Roland®

EFFECT EXPANSION BOARD FOR VS-880

VS8F-1

OWNER'S MANUAL

Introduction

Thank you for purchasing the Roland VS8F-1 Effect Expansion Board. The VS8F-1 is an expansion board which adds effect functions to the VS-880 digital studio workstation.

In order to use this product correctly, please be sure to read "USING THE UNIT SAFELY" and "IMPORTANT NOTE" (p.2) before use. Also, to take full advantage of the VS8F-1's functionality, please read this manual carefully, and keep it at hand for reference as necessary.

Contents

* In the interest of product improvement, the specifications and/or contents of this unit are subject to change without prior notice.

Algorithm list

Functions of each parameter

USING THE UNIT SAFELY

INSTRUCTIONS FOR THE PREVENTION OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS

About ⚠WARNING and ⚠CAUTION Notices

⚠WARNING	Used for instructions intended to alert the user to the risk of death or severe injury should the unit be used improperly.
⚠CAUTION	Used for instructions intended to alert the user to the risk of injury or material damage should the unit be used improperly. * Material damage refers to damage or other adverse effects caused with respect to the home and all its furnishings, as well to domestic animals or pets.

About the Symbols

⚠	The △ symbol alerts the user to important instructions or warnings.The specific meaning of the symbol is determined by the design contained within the triangle. In the case of the symbol at left, it is used for general cautions, warnings, or alerts to danger.
⊘	The ⊘ symbol alerts the user to items that must never be carried out (are forbidden). The specific thing that must not be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the unit must never be disassembled.
●	The ● symbol alerts the user to things that must be carried out. The specific thing that must be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the power-cord plug must be unplugged from the outlet.

ALWAYS OBSERVE THE FOLLOWING

⚠WARNING

- Before using this unit, make sure to read the instructions below, and the Owner's Manual. ⚠

- Do not open or perform any internal modifications on the unit. ⊘

- Do not attempt to repair the unit, or replace parts within it (except when this manual provides specific instructions directing you to do so). Refer all servicing to your dealer, or qualified Roland service personnel. ⊘

- Never use or store the unit in places that are: ⊘
  - Subject to temperature extremes (e.g., direct sunlight in an enclosed vehicle, near a heating duct, on top of heat-generating equipment); or are
  - Damp (e.g., baths, washrooms, on wet floors); or are
  - Humid; or are
  - Dusty; or are
  - Subject to high levels of vibration.

⚠WARNING

- Protect the unit from strong impact. (Do not drop it!) ⚠

- When installing the VS8F-1, turn the unit off and unplug the power cord. ●

⚠CAUTION

- When installing the VS8F-1, remove screws only as directed. ●

IMPORTANT NOTE

- Do not expose the unit to direct sunlight, place it near devices that radiate heat, leave it inside an enclosed vehicle, or otherwise subject it to temperature extremes. Excessive heat can deform or discolor the unit.

Main features

● Expands the functionality of the VS-880
Simply by installing the VS8F-1 into the VS-880, high quality stereo effects become accessible for convenient use.

● Two stereo effect systems
The VS8F-1 has two stereo effect systems. Each effect can be connected to the effect buss or inserted into a specific channel. This means that you can, for example, insert one effect into a specific channel, and connect the other effect to the send/return of the mixer.

● A varied selection of effects
100 Preset Patches (effect settings) and 100 User Patches are provided. You can instantly switch between a variety of effects simply by selecting a Patch.
Original effects settings that you create can be saved as a User Patch. They can also be saved as part of the mixer settings in a Scene.

● Algorithms
The VS8F-1 provided not only basic effects such as reverb and delay, but also effects ideal for vocals and guitar, and even special effects such as vocoder and RSS. The way in which each of these effects is organized internally is determined by which of the 20 "algorithms" it uses. This means that you can simply select an algorithm (Patch) and begin creating the sound you want, without having to worry about how to make connections.

Installing the VS8F-1

Here's how to install the VS8F-1 into the expansion slot of the VS-880.

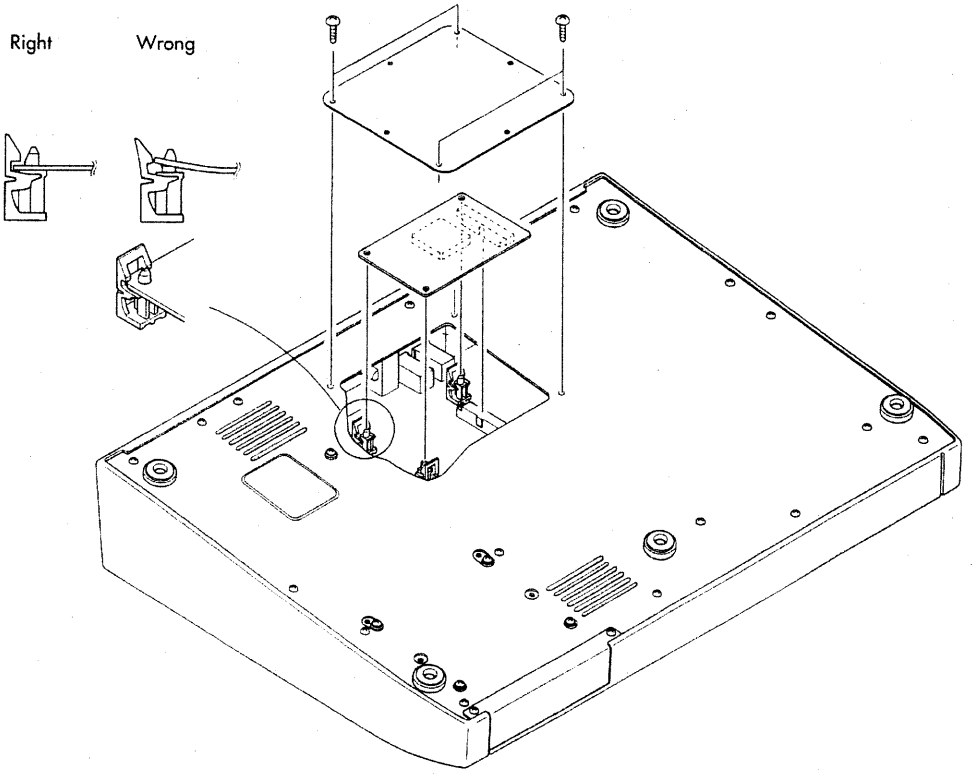
< Cautions for installation >

- *To avoid the risk of damage to internal components that can be caused by static electricity, please carefully observe the following whenever you handle the board.*
  - *Before you touch the board, always first grasp a metal object (such as a water pipe), so you are sure that any static electricity you might have been carrying has been discharged.*
  - *When handling the board, grasp it only by its edges. Avoid touching any of the electronic components or connectors.*
  - *Save the bag in which the board was originally shipped, and put the board back into it whenever you need to store or transport it.*
- *Use a philips screwdriver of the correct size for the screws. Using the wrong size of screwdriver can damage the heads of the screws.*
- *When installing the VS8F-1, remove screws only as directed.*
- *Be careful that the screws you remove do not drop inside the VS-880's chassis.*
- *Do not touch any of the printed circuit pathways or connection terminals.*
- *Be careful not to cut yourself on the edge of the installation slot.*
- *Do not insert the connector by force. If it does not go in easily, remove the board and try again.*
- *When you finish installing the board, check that it is installed correctly.*

1. Turn off the power of the VS-880 and the connected devices, and disconnect all cables that are connected to the VS-880.

2. Turn the VS-880 over, and remove the bottom cover.Inside is the connector and three plastic pins. Insert the connector of the VS8F-1 into the internal connector and at the same time make sure the plastic pins go into the holes in the VS8F-1, so that the board is firmly in place.

* Do not touch the switches (SW 2, SW 3) located on the VS-880's board.



3. Re-attach the cover.

4. Connect the external equipment to the VS-880, and turn on the VS-880 power.

Using effects

The VS8F-1 has two effect systems (effects 1 and 2), and two different types of effect can be used simultaneously. You can select for each channel of the mixer the effect that will be used. Of course you may also use two effects simultaneously for a single channel.
When using effects, use the following procedure to make settings.

* When the Vari-pitch function is being used, the delay time may change slightly, and the tone quality of distortion-type effects may change.

1. To use effect 1, hold down [SHIFT] and press channel 7 [EFFECT-1 (CH EDIT)]. To use effect 2, hold down [SHIFT] and press channel 8 [EFFECT-2 (CH EDIT)].

* If the VS8F-1 is not installed correctly, the display will indicate "No Effect Board." In this case, perform the shutdown procedure, turn off the power, and re-install the board (refer to the previous page).

2. Press [CH EDIT] for the channel to which you want to apply effects.

3. Use PARAMETER [◀◀][▶▶] to select the following parameters, and use the TIME/VALUE dial to make settings for each. Adjust the balance of the effect sound and the direct sound while actually playing a sound to hear the result.

EFFECT✱: So that you can use the channel faders to control the effect sound as well, set this to "PstFade."
EFFECT✱ Send: Adjust the send level (input level) to the effect.
EFFECT✱ Pan: Adjust the panning of the sound that is input to the effect.

4. Now the effect is available for use. Press [PLAY (DISPLAY)] to return to Play condition.

Selecting an effect (Patch)

There are 200 effect settings, and each of these is called a "Patch." There are 100 Preset Patches (1–100) and 100 User Patches (101–200). Here's how to try out each of these effects.

* For some of the effects, you will not want to output the direct sound, and for some, special settings will be necessary. As you try out the effects, refer to "Examples of using effects" (p.11).

* For Effect 2, it is not possible to select Patches which use the reverb or gate reverb algorithm. Patches which use these algorithms must be selected using Effect 1.

< When using a guitar >
In order to record guitar etc. with as high sound quality as possible, you can either use an active-type guitar, or connect a BOSS DI-1 direct box or compact effector between the guitar and the VS-880. Since in this case the compact effector is being used to lower the impedance, turn its power on and the effect off.

1. Press [EFFECT].

2. Choose the effect unit (1 or 2) for which you want to select an effect sound.
To select effect 1, use PARAMETER [◀◀][▶▶] to get the "EFF EFFECT-1 PRM?" display, and press [YES]. To select effect 2, get the "EFF EFFECT-2 PRM?" display, and press [YES].
When you press [YES], the name of the currently selected effect sound (the Effect Name) will appear.

3. Select a Patch.
Rotate the TIME/VALUE dial, and the number and name of the displayed Patch will blink. Select the number of the Patch that you wish to use, and press [YES] to confirm.

4. Play a sound to hear the result of the effect. If you wish to try out other Patches, repeat step 3.

5. After making your selection, press [PLAY (DISPLAY)] to return to Play condition.

Creating a new effect sound

When you wish to create a new effect sound, first select a Patch that is closest to the desired result, and then edit the settings as appropriate.

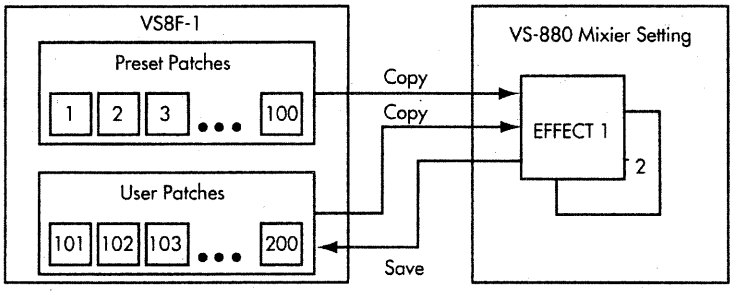
The modified effect settings are temporary, and will be lost if you select another Patch or recall a Scene. If you wish to save the modified effect settings, you must either store them as a User Patch, or save them together with the mixer settings as a Scene.

< Algorithms >

The "algorithm" determines the basic structure of the effect. The VS8F-1 provides 20 different algorithms. Each Patch uses one of these algorithms. The algorithm used in each Patch is given in the Preset Patch list sheet. For details on each algorithm, refer to the "Algorithm list" (p.16).

< How effect settings are handled >

The VS-880 handles effect settings as part of the mixer settings. This means that if you select a different Patch, the settings of that effect Patch are copied to the current mixer settings, rewriting them.



< Effect name >

Be sure to specify a new effect name for a newly created effect sound.

The Patches can be distinguished by Patch number and Patch name. However, since effect settings copied from a Patch do not carry the Patch number, they can be distinguished only by their Patch name. This means that if you have not given a new effect name to a newly created effect sound, it will still have the same name as the original Patch, and you will have no way to distinguish the two Patches.

