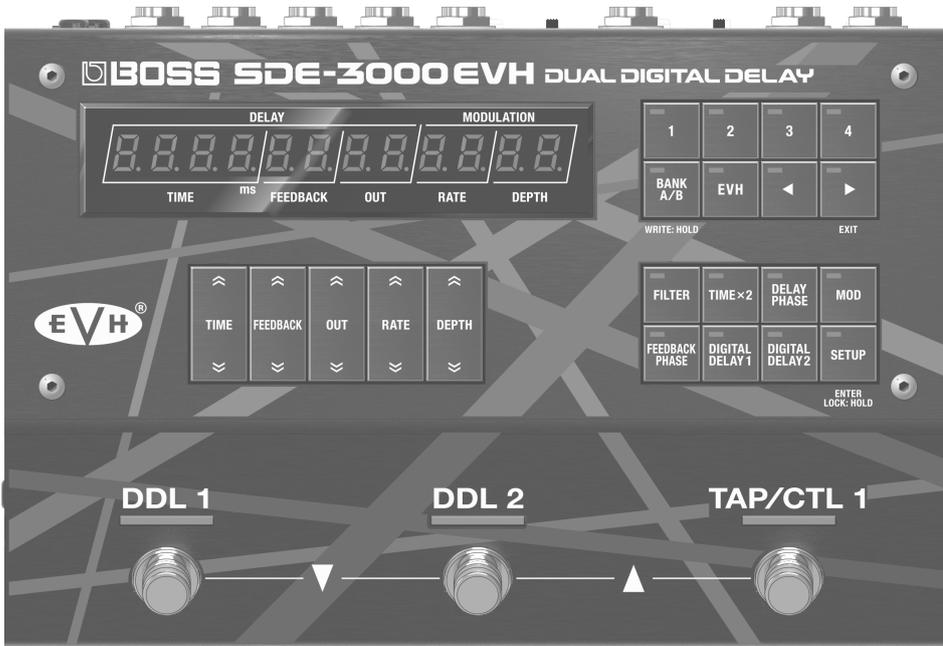


SDE-3000 EVH

DUAL DIGITAL DELAY

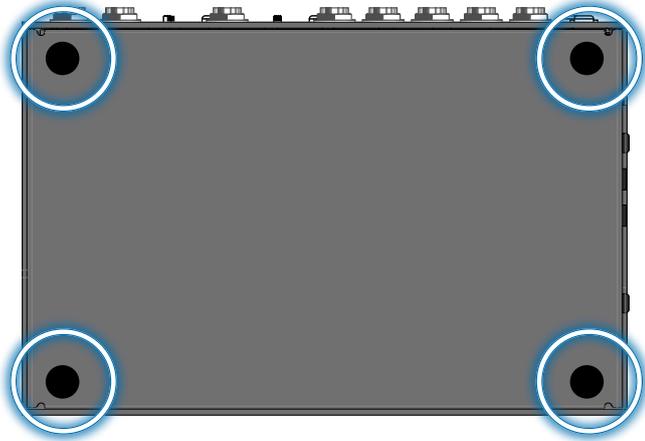
Reference Manual



Getting Ready

Attaching the Rubber Feet

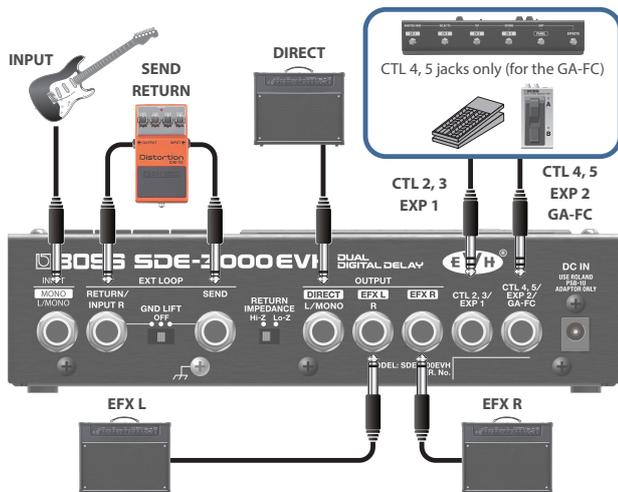
You can attach the rubber feet (included) if necessary. Attach them in the locations shown in the illustration.



- * Using the unit without rubber feet may damage the floor.
- * When turning the unit over, be careful so as to protect the buttons and knobs from damage. Also, handle the unit carefully; do not drop it.

Connecting the Equipment

* To prevent malfunction and equipment failure, always turn down the volume, and turn off all the units before making any connections.



There are many other ways to connect the SDE-3000EVH. For details, refer to “Connecting an Amp and Configuring the Input/Output Settings” (p. 12).

GND LIFT CABLE



You may hear a humming noise when more than one amp is connected to this unit. To disconnect the ground from the OUTPUT jacks, use the ground lift cable included with this unit. For details, refer to “Dealing with Hum Noise” (p. 11).

Turning the Power On

* Before turning the unit on/off, always be sure to turn the volume down. Even with the volume turned down, you might hear some sound when switching the unit on/off. However, this is normal and does not indicate a malfunction.

1. Connect the AC adaptor to the DC IN jack.

This turns the power of the SDE-3000EVH on.

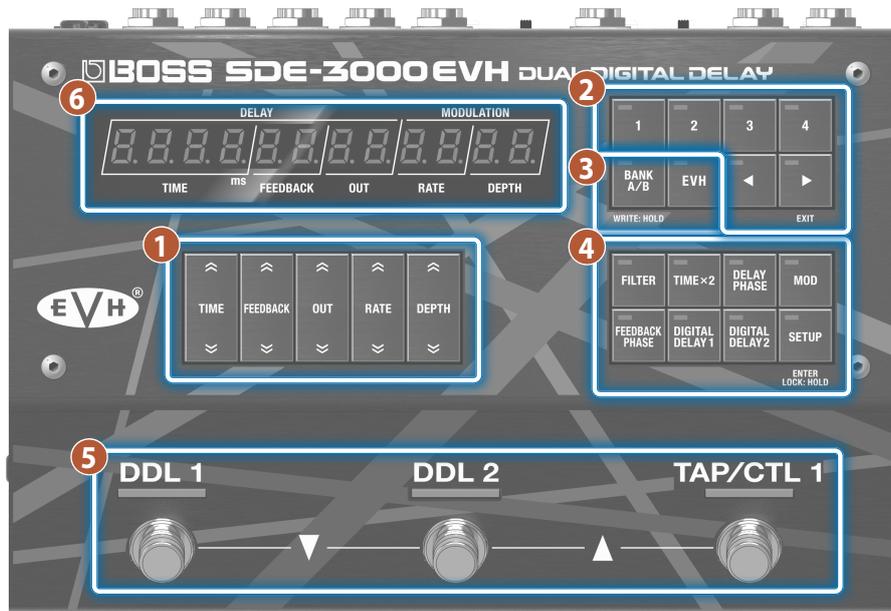


2. Turn on any connected devices first, and then turn on your guitar amp.

- * Do this in reverse order when turning off the power.
- * Unsaved data is lost when the power turns off. You must save any data in advance that you want to keep.
- * The bank and memory number that you were using when you turned the power off are stored in memory, and are recalled when you turn the unit back on.

Panel Descriptions

Top Panel



Area	Explanation
1 Controls	Press the top part of each button to increase the value, and press the bottom part of each button to decrease the value. Long-press a button to make its value change rapidly.
	[TIME] buttons Adjusts the delay time.
	[FEEDBACK] buttons Adjusts the delay feedback level.
	[OUT] buttons Adjusts the output level for the delay sound.
	[RATE] buttons Adjusts the cycle of the delay modulation.
	[DEPTH] buttons Adjusts the depth of the delay modulation. A setting of zero turns the modulation off.
2 Memory	[1]–[4] buttons Selects the memories. → “Selecting a Memory” (p. 20)
	[◀] [▶] buttons Switches the play screen in the following order: Input level ↔ Parameter ↔ Tempo ↔ Bank/memory
3 Bank	[BANK A/B] button Switches between banks A (lights up red) and B (lights up green). You can select the bank C memories (C.01 and up) by using your feet (p. 6).
	[EVH] button Press the “EVH” (Eddie Van Halen) button to recall the settings that recreate the essence of Eddie’s sound system. Each press of the button toggles between EVH memories 1–4 (lights up red) and EVH memories 5–8 (lights up green).
	* The detailed parameters are not shown, as they are a trade secret. * The DDL 1/DDL 2 parameters for SETUP are not shown. * You can’t edit or save these settings, but only the [OUT] button can be used for overwriting to the same memory.



Area	Explanation
4 Delay settings	[FILTER] button A delay filter. This gives you a natural-sounding effect when you’re using the delay as an echo.
	[TIME×2] button Switches between delay time ranges. Off (×1): 0.0-1500 ms On (×2): 0.0-3000 ms
	[DELAY PHASE] button Inverts the phase of the delay sound.
	[MOD] button Turns the modulation on/off.
	[FEEDBACK PHASE] button Inverts the phase of the delay sound’s feedback.
	[DIGITAL DELAY 1] button (DDL 1) / [DIGITAL DELAY 2] button (DDL 2) Switches between the DDL 1 and DDL 2 parameter displays. When TIME LINK is OFF or OFFSET, you can switch between time displays for the L channel (lights up green) and the R channel (lights up red) of DDL 1/DDL 2.
5 Switches	[SETUP] button Configures the memory and system settings. Long-press the button to turn the lock on/off. Other button operations are disabled when the lock feature is enabled.
	[DDL 1] switch / [DDL 2] switch Switches the DIGITAL DELAY 1/2 on and off.
	[TAP/CTL 1] switch Press this switch in specific intervals to set the delay time. Also, use this for the CTL function and assign setting functions. You can select memories by pressing the [DDL 1] switch and [DDL 2] switch at the same time, or by pressing the [DDL 2] switch and [TAP/CTL 1] switch at the same time. → “Selecting Memories via Foot Control” (p. 6)
6 Display	This shows various information depending on the operation.
	Play screen → “Switching Between Play Screen Displays” (p. 4) Edit screen → See the edit pages for details.

Switching Between Play Screen Displays

The screen that appears after you turn on the power is called the “play screen”.

1. Press the [◀] [▶] buttons to switch between displays.



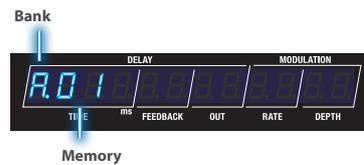
Input level display ↔ parameter display ↔ BPM display ↔ bank/memory display

Parameter display



The values you set using the control buttons are all displayed here.

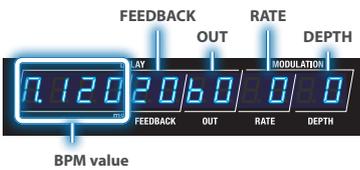
Bank/memory display



NOTE

As the parameters for the EVH memories are unreleased, you can't view the parameters or BPM for them.

BPM display



BPM value



This blinks in time with the BPM (default setting).

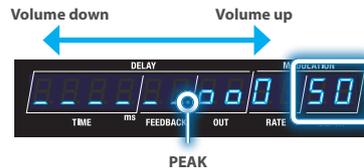
You can change the function that's controlled by the [TAP/CTL 1] switch. For details, refer to “Configuring the CTL Function (CTL)” (p. 30).

Input level meter display



INPUT LV is indicated, and the unit automatically switches to showing the input level.

The meter moves according to the input signal level.



Input level
Adjust the value with the [DEPTH] buttons.

