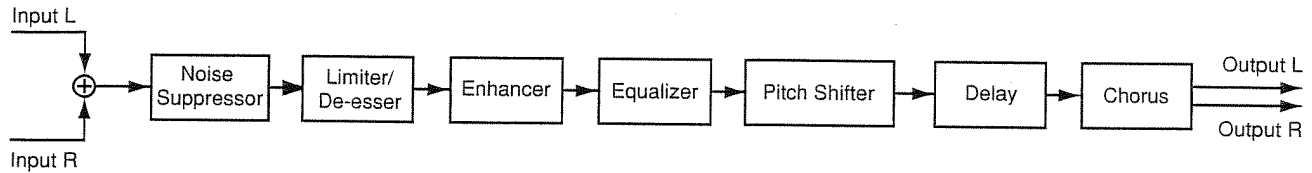
Dly (Delay) (p. 111)

Sw Off, On
 Time 0–1000 ms
 Shift L1000–0–R1000 ms
 FBTime 0–1000 ms
 FBLvl -100–100
 EfxLvl -100–100
 DirLvl -100–100

Vocal Multi



This algorithm is a multi-effect for vocals.



NS (Noise Suppressor) (p. 115)

Sw Off, On
 Thresh 0-100
 Release 0-100

Lmt (Limiter/De-esser) (p. 116)

Sw Off, On
 Mode Limiter, De-esser
 Thresh 0-100
 Release 0-100
 Sens 0-100
 Freq 1.0-10.0 kHz
 Level 0-100

Enh (Enhancer) (p. 117)

Sw Off, On
 Sens 0-100
 Freq 1.0-10.0 kHz
 MixLvl 0-100
 Level 0-100

EQ (Equalizer) (p. 110)

Sw Off, On
 Low Gain -12-12 dB
 Low Freq 20-2000 Hz
 Low Q 0.3-10.0
 Low Type Shlv, Peak
 Mid Gain -12-12 dB
 Mid Freq 200-8000 Hz
 Mid Q 0.3-10.0
 High Gain -12-12 dB
 High Freq 1.4-20.0 kHz
 High Q 0.3-10.0
 Hi Type Shlv, Peak
 Level 0-100

PShift (Pitch Shifter) (p. 113)

Sw Off, On
 Cromatic Pitch -12-12
 Fine Pitch -100-100
 EfxLvl -100-100
 DirLvl -100-100

Dly (Delay) (p. 111)

Sw Off, On
 Time 0-1000 ms
 FBLvl -100-100
 EfxLvl -100-100
 DirLvl -100-100

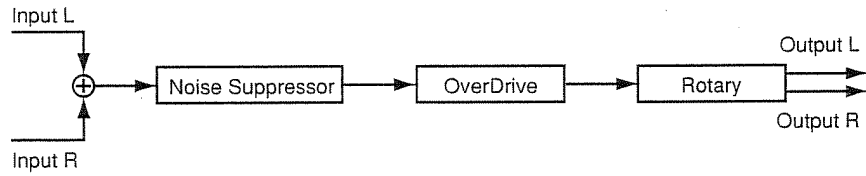
Cho (Chorus) (p. 112)

Sw Off, On
 Rate 0.1-10.0 Hz
 Depth 0-100
 PreDLY 0-50 ms
 EfxLvl -100-100
 DirLvl -100-100

Rotary



This algorithm simulates a rotary speaker.



NS (Noise Suppressor) (p. 115)

Sw	Off, On
Thresh	0-100
Release	0-100

Rot (Rotary) (p. 117)

LRate	0.1-10.0 Hz
HRate	0.1-10.0 Hz

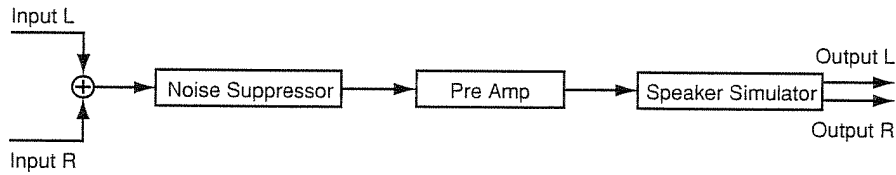
Ovd (OverDrive) (p. 114)

Sw	Off, On
Gain	0-100
Level	0-100

GuitarAmpSim (Guitar Amp Simulator)



This algorithm simulates a guitar amp.



NS (Noise Suppressor) (p. 115)

Sw Off, On
 Thresh 0–100
 Release 0–100

Amp (Pre Amp) (p. 118)

Sw Off, On
 Amp Type JC-120, Clean Twin, Match Drive, BG Lead, MS1959 I, MS1959 II, MS1959 I+II, SLDN Lead, Metal 5150, Metal Lead, OD-1, OD-2 Turbo, Distortion, Fuzz
 Gain Low, Middle, High
 Bright Off, On
 Volume 0–100
 Bass 0–100
 Middle 0–100
 Treble 0–100
 Presence 0–100(-100–0)
 Master 0–100

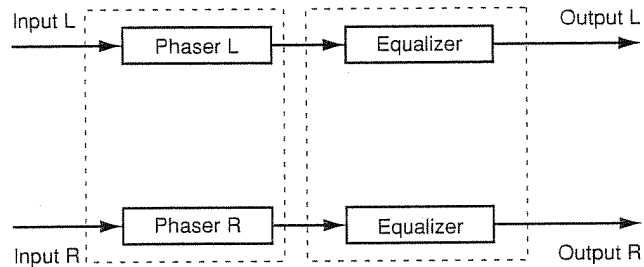
Sp (Speaker Simulator) (p. 118)

Sw Off, On
 Sp Type Small, Middle, JC-120, Built In 1, Built In 2, Built In 3, Built In 4, BG Stack 1, BG Stack 2, MS Stack 1, MS Stack 2, Metal Stack
 MicSetting 1, 2, 3
 MicLevel 0–100
 DirLvl 0–100

St Phaser (Stereo Phaser)



This algorithm is a stereo phaser. A three-band equalizer is provided on the output.



Phs (Phaser) (p. 116)

Sw	Off, On
Mode	4, 8, 12, 16
Pol	Inv, Sync
Rate	0.1–10.0 Hz
Depth	0–100
Manual	0–100
Reso	0–100
CrossFBLvl	0–100
EfxLvl	-100–100
DirLvl	-100–100

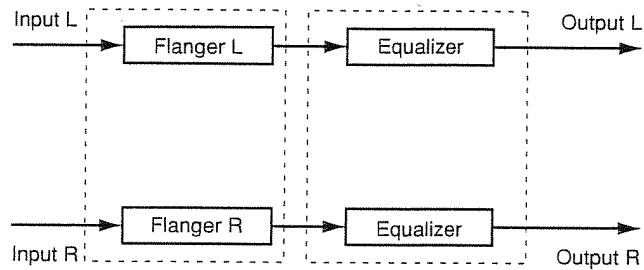
EQ (Equalizer) (p. 110)

Sw	Off, On
Low Gain	-12–12 dB
Low Freq	20–2000 Hz
Low Q	0.3–10.0
Low Type	Shlv, Peak
Mid Gain	-12–12 dB
Mid Freq	200–8000 Hz
Mid Q	0.3–10.0
High Gain	-12–12 dB
High Freq	1.4–20.0 kHz
High Q	0.3–10.0
Hi Type	Shlv, Peak
Level	0–100

St Flanger (Stereo Flanger)



This algorithm is a stereo flanger. A three-band equalizer is provided on the output.



Flg (Flanger) (p. 115)

Sw	Off, On
Pol	Inv, Sync
Rate	0.1–10.0 Hz
Depth	0–100
Manual	0–100
Reso	0–100
CrossFBLvl	0–100
EfxLvl	-100–100
DirLvl	-100–100

EQ (Equalizer) (p. 110)

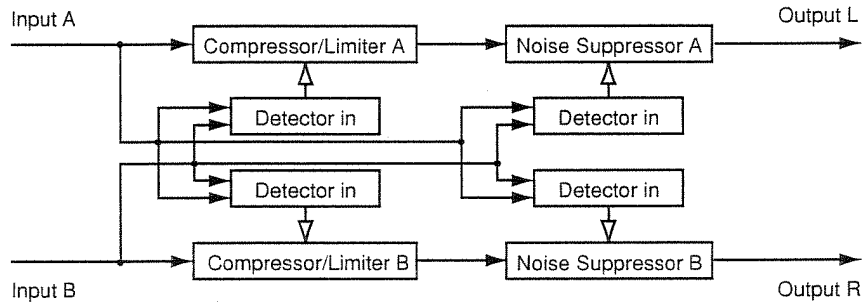
Sw	Off, On
Low Gain	-12–12 dB
Low Freq	20–2000 Hz
Low Q	0.3–10.0
Low Type	Shlv, Peak
Mid Gain	-12–12 dB
Mid Freq	200–8000 Hz
Mid Q	0.3–10.0
High Gain	-12–12 dB
High Freq	1.4–20.0 kHz
High Q	0.3–10.0
Hi Type	Shlv, Peak
Level	0–100

DualCom/Lim (Dual Compressor/Limiter)



Two independent processors (A, B) for compressor/limiter and noise suppressor are connected in series in this algorithm.

To use INPUT A for the input, Effect Pan for the channel should be set to "L63" (send/return) or select "InsL" (insert). To use INPUT B for the input, Effect Pan for the channel should be set to "R63" (send/return) or select "InsR" (insert).



CmpA/CmpB (Compressor/Limiter) (p. 117)

Sw	Off, On
Thresh	-60-0 dB
Ratio	1.5:1, 2:1, 4:1, 100:1
Attack	0-100
Release	0-100
Level	-60-12 dB
Detect	A, B, Link

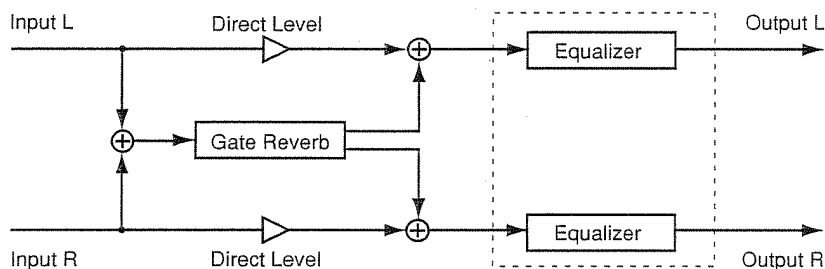
NS (Noise Suppressor) (p. 115)

Sw	Off, On
Thresh	0-100
Release	0-100
Detect	A, B, Link

Gate Reverb



This algorithm is a gated reverb. A three-band equalizer is provided on the output.