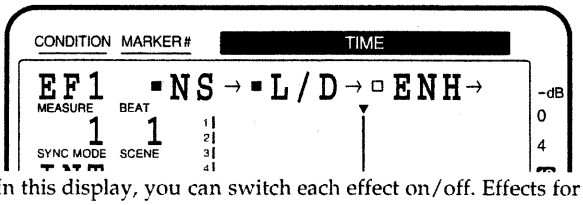
■ Creating an effect sound

1. Press [EFFECT], and select either effect 1 or 2.

2. Select the effect sound Patch from which you will start.

3. Once you confirm your selection, you will be able to modify the effect parameters. Use PARAMETER [◀◀][▶▶] to select parameters, and use the TIME/VALUE dial to modify the values.

If you have selected a Patch that uses an algorithm in which effects can be switched on/off, pressing PARAMETER [▶▶] once will make the following display appear.



In this display, you can switch each effect on/off. Effects for which a "■" is shown at the left of the effect name are On. Effects for which a "□" is shown are Off. If a "→" appears at the right of the right-most effect, more effects follow it.

To switch an effect on/off, use CURSOR [◀][▶] to move the blinking mark to that effect, and use the TIME/VALUE dial to change the setting. The parameters of an effect which is turned off will not be displayed in subsequent operations.

4. Assigning the effect name.
Press PARAMETER [▶▶] to get the "EF1 Nam=" display. (This display is located at the end of the parameters. Use CURSOR [◀][▶] to move the blinking area to the character that you wish to modify, and use the TIME/VALUE dial to modify the character. The name can consist of up to 12 characters.

5. To save the current effect sound as a User Patch, continue with the procedure given below. To save the current effect sound in a Scene, press [PLAY (DISPLAY)] to return to Play condition, and then save the Scene.

< Convenient procedures >
● Hold down [SHIFT] and press [EFFECT]. Each time you press the button you will cycle between the Effect Select page, the Effect Name page, and the Effect On/Off page.
● In the Effect On/Off page, you can press PARAMETER [▶▶] to move directly to the setting page for the blinking effect.
● In the Effect Setting page when you wish to display the parameters of the next effect, hold down [SHIFT] and press PARAMETER [▶▶]. To display the parameters of the previous effect, hold down [SHIFT] and press PARAMETER [◀◀].

<About the level of effects>
Most of the algorithms provide two parameters which allow the level to be altered:
"Effect Level," which adjusts the level of the effect sound; and "Direct Level," which controls the level of the unaffected, direct sound. By supplying negative values for these parameters, the phase can be reversed. Some of the Preset Patches were designed to work best when linked with the Effects Buss, so their Direct Level is set to "0." You will need to increase the Direct Level for such Patches if you intend to use them for channel insertion. Please refer to the supplied Preset Patch list sheet and find out which type of Preset Patch the Patch is before using it.

■ Saving an effect sound

If you wish to keep your newly modified effect settings, you must save them either as a User Patch or as part of the mixer settings in a Scene. If you wish to use the settings in another song, save the settings as a User Patch. If you will be using the settings only in the currently selected song, save them as part of the Scene.

Saving as a User Patch

When you save a User Patch, the settings that were previously in that User Patch will be overwritten. However since the User Patches contain Preset Patch effect sounds when shipped from the factory, you may save your own effect sounds without worrying about losing important data.

1. Press PARAMETER [▶▶] to get the "Save User Patch?" display. If you wish to save the data as a User Patch, press [YES] in response to this display. You will then be able to select the save destination User Patch.

2. Use the TIME/VALUE dial to select the save destination User Patch, and press [YES] to save the data.

Saving as part of a Scene

For details on saving data to a Scene and on recalling a Scene, refer to the VS-880 owner's manual.

1. Press [SCENE] to make the button indicator light.

2. Specify the save destination Scene number.
To save the data in a Scene 1–4, press one of the [LOC 1/5]–[LOC 4/8] buttons. To save the data in a Scene 5–8, hold down [SHIFT] and press one of the [LOC 1/5]–[LOC 4/8] buttons. When the data has been saved, the button indicator will light.

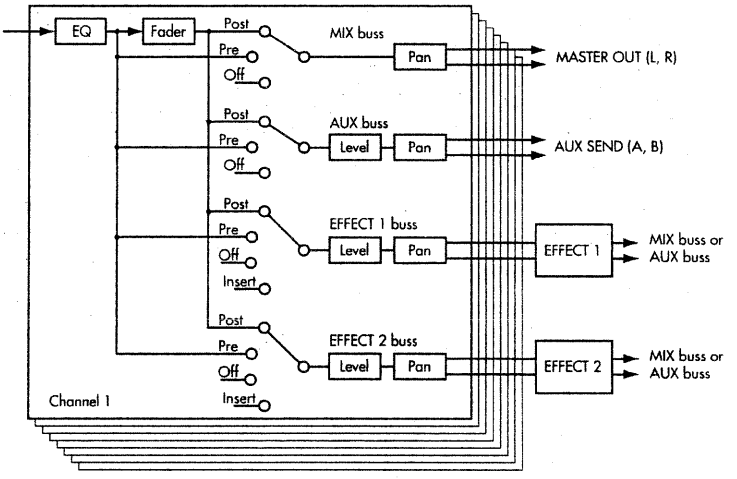
Connecting effects

There are two ways to connect the effects. One is by using the Effect buss, and the other is by inserting the effect between the equalizer and the fader of a channel. Use the connection method that is suitable for the type of effect or your needs.

Using the Effect buss

When using effects such as reverb or delay, in which the effect sound is added to the direct sound, use the Effect buss to make connections.

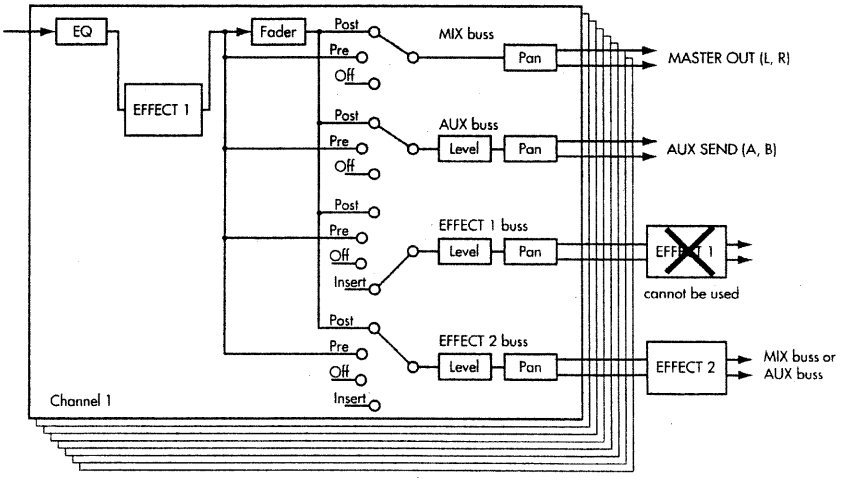
Some effects are able to output both the effect sound and the direct sound. However normally, you should make settings so that the effect outputs only the effect sound, and use the output of the Mix buss for the direct sound. To adjust the balance between the direct sound and the effect sound, use the channel fader to adjust the volume of both the direct sound and the effect sound, and use the send level / return level parameters located before and after EFFECT to adjust the volume of the effect sound.



Inserting an effect between the equalizer and fader

When using effects such as distortion or overdrive, which modify the original sound, insert the effect between the equalizer and fader. If the effect is inserted into a channel whose Channel Link is turned off, the effect will be a mono effect regardless of which effect it is. If the channel's Channel Link setting is on, the effect can be used as a stereo effect depending on the algorithm of the Patch.

If an effect is inserted between the equalizer and fader of a channel, that effect will be unavailable for use by any other channel. For example if you connect effect 1 between the equalizer and fader of channel 1, effect 1 cannot be used for any other channel. Also, only one effect can be inserted into a channel. It is not possible to insert two effects into a single channel.



Effect settings

When the VS8F-1 is installed in the VS-880, the following parameters will become available for setting in the mixer section.

■ Channel Edit condition

The following parameters can be set for each channel of the mixer.

EFFECT 1 (Effect 1 switch)

Specify how the signal is sent to the EFFECT 1 buss.

Off: The signal will not be sent.
PreFade: The signal will be taken before the channel fader.
PstFade: The signal will be taken after the channel fader.
Insert: The effect will be inserted between the equalizer and fader of the channel.

* If the effect is inserted in another channel, the value will appear as "-----," and cannot be selected.

EFFECT 1 Send (Effect 1 send level)

Specify the volume level (0–127) of the signal that is sent to the EFFECT 1 buss. The default setting is 100.

EFFECT 1 Pan (Effect 1 pan)
EFFECT 1 Bal (Effect 1 balance)

For channels on which Channel Link is "Off," this sets the panning (L63–0–R63) of the stereo signal which is output to the EFFECT 1 buss. "L63" is far left, and "R63" is far right.
For channels on which Channel Link is "On," this sets the left/right volume balance (L63–0–R63) of the stereo signal from the paired channels which is output to the EFFECT 1 buss.
The default value is "0" (center).

EFFECT 2 (Effect 2 switch)

Specify how the signal is sent to the EFFECT 2 buss.

Off: The signal will not be sent.
PreFade: The signal will be taken before the channel fader.
PstFade: The signal will be taken after the channel fader.
Insert: The effect will be inserted between the equalizer and fader of the channel.

* If the effect is inserted in another channel, the value will appear as "-----," and cannot be selected.

EFFECT 2 Send (Effect 2 send level)

Specify the volume level (0–127) of the signal that is sent to the EFFECT 2 buss. The default setting is 100.

EFFECT 2 Pan (Effect 2 pan)
EFFECT 2 Bal (Effect 2 balance)

For channels on which Channel Link is "Off," this sets the panning (L63–0–R63) of the stereo signal which is output to the EFFECT 2 buss. "L63" is far left, and "R63" is far right.
For channels on which Channel Link is "On," this sets the left/right volume balance (L63–0–R63) of the stereo signal from the paired channels which is output to the EFFECT 2 buss.
The default value is "0" (center).

■ Master Edit condition

The following parameters can be set in the master section of the mixer. Here you will make settings for the output of the effects which are connected to the EFFECT busses. It is not possible to make settings here for effects which are inserted between the equalizer and fader of a channel.

EFF1 RTN to (Effect 1 return to)
Select the output destination of effect 1. The busses that can be selected will depend on the current mixer mode.

When in INPUT → TRACK mode
MIX: the MIX buss (stereo)
AUX: the AUX buss (stereo)

When in INPUT MIX mode / TRACK MIX mode
MIX: the MIX buss (stereo)
1-2: REC buss 1-2
3-4: REC buss 3-4
5-6: REC buss 5-6
7-8: REC buss 7-8

EFF1 RTN Lev (Effect 1 return level)
Set the output level (0–127) of effect 1.

EFF1 Bal (Effect 1 balance)
Set the left/right volume balance (L63–0–R63) of effect 1.

EFF2 RTN to (Effect 2 return to)
Select the output destination of effect 2. The busses that can be selected will depend on the current mixer mode.

When in INPUT → TRACK mode
MIX: the MIX buss (stereo)
AUX: the AUX buss (stereo)

When in INPUT MIX mode / TRACK MIX mode
MIX: the MIX buss (stereo)
1-2: REC buss 1-2
3-4: REC buss 3-4
5-6: REC buss 5-6
7-8: REC buss 7-8

EFF2 RTN Lev (Effect 2 return level)
Set the output level (0–127) of effect 2.

EFF2 Bal (Effect 2 balance)
Set the left/right volume balance (L63–0–R63) of effect 2.

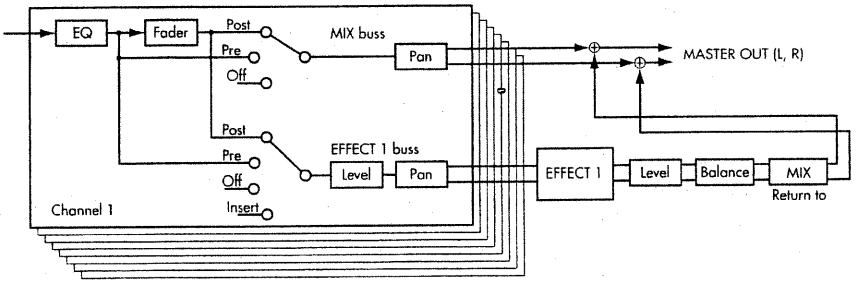
Examples of using effects

This section gives several examples of ways in which effects can be used. Refer to these examples as necessary. In order to make it easier to understand the important points, details of the procedures are omitted. For details on the procedures, refer to the owner's manual of the VS-880.

■ Applying effects during song playback

Here's how to apply reverb or delay to the entire song during playback. The mixer is in INPUT → TRACK mode.

In this case, the signal flow will be as follows.