PEAK

When the input signal exceeds this level, the sound begins to distort.

* The input level setting is the same for all memories (system setting).

About the EVH memories

These preset parameters are internal and locked but allow for output level adjustments.



You can't operate these buttons while an EVH memory is selected.

Rear Panel



Area	Explanation
A	INPUT [MONO] L/MONO jack Connect your guitar or keyboard here. For a mono connection, use only the L/MONO jack. If the unit is set for stereo input, use this to input the L channel audio.
B	EXT LOOP RETURN/INPUT R jack Connect this to the output of an external effect unit. If this unit is set for stereo input, use this to input the R channel audio.
C	EXT LOOP SEND jack Connect this to the input of an external effect unit.
D	EXT LOOP GND LIFT switch This should normally be set to "OFF". Noise may occur due to a ground loop when you connect an amp to the EXT LOOP (SEND/RETURN) jack. The noise may be eliminated if you switch to "LIFT".
E	RETURN IMPEDANCE switch Set this to match the output impedance of the device that's connected. When inputting in stereo, set this to "Hi-Z" so that the left/right signal levels are matched.
F	OUTPUT [DIRECT] L/MONO jack Connect this to your guitar amp, mixer or other audio equipment. For a mono output, connect only to the L/MONO jack.
G	OUTPUT [EFX L] R jack Connect this to your guitar amp, mixer or other audio equipment.

Area	Explanation
H	OUTPUT [EFX R] jack Connect this to your guitar amp, mixer or other audio equipment.
I	CTL 2, 3/EXP 1 jack You can connect an expression pedal (*1) or footswitches (*2) to these jacks for controlling a variety of parameters. * Use only the specified expression pedal. By connecting any other expression pedals, you risk causing malfunction and/or damage to the unit. * For more about footswitch settings, refer to "Connecting Footswitches" (p. 29).
J	CTL4, 5/EXP2/GA-FC jack You can connect an expression pedal (*1) or footswitches (*2) and foot controllers (*3) to these jacks for controlling a variety of parameters.
K	DC IN jack Connect the AC adaptor here. The SDE-3000EVH powers up when the AC adaptor is connected to the DC IN jack.
L	Ground terminal Connect this to an external earth or ground if necessary.

- *1 Expression pedal
Sold separately: EV-30, FV-500L, FV-500H, Roland EV-5
- *2 Footswitch
Sold separately: FS-5U, FS-5L, FS-6, FS-7
- *3 Foot controller
Sold separately: GA-FC, GA-FC EX

Side Panel

MIDI (OUT/IN) jacks

Use TRS/TRS or TRS/MIDI connecting cables to connect this unit to an external MIDI device.

➔ "Connecting with an External MIDI Device" (p. 36)

Sold separately:
TRS/TRS connecting cable
BCC-1-3535, BCC-2-3535

TRS/MIDI connecting cable
BMIDI-5-35, BMIDI-1-35, BMIDI-2-35



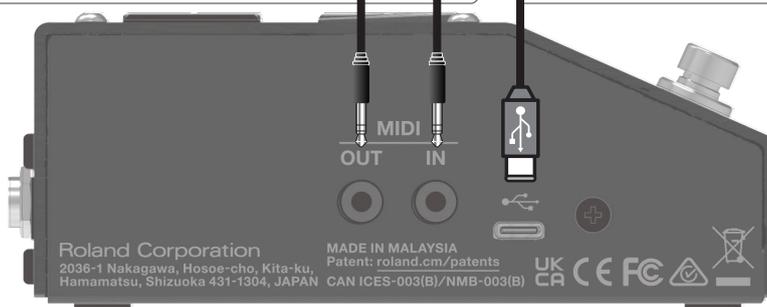
USB port (USB Type-C*)

Connect your computer using a commercially available USB cable that supports USB 2.0.

➔ "Connecting to a Computer" (p. 39)



* Do not use a USB cable that is designed only for charging a device. Charge-only cables cannot transmit data.



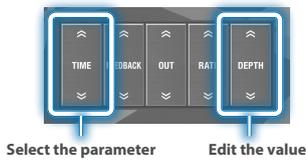
Configuring the Footswitch Mode

The footswitch mode features a “manual mode” in which you can select one memory at a time in order, and “memory mode” in which you can select two memories at a time in order. Further, memory mode features an “immediate” mode that lets you select odd-numbered memories, and a “wait” mode that lets you show two memories and then select the memory.

MEMO

The unit is set to memory mode when shipped from the factory.

1. Press the [SETUP] button.
2. Use the [TIME] buttons to select “SYSTEM”, and press the [SETUP] (ENTER) button.
3. Use the [TIME] buttons to select the “FSM” and “MODE” parameters, and then use the [DEPTH] buttons to change the value.



Parameter	Value	Explanation
FSM (Footswitch Mode)	MANUAL (Manual)	Manual mode. Selects one memory at a time.
	MEMORY (Memory)	Memory mode. Selects two memories at a time.
MODE (M. Mode)	IMMEDIATE (immediate)	Immediate. Switches immediately to the memory after the next in memory mode.
	WAIT (Wait)	Wait. In memory mode, when two memories are displayed via foot control, the memory switches only when you operate a foot control once more.

Selecting Memories via Foot Control

The SDE-3000EVH has 100 memories, and you can select the memories via foot control.

Memories: EVH 1–EVH 8, A.01–A.04, B.01–B.04, C.01–C.84

Memory mode (factory setting)

In this mode, the 100 memories are selected in sequential order, two at a time.

Further, this mode features an “immediate” mode that lets you select odd-numbered memories, and a “wait” mode that lets you show two memories and then select a memory.

Immediate

Switches to odd-numbered memories, two at a time. To select an even-numbered memory, press the [DDL 2] switch.

1. Select a memory.

[DDL 1] switch + [DDL 2] switch: previous memory

[DDL 2] switch + [TAP/CTL 1] switch: next memory

This immediately switches to the next two memories.

For instance, when R01 is selected, the [DDL 1] switch selects and turns on/off the delay for R01 (odd-numbered memories), and the [DDL 2] switch selects and turns on/off the delay for R02 (the even-numbered memories).

2. Select the memories using the [DDL 1] and [DDL 2] switches.

If you press the same switch twice in a row, you can turn the delay off or restore the memory to its stored state.



Selects and turns on/off the even-numbered memories

3. To turn the delay off, press the same switch again.



Selects the previous memory (memory decrement)

Selects the next memory (memory increment)

Wait

This displays two memories at a time for you to select.

1. Switch the memory display.

[DDL 1] switch + [DDL 2] switch: previous memory

[DDL 2] switch + [TAP/CTL 1] switch: next memory

The display changes with each operation. The memory does not switch until you perform the next operation.



Selects the previous memory (memory decrement)

Selects the next memory (memory increment)

2. Select the memories using the [DDL 1] and [DDL 2] switches.

If you press the same switch twice in a row, you can turn the delay off or restore the memory to its stored state.



Selects and turns on/off the odd-numbered memories

Selects and turns on/off the even-numbered memories

3. To turn the delay off, press the same switch again.

Manual mode

In this mode, the 100 memories are called up in sequential order, one by one.

1. Select a memory.



Selects the previous memory (memory decrement)

Selects the next memory (memory increment)

2. The [DDL 1] switch turns DDL 1 on/off, and the [DDL 2] switch turns DDL 2 on/off.



DDL 1 on/off

DDL 2 on/off

Action	Operation
Select the previous memory	[DDL 1] switch + [DDL 2] switch
Select the next memory	[DDL 2] switch + [TAP/CTL 1] switch

Configuring the Input and Output Settings

Configuring the Input/Output to Match the Connected Device

1. Press the [SETUP] button.



2. Use the [TIME] buttons to select "in out", and press the [SETUP] (ENTER) button.



3. Use the [TIME] buttons to select a parameter, and then use the [DEPTH] buttons to change the value.



Select the parameter Edit the value

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
in (Input Setting)	None (MONO)	Inputs from the INPUT L/MONO jack. * SEND/RETURN is enabled. For details, refer to "Send/Return Settings" (p. 17).
	STEREO (STEREO)	Inputs in stereo from the INPUT L/MONO jack and the INPUT R jack. * When inputting in stereo, set the RETURN IMPEDANCE switch to "Hi-Z" so that the left/right signal levels are matched.
out (Output Setting)	STEREO (STEREO)	The sound is output in stereo from the OUTPUT L/MONO and R jacks.
	dirEFF (L: DIRECT, R: EFX)	The direct sound is output from the OUTPUT DIRECT jack, and the delay sound is output from the OUTPUT EFX L jack.
	dirMUTE (DIRECT MUTE)	Mutes the direct sound. * When you connect three cables to the OUTPUT jacks, the signals are automatically separated into three outputs. For details, refer to "Using Three Amps (1-in, 3-out)" (p. 10).
uniGR in (Uni Gain)	4d, -10d, -20d	Switches between +4 dBm, -10 dBm and -20 dBm to match the input/output level of the connected device.
inVol (Input Volume)	1-100	Adjusts the input level.
bYPASS (Bypass)	dSP (DSP)	This fully recreates the bypass characteristics of the original Roland SDE-3000.
	AnLG (Analog)	Outputs via a hardware bypass signal route.

Adjusting the Input Level While Checking the Level Meter

1. On the play screen (the screen that appears right after you start up the unit), press the [◀] button to show the input level meter.

Input level meter display



Input level
Adjust the value with the [DEPTH] buttons.

PEAK
When the input signal exceeds this level, the sound begins to distort.

2. Use the DEPTH buttons to adjust the input level.

Adjusting the Output Level (Output Gain)

To adjust the output level, change this value within a range of -12 to +12 dB.

1. Press the [SETUP] button.



2. Use the [TIME] buttons to select "MASTER", and press the [SETUP] (ENTER) button.



3. Use the [TIME] buttons to select "outGR in", and then use the [DEPTH] buttons to change the value.

Output gain parameters (in MASTER settings)

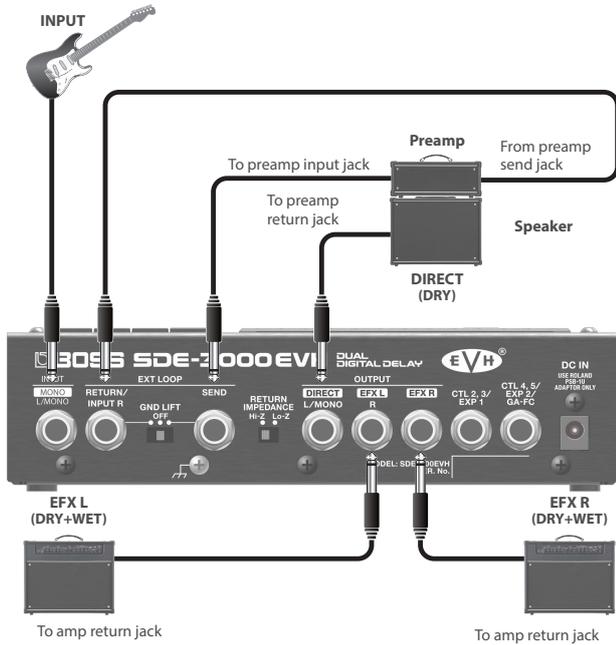
Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
outGR in (Output Gain)	-12-12	Adjusts the output level.

EVH Sound Settings

This explains how to set up a system using three amps to output DRY+WET+WET signals.

Connecting to the Send/Return of a Preamp (Four-Cable Method)

You can use an external preamp to create different sounds by connecting the send/return of your preamp to this unit.