GRev (Gate Reverb) (p. 119)

Sw	Off, On
Mode	Normal, L→R, R→L, Revers1, Revers2
Time	10–400 ms
PreDLY	0–300 ms
Thick	0–100
Density	0–100
AcDLY	0–200 ms
AcLvl	0–100
AcPan	L63–R63
EfxLvl	-100–100
DirLvl	-100–100

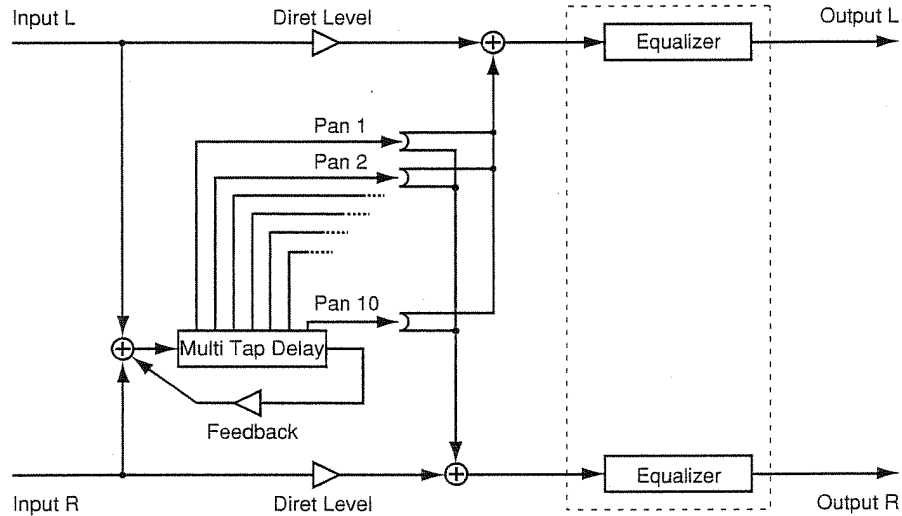
EQ (Equalizer) (p. 110)

Sw	Off, On
Low Gain	-12–12 dB
Low Freq	20–2000 Hz
Low Q	0.3–10.0
Low Type	Shlv, Peak
Mid Gain	-12–12 dB
Mid Freq	200–8000 Hz
Mid Q	0.3–10.0
High Gain	-12–12 dB
High Freq	1.4–20.0 kHz
High Q	0.3–10.0
Hi Type	Shlv, Peak
Level	0–100

MultiTapDly (Multi Tap Delay)



This algorithm is a delay in which ten delays can be set independently. A three-band equalizer is provided on the output.



MTD (Multi Tap Delay) (p. 111)

Time Ch1–Ch10	0–1200 ms
Level Ch1–Ch10	0–100
Pan Ch1–Ch10	L63–R63
FBTim	0–1200 ms
FBLvl	-100–100
EfxLvl	-100–100
DirLvl	-100–100

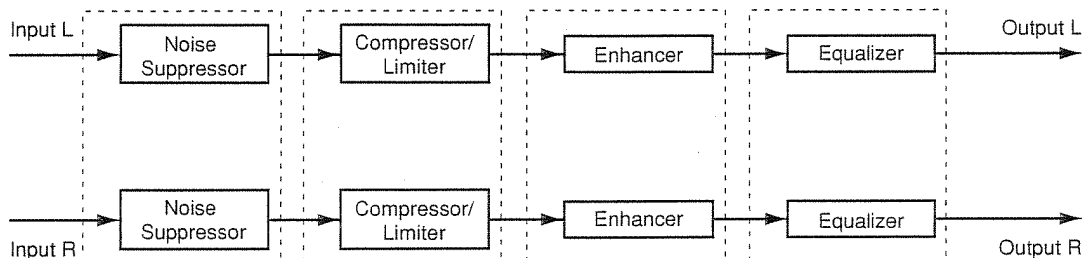
EQ (Equalizer) (p. 110)

Sw	Off, On
Low Gain	-12–12 dB
Low Freq	20–2000 Hz
Low Q	0.3–10.0
Low Type	Shlv, Peak
Mid Gain	-12–12 dB
Mid Freq	200–8000 Hz
Mid Q	0.3–10.0
High Gain	-12–12 dB
High Freq	1.4–20.0 kHz
High Q	0.3–10.0
Hi Type	Shlv, Peak
Level	0–100

Stereo Multi



This algorithm connects a stereo noise suppressor, stereo compressor/limiter, stereo enhancer, and a stereo equalizer in series.



NS (Noise Suppressor) (p. 115)

Sw Off, On
 Thresh 0–100
 Release 0–100

Cmp (Compressor/Limiter) (p. 114)

Sw Off, On
 Thresh -60–0 dB
 Ratio 1.5:1, 2:1, 4:1, 100:1,
 Attack 0–100
 Release 0–100
 Level -60–12 dB

Enh (Enhancer) (p. 117)

Sw Off, On
 Sens 0–100
 Freq 1.0–10.0 kHz
 MixLvl 0–100
 Level 0–100

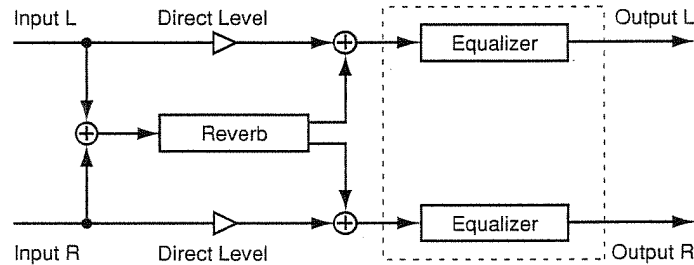
EQ (Equalizer) (p. 110)

Sw Off, On
 Low Gain -12–12 dB
 Low Freq 20–2000 Hz
 Low Q 0.3–10.0
 Low Type Shlv, Peak
 Mid Gain -12–12 dB
 Mid Freq 200–8000 Hz
 Mid Q 0.3–10.0
 High Gain -12–12 dB
 High Freq 1.4–20.0 kHz
 High Q 0.3–10.0
 Hi Type Shlv, Peak
 Level 0–100

Reverb 2



This is a reverb that provides a gating function and a ducking function. It can be used in whichever EFX1 to EFX4. You can use two reverbs with different settings, or use it in combination with a previous reverb.



Rev (Reverb) (p. 120)

Sw	On, Off
Type	Room1, Room2, Hall1, Hall2, Plate
Gate	Off, On
Mode	Gate, Ducking
Time	0.1–10.0 sec
PreDLY	0–200 msec
Density	0–100
HPF	Thru, 20–2000 Hz
LPF	1.0–20.0 kHz, Thru
Thresh	0–100
Attack	1–100
Releas	1–100
HoldT	1–100
EfxLvl	0–100
DirLvl	0–100

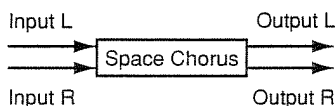
EQ (Equalizer) (p. 110)

Sw	Off, On
Low Gain	-12–12 dB
Low Freq	20–2000 Hz
Low Q	0.3–10.0
Low Type	Shlv, Peak
Mid Gain	-12–12 dB
Mid Freq	200–8000 Hz
Mid Q	0.3–10.0
High Gain	-12–12 dB
High Freq	1.4–20.0 kHz
High Q	0.3–10.0
Hi Type	Shlv, Peak
Level	0–100

Space Chorus



This is a chorus which simulates the Roland SDD-320.



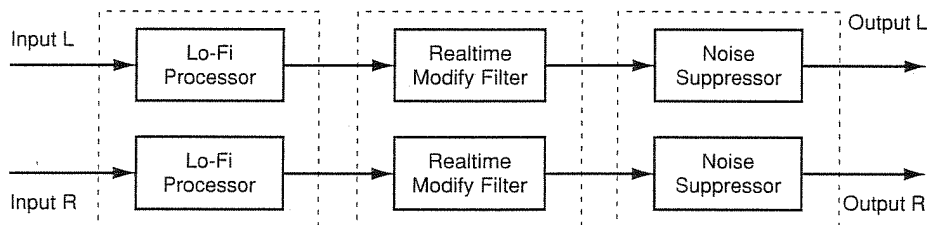
Spcho (Space Chorus) (p. 120)

Sw Off, On
 InMode Mono, Stereo
 Mode 1, 2, 3, 4, 1+4, 2+4, 3+4
 MixBal 0-100

Lo-Fi Proces (Lo-Fi Processor)



This allows you to create a "lo-fi" sound by lowering the sample rate and/or decreasing the number of bits. Realtime modify filters connected in series allow you to reshape the sound freely.



Lo-Fi (Lo-fi Processor) (p. 121)

Sw Off, On
 Pre Filter Off, On
 Rate Off, 1/2-1/32
 Bit Off, 15-1 bit
 Post Filter Off, On
 EfxLvl 0-100
 DirLvl 0-100

RMF (Realtime Modify Filter) (p. 121)

Sw Off, On
 Type LPF, BPF, HPF
 CutOff 0-100
 Reso 0-100
 Gain 0-24 dB

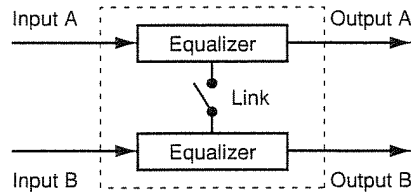
NS (Noise Suppressor) (p. 115)

Thresh 0-100
 Release 0-100

ParametricEQ (4-Band Parametric Equalizer)



This is a 4-band parametric equalizer. It can be used either as two monaural units or as one stereo unit.