1. Make the following settings for the parameters of the channels to which you wish to apply effects.

MIX Sw: PstFade
EFFECT1: PstFade
EFFECT1 Send: Specify the send level to effect 1.
EFFECT1 Pan: Specify the panning of the sound that is input to effect 1.

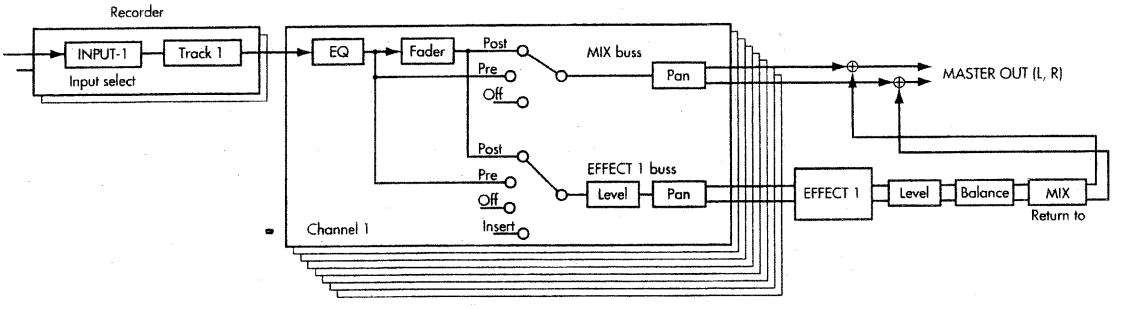
* If you do not want the direct sound to be output from the MIX buss, set the MIX Sw to "Off."

2. Set the parameters of the master section as follows.

EFF1 RTN to: MIX
EFF1 RTN Lev: Specify the return level from effect 1.
EFF1 RTN Bal: Specify the left/right balance of the effect sound.

■ Applying effects just for monitoring during recording

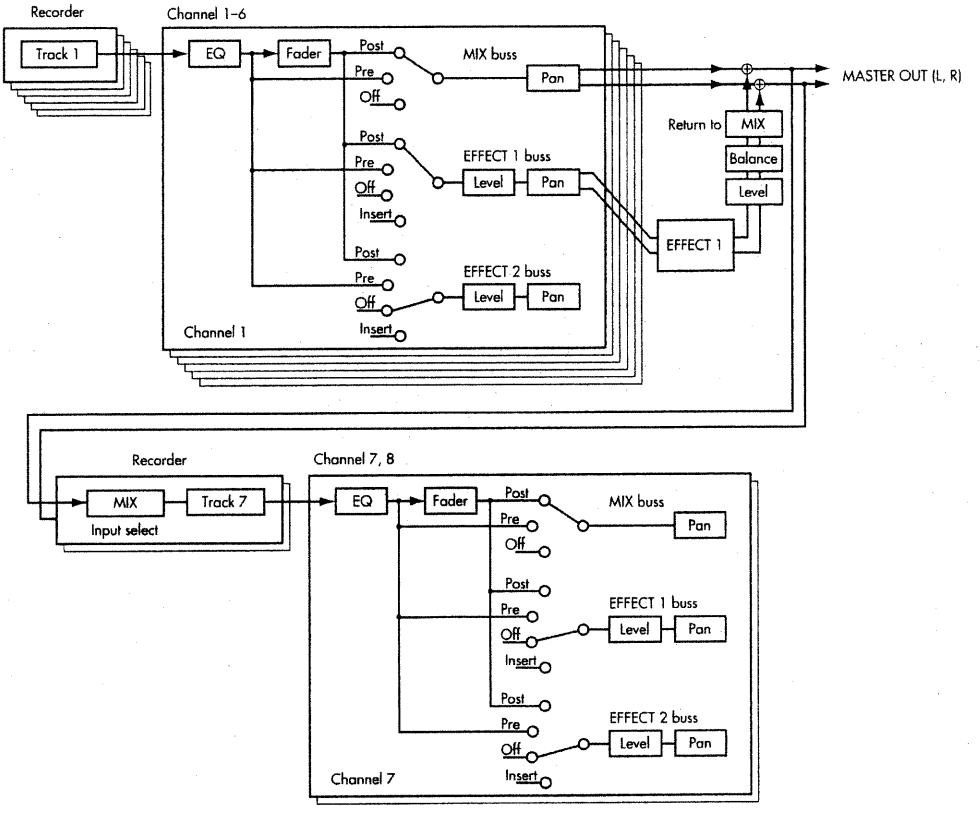
This example explains how the input source of channel 1 can be recorded with only the direct sound on track 1 while you monitor the effect processed sound. The mixer mode is INPUT → TRACK mode. This method is convenient when you want to have an idea of the mixdown effects while you record, but want only the direct sound to be recorded onto the track.



1. Set the parameters of channels 1 as follows.
   MIX Sw: PstFade
   EFFECT1: PstFade
   EFFECT1 Send: Specify the send level to effect 1.
   EFFECT1 Pan: Specify the panning of the sound that is input to effect 1.
2. Set the parameters of the master section as follows.
   EFF2 RTN to: MIX
   EFF2 RTN Lev: Specify the return level from effect 1.
   EFF2 RTN Bal: Specify the left/right balance of the effect sound.
3. Set the track status of channel 1 to REC, and begin recording.

■ Aplying effects while Bouncing tracks

Here's how to apply effects to the music recorded on tracks 1–6 and bounce the result to tracks 7 and 8. The mixer is in INPUT → TRACK mode. This method is convenient when after the song has been recorded you want to apply an effect such as reverb to the entire song during the mixdown.



1. Set the parameters of channels 1–6 as follows.
   MIX Sw: PstFade
   EFFECT1: PstFade
   EFFECT1 Send: Specify the send level to effect 1.
   EFFECT1 Pan: Specify the panning of the sound that is input to effect 1.

2. Set the parameters of channels 7 and 8 as follows.
   INPUT: MIX-L (channel 7), MIX-R (channel 8)
   EFFECT1: Off
   EFFECT2: Off

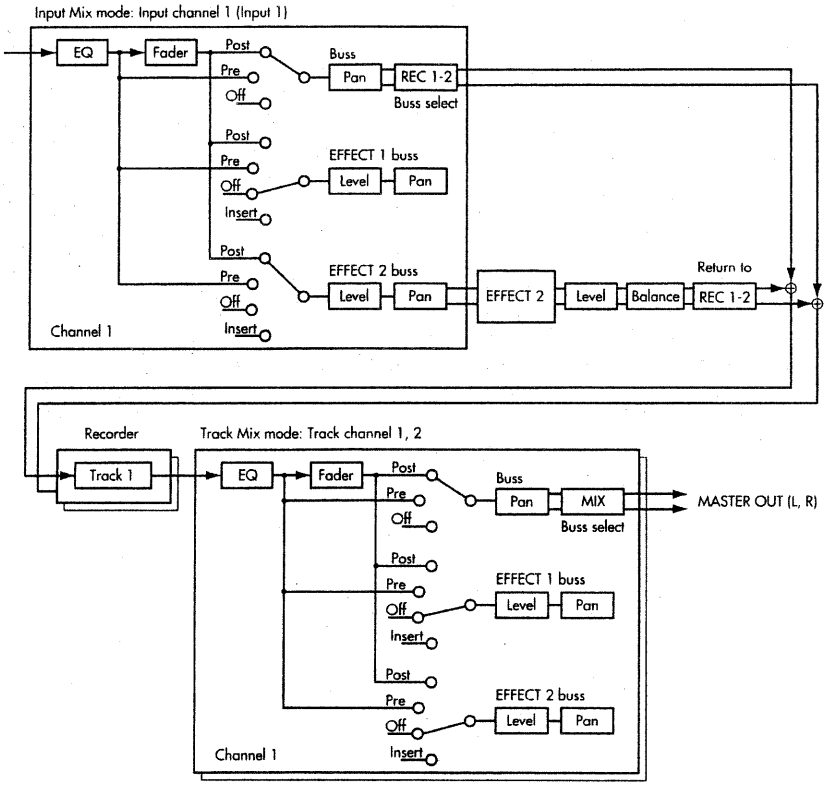
* If EFFECT1 and EFFECT2 are "On," feedback may occur.

3. Set the parameters of the master section as follows.
   EFF1 RTN to: MIX
   EFF1 RTN Lev: Specify the return level from effect 1.
   EFF1 RTN Bal: Specify the left/right balance of the effect sound.

4. Set the track status of channels 7 and 8 to REC, and begin recording.

■ Recording using an effects buss

This example explains how an effect can be applied to the input source of input 1 and the direct sound and effect sound recorded in stereo to tracks 1 and 2. The mixer is in INPUT MIX mode or TRACK MIX mode. This example is useful when you wish to apply an effect to a mono source and record it in stereo. In this case, the signal flow will be as follows.



1. Select INPUT MIX mode, and make the following settings for input channel 1.

BUSS Sw: PstFade

BUSS Sel: If you wish to record both the direct sound and the effect sound, select "1-2." If you wish to record only the effect sound, select another REC buss.

EFFECT2: Select "PstFade" so that you will be able to use the channel fader of input channel 1 to adjust the send level to effect 2.

EFFECT2 Send: Specify the send level to effect 2.

EFFECT2 Pan: Specify the panning of the sound being input to effect 2.

* Do not input the sound of other channels to effect 2. If the sound of other channels is also input, their effect sound will also be output from effect 2.

2. Select TRACK MIX mode, and make the following settings for input channels 1 and 2.

BUSS Sw: PstFade

BUSS Sel: MIX

EFFECT1: Off

EFFECT2: Off

* If EFFECT 1 and 2 are "On," feedback may occur.

3. Make the following settings for the master section.

EFF2 RTN to: 1-2

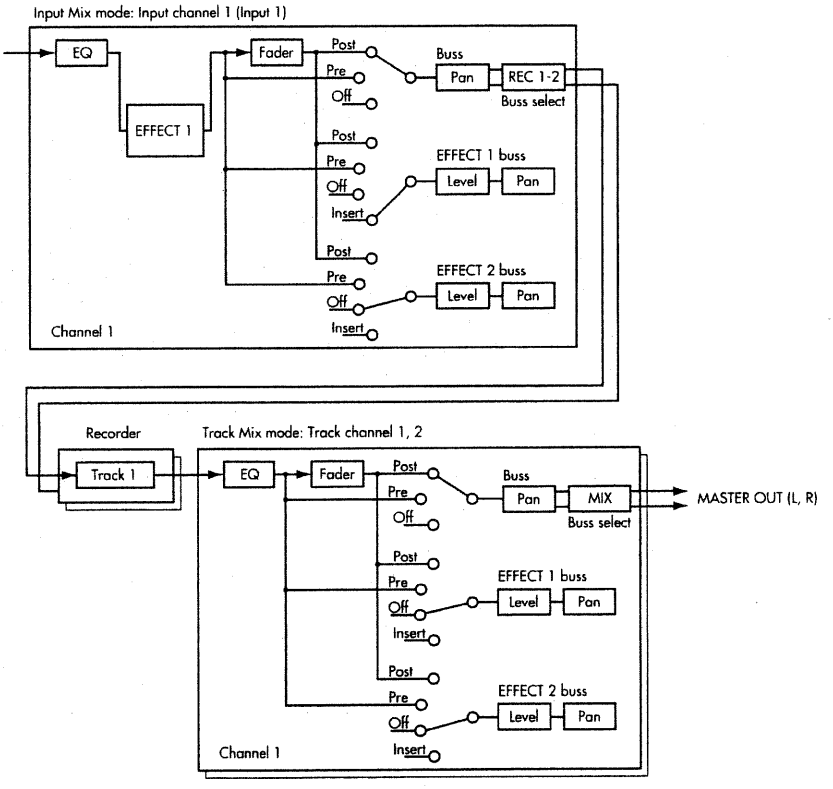
EFF2 RTN Lev: Specify the return level from effect 2.

EFF2 RTN Bal: Specify the left/right balance of the effect sound.

4. Set the track status of track channels 1 and 2 to REC, and begin recording.

■ Recording with effects inserted

Here's how to apply effects to the input source of input 1, and record only the effect sound to track 1. The effect will be inserted immediately after the equalizer. The mixer is in INPUT MIX mode or TRACK MIX mode. This example is useful when you wish to apply an effect to a mono source and record it in mono. If Channel Link is turned on for the channel in which the effect is inserted, the effect can be used as a stereo effect, depending on the algorithm.
In this case, the signal flow will be as follows.

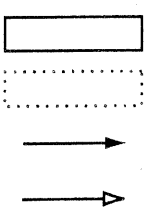


1. Make the following settings for input channel 1.
   BUSS Sw: PstFade
   BUSS Sel: 1-2
   BUSS Pan: Since we are recording only track 1, set this to "L63."
   EFFECT1: Insert
2. Make the following settings for track channel 1.
   BUSS Sw: PstFade
   BUSS Sel: MIX
3. Set the track status of track channel 1 to REC, and begin recording.