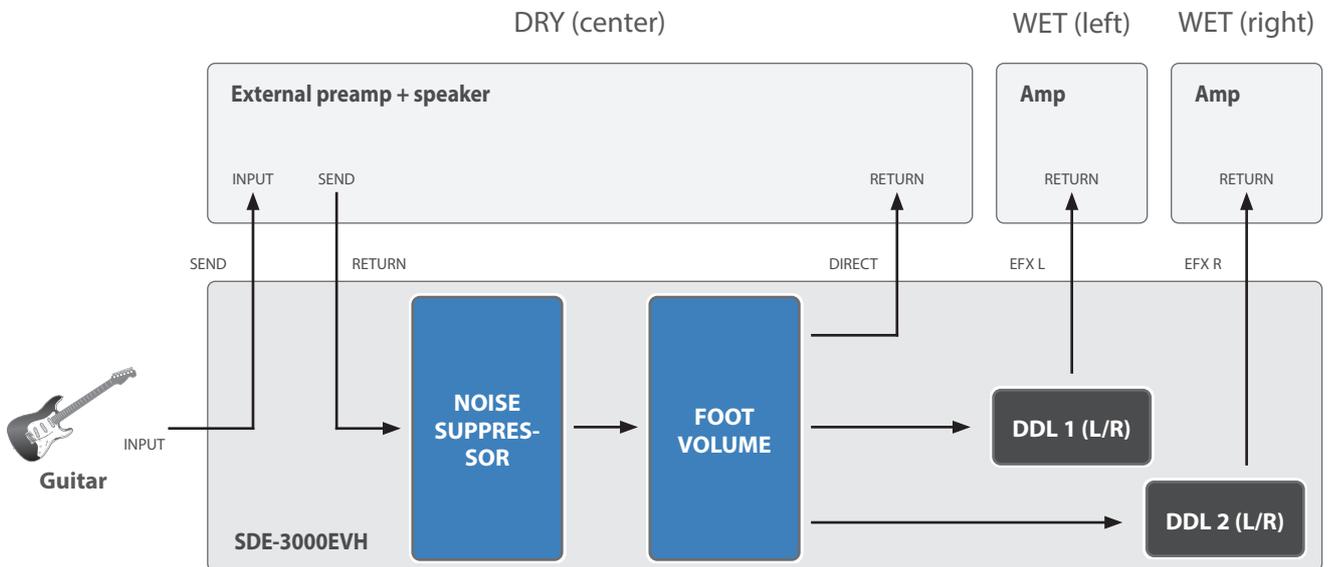
IN OUT settings

[SETUP] → “in out”

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
in (Input Setting)	<i>None</i> (MONO)	Inputs from the INPUT L/MONO jack.
out (Output Setting)	<i>StErEo</i> (STEREO)	When you connect three cables to the respective OUTPUT jacks, the signals are automatically separated into dry, dry+wet and dry+wet.
	<i>d r.EFII</i> (L: DIRECT, R: EFX)	When you connect three cables into their respective output jacks, the signals are automatically separated into dry/wet/wet.
	<i>d r.NUTE</i> (Direct Mute)	

Delay structure (parallel 2: connected separately in parallel)

The two delays are connected in parallel and output to different jacks.

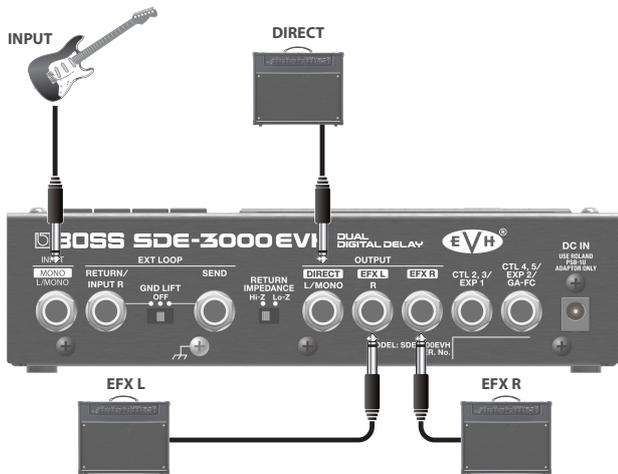


MEMO

You may hear a humming noise when more than one amp is connected to this unit. For more on how to deal with hum noise, see “Dealing with Hum Noise” (p. 11).

Using Three Amps (1-in, 3-out)

When connecting this unit to three amps, use the OUTPUT DIRECT jack, the OUTPUT EFX L and the OUTPUT EFX R jacks. When you connect a plug to the OUTPUT EFX R jack, the signal is separated into dry (direct sound), wet L (left delay sound) and wet R (right delay sound).



IN OUT settings

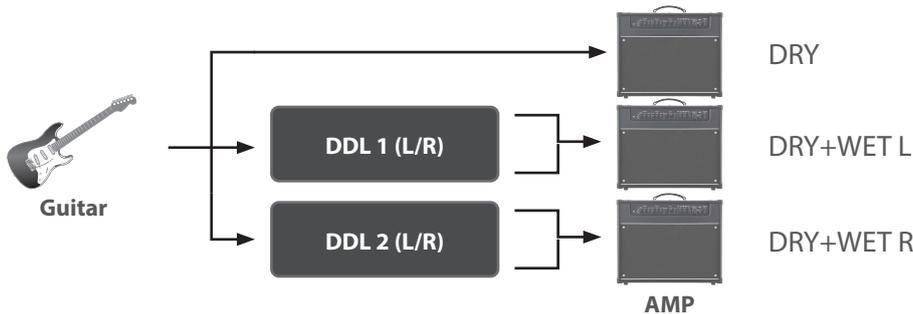
[SETUP] → "in out"

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
in (Input Setting)	None (MONO)	Inputs from the INPUT L/MONO jack.
out (Output Setting)	STEREO (STEREO)	When you connect three cables to the respective OUTPUT jacks, the signals are automatically separated into dry, dry+wet and dry+wet.
	dirEFII (L: DIRECT, R: EFX)	When you connect three cables into their respective output jacks, the signals are automatically separated into dry/wet/wet.
	dirMUTE (Direct Mute)	

When **out** (Output Setting) is **STEREO** (STEREO)

Delay structure (parallel 2: connected separately in parallel)

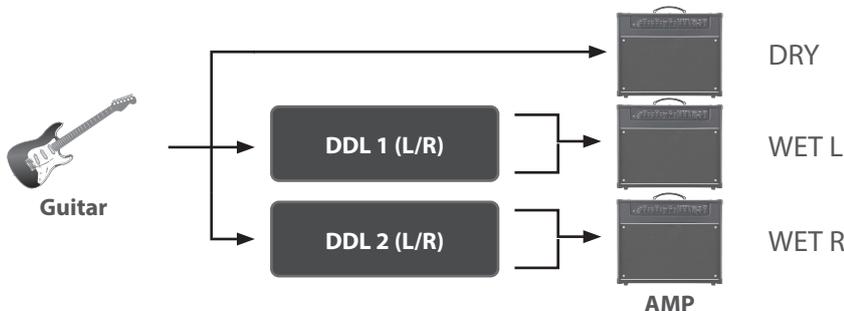
The two delays are connected in parallel, to be mixed with the dry signal and output to different jacks.



When **out** (Output Setting) is **dirEFII** (L: DIRECT, R: EFX)

Delay structure (parallel 2: connected separately in parallel)

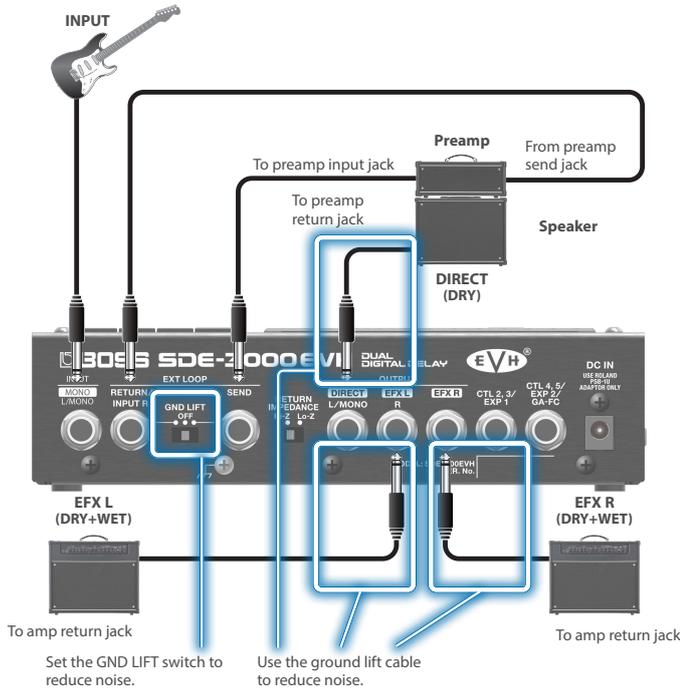
The two delays are connected in parallel and output independently to different jacks.



Dealing with Hum Noise

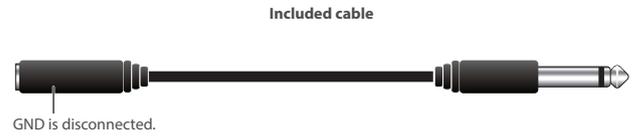
You may hear a humming noise when more than one amp is connected to this unit. This explains how to suppress hum noise.

Connecting Using the Four-cable Method



Using the Included Ground Lift Cable

The ground wire is disconnected from the female jack of the cable that's included. Connect this cable to the cable that's connected to the OUTPUT jacks.



NOTE

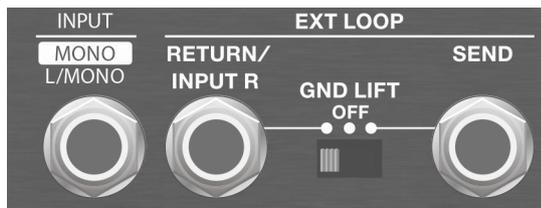
- You can use it only when the power supply is 3P (3 poles). When this is set to 2P, the ground is cut off, so no sound is produced.
- Do not connect the ground lift cable to any other jack besides OUTPUT. Doing so may cause a malfunction.
- The cause of the hum noise may differ depending on the environment in which you use this unit. You should decide how to set the ground lift switch and which jacks are to be connected with ground lift cables, while checking out the hum noise in each case.

Using the Noise Suppressor

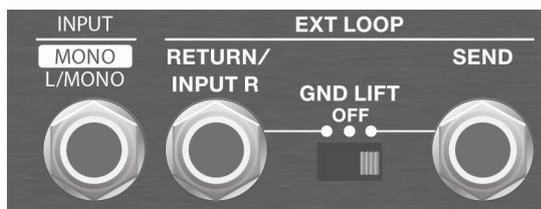
This unit has a built-in noise suppressor. You can set this based on whether the hum noise occurs.

Using the GND LIFT Switch

The SEND/RETURN jack features a GND LIFT switch. To lift the ground from the SEND jack, move the switch to the left side (RETURN).



To lift the ground from the RETURN jack, move the switch to the right side (SEND).



Connecting an Amp and Configuring the Input/Output Settings

The SDE-3000EVH has two built-in digital delays (Roland SDE-3000) that have been expanded to work in stereo. You can switch the configuration of these two delays between serial to parallel. The connection method is called a “structure”.

For details on how to configure the input/output settings, refer to the information below.

→ “Configuring the Input and Output Settings” (p. 8)

Switching Between Serial and Parallel Connections (Structure)

1. Press the [SETUP] button.
2. Use the [TIME] buttons to select “*NAStEr*”.
3. Press the [SETUP] (ENTER) button.
4. Use the [TIME] buttons to select “*StRuCt*”, and then use the [DEPTH] buttons to change the value.