Lnk (Link) (p. 121)

Link Off, On

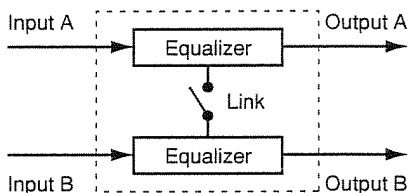
PEQA/PEQB (Parametric Equalizer) (p. 122)

Sw	Off, On
Low Gain	-12-12 dB
Low Freq	20-2000 Hz
Low Q	0.3-10
Low Type	Shlv, Peak
LoMid Gain	-12-12 dB
LoMid Freq	200-8000 Hz
LoMid Q	0.3-10
HiMid Gain	-12-12 dB
HiMid Freq	200-8000 Hz
HiMid Q	0.3-10
High Gain	-12-12 dB
High Freq	1.4-20.0 kHz
High Q	0.3-10
High Type	Shlv, Peak
InputG	-60-12dB
Level	-60-12 dB

GraphicEQ (10-Band Graphic Equalizer)



This simulates a 10-band graphic equalizer. It can be used either as two monaural units or as one stereo unit.



Lnk (Link) (p. 121)

Link Off, On

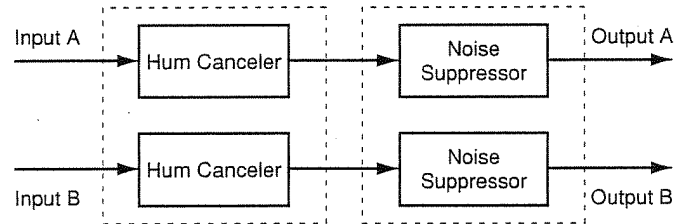
GEQA/GEQB (Graphic Equalizer) (p. 122)

Sw	Off, On
31.2	-12-12 dB
62.5	-12-12 dB
125	-12-12 dB
250	-12-12 dB
500	-12-12 dB
1k	-12-12 dB
2k	-12-12 dB
4k	-12-12 dB
8k	-12-12 dB
16k	-12-12 dB
InputG	-60-12 dB
Level	-60-12 dB

Hum Canceler



This removes unwanted hum (electrical “buzz” or “drone”).



HC (Hum Canceller) (p. 123)

Sw	Off, On
Freq	20.0–800.0 Hz
Width	10–40 %
Depth	0–100
Thresh	0–100
RangeLo	Unlimit, 20–2000 Hz
RangeHi	1.0–20.0 kHz, Unlimit

NS (Noise Suppressor) (p. 115)

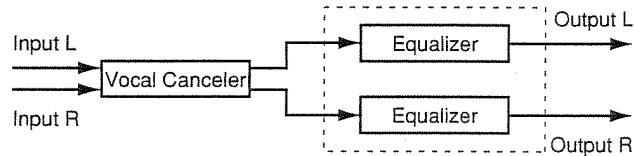
Sw	Off, On
Thresh	0–100
Release	0–100

Vocal Cancel



When a stereo source is being input from CD or DAT etc., this cancels the sound which is located in the stereo center, such as the vocal or bass.

* Depending on the musical source, sounds that you do not wish to be canceled may be canceled as well. In particular if the musical source has heavy reverb or if the sound that you wish to delete is not located in the center, the vocal canceller may not produce the desired result.



VC (Vocal Canceller) (p. 123)

Sw	Off, On
Balance	0-100
RangeLo	Unlimit, 20-2000 Hz
RangeHi	1.0-20.0 kHz, Unlimit

EQ (Equalizer) (p. 110)

Sw	Off, On
Low Gain	-12-12 dB
Low Freq	20-2000 Hz
Low Q	0.3-10.0
Low Type	Shlv, Peak
Mid Gain	-12-12 dB
Mid Freq	200-8000 Hz
Mid Q	0.3-10.0
High Gain	-12-12 dB
High Freq	1.4-20.0 kHz
High Q	0.3-10.0
Hi Type	Shlv, Peak
Level	0-100

Voice Trans (Voice Transformer)



This independently controls the basic pitch and the formants, allowing a variety of voice characters to be created.

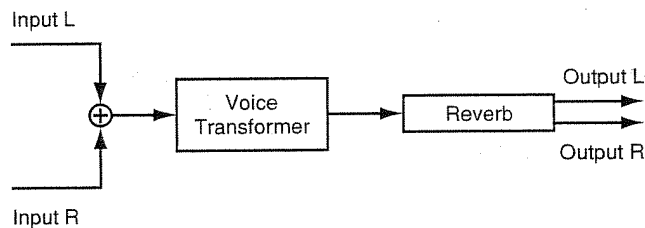


Formants (p. 63)

* *Voice Transformer can be used in EFX1 or EFX3. Also, EFX2 or EFX4 will not be available for use.*

Hints for voice input

- Input only a single voice. If several voices are input, the VS-1680 will not operate properly.
- Be sure that sound from a speaker does not enter the microphone you are using. This will have the same effect as if several voices were input to the unit (i.e. the VS-1680 will not function properly).
- We recommend that you to use a unidirectional microphone; speak or sing as close to the microphone as possible.



VT (Voice Transformer) (p. 123)

Sw	Off, On
Robot	Off, On
Cromatic Pitch	-12-36
Fine Pitch	-100-100
Cromatic Formant	-12-12
Fine Formant	-100-100
MixBal	0-100

FE (Fader Edit) (p. 124)

Sw	Off, On
----	---------

MIDI (MIDI Control) (p. 124)

Sw	Off, On
PitchBend	Off, 1-12
Portament	Off, 1-100

Rev (Reverb) (p. 110)

Sw	Off, On
Time	0.1-10.0 sec
PreDLY	0-200 msec
Density	0-100
EfxLvl	0-100

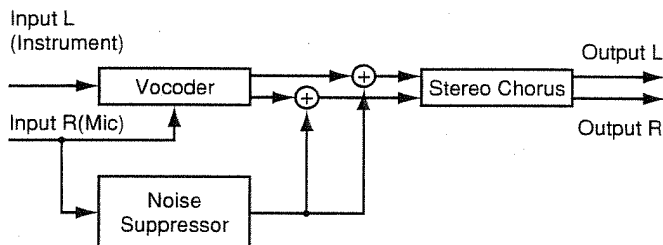
Vocoder 2 (19)



This is a 19 band vocoder. A clear sound that was not possible with conventional vocoders can be obtained.

To use the vocoder, Effect Pan for the instrument channel should be set to "L63" (send/return) or select "insL" (insert) so that input an instrumental sound into the left channel. Similarly, Effect Pan for the vocal channel should be set to "R63" (send/return) or select "insR" (insert) so that input a vocal sound into the right channel.

* Vocoder 2 (19) can be used in EFX1 or EFX3. Also, EFX2 or EFX4 will not be available for use.



Voc (Vocoder2) (p. 124)

Envelope	Sharp, Soft, Long
PanMode	Mono, Stereo, L→R, R→L
Hold	Off, MIDI
MicSens	0-100
SynInLev	0-100
Character Ch1-19	0-100
Mic	0-100
MicHPF	Thru, 1.0-20.0 kHz
MicPan	L63-R63
NSThresh	0-100

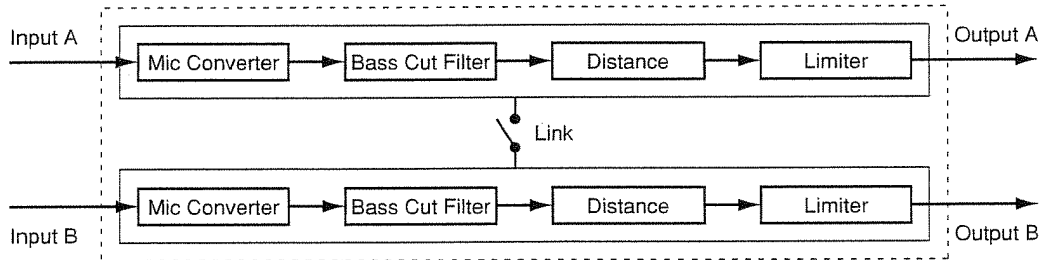
Cho (Chorus) (p. 112)

Sw	Off, On
Rate	0.1-10.0 Hz
Depth	0-100
PreDLY	0-50.0 msec
MixBal	0-100

MicSimulator (Mic Simulator)



This modifies sound that was recorded by a conventional dynamic mic, lapel mic or direct line, causing it to sound as though it had been recorded by an expensive condenser mic or a special studio mic. The mic simulator can add effects of proximity or distance.



Lnk (Link) (p. 121)

Link Off, On

CnvA/CnvB (Mic Converter) (p. 125)

Sw Off, On
 Input DR-20, Sml.Dy, Hed.Dy, Min.Cn, Flat
 Out Sml.Dy, Voc.Dy, Lrg.Dy, Sml.Cn, Lrg.Cn,
 Vnt.Cn, Flat
 Phase Nor, Inv

BCutA/BCutB (Bass Cut Filter) (p. 126)

Sw Off, On
 Freq Thru, 20–2000 Hz

DstnA/DstnB (Distance) (p. 126)

Sw Off, On
 Prox.Fx -12--+12
 Time 0–3000 cm

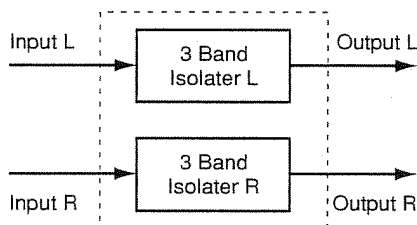
LmtA/LmtB (Limiter) (p. 117)

Sw Off, On
 Thresh -60–0 dB
 Attack 0–100
 Release 0–100
 Detect HPF Freq Thru, 20–2000 Hz
 Level -60–24 dB

3BndIsolater (3-band Isolator)



The input sound is separated into three frequency ranges — high, mid, and low — each of which can be boost or cut.