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 "Functions of each parameter" (p.30).

Conventions in the algorithm diagrams



effects

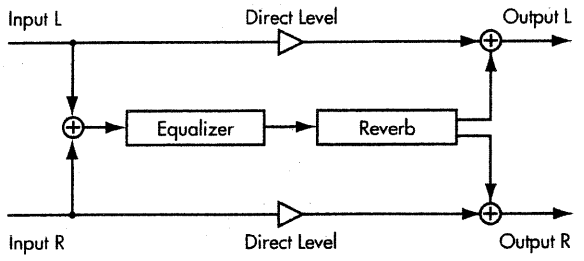
parameters within the same effect (left/right channels linked)

audio signal

control signal

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.



● Reverb

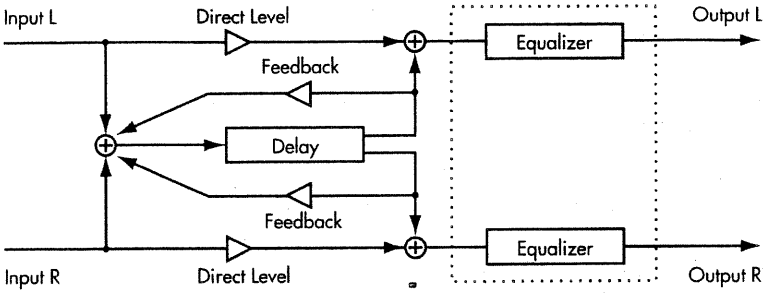
Room Size	5–40 m
Reverb Time	0.1–32.0 sec
Effect Level	-100–100
Direct Level	-100–100
Pre Delay	0–200 ms
Diffusion	0–100
Density	0–100
Early Reflection Level	0–100
LF Damp Gain	-36–0 dB
LF Damp Frequency	50–4000 Hz
HF Damp Gain	-36–0 dB
HF Damp Frequency	1.0–20.0 kHz
High Cut Frequency	0.2–20.0 kHz

● Equalizer

Equalizer SW	Off, On
Low EQ Type	Shelving, Peaking
Low EQ Gain	-12–12 dB
Low EQ Frequency	20–2000 Hz
Low EQ Q	0.3–10.0
Mid EQ Gain	-12–12 dB
Mid EQ Frequency	200–8000 Hz
Mid EQ Q	0.3–10.0
High EQ Type	Shelving, Peaking
High EQ Gain	-12–12 dB
High EQ Frequency	1.4–20.0 kHz
High EQ Q	0.3–10.0
Out Level	0–100

Delay

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



● Delay

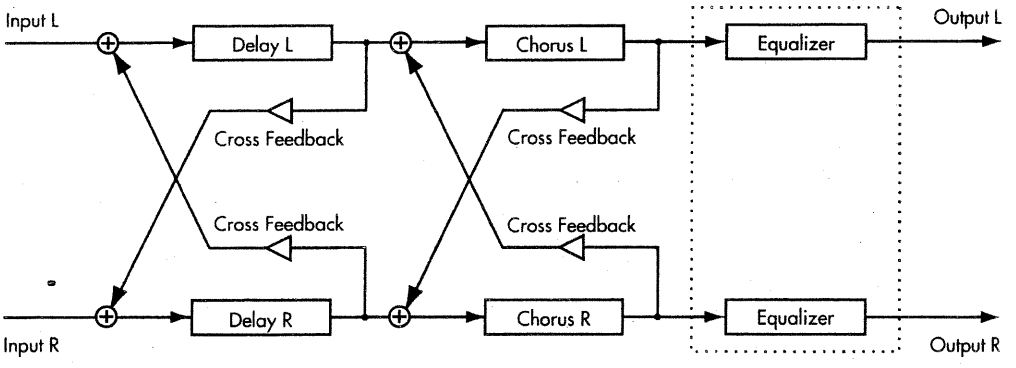
Delay SW	Off, On
Delay Time	0–1200 ms
Shift	L1200–0–R1200 ms
L ch Feedback Level	-100–100
R ch Feedback Level	-100–100
L ch Level	-100–100
R ch Level	-100–100
Direct Level	-100–100
LF Damp Gain	-36–0 dB
LF Damp Frequency	50–4000 Hz
HF Damp Gain	-36–0 dB
HF Damp Frequency	1.0–20.0 kHz

● Equalizer

Equalizer SW	Off, On
Low EQ Type	Shelving, Peaking
Low EQ Gain	-12–12 dB
Low EQ Frequency	20–2000 Hz
Low EQ Q	0.3–10.0
Mid EQ Gain	-12–12 dB
Mid EQ Frequency	200–8000 Hz
Mid EQ Q	0.3–10.0
High EQ Type	Shelving, Peaking
High EQ Gain	-12–12 dB
High EQ Frequency	1.4–20.0 kHz
High EQ Q	0.3–10.0
Out Level	0–100

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

Delay SW	Off, On
Delay Time	0–500 ms
Shift	L500–0–R500 ms
L ch Feedback Level	-100–100
R ch Feedback Level	-100–100
L ch Cross Feedback Level	-100–100
R ch Cross Feedback Level	-100–100
Effect Level	-100–100
Direct Level	-100–100

● Chorus

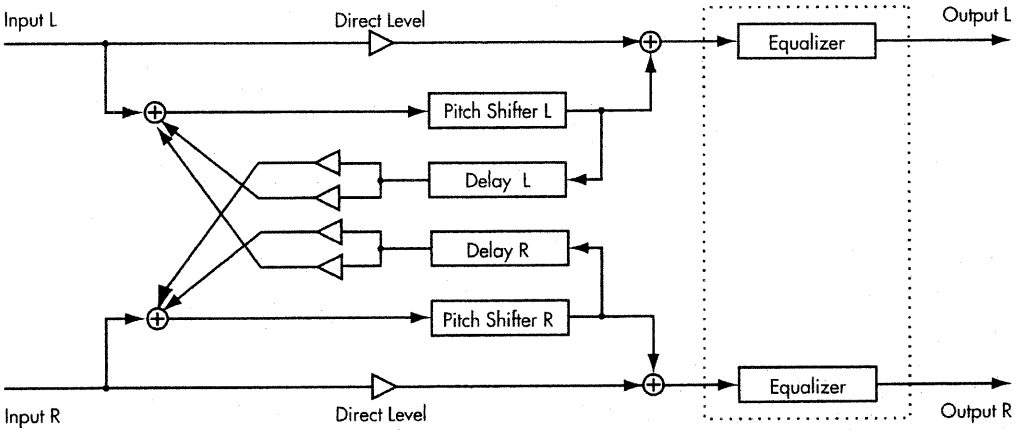
Chorus SW	Off, On
Rate	0.1–10.0 Hz
Depth	0–100
Effect Level	-100–100
Direct Level	-100–100
Pre Delay	0–50 ms
L ch Feedback Level	-100–100
R ch Feedback Level	-100–100
L ch Cross Feedback Level	-100–100
R ch Cross Feedback Level	-100–100

● Equalizer

Equalizer SW	Off, On
Low EQ Type	Shelving, Peaking
Low EQ Gain	-12–12 dB
Low EQ Frequency	20–2000 Hz
Low EQ Q	0.3–10.0
Mid EQ Gain	-12–12 dB
Mid EQ Frequency	200–8000 Hz
Mid EQ Q	0.3–10.0
High EQ Type	Shelving, Peaking
High EQ Gain	-12–12 dB
High EQ Frequency	1.4–20.0 kHz
High EQ Q	0.3–10.0
Out Level	0–100

Stereo Pitch Shifter Delay

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



● Pitch Shifter Delay

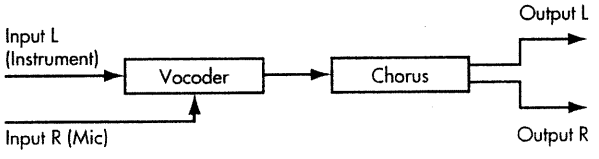
Pitch Shifter Delay SW	Off, On
L ch Chromatic Pitch	-12–12
R ch Chromatic Pitch	-12–12
L ch Fine Pitch	-100–100
R ch Fine Pitch	-100–100
L ch Pre Delay	0–50 ms
R ch Pre Delay	0–50 ms
L ch Feedback Delay Time	0–500 ms
R ch Feedback Delay Time	0–500 ms
L ch Feedback Level	-100–100
R ch Feedback Level	-100–100
L ch Cross Feedback Level	-100–100
R ch Cross Feedback Level	-100–100
Effect Level	-100–100
Direct Level	-100–100

● Equalizer

Equalizer SW	Off, On
Low EQ Type	Shelving, Peaking
Low EQ Gain	-12–12 dB
Low EQ Frequency	20–2000 Hz
Low EQ Q	0.3–10.0
Mid EQ Gain	-12–12 dB
Mid EQ Frequency	200–8000 Hz
Mid EQ Q	0.3–10.0
High EQ Type	Shelving, Peaking
High EQ Gain	-12–12 dB
High EQ Frequency	1.4–20.0 kHz
High EQ Q	0.3–10.0
Out Level	0–100

Vocoder

This algorithm is a ten-band vocoder. To use the vocoder, input an instrumental sound into the left channel, and a vocal sound into the right channel. The instrumental sound will be split into ten frequency bands, and processed according to the frequency characteristics of the audio signal. When using Patches of this algorithm, use the EFFECT buss for the effect. If this effect is inserted between the equalizer and the fader, it will not operate correctly.



● Vocoder

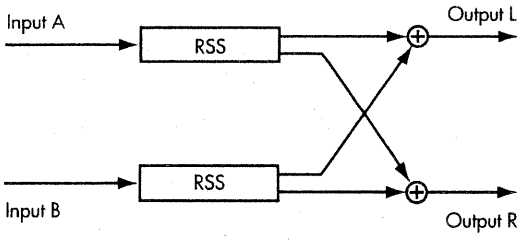
Voice Character 1	0–100
Voice Character 2	0–100
Voice Character 3	0–100
Voice Character 4	0–100
Voice Character 5	0–100
Voice Character 6	0–100
Voice Character 7	0–100
Voice Character 8	0–100
Voice Character 9	0–100
Voice Character 10	0–100

● Chorus

Chorus SW	Off, On
Rate	0.1–10.0 Hz
Depth	0–100
Effect Level	-100–100
Direct Level	-100–100
Pre Delay	0–50 ms
Feedback Level	-100–100

2 ch RSS

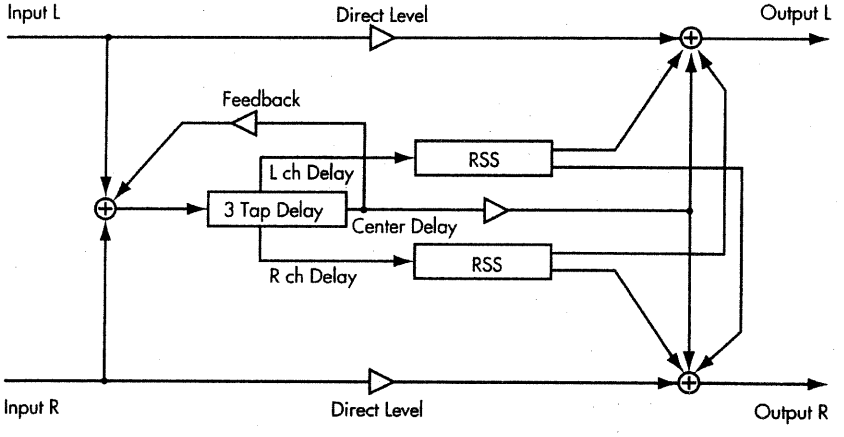
This algorithm lets you specify the spatial placement of each of the input channels. When using this algorithm, do not allow the direct sound to be output. If using the Effect Buss: Effect Pan for the channel should be set to "L63" to have the input be for INPUT A; set it to "R63" to use INPUT B for input.



A ch Azimuth	-180–180°
A ch Elevation	-90–90°
B ch Azimuth	-180–180°
B ch 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.

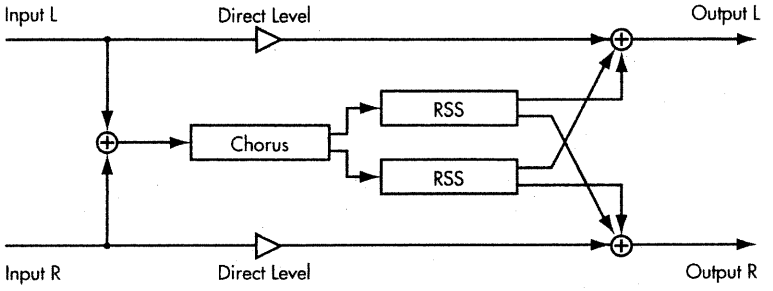


● 3 Tap Delay

Delay Time	0–1200 ms
Shift	L1200–0–R1200 ms
Center Delay Time	0–1200 ms
RSS Level	0–100
Center Level	0–100
Feedback Level	-100–100
Effect Level	-100–100
Direct Level	-100–100
LF Damp Gain	-36–0 dB
LF Damp Frequency	50–4000 Hz
HF Damp Gain	-36–0 dB
HF Damp Frequency	1.0–20.0 kHz

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.