3. Press the [SETUP] (ENTER) button.



Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
<i>StRuCt</i> (Structure)	<i>SER 1</i> (Series)	The two delays are connected in series.
	<i>PARA 1</i> (Parallel 1)	The two delays are connected in parallel.
	<i>PARA 2</i> (Parallel 2)	Outputs the sound independently from the two delays via the OUTPUT L/MONO and R jacks.

You can't change the structure of the EVH memories.

Connected in series (serial)

In series

The two delays are connected in series.



Parallel connection

Parallel 1

The two delays are connected in parallel.



Parallel 2

Outputs the sound independently from the two delays via the OUTPUT L/MONO and R jacks.

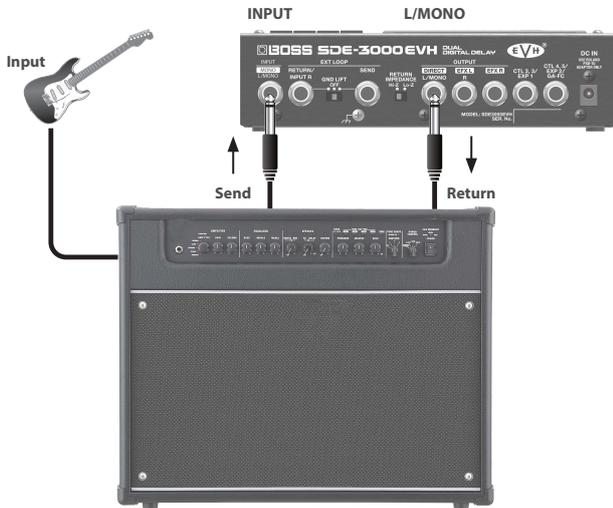


Using a Single Amp (1-in, 1-out)

Use the OUTPUT L/MONO jack when connecting to only one amp. The dry (direct) and wet (delay) sounds are mixed when output.

When Connecting to the Send/Return of the Amplifier

When Connecting before the Amplifier



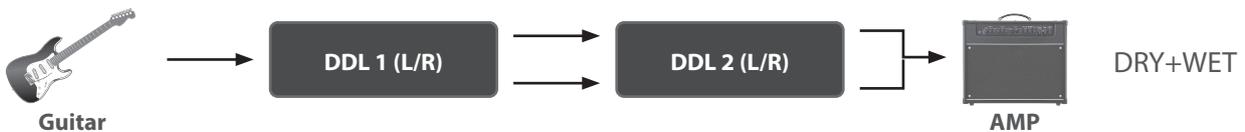
IN OUT settings

[SETUP] → " in out "

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
in (Input Setting)	<i>Mono</i> (MONO)	Inputs from the INPUT L/MONO jack.
out (Output Setting)	<i>Stereo</i> (STEREO)	The sound is output in mono when an amp is only connected to the OUTPUT L/MONO jack.

Delay structure (in series: connected one after another)

The two delays are connected in series.



Delay structure (parallel 1/2: connected separately in parallel)

The two delays are connected in parallel.

You can combine the two delays with different delay times to create your own sound.



NOTE

The SDE-3000EVH fully recreates the bypass characteristics of the original Roland SDE-3000. Since the original sound is faithfully recreated by varying the delay times and so on, you may notice a unique modulated sound that occurs with certain settings when you mix two delays that are connected in parallel and output them in mono. This is not a malfunction.

Using Two Amps (1-in, 2-out)

Use the OUTPUT L/MONO and OUTPUT R jacks when connecting to two amps. This lets you mix the dry (direct) and wet (delay) sounds for output, or output the dry and wet sounds separately.

When mixing the dry and wet sounds for output



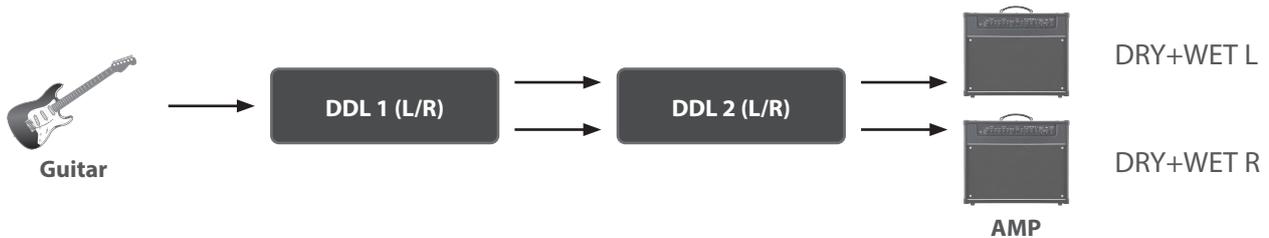
IN OUT settings

[SETUP] → "in out"

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
in (Input Setting)	None (MONO)	Inputs from the INPUT L/MONO jack.
out (Output Setting)	SErEa (STEREO)	The sound is output in stereo from the OUTPUT L/MONO and R jacks.

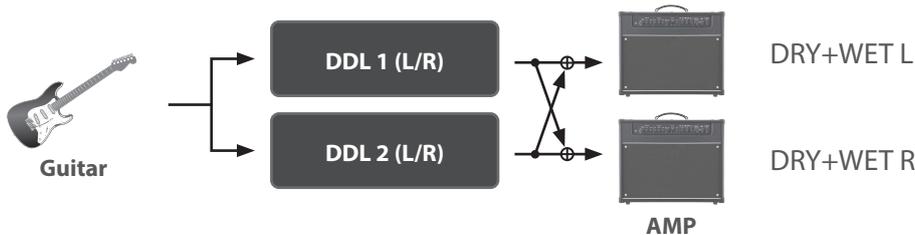
Delay structure (in series: connected one after another)

The two delays are connected in series.



Delay structure (parallel 1: connected separately in parallel)

The two delays are connected in parallel.



Delay structure (parallel 2: connected separately in parallel)

The two delays are connected in parallel and output to different jacks.



When outputting the dry and wet sounds separately



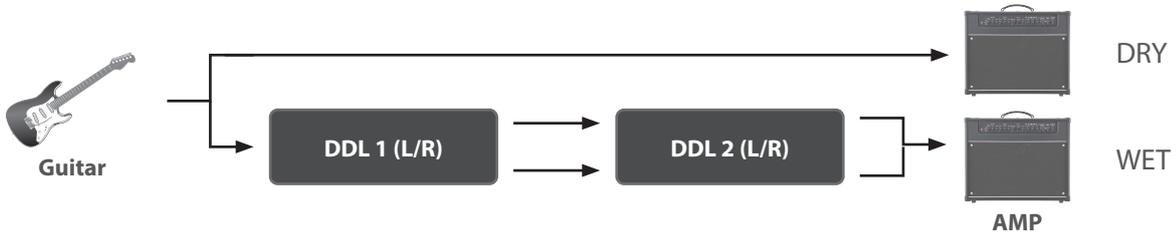
IN OUT settings

[SETUP] → "in out"

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
in (Input Setting)	None (MONO)	Inputs from the INPUT L/MONO jack.
out (Output Setting)	dir.EF11 (L: DIRECT, R: EFX)	The direct sound is output from the OUTPUT DIRECT jack, and the delay sound is output from the OUTPUT EFX L jack.
	dir.MUTE (Direct Mute)	

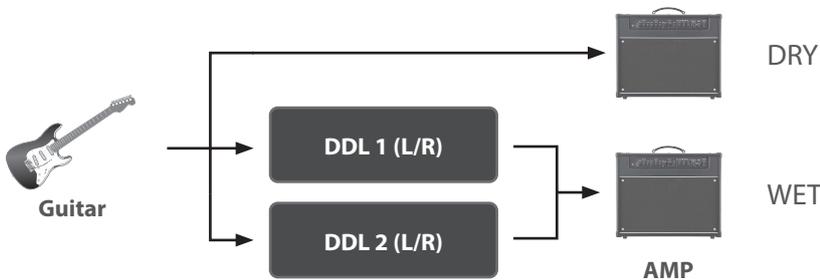
Delay structure (in series: connected one after another)

The two delays are connected in series.



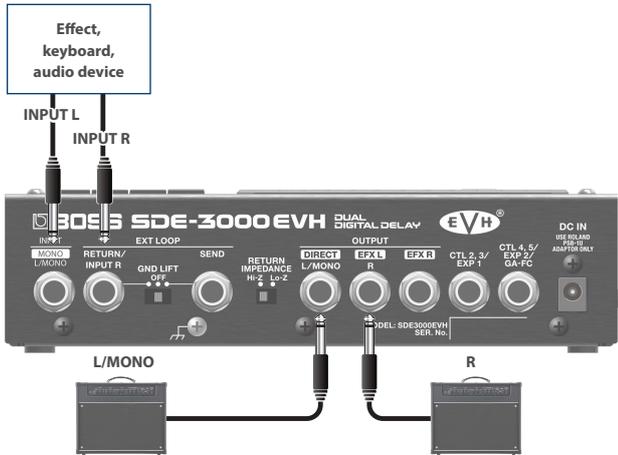
Delay structure (parallel 1/2: connected separately in parallel)

The two delays are connected in parallel and output to different jacks.



Stereo Input/Output (2-in, 2-out)

For stereo input, the dry (direct) and wet (delay) sounds are mixed when output.



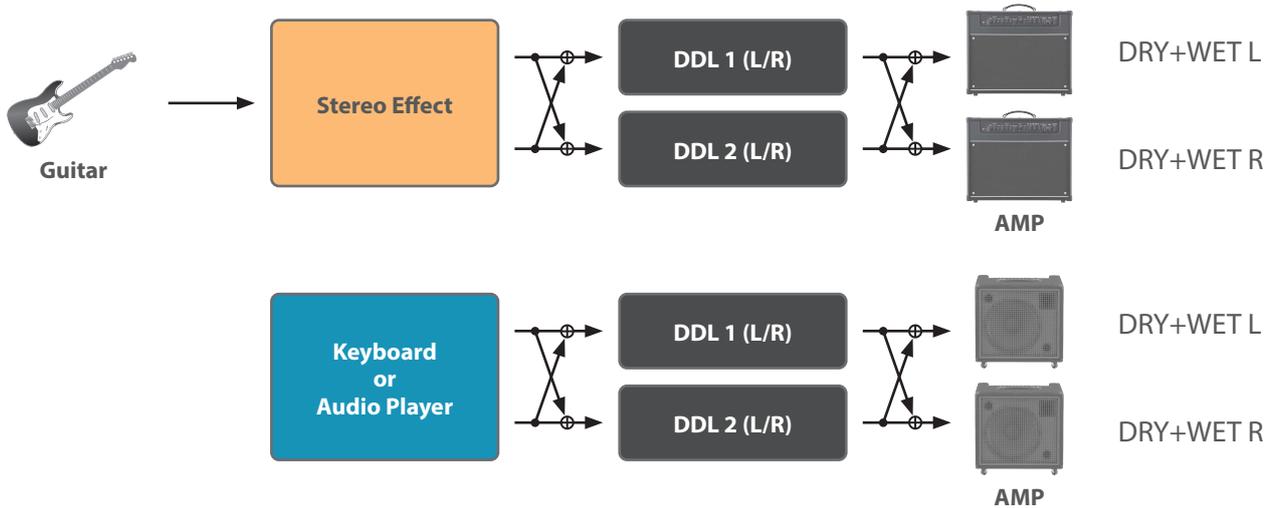
IN OUT settings

[SETUP] → " in out "

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
<i>in</i> (Input Setting)	StErEo (STEREO)	Inputs in stereo from the INPUT L/ MONO jack and the INPUT R jack. * When inputting in stereo, set the RETURN IMPEDANCE switch to "Hi-Z" so that the left/right signal levels are matched.
<i>out</i> (Output Setting)	StErEo (STEREO)	The sound is output in stereo from the OUTPUT L/MONO and R jacks. * When inputting in stereo, nothing is output from the EFX R jack.