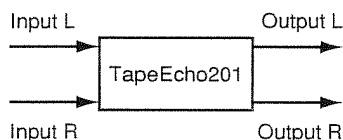
Iso (3-band Isolator) (p. 126)

Sw	Off, On
AntiPhase LoLev	0–100
AntiPhase MidLev	0–100
LoMixSw	Off, On
MidMixSw	Off, On
LowLvl	-60–+4 dB
MidLvl	-60–+4 dB
HiLvl	-60–+4 dB

TapeEcho201 (Tape Echo 201)



This is a tape echo which simulates the Roland RE-201.



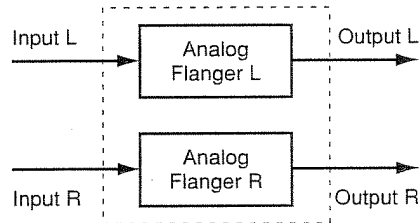
Echo (Tape Echo 201) (p. 126)

Sw	Off, On
Mode	1–7
Repeat Rate	0–100
Intnsty	0–100
Tone Bass	-100–100
Tone Treble	-100–100
Pan HeadS	L63–R63
Pan HeadM	L63–R63
Pan HeadL	L63–R63
Tape Dist	0–100
WahFlutter Rate	0–100
WahFlutter Depth	0–100
EfxLvl	0–100
DirLvl	0–100

AnalogFinger (Analog Flanger)



This is analog flanger which simulates the Roland SBF-325.



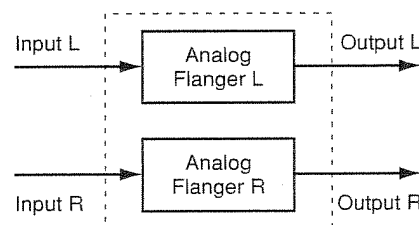
AnFl (Analog Flanger) (p. 127)

Sw	Off, On
Feedback	0–100
Modulation Freq	0–100
Modulation Rate	0–100
Modulation Depth	0–100
Mode	FL1, FL2, FL3, CHO
ChB	Nor, Inv
Phase ChA	Nor, Inv
Phase ChB	Nor, Inv

AnalogPhaser (Analog Phaser)



The VS-1680 features two analog phasers arranged in parallel, so they can be used in stereo.



AnPh (Analog Phaser) (p. 127)

Sw	Off, On
Mode	4STAGE, 8STAGE
Freq	0–100
Reso	0–100
LFO1 Rate	0–100
LFO1 Depth	0–100
LFO1 ChB	Nor, Inv
LFO2 Rate	0–100
LFO2 Depth	0–100
LFO2 ChB	Nor, Inv

Function of Each Effect Parameter

This section explains the function of each effect parameter included in the algorithm.

EQ (Equalizer)

This is a three-band equalizer with low range (shelving /peaking type), mid range (peaking type), and high range (shelving/peaking type) bands.

Sw (Switch)

Turn the equalizer on/off.

Low Gain

Adjust the gain of the low range equalizer.

Low Freq (Low Frequency)

Adjust the frequency of the low range equalizer.

Low Q

Specify the width of the band centered on the low range equalizer center frequency in which the gain adjustment will occur. As this setting is raised, the width of the band affected will become narrower.

Low Type

Select the type of the low range equalizer.

Shlv: Shelving type

Peak: Peaking type

Mid Gain (Middle gain)

Specify the gain (amount of boost/cut) for the mid-range equalizer.

Mid Freq (Middle frequency)

Specify the center frequency of the mid-range equalizer.

Mid Q (Middle Q)

Specify the width of the band around the center frequency specified for the middle range equalizer in which the gain adjustment will occur. As this setting is raised, the width of the band affected will become narrower.

High Gain

Specify the gain (amount of boost/cut) for the high range equalizer.

High Freq (High frequency)

Specify the center frequency of the high range equalizer.

High Q (High Q)

Specify the width of the band around the center frequency specified for the high range equalizer in which the gain adjustment will occur. As this setting is raised, the width of the band affected will become narrower.

High Type

Select the type of high range equalizer.

Shlv: Shelving type

Peak: Peaking type

Level (Output level)

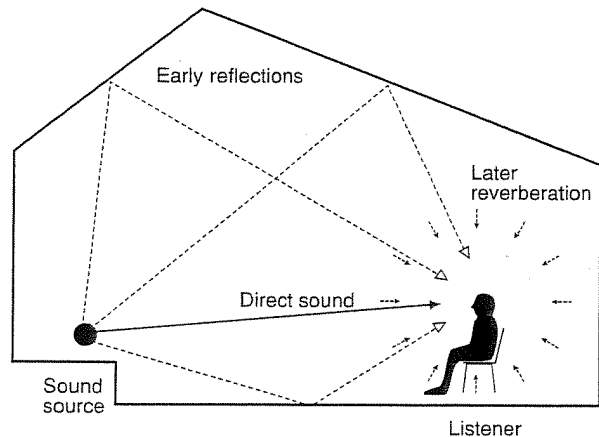
Adjust the volume level after the sound has passed through the equalizer.

Rev (Reverb)

Reverb refers to the reverberation that consists of many overlapping reflections. For example, if you clap your hands in a large room or auditorium, a lingering sound will follow the handclap itself. This lingering sound is called reverberation.

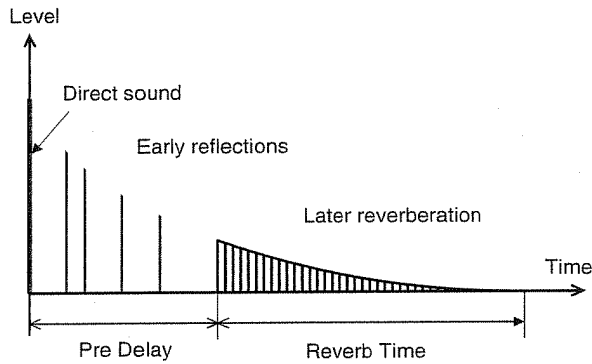
Types of reflection

The sound that normally enters our ear can be analyzed into three types of sound; direct sound, early reflections, and later reverberation. The direct sound is what reaches the listener directly from the sound source. Early reflections are what reach the listener after reflecting once or a few times off the walls or ceiling. Later reverberation is the "wash" of sound that is heard as a result of many reflections.



How reflections and time are related

Reflected sound reaches the listener in the following sequence. The Pre Delay is the time from when the direct sound is heard until the reverb is heard. The Reverb Time is the time over which the reverb decays to silence.



Other elements

The tonal characteristics of the reverb are affected by the materials of the surfaces (walls, etc.) off which the sound is reflected. The HF Damp and LF Damp parameters let you adjust the tonal quality as affected by such conditions.

HF Damp: The materials of the reflective surface will affect the way in which the high frequencies of the sound are attenuated. HF Damp adjusts the way in which the high frequencies are attenuated. Lower values will cause the high frequencies of the later reverberation to be attenuated more sharply.

LF Damp: The materials of the reflective surface will also affect the way in which the low frequencies of the sound are attenuated. LF Damp adjusts the way in which the low frequencies are attenuated. Lower values will cause the low frequencies of the later reverberation to be attenuated more sharply.

PreDLY (Pre Delay)

Adjust the time until the later reverberation appears.

Difusi (Diffusion)

Adjust the spread of the reverb sound.

Densty (Density)

Adjust the diffusive spaciousness of the early reflections.

ERLvl (Early Reflection Level)

Adjust the level of the early reflections.

LF Damp Gain

Adjust the degree of LF damping. With a setting of 0, there will be no damping. As the value is decreased, damping will become more pronounced.

LF Damp Freq (LF Damp Frequency)

Adjust the frequency at which LF damping will begin to take effect.

HF Damp Gain

Adjust the degree of HF damping. With a setting of 0, there will be no damping. As the value is decreased, damping will become more pronounced.

HF Damp Freq (HF Damp Frequency)

Adjust the frequency at which HF damping will begin to take effect.

HiCF (High Cut Frequency)

Adjust the frequency at which the high frequencies of the reverb sound will be cut.

EfxLvl (Effect Level)

Adjust the volume of the reverb.

DirLvl (Direct Level)

Adjust the volume of the direct sound.

Delay

Delay is an effect that adds delayed sound (s) to the direct sound, adding depth to the sound or creating special effects.

Sw (Switch)

Turn the delay on/off.

Time (Delay Time)

Adjust the delay time.

Room Size

Adjust the size of the room.

Time (Reverb Time)

Adjust the time over which the later reverberation will decay.

Shift (Delay shift)

Adjust the time difference between the delay times of the left and right channels. To delay the left channel delay, set this to a "L" value. To delay the right channel delay, set this to an "R" value. If you want the left and right channels to have the same delay time, set this to "0."

By shifting the delay times of the left and right channels, you can create a feeling of greater spaciousness.

** It is not possible for the sum of the Delay Time and the Delay Shift values to exceed the possible range of Delay Time settings. For example if the Delay Time has a range of 0–1200 ms and the Delay Time is set to 1000 ms, the Delay Shift setting range will be L200–R200 ms.*

FeedbackLvl (Feedback Level)

Feedback is when the delayed sound is returned to the input of the delay. This setting adjusts the amount that is returned. Higher settings will result in a greater number of repeats. For negative (-) settings, the phase of the sound will be inverted. Excessively high settings may cause oscillation to occur.

CrossFeedback Lvl (Cross Feedback Level)

This adjusts the amount of the delayed sound that is returned (fed back) to the other channel. For negative (-) settings, the phase of the sound will be inverted. Excessively high settings may cause oscillation to occur.

FBTim (Feedback Delay Time)

This adjusts the time of repeats when feedback is used with Multi Tap Delay.

LF Damp Gain

Adjust the degree of LF Damping. With a setting of 0, there will be no damping. As the value is decreased, damping will become more pronounced.

LF Damp Freq (LF Damp Frequency)

Adjust the frequency at which LF Damping will begin to take effect.

HF Damp Gain

Adjust the degree of HF Damping. With a setting of 0, there will be no damping. As the value is decreased, damping will become more pronounced.

HF Damp Freq (HF Damp Frequency)

Adjust the frequency at which HF Damping will begin to take effect.