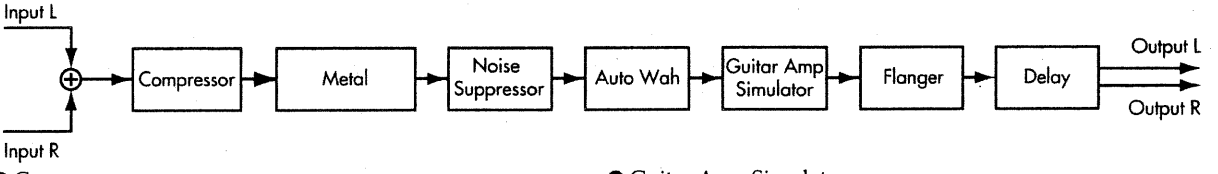


● Chorus

Chorus Rate	0.1–10.0 Hz
Chorus Depth	0–100
Effect Level	-100–100
Direct Level	-100–100

Guitar Multi 1

This algorithm is a multi-effect for guitar.



● Compressor

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

● Metal

Metal SW	Off, On
Gain	0–100
Level	0–100
High Gain	-100–100
Mid Gain	-100–100
Low Gain	-100–100

● Noise Suppressor

Noise Suppressor SW	Off, On
Threshold	0–100
Release	0–100

● Auto Wah

Wah SW	Off, On
Mode	LPF, BPF
Polarity	Down, Up
Frequency	0–100
Level	0–100
Peak	0–100
Sens	0–100
Rate	0.1–10.0 Hz
Depth	0–100

● Guitar Amp Simulator

Guitar Amp Simulator SW	Off, On
Mode	Small, Built In, 2 Stack, 3 Stack

● Flanger

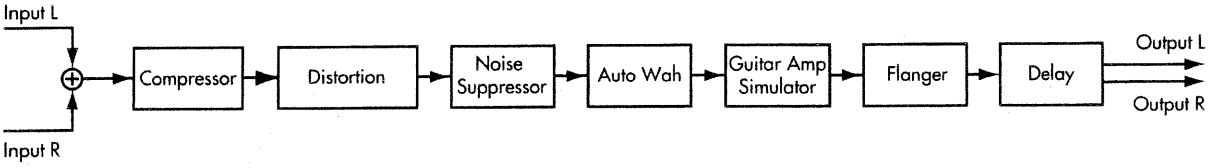
Flanger SW	Off, On
Rate	0.1–10.0 Hz
Depth	0–100
Manual	0–100
Resonance	0–100

● Delay

Delay SW	Off, On
Delay Time	0–1000 ms
Shift	L1000–0–R1000 ms
Feedback Time	0–1000 ms
Feedback Level	-100–100
Effect Level	-100–100
Direct Level	-100–100

Guitar Multi 2

This algorithm is a multi-effect for guitar.



● Compressor

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

● Distortion

Distortion SW	Off, On
Gain	0–100
Level	0–100
Tone	0–100

● Noise Suppresor

Noise Suppressor SW	Off, On
Threshold	0–100
Release	0–100

● Auto Wah

Wah SW	Off, On
Mode	LPF, BPF
Polarity	Down, Up
Frequency	0–100
Level	0–100
Peak	0–100
Sens	0–100
Rate	0.1–10.0 Hz
Depth	0–100

● Guitar Amp Simulator

Guitar Amp Simulator SW	Off, On
Mode	Small, Built In, 2 Stack, 3 Stack

● Flanger

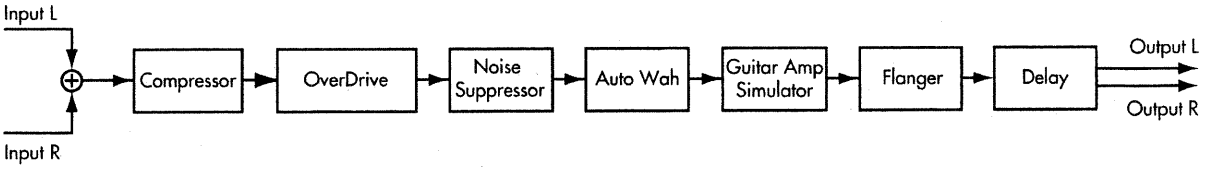
Flanger SW	Off, On
Rate	0.1–10.0 Hz
Depth	0–100
Manual	0–100
Resonance	0–100

● Delay

Delay SW	Off, On
Delay Time	0–1000 ms
Shift	L1000–0–R1000 ms
Feedback Time	0–1000 ms
Feedback Level	-100–100
Effect Level	-100–100
Direct Level	-100–100

Guitar Multi 3

This algorithm is a multi-effect for guitar.



● Compressor

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

● OverDrive

OverDrive SW	Off, On
Gain	0–100
Level	0–100
Tone	0–100

● Noise Suppressor

Noise Suppressor SW	Off, On
Threshold	0–100
Release	0–100

● Auto Wah

Wah SW	Off, On
Mode	LPF, BPF
Polarity	Down, Up
Frequency	0–100
Level	0–100
Peak	0–100
Sens	0–100
Rate	0.1–10.0 Hz
Depth	0–100

● Guitar Amp Simulator

Guitar Amp Simulator SW	Off, On
Mode	Small, Built In, 2 Stack, 3 Stack

● Flanger

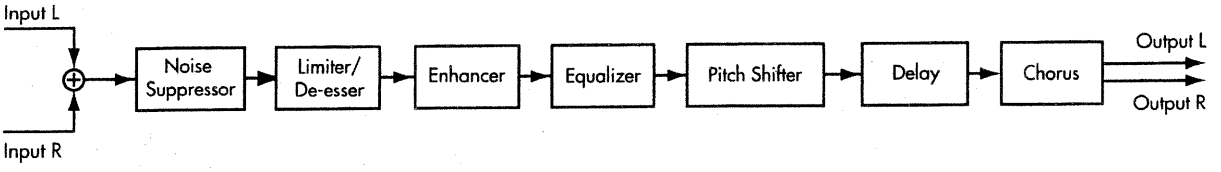
Flanger SW	Off, On
Rate	0.1–10.0 Hz
Depth	0–100
Manual	0–100
Resonance	0–100

● Delay

Delay SW	Off, On
Delay Time	0–1000 ms
Shift	L1000–0–R1000 ms
Feedback Time	0–1000 ms
Feedback Level	-100–100
Effect Level	-100–100
Direct Level	-100–100

Vocal Multi

This algorithm is a multi-effect for vocals.



● Noise Suppressor

Noise Suppressor SW	Off, On
Threshold	0–100
Release	0–100

● Limiter/De-esser

Limiter/De-esser SW	Off, On
Mode	Limiter, De-esser

Limiter

Threshold	0–100
Release	0–100
Level	0–100

● De-esser

Sens	0–100
Frequency	1.0–10.0 kHz

● Enhancer

Enhancer SW	Off, On
Sens	0–100
Frequency	1.0–10.0 kHz
MIX Level	0–100
Level	0–100

● Equalizer

Equalizer SW	Off, On
Low EQ Type	Shelving, Peaking
Low EQ Gain	-12–12 dB
Low EQ Frequency	20–2000 Hz
Low EQ Q	0.3–10.0
Mid EQ Gain	-12–12 dB
Mid EQ Frequency	200–8000 Hz
Mid EQ Q	0.3–10.0
High EQ Type	Shelving, Peaking
High EQ Gain	-12–12 dB
High EQ Frequency	1.4–20.0 kHz
High EQ Q	0.3–10.0
Out Level	0–100

● Pitch Shifter

Pitch Shifter SW	Off, On
Chromatic Pitch	-12–12
Fine Pitch	-100–100
Effect Level	-100–100
Direct Level -100–100	

● Delay

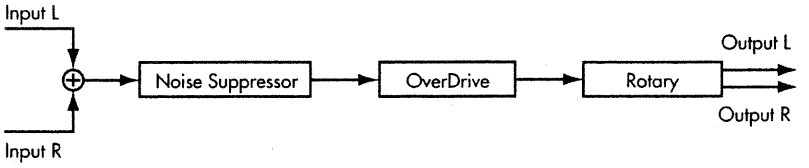
Delay SW	Off, On
Delay Time	0–1000 ms
Feedback Level	-100–100
Effect Level	-100–100
Direct Level	-100–100

● Chorus

Chorus SW	Off, On
Rate	0.1–10.0 Hz
Depth	0–100
Effect Level	-100–100
Direct Level	-100–100
Pre Delay	0–50 ms

Rotary

This algorithm simulates a rotary speaker.



● Noise Suppressor

Noise Suppressor SW	Off, On
Threshold	0–100
Release	0–100

● OverDrive

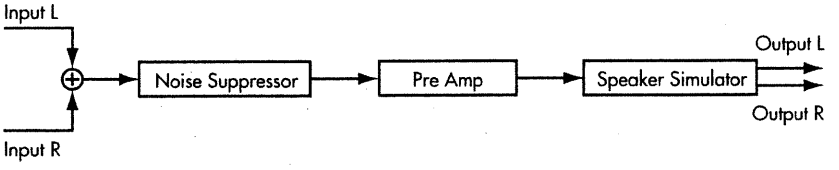
OverDrive SW	Off, On
Gain	0–100
Level	0–100

● Rotary

Low Rate	0.1–10.0 Hz
Hi Rate	0.1–10.0 Hz

Guitar Amp Simulator

This algorithm simulates a guitar amp.



● Noise Suppressor

Noise Suppressor SW	Off, On
Threshold	0–100
Release	0–100

● Pre Amp

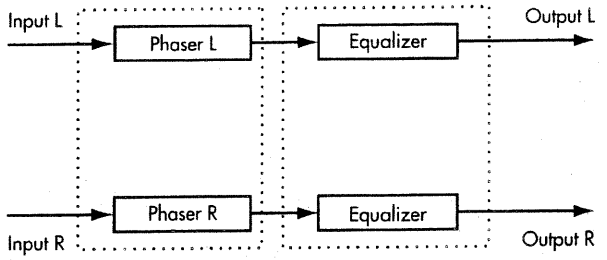
Pre Amp SW	Off, On
Pre Amp	JC-120, Clean Twin, Match Drive, BG Lead, MS1959 I, MS1959 II, MS1959 I+II, SLDN Lead, Metal 5150, Metal Lead, OD-1, OD-2 Turbo, Distortion, Fuzz
Volume	0–100
Master	0–100
Gain	Low, Middle, High
Bass	0–100
Middle	0–100
Treble	0–100
Presence	0–100 (-100–0)
Bright	Off, On

● Speaker Simulator

Speaker SW	Off, On
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
Mic Setting	1, 2, 3
Mic Level	0–100
Direct Level	0–100

Stereo Phaser

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



● Phaser

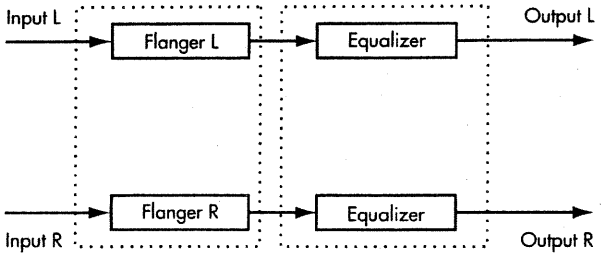
Phaser SW	Off, On
Mode	4, 8, 12, 16 stage
Rate	0.1–10.0 Hz
Depth	0–100
Polarity	Inverse, Synchro
Manual	0–100
Resonance	0–100
Cross Feedback	0–100
Effect Level	-100–100
Direct Level	-100–100

● Equalizer

Equalizer SW	Off, On
Low EQ Type	Shelving, Peaking
Low EQ Gain	-12–12 dB
Low EQ Frequency	20–2000 Hz
Low EQ Q	0.3–10.0
Mid EQ Gain	-12–12 dB
Mid EQ Frequency	200–8000 Hz
Mid EQ Q	0.3–10.0
High EQ Type	Shelving, Peaking
High EQ Gain	-12–12 dB
High EQ Frequency	1.4–20.0 kHz
High EQ Q	0.3–10.0
Out Level	0–100

Stereo Flanger

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



● Flanger

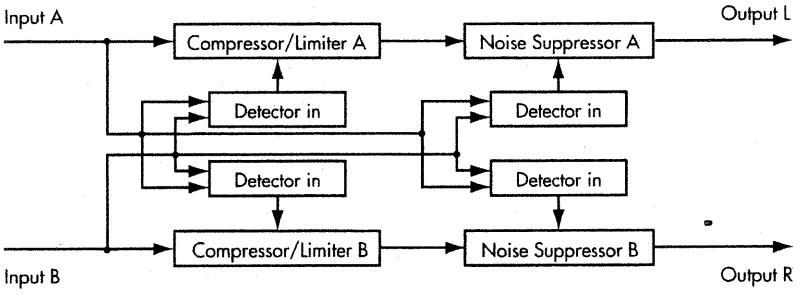
Flanger SW	Off, On
Rate	0.1–10.0 Hz
Depth	0–100
Polarity	Inverse, Synchro
Manual	0–100
Resonance	0–100
Cross Feedback Level	0–100
Effect Level	-100–100
Direct Level	-100–100

● Equalizer

Equalizer SW	Off, On
Low EQ Type	Shelving, Peaking
Low EQ Gain	-12–12 dB
Low EQ Frequency	20–2000 Hz
Low EQ Q	0.3–10.0
Mid EQ Gain	-12–12 dB
Mid EQ Frequency	200–8000 Hz
Mid EQ Q	0.3–10.0
High EQ Type	Shelving, Peaking
High EQ Gain	-12–12 dB
High EQ Frequency	1.4–20.0 kHz
High EQ Q	0.3–10.0
Out Level	0–100

Dual Compressor/Limiter

Two independent processors (A, B) for compressor/limiter and noise suppressor are connected in series in this algorithm. If using the Effect Buss: Effect Pan for the channel should be set to "L63" to have the input be for INPUT A; set it to "R63" to use INPUT B for input.