Delay structure (parallel 1: connected separately in parallel)

The two delays are connected in parallel.



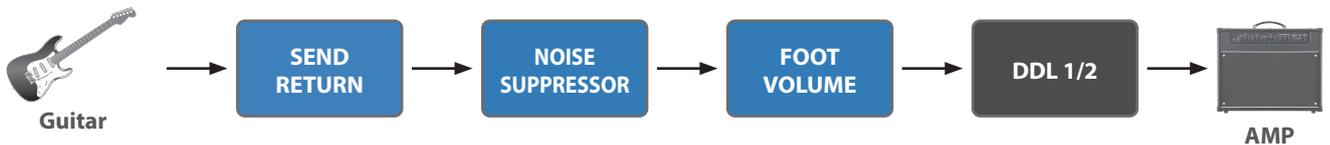
Using SEND and RETURN

You can connect an external effects processor between the SEND jack and RETURN jack, and use it as one of the SDE-3000EVH's effects processors. This lets you control the memories, in which the external pedal is included.

The sound that is input to SEND/RETURN within the effect chain will be output to the SEND jack. The sound that is input via the RETURN jack will be input to SEND/RETURN within the effect chain.



Signal path diagram



Send/Return Settings

1. Press the [SETUP] button.
The parameter to set is shown in the display.
2. Use the [TIME] buttons to select "SEnd rEtURN", and press the [SETUP] (ENTER) button.



3. Use the [TIME] buttons to select "SndrEt.5H", and then use the [DEPTH] buttons to set the value to "on".



Send/return parameters

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
SndrEt.5H (Send Return Switch)	oFF (off) oN (on)	Turns the send/return on/off.
rEt.LEVEL (Return Level)	0-100	Sets the return level for signals coming from the external device.
Sr.Prf (Send Return Preference)	MEMoRY (Memory) SYStEM (System)	Sets whether the send/return settings should follow the settings for the memories, or whether they should follow the system settings.

Preference parameters

"Preference parameters" are available on this unit.

Select "MEMoRY (Memory)" to configure the settings for each memory.

Select "SYStEM (System)" to follow the system settings, so that the same settings are used even when switching to a different memory. Change the setting as appropriate for your use case.

Using the Noise Suppressor

Configuring the Noise Suppressor

The noise suppressor is a function that suppresses noise during periods of silence.

1. Press the [SETUP] button.

The parameter to set is shown in the display.

2. Use the [TIME] buttons to select "n5".



3. Press the [SETUP] button.



4. Use the [TIME] buttons to select a parameter, and then use the [DEPTH] buttons to change the value.

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
n55H (Noise Suppressor Switch)	oFF (off) oN (on)	Switches the noise suppressor on/off.
tHrESHLD (Threshold)	0-100	Adjusts the volume at which noise suppression starts to be applied.
rELeASE (Release)	0-100	Adjusts the time from when noise suppression starts until the volume reaches 0.
nSPrF (Noise Suppressor Preference)	MEMoRY (Memory) SYStEM (System)	Sets whether the noise suppressor settings should follow the settings for the memories, or whether they should follow the system settings.

Using the Foot Volume

Configuring the Foot Volume

This is a volume control effect. Operate this with an expression pedal that's connected to the CTL 2, 3/EXP1 jack or the CTL 4, 5/EXP2/GA-FC jack.

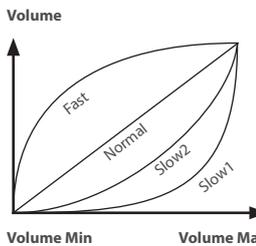
1. Press the [SETUP] button.
2. Use the [TIME] buttons to select "Foot Vol".



3. Press the [SETUP] button.



4. Use the [TIME] buttons to select a parameter, and then use the [DEPTH] buttons to change the value.

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
<i>F.VOL SW</i> (Foot Vol Switch)	<i>OFF</i> (off) <i>ON</i> (on)	Turns the foot volume on/off.
<i>PEDAL POS</i> (Pedal Position)	<i>0-100</i>	Sets the volume.
<i>VOL MIN</i> (Volume Min)	<i>0-100</i>	Sets the volume when the heel of the EXP Pedal is depressed.
<i>VOL MAX</i> (Volume Max)	<i>0-100</i>	Selects the volume when the toe of the EXP Pedal is depressed.
<i>CURVE</i> (Curve)	<i>SLOW 1</i> (Slow1) <i>SLOW 2</i> (Slow2) <i>NORMAL</i> (Normal) <i>FAST</i> (Fast)	You can select how the actual volume changes relative to the amount the pedal is pressed. 
<i>F.V.PRF</i> (Foot Vol Preference)	<i>MEMORY</i> (Memory) <i>SYSTEM</i> (System)	Sets whether the foot volume should follow the settings for the memories, or whether it should follow the system settings.

Playing

Selecting a Memory

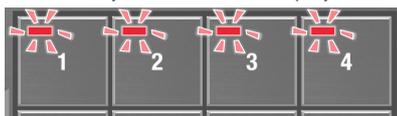
1. Press the [BANK A/B] button or the [EVH] button to select a bank.



- The bank switches between BANK A and BANK B each time you press the [BANK A/B] button.
- The unit switches between EVH (1–4) and EVH (5–8) each time you press the [EVH] button.

Button (indicator color)	Bank (memory)
[BANK A/B] button (lit red)	BANK A (1–4)
[BANK A/B] button (lit green)	BANK B (1–4)
[EVH] button (lit red)	EVH (1–4)
[EVH] button (lit green)	EVH (5–8) * Use the [1]–[4] buttons to select EVH 5–8.

When you select a bank, the indicators for the memory buttons and the memory number in the display blink.



2. Press the [1]–[4] buttons to select a memory.

Configuring the Delay Sound (From the Top Panel)

Use the buttons to edit the parameters shown in the display.

1. Switch to the play screen parameter display (p. 4).



2. Press the [DIGITAL DELAY 1] and [DIGITAL DELAY 2] buttons to select the delay to operate.



3. Use the control buttons to configure the delay.



Button (parameter)	Value/Explanation
[TIME] buttons	<p>Sets the delay time.</p> <p>00-1500 0.0-1500 ms (TIMEx2 off)</p> <p>00-3000 0.0-3000 ms (TIMEx2 on)</p> <p>Note Sets the time as a note value (*1).</p>
[FEEDBACK] buttons	0-99 Sets the amount of feedback.
[OUT] buttons	0-99 Sets the output volume of the delay sound.
[RATE] buttons	0-99, 0F (note) *1 Sets the modulation speed.
[DEPTH] buttons	0-99 Sets the modulation depth.

*1 Note values that can be set

Symbols	Explanation
1_16	Sixteenth note
8t	Eighth-note triplet
16d	Dotted sixteenth note
1_8	Eighth note
4t	Quarter-note triplet
8d	Dotted eighth note

Symbols	Explanation
1_4	Quarter note
2t	Half-note triplet
4d	Dotted quarter note
1_2	Half note
1t	Whole-note triplet
2d	Dotted half note
1_1	Whole note

* If the note value you've set exceeds the upper limit for the delay time, the length is halved.

Other Delay Parameters (DDL 1, DDL 2)

1. Press the [SETUP] button.
The parameter to set is shown in the display.
2. Use the [TIME] buttons to select "ddl 1" or "ddl 2", and press the [SETUP] (ENTER) button.
3. Use the [TIME] buttons to select a parameter, and then use the [DEPTH] buttons to change the value.

Parameter list (common for DDL 1 and DDL 2)

MEMO

Use the [DIGITAL DELAY 1] button and [DIGITAL DELAY 2] button to switch between the DDL 1 and DDL 2 parameters.

Parameter	Value/Explanation
d 15H (DDL 1 Switch)	oFF (Off) Turns DDL 1 or DDL 2 on/off.
d 25H (DDL 2 Switch)	oN (On) Turns DDL 1 or DDL 2 on/off.
d 1tYP (DDL 1 type)	StErEo (Stereo) Sets the type for DDL 1 or DDL 2. A stereo-in/out delay.
d 2tYP (DDL 2 type)	PAn (Pan) This gives a tap delay effect, with the delay time (how long the sound is delayed) divided into L and R channels.
d 1tNL inL (DDL 1 Timelink)	oFF (Off) Sets whether to independently control the DDL 1 or DDL 2 left-right delay time (off), or to use a common delay time for the left and right (on).
d 2tNL inL (DDL 2 Timelink)	oN (On) Sets the left-right delay time independently.
d 1oFFSt (DDL 1 Offset)	o5t (Offset) Sets a common left-right delay time.
d 2oFFSt (DDL 2 Offset)	o5t (Offset) Links the left and right channel delay times while maintaining the offset. This also follows the tap tempo.
d 1oFFSt (DDL 1 Offset)	-99-0-99 When d 1tNL inL, d 2tNL inL is o5t, this parameter is shown.
d 2oFFSt (DDL 2 Offset)	-99-0-99 Sets how much to offset the delay time of the R channel from the L channel (in msec). When the offset is "0", the left and right delays sound at the same time.
d 1WAVEFN (DDL 1 Waveform)	tr (Triangle) Selects the modulation waveform. This is the original SDE-3000 waveform.
d 2WAVEFN (DDL 2 Waveform)	SiN (Sine) Sine wave
d 1ModPH (DDL 1 Mod phase)	nor (Normal) Specifies the left-right phase. Normal (in phase) The phase does not change.
d 2ModPH (DDL 2 Mod phase)	inV (Invert) Inverted (reverse phase) The phase is inverted.
d 1FEqTP (DDL 1 Feedback EQ type)	oFF (Off) Selects the EQ type that's applied to the delay feedback. The feedback EQ is off.
d 2FEqTP (DDL 2 Feedback EQ type)	oRi (Original) This is the original characteristic for the SDE-3000.
	uSr (User) This can be freely configured in the user settings.

Parameter	Value/Explanation
<i>d lFbLcF</i> (DDL 1 Feedback EQ Lo Freq)	Cuts the frequency region below the specified frequency (low-cut filter).
<i>d 2FbLcF</i> (DDL 2 Feedback EQ Lo Freq)	
*1	FLAt (Flat) The low-cut filter has no effect. 20-800 20, 25, 31.5, 40, 50, 63, 80, 100, 125, 160, 200, 250, 315, 400, 500, 630, 800 (Hz)
<i>d lFbHcF</i> (DDL 1 Feedback EQ hi Freq)	Cuts the frequency region above the specified frequency (high-cut filter).
<i>d 2FbHcF</i> (DDL 2 Feedback EQ hi Freq)	
*1	630-125k 630, 800, 1000, 1.25k, 1.6k, 2k, 2.5k, 3.15k, 4k, 5k, 6.3k, 8k, 10k, 12.5k (Hz) FLAt (Flat) The high-cut filter has no effect.
<i>d lFbHcG</i> (DDL 1 Feedback EQ Hc Gain)	
<i>d 2FbHcG</i> (DDL 2 Feedback EQ Hc Gain)	
*1	-24-0 Adjusts the tonal character of the high frequencies.

*1 This is shown only when the *d lFbEQtP* (DDL 1 Feedback EQ type) and *d 2FbEQtP* (DDL 2 Feedback EQ type) parameters are set to *u5r* (User).