EfxLvl (Effect Level)

Adjust the volume of the delay.

DirLvl (Direct Level)

Adjust the volume of the direct sound.

Cho (Chorus)

Chorus is an effect that adds spaciousness and depth to the sound.

Sw (Switch)

Turn the chorus on/off.

Rate

Adjust the rate at which the chorus is modulated.

Depth

Adjust the depth at which the chorus is modulated.

PreDLY (Pre Delay)

Adjust the time from the direct sound until when the chorus sound is output.

FeedbackLvl (Feedback Level)

Feedback returns the chorused sound back to the input of the chorus. This setting adjusts the amount of chorused sound that is returned. For negative (-) settings, the phase will be inverted. Excessively high settings may cause oscillation to occur.

CrossFeedbackLvl (Cross Feedback Level)

Adjust the amount of the chorused sound that is fed back to the other channel. For negative (-) settings, the phase will be inverted. Excessively high settings may cause oscillation to occur.

EfxLvl (Effect Level)

Adjust the volume of the chorus.

DirLvl (Direct Level)

Adjust the volume of the direct sound.

MixBal (Mix Balance)

Adjust the balance between the chorus volume and the direct sound volume.

Shift (Pitch Shifter)

This effect changes the pitch of the original sound.

Sw (Switch)

Turn the Pitch Shifter on/off.

Croma Pitch (Chromatic Pitch)

Adjust the amount of pitch change in semitone steps.

Fine Pitch

Make fine adjustments to the amount of pitch change.

PreDly (Pre Delay)

Adjust the time from when the direct sound is output until when the pitch shifted sound is output.

FBDly (Feedback Delay Time)

This adjusts the time of repeats when feedback is used.

FeedBackLvl (Feedback Level)

Feedback returns the pitch-shifted sound back to the input of the pitch shifter. This setting adjusts the amount of pitch-shifted sound that is returned. For negative (-) settings, the phase will be inverted. Excessively high settings may cause oscillation to occur.

CrossFeedBackLvl (Cross Feedback Level)

Adjust the amount of the pitch-shifted sound that is fed back to the other channel. For negative (-) settings, the phase will be inverted. Excessively high settings may cause oscillation to occur.

EfxLvl(Effect Level)

Adjust the volume of the Pitch Shifter.

DirLvl (Direct Level)

Adjust the volume of the direct sound.

Voc (Vocoder)

The vocoder creates "talking instrument" effects. When using the vocoder, input an instrumental sound into the left channel, and a vocal sound into the right channel. The instrumental sound is divided into ten frequency bands, and processed according to the frequency characteristics of the vocal sound.

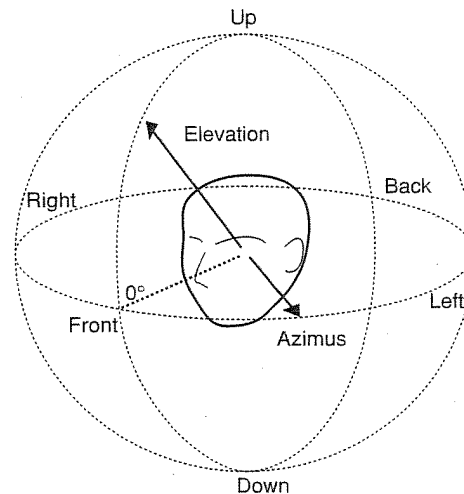
Char 1-10 (Voice Character 1-10)

Adjust the volume of each frequency band. These settings will affect the tone of the vocoder.

RSS

RSS (Roland Sound Space) is an effect that controls three-dimensional placement of the sound.

** In the Delay RSS and Chorus RSS algorithms, the spatial placement is fixed, and it is not possible to adjust Azimuth and Elevation.*



Azimuth

Set the front/back left/right position of the sound. A value of "0" is directly in front of the listener. Negative (-) values move to the left, and positive (+) values move to the right.

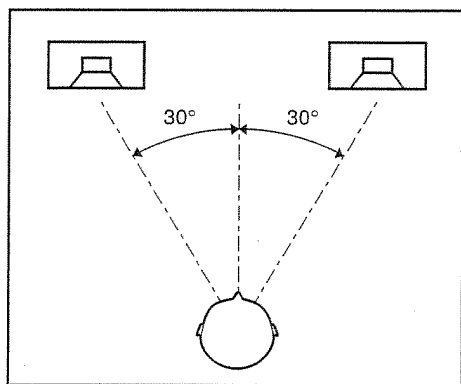
Elevation

Set the up/down position of the sound. A value of "0" is directly in front of the listener. Negative (-) values move downward, and positive (+) values move upward.

Cautions when using RSS

In order for RSS to be as effective as possible, note the following points.

- Acoustically “dead” rooms are most suitable.
- Single-way speakers are most suitable. However, coaxial or virtual coaxial multi-way speakers are also OK.
- The speakers should be distanced from the side walls as far as possible.
- Do not excessively separate the speakers to left and right.
- Monitor in the sweet spot shown below.



Product package notice for when RSS is used

RSS is an effect that places a sound source in a three-dimensional space when played back on a conventional stereo system. In order for the full RSS effect to be obtained, it is important to specify details of the listening environment. If a song using an RSS Patch is commercially released, we suggest placing the following notice on the package.

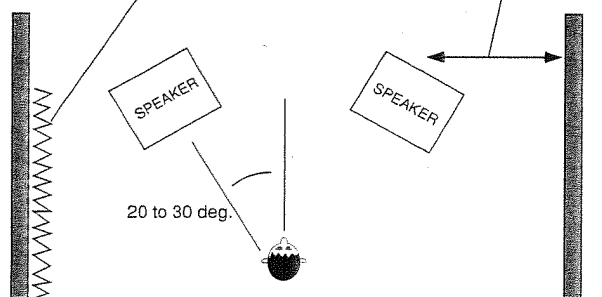


For Stereo Speakers

This sound is made to be played specifically through speakers.
The proper effect cannot be obtained if listened to through headphones.

Less reflections from the wall or floor are better.
If a hard wall is close to it, draw a curtain.

Speaker should be placed as far away as possible from the wall or floor.



Comp (Compressor)

A compressor holds down high levels and boosts low levels to even out the volume.

Sw (Switch)

Turn the compressor on/off.

Sustain

Adjust the time over which low level signals are boosted to a constant volume.

Attack

Adjust the strength of the attack when a sound is input.

Tone

Adjust the tone color.

Level

Adjust the volume.

Dstr/Ovd/Metal (Distortion/OverDrive/Metal)

These effects distort the sound to create sustain.

Gain

Adjust the degree of distortion.

Low Gain

Adjust the gain of the low frequency range.

Mid Gain

Adjust the gain of the mid frequency range.

High Gain

Adjust the gain of the high frequency range.

Tone

Adjust the tone color.

Level

Adjust the volume of the effect sound.

NS (Noise Suppressor)

The noise suppressor leaves the original sound unmodified, but mutes only the noise during the silent intervals.

Sw (Switch)

Turn the Noise Suppressor on/off.

Thresh (Threshold)

Adjust the level at which the noise suppressor will begin to take effect. When the signal drops below the specified level, it will be muted.

Release

Adjust the time over which the volume will drop to 0 after the noise suppressor begins to take effect.

Wah (Auto Wah)

Wah is an effect that modifies the frequency characteristics of a filter over time, producing a unique tone. The wah effect can change in relation to the volume of the input signal, and/or cyclically.

Sw (Switch)

Turn the Auto Wah on/off.

Mode

Select either BPF (band pass filter) or LPF (low pass filter). When BPF is selected, the wah effect will be produced in a narrow frequency range. When LPF is selected, the wah effect will be produced in a wide frequency range.

Pol (Polarity)

When using the volume of the input signal to control the wah effect, this setting determines whether the frequency of the filter will be moved upward (Up) or downward (Down).

Sens (Sensitivity)

When using the volume of the input signal to control the wah effect, this adjusts the sensitivity. As this value is increased, the response to the input level will become stronger. If you do not want the volume of the input sound to affect the wah effect, set this to 0.

Freq (Frequency)

Adjust the frequency at which the wah effect will apply.

Peak

Adjust the degree to which the wah effect will apply to the region around the center frequency. With lower values, the wah effect will affect a broad area around the center frequency. With higher values, the wah effect will affect a narrow area around the center frequency.

Rate

Adjust the rate at which the wah effect will be cyclically modulated.

Depth

Adjust the depth at which the wah effect will be cyclically modulated. If you do not want the wah effect to be cyclically modulated, set this to 0.

Level

Adjust the volume.

Sim (Guitar Amp Simulator)

This effect simulates a guitar amp.

Sw (Switch)

Turn the Guitar Amp Simulator on/off.

Mode

Select the Guitar Amp

Small: small amp

Built In: a built-in type amp

2 Stack: a large two-level amp stack

3 Stack: a large three-level amp stack

Flg (Flanger)

A flanger produces a "sweeping" effect somewhat like the sound of a jet airplane taking off and landing.

Sw (Switch)

Turn the Flanger on/off.

Pol (Polarity)

Select whether the left and right phase of the modulation will be the same or the opposite.

Inv: The left and right phase will be opposite. When inputting a mono source, this spreads the sound.

Sync: The left and right phase will be the same. Select this when inputting a stereo source.

Function of Each Effect Parameter

Rate

Adjust the rate at which flanger is modulated.

Depth

Adjust the depth of modulation for the flanger.

Manual

Adjust the center frequency at which the flanging effect will be applied.

Reso (Resonance)

Adjust the amount of resonance. Raising this value will produce a more characteristic effect. Excessive settings of this value may produce oscillation.

CrossFBLvL (Cross Feedback Level)

Adjust the amount of flanging sound which will be returned to the other channel. Excessively high settings may produce oscillation.

EfxLvl (Effect Level)

Adjust the volume of the Flanger.

DirLvl (Direct Level)

Adjust the volume of the direct sound.

Phs (Phaser)

Phaser is an effect that adds a phase-shifted sound to the direct sound, making the sound more spacious.

Sw (Switch)

Turn the Phaser on/off.

Mode

Select the number of stages in the phaser (4, 8, 12, 16).