● Compressor/Limiter

Compressor/Limiter SW	Off, On
Detector in	A, B, Link
Level	-60–12 dB
Threshold	-60–0 dB
Attack	0–100
Release	0–100
Ratio	1.5:1, 2:1, 4:1, 100:1

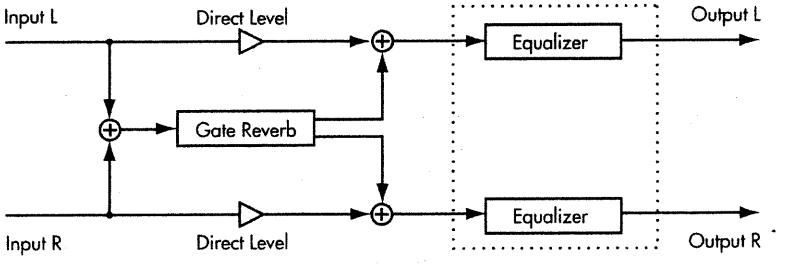
● Noise Suppressor

Noise Suppressor SW	Off, On
Detector in	A, B, Link
Threshold	0–100
Release	0–100

* The Detector in parameter is used to select the input source 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.

Gate Reverb

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



● Gate Reverb

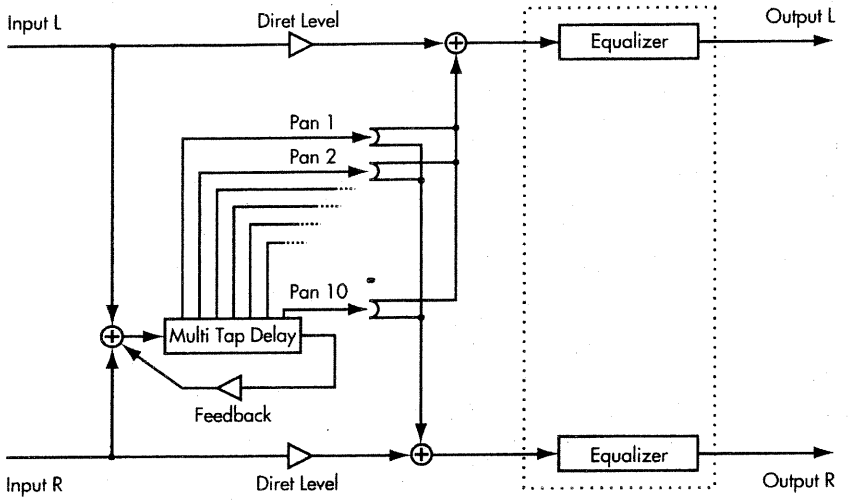
Gate Reverb SW	Off, On
Gate Time	10–400 ms
Pre Delay	0–300 ms
Mode	Normal, Lch → Rch, Rch → Lch, Reverse1, Reverse2
Effect Level	-100–100
Direct Level	-100–100
Thickness	0–100
Density	0–100
Accent Delay	0–200 ms
Accent Level	0–100
Accent Pan	L63–R63

● Equalizer

Equalizer SW	Off, On
Low EQ Type	Shelving, Peaking
Low EQ Gain	-12–12 dB
Low EQ Frequency	20–2000 Hz
Low EQ Q	0.3–10.0
Mid EQ Gain	-12–12 dB
Mid EQ Frequency	200–8000 Hz
Mid EQ Q	0.3–10.0
High EQ Type	Shelving, Peaking
High EQ Gain	-12–12 dB
High EQ Frequency	1.4–20.0 kHz
High EQ Q	0.3–10.0
Out Level	0–100

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.



● Multi Tap Delay 1–10

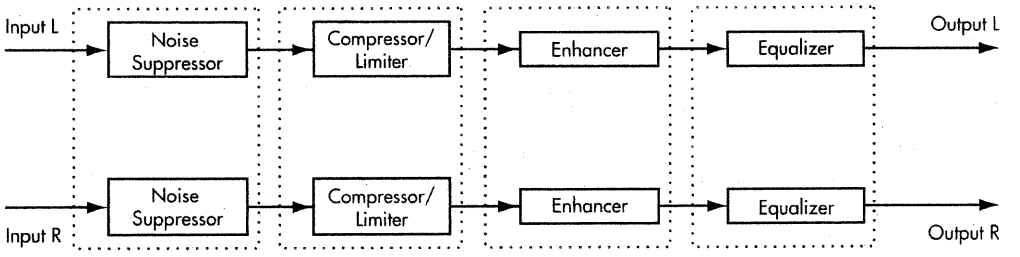
Time 1–10	0–1200 ms
Tap Level 1–10	0–100
Pan 1–10	L63–R63
Feedback Delay Time	0–1200 ms
Feedback Level	-100–100
Effect Level	-100–100
Direct Level	-100–100

● Equalizer

Equalizer SW	Off, On
Low EQ Type	Shelving, Peaking
Low EQ Gain	-12–12 dB
Low EQ Frequency	20–2000 Hz
Low EQ Q	0.3–10.0
Mid EQ Gain	-12–12 dB
Mid EQ Frequency	200–8000 Hz
Mid EQ Q	0.3–10.0
High EQ Type	Shelving, Peaking
High EQ Gain	-12–12 dB
High EQ Frequency	1.4–20.0 kHz
High EQ Q	0.3–10.0
Out Level	0–100

Stereo Multi

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



● Noise Suppressor

Noise Suppressor SW	Off, On
Threshold	0–100
Release	0–100

● Compressor/Limiter

Compressor/Limiter SW	Off, On
Level	-60–12 dB
Threshold	-60–0 dB
Attack	0–100
Release	0–100
Ratio	1.5:1, 2:1, 4:1, 100:1

● Enhancer

Enhancer SW	Off, On
Sens	0–100
Frequency	1.0–10.0 kHz
MIX Level	0–100
Level	0–100

● Equalizer

Equalizer SW	Off, On
Low EQ Type	Shelving, Peaking
Low EQ Gain	-12–12 dB
Low EQ Frequency	20–2000 Hz
Low EQ Q	0.3–10.0
Mid EQ Gain	-12–12 dB
Mid EQ Frequency	200–8000 Hz
Mid EQ Q	0.3–10.0
High EQ Type	Shelving, Peaking
High EQ Gain	-12–12 dB
High EQ Frequency	1.4–20.0 kHz
High EQ Q	0.3–10.0
Out Level	0–100

Functions of each parameter

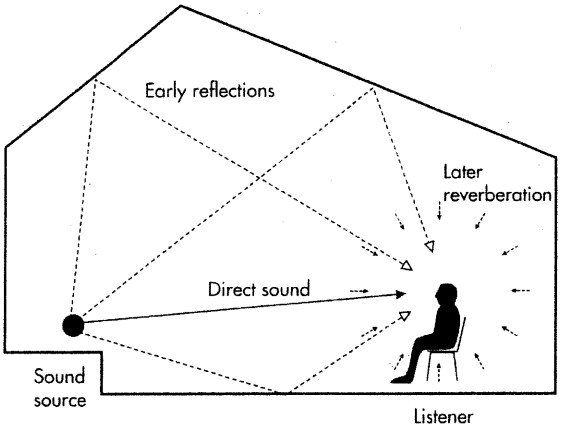
This section explains the function of each effect parameter included in the algorithms.

Reverb

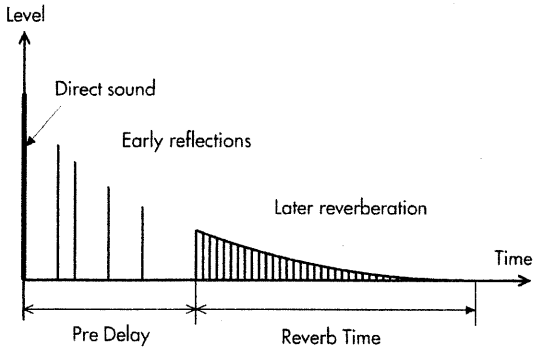
Reverb refers to the reverberation that consists of many overlapping reflections. For example, if you clap your hands in a large room or auditorium, a lingering sound will follow the handclap itself. This lingering sound is called reverberation.

Elements of 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.

Reverb parameters

Room Size
Adjust the size of the room.

Reverb Time
Adjust the time over which the later reverberation will decay.

Pre Delay
Adjust the time until the later reverberation appears.

Diffusion
Adjust the spread of the reverb sound.

Density
Adjust the density of reverb sound.

Early Reflection Level
Adjust the level of the early reflections.

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

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.

HF Damp Frequency
Adjust the frequency at which HF 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.

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

Delay

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

Delay Time
Adjust the delay time.

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.

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.

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.

Feedback Delay Time
This adjusts the time of repeats when feedback is used.

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

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.

HF Damp Frequency
Adjust the frequency at which HF 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.

Chorus

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

Rate
Adjust the rate at which the chorus is modulated.

Depth
Adjust the depth at which the chorus is modulated.

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

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.

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.

Pitch Shifter

This effect changes the pitch of the original sound.

Chromatic Pitch
Adjust the amount of pitch change in semitone steps.

Fine Pitch
Make fine adjustments to the amount of pitch change.

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

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.

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.

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.

Voice Character 1–10
Adjust the volume of each frequency band. These settings will affect the tone of the vocoder.

Equalizer

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

Low Gain
Adjust the gain of the low range equalizer.

Low Frequency
Adjust the frequency of the low range equalizer.

Mid Gain
Adjust the gain of the mid range equalizer.

Mid Frequency
Adjust the frequency of the mid range equalizer.

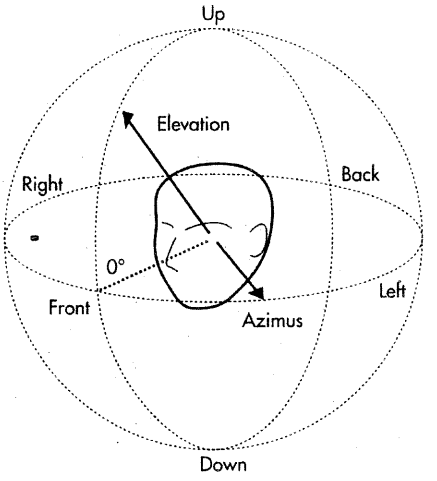
Mid Q
Adjust the way in which the gain will change around the specified mid frequency. Higher settings will produce a sharper change.

High Gain
Adjust the gain of the high range equalizer.

High Frequency
Adjust the frequency of the high range equalizer.

RSS

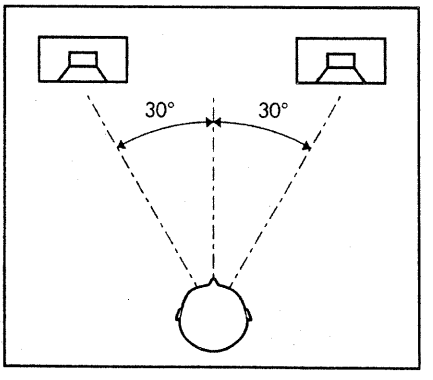
* In the Delay RSS and Chorus RSS algorithms, the spatial placement is fixed, and it is not possible to adjust Azimuth and Elevation.