Linking the Left and Right Delay Times (Time Link)

Time Link is a function that lets you use the same delay times for the left and right channels, or make them work independently.

1. Press the [SETUP] button.
The parameter to set is shown in the display.
2. Use the [TIME] buttons to select “*ddl 1*” “*ddl 2*”, and press the [SETUP] (ENTER) button.
3. Use the [TIME] buttons to select the parameter, and then use the [DEPTH] buttons to change the value.

Parameter	Value/Explanation
	Sets whether to independently control the DDL 1 or DDL 2 left-right delay time (off), or to use a common delay time for the left and right (on).
<i>d ltlL inE</i> (DDL 1 Timelink)	oFF (Off) Sets the left-right delay time independently.
<i>d 2tlL inE</i> (DDL 2 Timelink)	oN (On) Sets a common left-right delay time.
	Links the left and right channel delay times while maintaining the offset. This also follows the tap tempo.
	When <i>d ltlL inE</i> , <i>d 2tlL inE</i> is o5t , this parameter is shown.
<i>d loFFSt</i> (DDL 1 Offset)	
<i>d 2oFFSt</i> (DDL 2 Offset)	-99-0-99 Sets how much to offset the delay time of the R channel from the L channel (in msec). When the offset is “0”, the left and right delays sound at the same time.

Setting the Left and Right Channels to the Same Delay Time (Time Link: ON)

When you set the offset to “0” while Time Link is ON, the left and right channels use the same delay times. When you use tap tempo to change the delay time, the left and right channel delays still stay the same.

1. Press the [SETUP] button.
2. Use the [TIME] buttons to select “*ddl 1*” “*ddl 2*”, and press the [SETUP] (ENTER) button.
3. Use the [TIME] buttons to select “*d ltlL inE*” “*d 2tlL inE*”, and then use the [DEPTH] buttons to change the value to “**oN**”.

Setting the Left and Right Delay Times Independently (Time Link: OFF)

When Time Link is OFF, the left and right channel delay times can be set independently. When you use tap tempo to change the delay time, only the delay for the selected channel (left or right) is changed.

1. Press the [SETUP] button.
2. Use the [TIME] buttons to select “*ddl 1*” “*ddl 2*”, and press the [SETUP] (ENTER) button.
3. Use the [TIME] buttons to select “*d ltlL inE*” “*d 2tlL inE*”, and then use the [DEPTH] buttons to change the value to “**oFF**”.

Outputting a delay with different times

(Lch: 400 msec; Rch: 800 msec)



1. Press the [DIGITAL DELAY 1] button to make it light up green, and set the “TIME” to “400”.
2. Press the [DIGITAL DELAY 1] button to make it light up red, and set the “TIME” to “800”.

Setting the Left and Right Channels to Different Delay Times (Time Link: OFFSET)

You can adjust the delay time offset to set different delay times for the left and right channels. When you use tap tempo to change the delay time, the offset still stays the same.

1. Press the [SETUP] button.
2. Use the [TIME] buttons to select “*ddl 1*” “*ddl 2*”, and press the [SETUP] (ENTER) button.
3. Use the [TIME] buttons to select “*d ltlL inE*” “*d 2tlL inE*”, and then use the [DEPTH] buttons to change the value to “**o5t**”.

- Use the [TIME] buttons to select “d LoFF5t” or “d2oFF5t”, and then use the [DEPTH] buttons to change the value.



The R channel value is offset from the L channel by the amount set (-10 msec).

MEMO

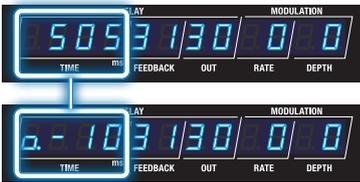
When the offset is “0”, the left and right delays sound at the same time.

When the delay time is set to “505 msec” and the offset is set to “-10”

You can offset the delay times by a tiny amount to create an expansive, spatially synthesized delay sound.

L channel (505 msec)

From this screen, you can press the [TIME] buttons to edit the delay time.



R channel (495 msec)

The offset value that you set (which starts with “a”) is shown. From this screen, you can press the [TIME] buttons to edit the offset value.

MEMO

When you keep pressing the [DIGITAL DELAY 1] or [DIGITAL DELAY 2] button, the setting switches between the L and R channels each time you press the buttons.

- Change the delay time using tap tempo.



The offset always remains the same even if the tempo changes, which lets you keep the same stereo image.

L channel (542 msec)

From this screen, you can press the [TIME] buttons to edit the delay time.



R channel (532 msec)

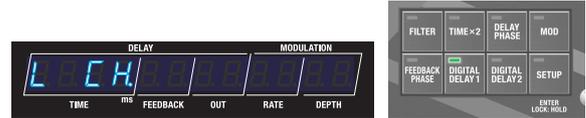
The offset value that you set (which starts with “a”) is shown. From this screen, you can press the [TIME] buttons to edit the offset value.

Switching Between Left and Right Time Display for DDL 1/DDL 2

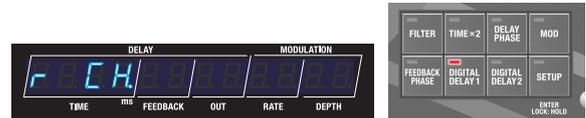
- Press the [DIGITAL DELAY 1] or [DIGITAL DELAY 2] button, corresponding to which indicator is lit.

Each time you press the button, the display switches between the left and right times, and the channel you select (Lch/Rch) appears as a pop-up in the display.

L channel (indicator lights up green)



R channel (indicator lights up red)



Parameters aside from delay time are the same for both left and right.

Carrying Over Reverberations when Switching the Delays On/Off or When Switching Between Memories (Carryover)

When the carryover function is on, you can make the reverberations of the previous delay continue to sound even when you switch the delays on/off or switch between memories.

Turning On the Carryover

1. Press the [SETUP] button.
2. Use the [TIME] buttons to select "PARSER", and press the [SETUP] (ENTER) button.
3. Use the [TIME] buttons to select "d1CARRY" or "d2CARRY", and then use the [DEPTH] buttons to change the value to "ON".

Carryover parameter (in MASTER settings)

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
d1CARRY (DDL 1 Carryover)	OFF (Off)	When this is on, you can make the reverberations of the previous delay continue to sound even when you switch the delays on/off or switch between memories.
d2CARRY (DDL 2 Carryover)	ON (On)	Disables the carryover.
	ON (On)	Enables the carryover.

Setting the Tempo (BPM)

Here's how to set the tempo when the delay time was set using a note length.

1. Press the [SETUP] button.
2. Use the [TIME] buttons to select "PARSER", and press the [SETUP] (ENTER) button.
3. Use the [TIME] buttons to select "BPM", and then use the [DEPTH] buttons to change the value.

BPM parameter (in MASTER settings)

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
BPM (BPM)	40-250	Specifies the tempo.

MEMO

The display reads as follows when an external clock is received.



Setting the Other Parameters (MASTER)

1. Press the [SETUP] button.
2. Use the [TIME] buttons to select "PARSER".



3. Press the [SETUP] (ENTER) button.



4. Use the [TIME] buttons to select a parameter, and then use the [DEPTH] buttons to change the value.

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
		This is shown when the structure is "Parallel 2".
ModLInk (Mod Link)	nor (Normal)	Aligns the phase of modulation between DDL 1 and DDL 2.
	inU (Invert)	Reverses the phase of modulation between DDL 1 and DDL 2.
	OFF (off)	Sets this to off (free running).
d1rLEVEL (Direct Level)	0-100	Sets the direct level. When this is set to "60", the input/output balance is 1:1 (unity gain).
outGain (Output Gain)	-12-12	Adjusts the output level.
TEMPHold (Tempo Hold)	OFF (off) ON (on)	Specifies whether the tempo (BPM) is changed (OFF) or held (ON) or when you switch memories. You can keep the same delay time by maintaining the tempo. However, note that when the NOTE setting (note value) of the patch you're switching to is different, the delay time also changes. The setting can be changed for each memory.

Useful Functions

Switching Between Note Length and Time Display for the Delay Time

- When the play screen is showing the parameter, hold down the [▶] button and press the [TIME] buttons up and down.

Operation	Display
[▶] button + [TIME (up)] button	Note length display
[▶] button + [TIME (down)] button	Time display

Note length display



Time display



Note values that can be set

Symbols	Explanation
1.16	Sixteenth note
8t	Eighth-note triplet
16d	Dotted sixteenth note
1.8	Eighth note
4t	Quarter-note triplet
8d	Dotted eighth note

Symbols	Explanation
1.4	Quarter note
2t	Half-note triplet
4d	Dotted quarter note
1.2	Half note
1t	Whole-note triplet
2d	Dotted half note
1.1	Whole note

Make Large Changes to the Delay Time

- When the delay time on the play screen is displayed as time, hold down the [◀] button and press the [TIME] button up or down.

The set value increases or decreases significantly.

Operation	Display
[◀] button + [TIME (up)] button	The set value increases significantly.
[◀] button + [TIME (down)] button	The set value decreases significantly.

Increase the setting value significantly



Decrease setting value significantly

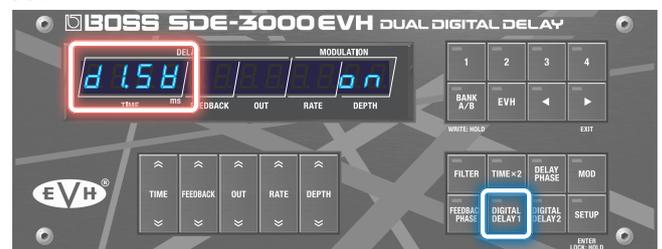


Switching Between DDL 1 and DDL 2 on the Parameter Setting Screen

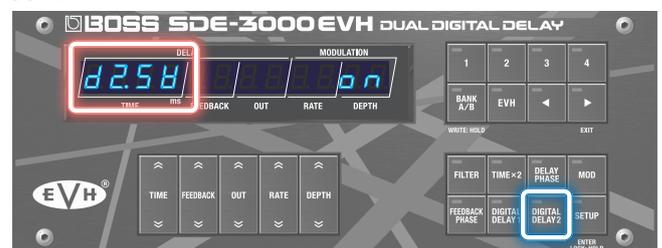
- Press the [DIGITAL DELAY 1] and [DIGITAL DELAY 2] buttons when editing the delay.

The display switches to the settings screen for the delay you selected by pressing the buttons without changing any parameters. The indicator for the selected delay lights up.

DDL 1



DDL 2



Saving, Exchanging and Other Memory Operations

Saving to Memory (WRITE)

Here's how to save the currently selected memory.

1. Long-press the [BANK A/B] (WRITE) button.

The write menu appears.



If "WRITE" is not shown on the display, press the [TIME] buttons to select "WRITE".

2. Press the [SETUP] (ENTER) button.

The memory number of the write destination is shown.



3. To change the write destination, select the memory number with the [DEPTH] buttons.



- * You can't write to EVH 1-8.
- * Only the out level can be set for EVH 1-8. Also, you can only overwrite these memories.
- * EVH 1-8 can't be saved to other memories.

Press the [▶] (EXIT) button if you want to cancel and return to the write menu.

4. To save the memory, press the [BANK A/B] (WRITE) button.

When the memory is finished saving, the unit switches to the write destination memory and returns to the play screen.

Swapping Memories (EXCHANGE)

Here's how to swap (exchange) the memory number of the saved memory with a different one.

1. Long-press the [BANK A/B] (WRITE) button.

The write menu appears.



2. Use the [TIME] buttons to select "ECHANGE", and press the [SETUP] (ENTER) button.



The memory number to exchange is shown.