Pol (Polarity)

Select whether the left and right phase of the modulation will be the same or the opposite.

Inv: The left and right phase will be opposite. When inputting a mono source, this spreads the sound.

Sync: The left and right phase will be the same. Select this when inputting a stereo source.

Rate

Adjust the rate at which the phaser will modulate.

Depth

Adjust the depth of the phaser effect.

Manual

Adjust the center frequency at which the phaser effect will apply.

Reso (Resonance)

Adjust the amount of resonance. Raising this value will produce a more distinctive tone. Excessively high settings may cause the sound to distort. When using a phaser with many stages, excessively high settings may produce oscillation.

CrossFBLvL (Cross Feedback Level)

Adjust the amount of phased sound which will be returned to the other channel. Excessively high settings may produce oscillation.

EfxLvl (Effect Level)

Adjust the volume of the Phaser.

DirLvl (Direct Level)

Adjust the volume of the direct sound.

Lmt (Limiter/De-esser)

This can be used either as a limiter or as a de-esser. A limiter holds down high signal levels to prevent distortion. A de-esser cuts the sibilant sounds of a voice, producing a gentler tone.

Sw (Switch)

Turn the Limiter/De-esser on/off.

Mode

Select whether the effect will function as a limiter or as a de-esser.

Thresh (Limiter Threshold)

Adjust the level (Threshold Level) at which the limiter will begin to operate.

Release (Limiter Release)

Adjust the time until when the limiter will turn off after the input level falls below the threshold level.

Level (Limiter Level)

Adjust the volume of the sound that passes through the limiter.

Sens (De-esser Sensitivity)

Adjust the degree to which the de-esser effect will affect the input signal.

Freq (De-esser Frequency)

Adjust the frequency at which the de-esser effect will apply. The effect will apply to frequencies above the specified value.

Lmt (Compressor/Limiter)

Depending on the setting of the parameters, this effect can be used as a compressor or as a limiter. A compressor holds down high-level signals and boosts low-level signals, evening out the volume. A limiter is used when you wish to hold down excessive input levels.

Sw (Switch)

Turn the Compressor/Limiter on/off.

Thrsh (Threshold)

Adjust the level at which the effect will begin to apply. To use this effect as a limiter, set a high Threshold Level.

Ratio

Select the compression ratio that will apply when the Threshold Level is exceeded. When using the effect as a limiter, you will normally set this to "100:1."

Attack (Attack Time)

Adjust the time from when the input level exceeds the threshold level to when the effect begins to apply. When using the effect as a limiter, set a short Attack Time.

Release

Adjust the time from when the input level drops below the threshold level to when the effect ceases to apply. When using the effect as a limiter, set a short Release Time.

Level

Adjust the output level.

Detect HPF Freq (Frequency)

Adjust the cutoff frequency of the level detection section. With a setting of Thru, this will operate as a conventional limiter.

Detect (Detector in)

This is used to select the input source which INPUT A or INPUT B that is to be used for controlling the effect. Set it to "Link" if you want the unit to detect which input source is of a higher level and automatically use that source for control.

Enh (Enhancer)

The enhancer is an effect that adds phase-shifted sound to the direct sound, sharpening the focus of the sound and bringing it to the front of the mix.

Sw (Switch)

Turn the Enhancer on/off.

Sens (Sensitivity)

Adjust the degree of the enhancer effect relative to the input volume.

Freq (Frequency)

Adjust the frequency at which the effect will begin to apply. The effect will apply to frequencies above the specified value.

MixLvl (Mix Level)

Adjust the amount of the phase-shifted sound that is mixed into the input.

Level

Adjust the level of the effect sound.

Rot (Rotary)

Rotary is an effect that simulates a rotary speaker. This produces the characteristic sound of two rotating speakers (a high rotor and a low rotor).

LRate (Low Rate)

Adjust the rotating rate of the low-range rotor.

HRate (High Rate)

Adjust the rotating rate of the high-range rotor.

Amp (Pre Amp)

This effect simulates the pre-amp section of a guitar amplifier.

Sw (Switch)

Turn the Pre Amp on/off.

Amp Type

Select the type of guitar amp.

- JC-120:** The sound of a Roland JC-120.
- Clean Twin:** The sound of a standard built-in type vacuum tube amp.
- Match Drive:** The sound of a recent vacuum tube amp widely used in blues, rock, and fusion.
- BG Lead:** The sound of a vacuum tube amp representative of the late 70's and the 80's.
- MS1959 I:** The sound of the large vacuum tube amp stack that was indispensable to the British hard rock of the 70's, with input I connected.
- MS1959 II:** The same amp as MS1959 (I), but with input II connected.
- MS1959 I+II:** The same amp as MS1959 (I), but with inputs I and II connected in parallel.
- SLDN Lead:** The sound of a vacuum tube amp usable in a wide variety of styles.
- Metal 5150:** The sound of a large vacuum tube amp suitable for heavy metal.
- Metal Lead:** A metal lead sound with a distinctive mid-range.
- OD-1:** The sound of the BOSS OD-1 compact effector.
- OD-2 Turbo:** The sound of the BOSS OD-2 compact effector with the Turbo switch on.
- Distortion:** Distortion sound.
- Fuzz:** Fuzz sound.

Gain

Switch the degree of pre-amp distortion between three levels (Low/Middle/High).

Bright

Turning this "On" will produce a sharper and brighter sound. This parameter can be set if the Type is set to "JC-120," "Clean Twin," or "BG Lead."

Volume

Adjust the volume and the degree of distortion of the amp.

Bass

Adjust the tone of the low range.

Middle

Adjust the tone of the mid range. If "Match Drive" is selected for the Type parameter, this parameter cannot be set.

Treble

Adjust the tone of the high range.

Presenc (Presence)

Adjust the tone of the ultra-high range. Normally the range will be 0-100, but when "Match Drive" is selected, the range will be -100-0.

Master

Adjust the volume of the entire pre-amp.

Sp (Speaker Simulator)

This effect simulates a speaker system.

Sw (Switch)

Turn the Speaker Simulator on/off.

Sp Type (Speaker Type)

Select the type of speaker. The specifications of each type are as follows. The speaker column indicates the diameter of each speaker unit (in inches) and the number of units.

Type	Cabinet	Speaker	Mic
Small	a	10	D
Middle	b	12 x 1	D
JC-120	b	12 x 2	D
Built In 1	b	12 x 2	D
Built In 2	b	12 x 2	C
Built In 3	b	12 x 2	C
Built In 4	b	12 x 2	C
BG Stack 1	c	12 x 2	C
BG Stack 2	d	12 x 2	C
MS Stack 1	d	12 x 4	C
MS Stack 2	d	12 x 4	C
Metal Stack	e	12 x 4	C

a: Small open-back enclosure

b: open back enclosure

c: sealed enclosure

d: large sealed enclosure

e: large double stack

C: condenser mic

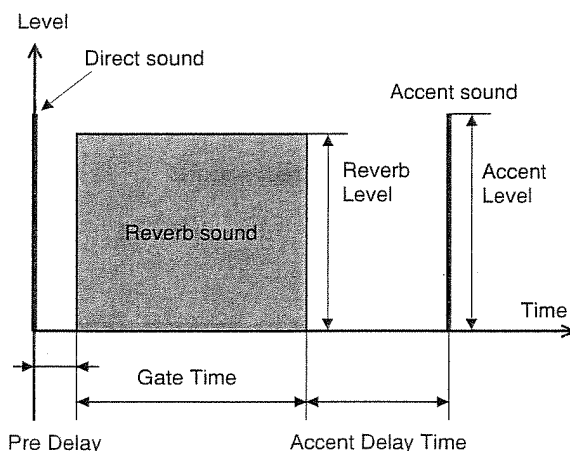
D: dynamic mic

Recommended combinations of pre-amp and speaker

Pre-amp type	Speaker type
BG Lead	BG Stack 1, BG Stack 2, Middle
MS1959 (II)	BG Stack 1, BG Stack 2, Metal Stack
MS1959 (I+II)	BG Stack 1, BG Stack 2, Metal Stack
SLDN Lead	BG Stack 1, BG Stack 2, Metal Stack
Metal 5150	BG Stack 1, BG Stack 2, Metal Stack
Metal Lead	BG Stack 1, BG Stack 2, Metal Stack
OD-2 Turbo	Built In 1-4
Distortion	Built In 1-4
Fuzz	Built In 1-4

GRev (Gate Reverb)

This is a reverb in which the reverberance is muted (gated) during its decay. Using the accent sound produces an interesting effect.



MicSetting (Mic Setting)

Specify the location of the mic that is recording the sound of the speaker. This can be adjusted in three steps, with the mic becoming more distant in the order of 1, 2, and 3.

MicLevel (Mic Level)

Adjust the volume of the mic sound.

DirLvl (Direct Level)

Adjust the volume of the direct sound.

Sw (Switch)

Turn the Gate Reverb on/off.

Time (Gate Time)

Adjust the time from when the reverb sound begins until it is muted.

PreDLY (Pre Delay)

Adjust the time until the reverb sound appears.

Mode (Gate Mode)

Select how the gated reverb will apply.

- Normal:** A conventional gated reverb.
- L→R:** The gated reverb sound will move from left to right.
- R→L:** The gated reverb sound will move from right to left.
- Revers1:** This is a reverse gated reverb. (As if the reverb was played backward.)
- Revers2:** This is a reverse gated reverb in which the reverb decays mid-way.

Thick (Thickness)

Adjust the thickness of the reverb sound.

Density

Adjust the density of reverb sound.

AcDLY (Accent Delay Time)

Adjust the time from when the reverb sound is muted until the accent sound appears.

Function of Each Effect Parameter

AcLvl (Accent Level)

Adjust the level of the accent sound.

AcPan (Accent Pan)

Adjust the pan of the accent sound.

EfxLvl (Effect Level)

Adjust the volume of the Gate Reverb.

DirLvl (Direct Level)

Adjust the volume of the direct sound.

Reverb2

This is a reverb that provides a gating function and a ducking function.

Sw (Switch)

Turn reverb on/off.