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 >
RSS (Roland Sound Space) is an effect that controls three-dimensional placement of the sound. In order for RSS to be as effective as possible, note the following points.
l Acoustically "dead" rooms are most suitable.
l Single-way speakers are most suitable. However, coaxial or virtual coaxial multi-way speakers are also OK.
l The speakers should be distanced from the side walls as far as possible.
l Do not excessively separate the speakers to left and right.
l Monitor in the sweet spot shown below.



Compressor

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

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

Level
Adjust the volume.

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

Tone
Adjust the tone color.

Distortion/OverDrive/Metal

These effects distort the sound to create sustain.

Gain
Adjust the degree of distortion.

High Gain
Adjust the gain of the high frequency range.

Mid Gain
Adjust the gain of the mid frequency range.

Low Gain
Adjust the gain of the low frequency range.

Level
Adjust the volume of the effect sound.

Tone
Adjust the tone color.

Noise Suppressor

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

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.

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.

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.

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).

Level
Adjust the volume.

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.

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.

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.

Guitar Amp Simulator

This effect simulates a 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

Flanger

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

Rate
Adjust the rate at which flanger is modulated.

Depth
Adjust the depth of modulation for the flanger.

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

Inverse: The left and right phase will be opposite. When inputting a mono source, this spreads the sound.
Synchro: The left and right phase will be the same. Select this when inputting a stereo source.

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

Resonance
Adjust the amount of resonance. Raising this value will produce a more characteristic effect.

* Excessive settings of this value may produce oscillation.

Phaser

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

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

Rate
Adjust the rate at which the phaser will modulate.

Depth
Adjust the depth of the phaser effect.

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

Inverse: The left and right phase will be opposite. When inputting a mono source, this spreads the sound.
Synchro: The left and right phase will be the same. Select this when inputting a stereo source.

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

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.

Cross Feedback Level
Adjust the amount of phased sound which will be returned to the other channel.

* Excessively high settings may produce oscillation.

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.

LMT/DES Mode (Limiter/de-esser mode)
Select whether the effect will function as a limiter or as a de-esser.

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

LMT Release (Limiter release)
Adjust the time until when the limiter will turn off after the input level falls below the threshold level.

LMT Level (Limiter level)
Adjust the volume of the sound that passes through the limiter.

DES Sens (De-esser sensitivity)
Adjust the degree to which the de-esser effect will affect the input signal.

DES Frequency (De-esser frequency)
Adjust the frequency at which the de-esser effect will apply. The effect will apply to frequencies above the specified value.

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.

Level
Adjust the output level.

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

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 Time
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.

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".

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.

Sens (Sensitivity)
Adjust the degree of the enhancer effect relative to the input volume.

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

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

Level
Adjust the level of the effect sound.

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).

Low Rate
Adjust the rotating rate of the low-range rotor.

High Rate
Adjust the rotating rate of the high-range rotor.

PreAmp

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

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 midrange.
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.

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.

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.

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."

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

Speaker Simulator

This effect simulates a speaker system.

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*

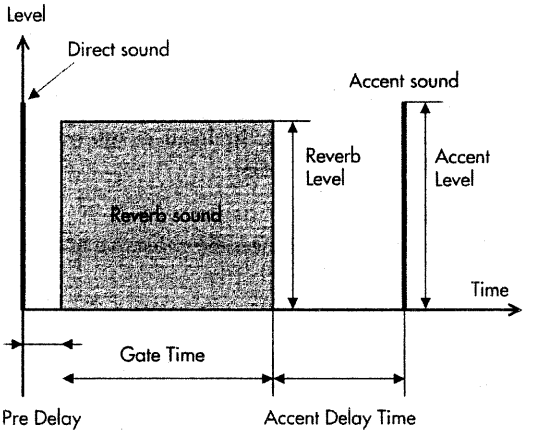
MIC Setting
Specify the location of the mic that is recording the sound of the speaker. This can be adjusted in three steps, with the mic becoming more distant in the order of 1, 2, and 3.

MIC Level
Adjust the volume of the mic sound.

Direct Level
Adjust the volume of the direct sound.

Gate Reverb

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



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

Pre Delay
Adjust the time until the reverb sound appears.

Gate Mode
Select how the gated reverb will apply.

Normal: A conventional gated reverb.

Left → Right: The gated reverb sound will move from left to right.

Right → Left: The gated reverb sound will move from right to left.

Reverse 1: This is a reverse gated reverb. (As if the reverb was played backward.)

Reverse 2: This is a reverse gated reverb in which the reverb decays mid-way.

Thickness
Adjust the thickness of the reverb sound.

Density
Adjust the density of reverb sound.

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

Accent Level
Adjust the level of the accent sound.

Accent Pan
Adjust the pan of the accent sound.

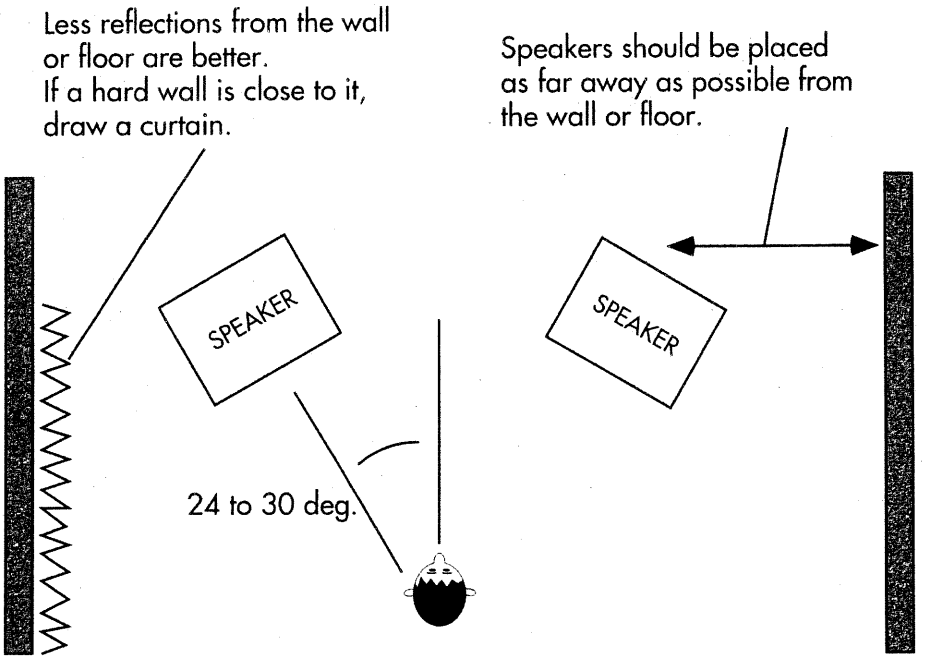
Product package notice for when RSS is used

Some of the Patches use RSS. 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.

Roland Sound Space

For Stereo Speakers

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



Information

When you need repair service, call your nearest Roland Service Center or authorized Roland distributor in your country as shown below.

ARGENTINA

Instrumentos Musicales S.A.
Florida 638
(1005) Buenos Aires
ARGENTINA
TEL: (01) 394 4029

BRAZIL

Roland Brasil Ltda.
R. Coronel Octaviano da Silveira
203 05522-010
Sao Paulo BRAZIL
TEL: (011) 843 9377

CANADA

Roland Canada Music Ltd.
(Head Office)
5480 Parkwood Way Richmond
B. C., V6V 2M4 CANADA
TEL: (0604) 270 6626

Roland Canada Music Ltd.
(Toronto Office)
Unit 2, 109 Woodbine Downs
Blvd, Etobicoke, ON
M9W 6Y1 CANADA
TEL: (0416) 213 9707

MEXICO

Casa Veerkamp, s.a. de c.v.
Av. Toluca No. 323 Col. Olivar de
los Padres 01780 Mexico D.F.
MEXICO
TEL: (525) 668 04 80

La Casa Wagner de
Guadalajara s.a. de c.v.
Av. Corona No. 202 S.J.
Guadalajara, Jalisco Mexico
C.P.44100 MEXICO
TEL: (03) 613 1414

PANAMA

Productos Superiores, S.A.
Apartado 655 - Panama 1
REP. DE PANAMA
TEL: 26 3322

U. S. A.

Roland Corporation U.S.
7200 Dominion Circle
Los Angeles, CA. 90040-3696,
U. S. A.
TEL: (0213) 685 5141

VENEZUELA

Musicland Digital C.A.
Av. Francisco de Miranda,
Centro Parque de Cristal, Nivel
C2 Local 20 Caracas
VENEZUELA
TEL: (02) 285 9218

AUSTRALIA

Roland Corporation
Australia Pty. Ltd.
38 Campbell Avenue
Dee Why West. NSW 2099
AUSTRALIA
TEL: (02) 9982 8266

NEW ZEALAND

Roland Corporation (NZ) Ltd.
97 Mt. Eden Road, Mt. Eden,
Auckland 3, NEW ZEALAND
TEL: (09) 3098 715

CHINA

Beijing Xinghai Musical
Instruments Co., Ltd.
6 Huangmuchang Chao Yang
District, Beijing, CHINA
TEL: (010) 6774 7491

HONG KONG

Tom Lee Music Co., Ltd.
Service Division
22-32 Pun Shan Street, Tsuen
Wan, New Territories,
HONG KONG
TEL: 2415 0911

INDIA

Rivera Digitec (India) Pvt. Ltd.
409, Nirman Kendra,
off Dr. Edwin Moses Road,
Mumbai 400011, INDIA
TEL: (022) 498 3079

INDONESIA

PT Galestra Inti
Kompleks Perkantoran
Duta Merlin Blok E No.6—7
Jl. Gajah Mada No.3—5,
Jakarta 10130,
INDONESIA
TEL: (021) 6335416

KOREA

Cosmos Corporation
Service Station
261 2nd Floor Nak-Won Arcade
Jong-Ro ku, Seoul, KOREA
TEL: (02) 742 8844

MALAYSIA

Bentley Music SDN BHD
140 & 142, Jalan Bukit Bintang
55100 Kuala Lumpur, MALAYSIA
TEL: (03) 2443333

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339 Gil J. Puyat Avenue
Makati, Metro Manila 1200,
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TEL: (02) 899 9801

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Swee Lee Company
BLOCK 231, Bain Street #03-23
Bras Basah Complex,
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CRISTOFORI MUSIC PTE
LTD
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Bangkok 10100, THAILAND
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Saigon Music Distributor
(Tan Dinh Music)
306 Hai Ba Trung, District 1
Ho chi minh City
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Moon Stores
Bab Al Bahrain Road,
P.O.Box 20077
State of BAHRAIN
TEL: 211 005

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Halilit P. Greenspoon &
Sons Ltd.
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Tel-Aviv-Yaho ISRAEL
TEL: (03) 682366

JORDAN

AMMAN Trading Agency
Prince Mohammed St. P. O. Box
825 Amman 11118 JORDAN
TEL: (06) 641200

KUWAIT

Easa Husain Al-Yousifi
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A. Chahine & Fils
P.O. Box 16-5857 Gergi Zeidan St.
Chahine Building, Achrafieh
Beirut, LEBANON
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OMAN

OHI Electronics & Trading
Co. LLC
P. O. Box 889 Muscat
Sultanate of OMAN
TEL: 959085

QATAR

Badie Studio & Stores
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DOHA QATAR
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Abdul Latif S. Al-Ghamdi
Trading Establishment
Middle East Commercial Center
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P.O.Box 2154 ALKHOBAR 31952,
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SYRIA

Technical Light & Sound
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TURKEY

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El Horrieh Heliopolos, Cairo,
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Chaudron - BP79 97491
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SOUTH AFRICA

That Other Music Shop
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11 Melle Street (Cnr Melle and
Juta Street)
Braamfontein 2001
Republic of SOUTH AFRICA
TEL: (011) 403 4105

Paul Bothner (PTY) Ltd.
17 Werdmuller Centre Claremont
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BELGIUM/HOLLAND/ LUXEMBOURG

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GREECE

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HUNGARY

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H-2046 Torokbalint, HUNGARY
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As of August, 1, 1998

VSBF-1

Roland Corporation

00904323 '98-9-E2-55T

VS8F-1 EFFECT EXPANSION BOARD FOR VS-880

Preset Patch List

Roland®

By installing a VS8F-1 on the VS-880, you can access the range of effects listed below.