3. To change the number of the memory to exchange, use the [DEPTH] buttons to select the memory number.



- * The EVH 1-8 memory numbers can't be exchanged.

Press the [▶] (EXIT) button if you want to cancel and return to the write menu.

4. To exchange, press the [BANK A/B] (WRITE) button.

The unit returns to the play screen when the exchange operation is finished.

Initializing a Memory (INITIALIZE)

Here's how to initialize the selected memory.

NOTE

The EVH 1–8 memories can't be initialized.

By executing a factory reset and selecting EVH 1–EVH 8 as the target, you can restore the memories to their factory settings.

→ “Restoring the Unit to the Factory Settings” (p. 41)

1. Long-press the [BANK A/B] (WRITE) button.

The write menu appears.



2. Use the [TIME] buttons to select “INITIALIZE”, and press the [SETUP] (ENTER) button.



The memory number to initialize is shown.



3. To change the number of the memory to initialize, use the [DEPTH] buttons to select the memory number.



Press the [▶] (EXIT) button if you want to cancel and return to the write menu.

4. To initialize, press the [BANK A/B] (WRITE) button.

The unit returns to the play screen when the initialize operation is finished.

Preventing Accidental Operation (Panel Lock)

You can enable (Lock OFF) or disable (Lock ON) the button operations.

MEMO

The panel lock setting is disabled when the power is turned off.

1. Long-press the [SETUP] button to return to the play screen.

The setting toggles between on and off each time you press the button.

The screens change as shown below when the status changes, and the unit returns to the play screen.

Lock ON



Lock OFF

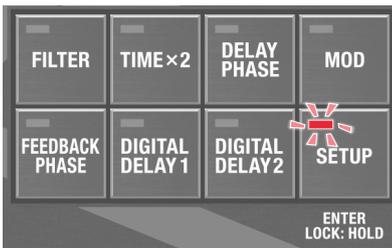


If you attempt an operation while the unit is locked, the display indicates "LoCkEd".



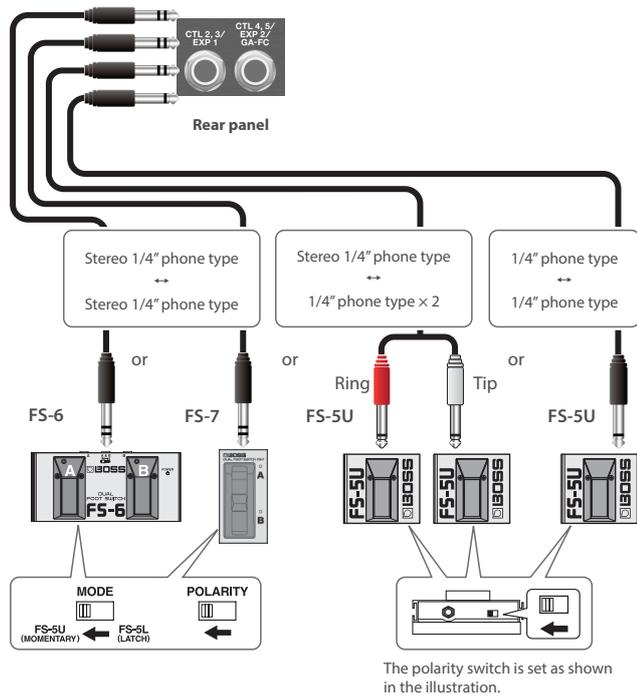
MEMO

When the panel lock is on, the [SETUP] button lights up.



Configuring the External Controllers

Connecting Footswitches



Footswitch		CTL 2, 3/EXP 1 jack	CTL4, 5/EXP2/GA-FC jack
FS-6	A	CTL 3	CTL 5
	B	CTL 2	CTL 4
FS-7	A	CTL 3	CTL 5
	B	CTL 2	CTL 4
FS-5U	RING (red)	CTL 2	CTL 4
	TIP	CTL 3	CTL 5

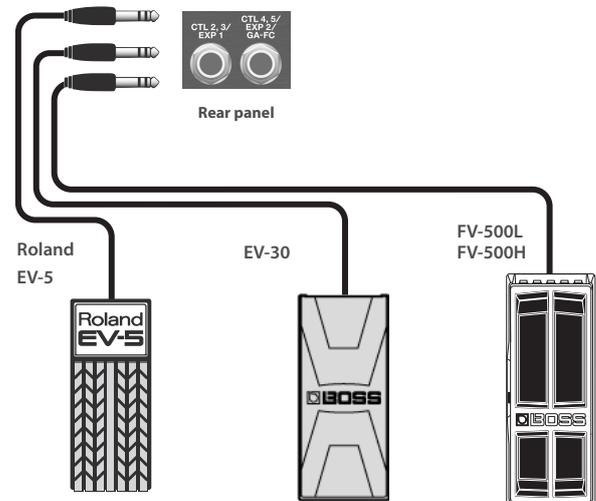
* This unit is compatible with latch-type footswitches. If you're using an FS-6 or FS-7, set the mode of A and B to FS-5U (MOMENTARY).

Supported footswitches

Sold separately: FS-5U, FS-5L, FS-6, FS-7

Connecting an Expression Pedal

You can connect an expression pedal for controlling the volume and other parameters.



* Use only the specified expression pedal. Connecting any other expression pedals may cause malfunctions and/or damage to this unit.

Supported expression pedals

Sold separately: BOSS EV-30, FV-500L, FV-500H, Roland EV-5

Configuring the CTL Function (CTL)

1. Press the [SETUP] button.

The parameter to set is shown in the display.

2. Use the [TIME] buttons to select “CTL”, and press the [SETUP] (ENTER) button.



3. Use the [TIME] buttons to select a parameter, and then use the [DEPTH] buttons to change the value.

Control parameters

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
	OFF (Off)	Turns the CTL 1–CTL 5 switches OFF.
	BPM TAP (BPM Tap)	Tap to input the BPM.
	d L2TAP (DDL 1/DDL 2 Tap)	DDL 1 and DDL 2 (at the same time)
	d LtAP (DDL 1 Lch Tap)	L channel of DDL 1
	d RrAP (DDL 1 Rch Tap)	R channel of DDL 1
	d2LtAP (DDL 2 Lch Tap)	L channel of DDL 2
	d2RrAP (DDL 2 Rch Tap)	R channel of DDL 2
	d L2SW (DDL 1/DDL 2 Switch)	DDL 1 and DDL 2 (at the same time)
	d LSW (DDL 1 Switch)	DDL 1
	d2SW (DDL 2 Switch)	DDL 2
CTL 1 Function :	d L2HLd (DDL 1/DDL 2 Hold)	DDL 1 and DDL 2 (at the same time)
	d LHoLd (DDL 1 Hold)	DDL 1
CTL 5 Function (CTL 5 Function)	d2HoLd (DDL 2 Hold)	DDL 2
	d L2MoM (DDL 1/DDL 2 MOMENT)	DDL 1 and DDL 2 (at the same time)
	d LMoM (DDL 1 MOMENT)	DDL 1
	d2MoM (DDL 2 MOMENT)	DDL 2
	bYPASS (Bypass)	Turns the bypass on/off. When this is on, the audio input is outputted as-is. → “Bypass circuit diagram (using an external controller to activate bypass)” (p. 35)
	MEMoRY (Memory up)	Switches to the next memory.
	MEMoDn (Memory down)	Switches to the previous memory.
	Send/Return (Send/Return)	Turns the send/return on/off.
	MEMoRY NUMBER (MEMORY NUMBER)	Lets you assign a desired memory number for quick recall (this function is not available in CTL 1 Function).

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
CTL 2 Number :	EXP 1-8, RD 1-04, BD 1-04, CD 1-84	When you set MEMORY NUMBER for CTL 2 Function–CTL 5 Function, this can be assigned to the memories for each controller.
CTL 5 Number :	0-120	Adjusts the Hold level.
CTL1 DDL 1 Hold :	0-120	Adjusts the Hold level.
CTL5 DDL 2 Hold (CTL5 DDL 2 Hold)	0-120	Adjusts the Hold level.
CTL1.Mode :	TOGGLE (Toggle)	Toggles between on and off each time you operate the control.
CTL5.Mode (CTL5.Mode)	MoMEnt (Moment)	Turns on only while you are pressing down on the switch, and turns off otherwise.
CTL1 PREFERENCE :	MEMoRY (Memory)	Sets whether to use different settings per memory for the CTL switches (MEMORY), or to use the same settings for all memories (SYSTEM).
CTL5 PREFERENCE (CTL5 PREFERENCE)	SYSTEM (System)	Sets whether to use different settings per memory for the CTL switches (MEMORY), or to use the same settings for all memories (SYSTEM).
	OFF (Off)	The EXP 1 and EXP 2 are not used.
	FU (Foot Volume)	Adjusts the volume for the foot volume control.
	d Lt INL (DDL 1 Time Lch)	L channel of DDL 1
	d Lt INr (DDL 1 Time Rch)	R channel of DDL 1
	d2Lt INL (DDL 2 Time Lch)	L channel of DDL 2
	d2Lt INr (DDL 2 Time Rch)	R channel of DDL 2
EXP1.Function EXP2.Function	d LFBF (DDL 1 Feedback)	DDL 1
	d2FBF (DDL 2 Feedback)	DDL 2
	d Lout (DDL 1 Out)	DDL 1
	d2out (DDL 2 Out)	DDL 2
	d LModRate (DDL 1 Modulation Rate)	DDL 1
	d2ModRate (DDL 2 Modulation Rate)	DDL 2
	d LModDepth (DDL 1 Modulation Depth)	DDL 1
	d2ModDepth (DDL 2 Modulation Depth)	DDL 2
	d r.LVL (Direct Level)	Adjusts the direct level.
EXP1.Min EXP2.Min	EXP1.Min EXP2.Min	The variable range differs depending on the parameter.
EXP1.Max EXP2.Max	EXP1.Max EXP2.Max	The variable range differs depending on the parameter.
EXP1 PREFERENCE EXP2 PREFERENCE	MEMoRY (Memory)	Sets whether to use different settings per memory for the EXP pedals (MEMORY), or to use the same settings for all memories (SYSTEM).
	SYSTEM (System)	Sets whether to use different settings per memory for the EXP pedals (MEMORY), or to use the same settings for all memories (SYSTEM).

*1 The relevant CTL1.Mode–CTL5.Mode parameters must be set to MoMEnt (Moment).

*2 Use caution, as the output volume may increase when you switch the delay on/off while holding or apply modulation.

Assign Settings (ASSIGN)

You can assign the functions you prefer to the [CTL 1] switch and to the footswitches you've connected.

Up to eight assign settings can be saved for each memory.

NOTE

As the EVH memory parameters are unreleased, you can't assign them to the SETUP items when selecting an EVH memory.

1. Press the [SETUP] button.

The parameter to set is shown in the display.

2. Use the [TIME] buttons to select "ASSIGN", and press the [SETUP] (ENTER) button.



3. Use the [TIME] buttons to select the switch assignment "A1S1" (Assign 1 Switch)–"A8S8" (Assign 8 Switch), and use the [DEPTH] buttons to set this to "ON".

MEMO

All assignments are turned off by default, and the setting parameters are not shown. To set an assignment, first turn on the assignment's switch.