Type (Reverb Type)

Select the type of reverb.

Room1: Normal room reverb.

Room2: Room reverb with a softer tone than Room1.

Hall1: Normal hall reverb.

Hall2: Hall reverb with a softer tone than Hall1.

Plate: Plate reverb.

Gate

Turn the gate function on/off.

Mode (Gate mode)

Select the way in which the gate function will operate.

Gate: The gate will begin to open when the direct signal level exceeds the threshold level, and will begin to close when it falls below the threshold level.

Ducking: The function will be the opposite of the Gate setting. The gate will begin to close when the direct signal level exceeds the threshold level, and will begin to open when it falls below the threshold level.

Time (Reverb Time)

Adjust the length (time) of the reverberation.

PreDLY (Pre delay)

Adjust the time until the reverb is output.

Densty (density)

Adjust the density of the reverb.

HPF (High pass filter)

Adjust the frequency at which the high pass filter will begin to take effect. With a setting of Thru, the high pass filter will not function.

LPF (Low pass filter)

Adjust the frequency at which the low pass filter will begin to take effect. With a setting of Thru, the low pass filter will not function.

Thresh (Threshold)

Adjust the basic level at which opening and closing of the gate will be controlled.

Attack

Adjust the time from when the direct sound level exceeds the threshold level until when the gate is completely open.

Releas (Release)

Adjust the time from when the hold time has elapsed until the sound is completely muted.

HoldT (Hold Time)

Adjust the time from when the input falls below the threshold level until when the release begins.

EFLvl (Effect level)

Adjust the volume of the reverb.

DiLvl (Direct level)

Adjust the volume of the direct sound.

SpCho (Space Chorus)

This is a chorus which simulates the Roland SDD-320.

Sw (Switch)

Turn space chorus on/off.

InMod (Input mode)

Specify whether the input signal is stereo or mono.

Mode (Space mode)

Select the way in the chorus will change.

MixBal (Mix balance)

Adjust the balance between the chorus volume and the direct sound volume.

Lo-Fi (Lo-Fi Processor)

This allows you to create a “lo-fi” sound by lowering the sample rate and/or decreasing the number of bits.

Sw (Switch)

Turn the Lo-fi Processor on/off.

Pre Filter

This filter decreases digital distortion. By turning this off, you can create an extremely lo-fi sound that includes aliasing.

Rate

Modify the sample rate. If this is turned off, the sample rate will be the same as the sample rate of the currently selected song.

Bit

Modify the number of data bits. If this is turned off, the number of data bits will be unchanged. If an extremely low number of bits is selected, loud noise may appear even when there is no sound, depending on the input source. In such cases, raise the threshold of the noise suppressor.

Post Filter

This filter decreases the digital distortion produced by lo-fi. By turning this off, you can create an extremely lo-fi sound.

EfxLvl (Effect level)

Adjust the volume of the lo-fi sound.

DirLvl (Direct level)

Adjust the volume of the direct sound.

RMF (Realtime Modify filter)

Realtime modify filters connected in series allow you to reshape the sound freely.

Sw (Switch)

Turn the realtime modify filter on/off.

Type (Filter type)

Select the filter type.

LPF: Low pass filter

BPF: Band pass filter

HPF: High pass filter

CutOff

Adjust the cutoff frequency.

Reso (Resonance)

Adjust the resonance.

Gain

Adjust the volume level of the sound that has passed through the realtime modify filter.

Link

This is a link switch for channels A and B.

Link

If this is turned off, the channels will function independently as two monaural channels. If this is turned on, both channels will be controlled simultaneously by the settings of channel A.

PEQA/PEQB (Parametric Equalizer)

This is a 4-band parametric equalizer. It can be used either as two monaural units or as one stereo unit.

Sw (Switch)

Turn the equalizer on/off.

Low Gain

Specify the gain (amount of boost/cut) for the low range equalizer.

Low Freq (Low frequency)

Specify the center frequency of the low range equalizer.

Low Q

Specify the width of the band centered on the low range equalizer center frequency in which the gain adjustment will occur. As this setting is raised, the width of the band affected will become narrower.

Low Type

Select the type of low range equalizer.

Shlv: Shelving type

Peak: Peaking type

LoMid Gain (Low middle gain)

Specify the gain (amount of boost/cut) for the low middle range equalizer.

LoMid Freq (Low middle frequency)

Specify the center frequency of the low middle range equalizer.

LoMid Q (Low middle Q)

Specify the width of the band centered on the low middle range equalizer center frequency in which the gain adjustment will occur. As this setting is raised, the width of the band affected will become narrower.

HiMid Gain (High middle gain)

Specify the gain (amount of boost/cut) for the high middle range equalizer.

HiMid Freq (High middle frequency)

Specify the center frequency of the high middle range equalizer.

HiMid Q (High middle Q)

Specify the width of the band centered on the high middle range equalizer center frequency in which the gain adjustment will occur. As this setting is raised, the width of the band affected will become narrower.

High Gain

Specify the gain (amount of boost/cut) for the high range equalizer.

High Freq (High frequency)

Specify the center frequency of the high range equalizer.

High Q

Specify the width of the band centered on the high range equalizer center frequency in which the gain adjustment will occur. As this setting is raised, the width of the band affected will become narrower.

High Type

Select the type of high range equalizer.

Shlv: Shelving type

Peak: Peaking type

InputG (Input gain)

Adjust the overall volume level of the sound before it enters the equalizer.

Level (Output level)

Adjust the overall volume level of the sound that has passed through the equalizer.

GEQA/GEQB (Graphic Equalizer)

This simulates a 10-band graphic equalizer. It can be used either as two monaural units or as one stereo unit.

Sw (Switch)

Turn the equalizer on/off.

31.2-16k (Gain)

Adjust the gain (amount of boost/cut) of the equalizer for each frequency.

InputG (Input gain)

Adjust the overall volume level of the sound before it passes through the equalizer.

Level (Output level)

Adjust the volume level of the sound which has passed through the equalizer.

HC (Hum canceller)

This removes unwanted hum (electrical "buzz" or "drone").

Sw (Switch)

Turn the hum canceller on/off.

Freq (Frequency)

Hum will be removed at the specified frequency and at multiples of that frequency. Set it to match the frequency of your power supply.

Width

Specify the width of the filter which will remove the hum.

Depth

Specify the depth of the filter which will remove the hum.

Thresh (Threshold)

Adjust the level at which the hum canceller will begin to take effect. If the signal falls below the specified level, only the hum will be removed from the signal. With the maximum setting, hum will always be removed regardless of the level of the signal.

RangeLo (Range low)

Specify the lower limit of the frequency range in which the hum canceler will operate. With a setting of Unlimit, the limit will be the lowest frequency that the VS-1680 is capable of playing back.

RangeHi (Range high)

Specify the upper limit of the frequency range in which the hum canceller will operate. With a setting of Unlimit, the limit will be the highest frequency that the VS-1680 is capable of playing back.

VC (Vocal Canceller)

When a stereo source is being input from CD or DAT etc., this cancels the sound which is located in the stereo center, such as the vocal or bass.

Sw (Switch)

Turn the vocal canceller on/off.

Balance

If the sound that you wish to cancel is not located in the center, find the point at which it is most effectively canceled.

RangeLo (Range low)

Specify the lower limit of the frequency range from which you wish to cancel a sound. Use this setting when you wish to decrease the volume of the vocal without affecting a low-frequency instrument (such as bass) located in the center. With a setting of Unlimit, the lowest frequency which the VS-1680 is capable of playing back will be the lower limit.

RangeHi (Range high)

Specify the upper limit of the frequency range from which you wish to cancel a sound. Use this setting when you wish to decrease the volume of the vocal without affecting a high-frequency instrument located in the center. With a setting of Unlimit, the highest frequency which the VS-1680 is capable of playing back will be the upper limit.

VT (Voice Transformer)

This independently controls the basic pitch and the formants, allowing a variety of voice characters to be created.

Sw (Switch)

Turn the voice transformer on/off.

Robot

Turn the robot function on/off. When this is on, the audio will be output at a fixed pitch regardless of the pitch that is input, producing a voice character without inflection.

Chromatic Pitch

Adjust the pitch of the voice character in semitone steps. This can be adjusted over a range of 1 octave down to three octaves up.

Fine Pitch

Make fine adjustments to the pitch of the voice character.

Cromatic Formant

Adjust the formant of the voice character in semitone steps.

Fine Formant

Make fine adjustments to the formant of the voice character.

MixBal (Mix balance)

Adjust the balance between the voice character volume and the normal voice volume.

FE (Fader Edit)

This switch allows you to use the channel faders of the top panel to modify the various settings of the Voice Transformer.

Sw (Switch)

Turn the Feder Edit on/off. If this is on, channel faders will control the following settings.

- Channel 1:** EFX1:Robot (Moving the fader above the middle will turn this on, and downroad will turn it off.)
- Channel 2:** EFX1:C.Pitch+F.Pitch (Cromatic Pitch and Fine Pitch will change simultaneously to smoothly change the pitch.)
- Channel 3:** EFX1:C.Formant+F.Formant (Cromatic Formant and Fine Formant will change simultaneously to smoothly change the pitch.)
- Channel 4:** EFX1:MixBal
- Channel 5:** EFX1:EfxLev
- Channel 8:** EFX3:Robot (Moving the fader above the middle will turn this on, and downroad will turn it off.)
- Channel 9/10:** EFX3:C.Pitch+F.Pitch (Cromatic Pitch and Fine Pitch will change simultaneously to smoothly change the pitch.)
- Channel 11/12:** EFX3:C.Formant+F.Formant (Cromatic Formant and Fine Formant will change simultaneously to smoothly change the pitch.)
- Channel 13/14:** EFX3:MixBal
- Channel 15/16:** EFX3:EfxLev

* *Fader Edit is valid only when you are in Effect Edit condition. In other conditions, the faders will control the volume level of each channel as usual. Also, it will fail to operate in Auto Mix (Owner's Manual p. 156).*

MIDI (MIDI control)

* *The MIDI channels on which the pitch and formant are adjusted are fixed respectively as below. They cannot be changed to other channels.*

Sw (Switch)

Turn MIDI control on/off. When this is on, MIDI note on messages and pitch bend messages will adjust the pitch and formant. This is effective when a MIDI keyboard etc. is connected.