No.	Patch Name	Algorithm	Type	Input	Comment

<Reverb> (18 preset)

1	RV:LargeHall	Reverb	Loop	Mono	Large concert hall reverberation.
2	RV:SmallHall	Reverb	Loop	Mono	Small hall reverberation.
3	RV:Strings	Reverb	Loop	Mono	Reverberation optimized for delicate highs of strings.
4	RV:PianoHall	Reverb	Loop	Mono	Rich and warm reverberation optimized for pianos.
5	RV:Orch Room	Reverb	Loop	Mono	Reverberation of large-capacity rooms such as big banquet halls.
6	RV:VocalRoom	Reverb	Loop	Mono	Room reverb suitable for vocals and chorus.
7	RV:MediumRm	Reverb	Loop	Mono	Warm and naturally spacious room reverb.
8	RV:LargeRoom	Reverb	Loop	Mono	Simulated acoustics of wide rooms with lots of reverberation.
9	RV:CoolPlate	Reverb	Loop	Mono	Distinctive bright plate reverb.
10	RV:Short Plt	Reverb	Loop	Mono	Shorter plate reverb.
11	RV:Vocal Plt	Reverb	Loop	Mono	Crystal-clear reverb optimized for vocals.
12	RV:Soft Amb.	Reverb	Loop	Mono	Simulated reverberation of a room with minimal wall reflections.
13	RV:Room Amb.	Reverb	Loop	Mono	Natural reverberation of rooms with good acoustics, suitable for drums and guitars.
14	RV:Cathedral	Reverb	Loop	Mono	Acoustics of a very large, high-ceilinged church.
15	RV:Long Cave	Reverb	Loop	Mono	Simulated reverberation of deep caves.
16	RV:GarageDr.	Reverb	Loop	Mono	Natural reverb that enhances unique drum sounds.
17	RV:Rock Kick	Reverb	Loop	Mono	Reverb with many low-frequency components, suitable for rock kicks.
18	RV:RockSnare	Reverb	Loop	Mono	Rich and thick sounding reverb suitable for rock snares.

<Gate Reverb> (4 preset)

19	RV:BriteGate	Gate Reverb	Loop	Mono	Slightly brighter gate reverb.
20	RV:Fat Gate	Gate Reverb	Loop	Mono	Dynamic reverb sound with powerful mids and lows.
21	RV:ReverseGt	Gate Reverb	Loop	Mono	A reverse gate commonly used as a special effect.
22	RV:PanningGt	Gate Reverb	Loop	Mono	A special effect with gate reverb shifting from left to right.

<Delay> (9 preset)

23	DL:Short Dly	Delay	Loop	Mono	An ambience effect that adds depth to the sound by doubling.
24	DL:MediumDly	Delay	Loop	Mono	Natural echo optimized for vocals.
25	DL:LongDelay	Delay	Loop	Mono	Long delay suited for brass and analog synth solos.
26	DL:AnalogDly	Delay	Loop	Mono	Analog sound with gradually diminishing feedbacking highs.
27	DL:Tape Echo	Stereo Delay Chorus	Loop	Stereo	Simulated tape echo with distinctive wow flutter.
28	DL:Karaoke	Stereo Delay Chorus	Loop	Stereo	Intense reverberation that effectively enhances karaoke vocals.
29	DL:Multi-Tap	Stereo Delay Chorus	Loop	Stereo	Spacious reflections using positioning delay at any point along the stereo soundfield.
30	DL:MltTapAmb	Multi Tap Delay	Loop	Mono	An ambience effect using 10 short delay units.
31	DL:Ping Pong	Multi Tap Delay	Loop	Mono	A special effect using tap delay.

<Vocal> (10 preset)

32	VO:Vocal Efx	Vocal Multi	Insert	Mono	Basic setup for recording/mixdown of vocals.
33	VO:JazzVocal	Vocal Multi	Insert	Mono	A natural sounding jazz club-like ambience for warm reverb well-suited for vocals.
34	VO:RockVocal	Vocal Multi	Insert	Mono	Sound featuring limiter/enhancer processing as well as a unison effect.
35	VO:Narration	Vocal Multi	Insert	Mono	An effect with heavy compression, used for narration.
36	VO:BigChorus	Vocal Multi	Insert	Mono	A spacious-sounding stereo effect similar to increasing the number of vocalists.
37	VO:Club DJ	Vocal Multi	Insert	Mono	A club DJ-tailored effect that uses a pitch shifter to make voices lower.
38	VO:AM-Radio	Vocal Multi	Insert	Mono	Sound featuring hard compression and narrower frequency range.
39	VO:PlusTwo	Stereo Pitch Shifter Delay	Insert	Stereo	A special effect that adds two more voices using a pitch shifter.
40	VO:Robot Efx	Stereo Pitch Shifter Delay	Insert	Stereo	SF movie-like effect using a pitch shifter.
41	VO:Bull Horn	Guitar Multi 3	Insert	Mono	Simulated effect of sound produced from a Bull Horn or old radio.

<Guitar > (11 preset)

42	GT:Rock Lead	Guitar Multi 2	Insert	Mono	Straight distortion sound with delay.
43	GT:LA Lead	Guitar Multi 2	Insert	Mono	Lead guitar sound with tasty compression and chorus applied.
44	GT:MetalLead	Guitar Multi 1	Insert	Mono	Metal sound with dynamic, ultrahigh gain distortion.
45	GT:Metal Jet	Guitar Multi 1	Insert	Mono	Distortion together with a metallic effect achieved by flanging.
46	GT:CleanRthm	Guitar Multi 1	Insert	Mono	Clean sound with compression and chorus applied.
47	GT:DIedClean	Vocal Multi	Insert	Mono	Superclean sound like line recording directly into the console.
48	GT:Delay Rif	Guitar Multi 2	Insert	Mono	Delay sounds at dotted eighth note intervals when a 120 BPM riff is played.
49	GT:Acoustic	Vocal Multi	Insert	Mono	Optimized for electroacoustic guitars.
50	GT:BluesDrv.	Guitar Multi 3	Insert	Mono	Crunchy overdrive sound suited to blues and R&R.
51	GT:Liverpool	Guitar Multi 3	Insert	Mono	Crunchy sound often heard on '60s British rock.
52	GT:Country	Guitar Multi 3	Insert	Mono	Clean sound featuring distinctive compression and delay.

No.	Patch Name	Algorithm	Type	Input	Comment

<Guitar Amp Simulator> (9 preset)

53	GA:JazChorus	Guitar Amp Simulator	Insert	Mono	Roland JC-120 amp. Sounds more authentic when used with chorus for mixdown.
54	GA:CleanTwin	Guitar Amp Simulator	Insert	Mono	U.S. tube combo amp circa "black panel."
55	GA:Vin.Tweed	Guitar Amp Simulator	Insert	Mono	'50s U.S. tube amp overdrive.
56	GA:BluesDrv.	Guitar Amp Simulator	Insert	Mono	Old British amp crunchy overdrive.
57	GA:MatchLead	Guitar Amp Simulator	Insert	Mono	Hot-rodded British combo amp.
58	GA:StudioCmb	Guitar Amp Simulator	Insert	Mono	Favourite late '70s amp of studio musicians.
59	GA:JMP-Stack	Guitar Amp Simulator	Insert	Mono	Late '60s British stacks.
60	GA:SLDN Lead	Guitar Amp Simulator	Insert	Mono	An '80s amp known for versatile distortion.
61	GA:5150 Lead	Guitar Amp Simulator	Insert	Mono	Big tube amp standard for American heavy metal.

<Bass> (5 preset)

62	BS:DI'edBass	Vocal Multi	Insert	Mono	Slight limiting and equalization optimized, ideal for line recording applications.
63	BS:MikedBass	Guitar Amp Simulator	Insert	Mono	A miked speaker box with four 12"s.
64	BS:CompBass	Stereo Multi	Insert	Stereo	Hard-compressed sound optimized for slaps.
65	BS:Auto Wah	Guitar Multi 2	Insert	Mono	Synth bass like sound added with auto wah essential for '70s funk.
66	BS:EFX Bass	Stereo Delay Chorus	Insert	Stereo	Solo-optimized sound with depth and spaciousness added through delay and chorus.

<Stereo Multi> (5 preset)

67	CL:Comp	Stereo Multi	Insert	Stereo	Stereo type compression optimized for broadcast mixing.
68	CL:Limiter	Stereo Multi	Insert	Stereo	A convenient effect for analog mastering because it can limit peak signals.
69	EQ:Loudness	Stereo Multi	Insert	Stereo	Applies EQ curve with slightly boosted lows and highs.
70	EQ:Fat Dance	Stereo Multi	Insert	Stereo	Hard compression plus equalizing for dance music.
71	EQ:ThinJingl	Stereo Multi	Insert	Stereo	Limiter and EQ processing for FM radio and TV broadcasting.

<Chorus/Flanger/Phaser/PitchShifter> (9 preset)

72	CH:Lt Chorus	Stereo Delay Chorus	Insert	Stereo	Natural stereo chorus with shallow depth for spacious, crystal-clear sound.
73	CH:Deep Cho	Stereo Delay Chorus	Insert	Stereo	Intense stereo chorus that adds depth and spaciousness to the sound.
74	CH:DetuneCho	Stereo Pitch Shifter Delay	Insert	Stereo	Chorus with left and right channels separately pitch shift-detuned up and down.
75	FL:LtFlanger	Stereo Flanger	Insert	Stereo	Stereo flanger with slight modulation.
76	FL:Deep Fl	Stereo Flanger	Insert	Stereo	Deeper stereo flanger for metallic jet swooshing sound.
77	PH:Lt Phaser	Stereo Phaser	Insert	Stereo	Lighter 4-stage stereo phaser suitable for synth strings.
78	PH:DeepPhase	Stereo Phaser	Insert	Stereo	Deep phaser effective for electronic piano and clavinet sounds.
79	PS:-4thVoice	Vocal Multi	Insert	Mono	Adds sound down a fourth to the direct sound.
80	PS:ShimmerUD	Stereo Pitch Shifter Delay	Insert	Stereo	A special effect with left channel pitch rising and right channel pitch dropping over time.

<Same as Algorithm> (20 preset)

81	Reverb	Reverb	Loop	Mono	Refer to page 16 of the VS8F-1 Owner's Manual.
82	Delay	Delay	Loop	Mono	Refer to page 17 of the VS8F-1 Owner's Manual.
83	StDly-Chorus	Stereo Delay Chorus	Insert	Stereo	Refer to page 18 of the VS8F-1 Owner's Manual.
84	StPS-Delay	Pitch Shifter Delay	insert	Stereo	Refer to page 19 of the VS8F-1 Owner's Manual.
85	Vocoder	Vocoder	Insert	Mono	Refer to page 19 of the VS8F-1 Owner's Manual.
86	2ch RSS	2ch RSS	Insert	2ch	Refer to page 20 of the VS8F-1 Owner's Manual.
87	Delay RSS	Delay RSS	Insert	Mono	Refer to page 20 of the VS8F-1 Owner's Manual.
88	Chorus RSS	Chorus RSS	Insert	Mono	Refer to page 21 of the VS8F-1 Owner's Manual.
89	GuitarMulti1	Guitar Multi 1	Insert	Mono	Refer to page 21 of the VS8F-1 Owner's Manual.
90	GuitarMulti2	Guitar Multi 2	Insert	Mono	Refer to page 22 of the VS8F-1 Owner's Manual.
91	GuitarMulti3	Guitar Multi 3	Insert	Mono	Refer to page 23 of the VS8F-1 Owner's Manual.
92	Vocal Multi	Vocal Multi	Insert	Mono	Refer to page 24 of the VS8F-1 Owner's Manual.
93	Rotary	Rotary	Insert	Mono	Refer to page 25 of the VS8F-1 Owner's Manual.
94	GuitarAmpSim	Guitar Amp Simulator	Insert	Mono	Refer to page 25 of the VS8F-1 Owner's Manual.
95	St Phaser	Stereo Phaser	Insert	Stereo	Refer to page 26 of the VS8F-1 Owner's Manual.
96	St Flanger	Stereo Flanger	Insert	Stereo	Refer to page 26 of the VS8F-1 Owner's Manual.
97	DualComp/Lim	Dual Compressor/Limiter	Insert	2ch	Refer to page 27 of the VS8F-1 Owner's Manual.
98	Gate Reverb	Gate Reverb	Loop	Mono	Refer to page 27 of the VS8F-1 Owner's Manual.
99	MultiTapDly	Multi Tap Delay	Insert	Mono	Refer to page 28 of the VS8F-1 Owner's Manual.
100	Stereo Multi	Stereo Multi	Insert	Stereo	Refer to page 29 of the VS8F-1 Owner's Manual.

TYPE
Loop: Direct Level is set to "0." Connect this Patch to the effects buss.
Insert: This Patch mixes the direct sound and effected sound. Insert it into a channel.

For details regarding connection, refer to page 8 of the VS8F-1 Owner's Manual.

You cannot select preset Patches 1 through 22, 81 and 98 for EFFECT2.
These Patches must be used for EFFECT1.

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1098:

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