- MIDI channel 1:** EFX1:C.Pitch+F.Pitch (C2–C6, original key is C3)
- MIDI channel 2:** EFX1:C.Formant+F.Formant (C2–C4, original key is C3)
- MIDI channel 3:** EFX3:C.Pitch+F.Pitch (C2–C6, original key is C3)
- MIDI channel 4:** EFX3:C.Formant+F.Formant (C2–C4, original key is C3)

PitchBend (Pitch bend)

Specify the maximum change produced by pitch bend (bend range), in semitone steps.

Portament (Portamento)

Specify the speed at which the portamento effect will change.

Vocoder 2

This is a 19 band vocoder. A clear sound that was not possible with conventional vocoders can be obtained. Input an instrumental sound into the left channel, and a voice into the right channel.

Envelope (Envelope)

Sharp: The human voice will be emphasized.

Soft: The instrumental sound will be emphasized.

Long: A vintage sound with long decay will be produced.

PanMode

Select Mono, Stereo, L→R or R→L. With a setting of Mono, the components of each frequency band will be located in the center. With a setting of Stereo, the odd-numbered frequency bands will be located at the left, and the even-numbered components at the right. With a setting of L→R, the low frequency bands will be located increasingly toward the left, and the high frequency bands will be located increasingly toward the right. With a setting of R→L, the low frequency bands

will be located increasingly toward the right, and the high frequency bands will be located increasingly toward the left.

Hold

This turns the Hold function on/off. When MIDI is selected, the MIDI control change message Hold will be received. The MIDI channel is fixed at 1. If you turn Hold on while a voice is being input into the mic, the instrument will sound with the vocal formats that are fixed at that time.

MicSens (Mic sensitivity)

Adjust the input sensitivity of the mic.

SynInLev (Synthesizer in level)

Adjust the input level of the instrument.

Character Ch1-19 (Voice character)

Adjust the volume of each frequency band. This setting adjusts the tone of the vocoder. As the value is increased, the frequency will rise.

Mic (Mic mix)

Adjust the amount of the mic audio (R channel input) which has passed through the mic HPF that will be added to the output of the vocoder.

MicHPF (Mic HPF)

When mic mix is used, this adjusts the frequency at which the high pass filter (HPF) will begin to affect the mic audio. Higher values for this setting will allow you to mix only the consonants. With a setting of Thru, the HPF will not be applied.

MicPan (Mic pan)

Adjust the panning of the mic audio.

NSThresh

(Noise suppressor threshold)

Adjust the level at which the noise suppressor applied to the instrumental input (R channel input) will begin to function.

CnvA/CnvB (Mic Converter)

This converts the characteristics of an inexpensive general purpose mic into the characteristics of an expensive studio mic (Microphone → Microphone conversion). For an already-recorded sound, it can create the

same tonal change as if the type or distance of the mic had been changed.

This adds a feeling of "air" to an instrumental sound that was recorded by direct line input, causing it to sound as though it had been recorded with a microphone (Line → Microphone conversion).

Sw (Switch)

Turn the mic converter on/off.

Input

Select the type of mic that was actually used to record.

DR-20: Roland DR-20

Sml.Dy: Small Dynamic Microphone

Hed.Dy: Head-worn Dynamic Microphone

Min.Cn: Miniature Condenser Microphone

Flat: Line Input

Out

Specify the mic that will be simulated.

Sml.Dy: General purpose dynamic mic for instruments or vocals. Ideal for guitar amp or snare drum.

Voc.Dy: A popular dynamic mic for vocals. Characterized by a tight mid-range. Use for vocals.

Lrg.Dy: Dynamic mic with extended low end. Use for bass drum or tom, etc.

Sml.Cn: Small condenser mic for instruments. Characterized by a sparkling high range. Use for metallic percussion or acoustic guitar.

Lrg.Cn: Condenser mic with flat response. Use for vocals, narration, or acoustic instruments etc.

Vnt.Cn: Vintage condenser mic. Use for vocals or acoustic instruments etc.

Flat: Mic with flat frequency response. For cancelling the characteristics of the mic used for recording.

** When you select a condenser-type mic simulator, the low range response is strengthened. This may cause noise transmitted from the mic stand to be emphasized. In this case, either use a bass cut filter to cut the unwanted low range, or equip the mic stand that you use at the time of recording with an isolation mount (a mic holder that uses rubber etc. to absorb vibration).*

Phase

Normally you will set this to Normal.

In cases such as when mics are placed both in front of and behind the instrument for recording, setting one of them to Invert will produce a solid sound with a unified phase.

Nor: Same phase as the input

Inv: Opposite phase as the input

BCutA/BCutB (Bass cut filter)

This is a filter that cuts unwanted low range noise, such as pops. It simulates the bass cut switch that is found on some mics.

Sw (Switch)

Turn the bass cut on/off.

Freq (Frequency)

Normally you will select Thru, and you can adjust the frequency if the attack contains a section of low volume.

DstnA/DstnB (Distance)

Microphones have a characteristic which causes the low frequency range to be boosted when the sound source is nearby. This setting simulates this phenomenon.

Sw (Switch)

Turn Distance on/off.

Prox.Fx (Proximity effects)

Adjust the low frequency response that is affected by the mic distance from the sound source. Adjustment in the [+] direction will move the mic closer to the sound source, and in the [-] direction will move it away from the sound source.

Time

This simulates the time difference due to distance from the sound source.

Iso (3-Band Isolator)

The input sound is separated into three frequency ranges — high, mid, and low — each of which can be boost or cut. With ordinary equalizers, even when the gain control for any of the frequency ranges turned all the way down, some sound from that range remains, whereas the VS-1680's Isolator cuts it completely. You may find turning the Isolator on and off or adjusting the level in real time to be a very effective technique.

Sw (Switch)

This turns the 3-band Isolator on and off.

AntiPhase LoMixSw (Anti-Phase Low Mix Switch)

AntiPhase MidMixSw (Anti-Phase Middle Mix Switch)

These turn the low- and mid-range Anti-Phase function on and off. When turned on, the phases of opposite stereo channels are reversed and then added.

AntiPhase LoLev (Anti-Phase Low Level)

AntiPhase MidLev (Anti-Phase Middle Level)

These set the level of the Anti-Phase function. Adjusting these levels for certain frequencies allows you to lend emphasis to specific parts.

LowLvl (Low Level) MidLvl (Middle Level) HiLvl (High Level)

These boost and cut each of the Low, Mid, and High frequency ranges. Setting any of these to “-60 dB,” the sounds in that range become inaudible. When set to “0 dB,” the sound remains at the input level.

Echo (Tape Echo 201)

Sw (Switch)

This turns the Tape Echo on and off.

Mode (Mode Selector)

This is used to select the different delay times (short, middle, and long) combination of three playback heads. When set to “4,” you can select short and middle delays.

Repeat Rate

This adjusts the “tape’s” running speed. The higher the value, the shorter the interval of the repeated sound.

Intnsty (Intensity)

This sets the number of times the sound is repeated.

Tone Bass

This adjusts the volume of the low end of the Tape Echo sound.

Tone Treble

This adjusts the volume of the Tape Echo sound's high end.

Pan HeadS Pan HeadM Pan HeadL

These adjust the pan settings for each of the short, middle, and long delay playback heads individually. This function is not featured on Roland's RE-201.

WahFlutter Rate (Wah/Flutter Rate)

This adjusts the wavering of the pitch that occurs with deterioration or unevenness in the tape. The higher the value, the more intense the wavering effect.

EfxLvl (Effect Level)

This adjusts the volume level of the Tape Echo effect.

DirLvl (Direct Level)

This adjusts the volume level of the direct sound.

AnFl (Analog Flanger)

This is a stereo analog flanger effect that simulates Roland's SBF-325.

Sw (Switch)

This turns the analog flanger on and off.

Feedback

Feedback refers to returning the delayed signal (output) back to the delay. This control adjusts the amount of that signal that is returned. The flanger effect intensifies the higher the value is set. Setting the value too high can make lead to oscillation in the sound.

Modulation Freq (Modulation Frequency)

This adjusts the center frequency to which the flanger effect is applied. This changes the pitch of the flanger effect's metallic sound.

Modulation Rate

This adjusts the flanger's modulation rate.

Modulation Depth

This adjusts the depth of the flanger modulation.

ChB (Channel B Modulation)

You should usually set this to "Nor." Setting this to "Inv" inverts the Channel B flanger effect.

Mode

This is used to select the flanger effect type.

FL1: A general monaural flanger

FL2: A stereo flanger that moves the sound around in the stereo field

FL3: Cross mix flanger that gives a more intense effect

CHO: Chorus effect

Phase ChA (Phase Channel A) Phase ChB (Phase Channel B)

This is used in selecting phase when mixing the direct sound and flanger sound. Set to "Nor" for normal phase; select "Inv" to invert the phase. This changes the breadth of the sound, making sound "wider." Check the sound to assure you have the appropriate setting.

AnPh (Analog Phaser)

The VS-1680's features two analog phasers arranged in parallel, so they can be used in stereo.

Sw (Switch)

This turns the Analog Phaser on and off.

Mode

This selects the number of levels (4 or 8) for the phase effect.

Freq (Frequency)

This adjusts the center frequency to which the phase effect is applied. With larger values, the phase effect is applied to higher-frequency ranges.

Reso (Resonance)

This adjusts the amount of resonance. Raising the value makes the characteristic sound more prominent. Raising the value too much, though, may cause oscillation in the sound.

LFO1 Rate

LFO2 Rate

This adjusts the phase effect cycle length.

Function of Each Effect Parameter

LFO1 Depth

LFO2 Depth

This adjusts the depth of the phase effect cycle.

LFO1 ChB

(LFO1 Channel B Modulation)

LFO2 ChB

(LFO2 Channel B Modulation)

You should usually set this to "Nor." Setting this to "Inv" inverts the Channel B phase effect.