4. Use the [TIME] buttons to select a parameter, and then use the [DEPTH] buttons to change the value.

Assign parameters

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
A1S1 (Assign 1 Switch) : A8S8 (Assign 8 Switch)	OFF (off) ON (on)	Turns Assign 1–8 on/off. When this is turned on, you can set the following parameters.
A1SRC (Assign 1 Source) : A8SRC (Assign 8 Source)	CTL 1-CTL 5 (CTL 1–CTL 5)	CTL 1–CTL 5 switches
	E1P1 (EXP1) E1P2 (EXP2)	EXP1, EXP2 pedal
	GAFC 1-GAFC 4 (GA-FC [CH1]–[CH4]) GAFCP (GA-FC [Panel]) GAFCE (GA-FC [Effects])	GA-FC [CH1]–[CH4] switch, GA-FC [Pedal] switch, GA-FC [Effect] switch
	GAFC E1 (GA-FC EXP1) GAFC E2 (GA-FC EXP2)	GA-FC EXP1, EXP2 pedal (*1)
	GAFC S1 (GA-FC S1) GAFC S2 (GA-FC S2)	GA-FC S1, S2 (*1)
	CC01-CC31 (CC01–CC31) CC64-CC95 (CC64–CC95)	CC01–31, CC64–95
	Toggle	The setting is toggled OFF (minimum value) or ON (maximum value) with each operation.
	Moment	The normal state is OFF (minimum value), and is ON (maximum value) only while the controller is operated.

*1 Pedal jack of the GA-FC

GA-FC



GA-FC EX



GAFC E1

(GA-FC EXP1)

GAFC E2

(GA-FC EXP2)

Sets the functions of the EXP pedal.

GAFC S1

(GA-FC S1)

GAFC S2

(GA-FC S2)

Sets the functions of the footswitch.

Configuring the External Controllers

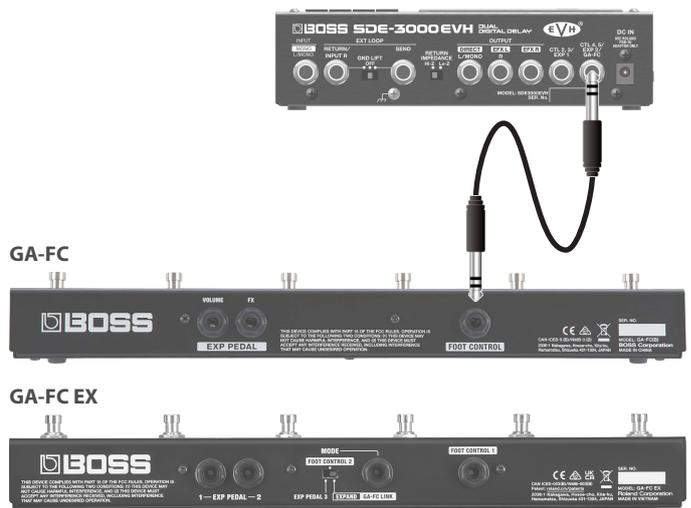
Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
		This selects the function assigned to the controller. Set the minimum/maximum values for each selected function as a Min/Max value. Toggle between the “Min” and “Max” parameters according to the mode for each assignment.
d 1SH (DDL 1 Switch)	DDL 1	Turns the delay on/off.
d 2SH (DDL 2 Switch)	DDL 2	
d 1L (DDL 1 Time Lch)	L channel of DDL 1	Adjusts the delay time.
d 1R (DDL 1 Time Rch)	R channel of DDL 1	
d 2L (DDL 2 Time Lch)	L channel of DDL 2	
d 2R (DDL 2 Time Rch)	R channel of DDL 2	
d 1FB (DDL 1 Feedback)	DDL 1	Adjusts the amount of feedback.
d 2FB (DDL 2 Feedback)	DDL 2	
d 1OUT (DDL 1 Output)	DDL 1	Adjusts the output volume of the delay sound.
d 2OUT (DDL 2 Output)	DDL 2	
d 1RATE (DDL 1 Rate)	DDL 1	Adjusts the delay rate.
d 2RATE (DDL 2 Rate)	DDL 2	
d 1DEPTH (DDL 1 Depth)	DDL 1	Adjusts the delay dept.
d 2DEPTH (DDL 2 Depth)	DDL 2	
d 1MOD (DDL 1 Modulation)	DDL 1	Turns the modulation on/off. * Works the same as the [MOD] button on the top panel.
d 2MOD (DDL 2 Modulation)	DDL 2	
d 1FBPH (DDL 1 Feedback Phase)	DDL 1	Switches the FEEDBACK PHASE on/off. * Works the same as the [FEEDBACK PHASE] button on the top panel.
d 2FBPH (DDL 2 Feedback Phase)	DDL 2	
d 1LEV (Direct Level)		Adjusts the direct level.
SR (Send Return Switch)		Turns the send/return switch on/off.
FVS (Foot Volume Switch)		Turns the foot volume on/off.
PP (Pedal Position)		Pedal position
A 1 Min : A 8 Min (Assign 8 Min)		The variable range differs depending on the parameter. This sets the minimum value for the range in which the parameter can change.
A 1 Max : A 8 Max (Assign 8 Max)		The variable range differs depending on the parameter. This sets the maximum value for the range in which the parameter can change.

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
A 1 ACT Low : A 8 ACT Low (Assign 1 ACT Low)	0-126	You can set the controllable range for target parameters within the source's operational range. Target parameters are controlled within the range set with ACT LOW and ACT HIGH. You should normally set ACT LOW to 0 and ACT HIGH to 127.
A 1 ACT High : A 8 ACT High (Assign 1 ACT High)		
A 1 ACT High : A 8 ACT High (Assign 1 ACT High)	1-127	

Connecting the GA-FC

NOTE

- If you're using a GA-FC, turn the GAFC switch ON before connecting. The unit may not work correctly if you connect the GA-FC first.
- The GA-FC is only compatible with the system settings. You can't configure the settings for each memory.



Connect a stereo cable to the GA-FC jack.

Set the “GAFC SW” parameter to ON when you use the GA-FC.

- * This unit supports the use of foot controllers. When connecting, make sure to use a stereo cable.
- * Use cables that do not contain resistors.

Supported foot controllers

Sold separately: GA-FC, GA-FC EX

MEMO

See the respective Owner's Manuals for details on how to use the GA-FC and the GA-FC EX.

This unit does not have a link function to support a second GA-FC EX.

Turning GAFC SW on

1. Press the [SETUP] button.
The parameter to set is shown in the display.
2. Use the [TIME] buttons to select "GA-FC", and press the [SETUP] (ENTER) button.
3. Use the [DEPTH] buttons to set "GAFC.SW" (GA-FC Switch) to "on".



NOTE

Set "GA-FC" to "OFF" if you are using an external pedal connected to the CTL4, 5/EXP2 jack.

4. Use the [TIME] buttons to select a parameter, and then use the [DEPTH] buttons to change the value.

GA-FC Settings (GA-FC)

If you're using a GA-FC, turn the GAFC switch ON before connecting. The unit may not work correctly if you connect the GA-FC first.

→ "Turning GAFC SW on" (p. 33)

1. Press the [SETUP] button.
The parameter to set is shown in the display.
2. Use the [TIME] buttons to select "GA-FC", and press the [SETUP] (ENTER) button.

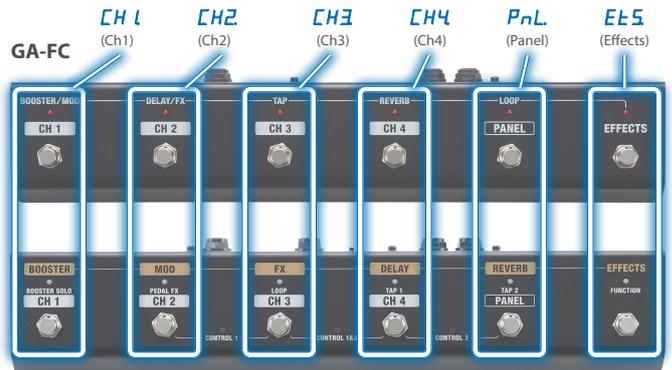


3. Use the [TIME] buttons to select a parameter, and then use the [DEPTH] buttons to change the value.

GA-FC parameters

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
GAFC.SW (GA-FC Switch)	OFF (off)	The GA-FC is disabled for the CTL4, 5/EXP2/GA-FC jack.
	ON (on)	The GA-FC is enabled for the CTL4, 5/EXP2/GA-FC jack.

GA-FC switch



GA-FC EX

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation	
	OFF (off)	The GA-FC is not used.	
	bPnLAP (BPM Tap)	BPM	
	d12tAP (DDL 1/DDL 2 Tap)	DDL 1 and DDL 2 (at the same time)	
	d1LtAP (DDL 1 Lch Tap)	L channel of DDL 1	Tap to input the delay time.
	d1RtAP (DDL 1 Rch Tap)	R channel of DDL 1	
	d2LtAP (DDL 2 Lch Tap)	L channel of DDL 2	
	d2RtAP (DDL 2 Rch Tap)	R channel of DDL 2	
	d125H (DDL 1/DDL 2 Switch)	DDL 1 and DDL 2 (at the same time)	
	d15H (DDL 1 Switch)	DDL 1	Turns the effect(s) on/off.
	d25H (DDL 2 Switch)	DDL 2	
CH1Fn (Ch1 Func)	d12HLd (DDL 1/DDL 2 Hold)	DDL 1 and DDL 2 (at the same time)	The delay sound repeats for as long as you press the switch (*1).
CH4Fn (Ch4 Func)	d1HoLd (DDL 1 Hold)	DDL 1	
PnL.Fn (Panel Func)	d2HoLd (DDL 2 Hold)	DDL 2	
ETS.Fn (Effects Func)	d12MoM (DDL 1/DDL 2 MOMENT)	DDL 1 and DDL 2 (at the same time)	The delay sound is output for as long as you press the switch (*1).
	d1MoM (DDL 1 MOMENT)	DDL 1	
	d2MoM (DDL 2 MOMENT)	DDL 2	
	bYPASS (Bypass)	Turns the bypass on/off. When this is on, the audio input is outputted as-is. → "Bypass circuit diagram (using an external controller to activate bypass)" (p. 35)	
	nEUp (Memory up)	Switches to the next memory.	
	nEDn (Memory down)	Switches to the previous memory.	
	SndrEt (Send/Return)	Turns the send/return on/off.	
	nEUn (Memory Number)	Selects the memories that you set in CH1Fn-CH4Fn, PnL.Fn and ETS.Fn.	

Configuring the External Controllers

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
<i>CH 1d 1HLd</i> (CH1 DDL 1 Hold) ⋮ <i>CH4d 1HLd</i> (CH4 DDL 1 Hold) <i>PnLd 1HLd</i> (Panel DDL 1 Hold) <i>Etsd 1HLd</i> (Effects DDL 1 Hold) ⋮ <i>Etsd2HLd</i> (Effects DDL 2 Hold)	0-120	When <i>CH 1Fn-EtsFn</i> is <i>d 1HLd, d 1HoLd, d2HoLd</i> . Sets the Hold level.
<i>CH 1nuπ</i> (CH1 Number) ⋮ <i>CH4nuπ</i> (CH1 Number) <i>PnLnuπ</i> (Panel Number) <i>Etsnuπ</i> (Effects Number)	EUH 1-C84	This sets the memory number to recall for each GA-FC switch. EVH1-EVH8, A1-A4, B1-B4, C1-C84
<i>CH 1Nd</i> (CH1 Mode) ⋮ <i>CH4Nd</i> (CH4 Mode) <i>PnLNd</i> (Panel Mode) <i>EtsNd</i> (Effects Mode)	toGGLE (Toggle) noNEnt (Moment)	When <i>CH 1Fn-EtsFn</i> is off and <i>tAP, nENuP, nENdn, nENnuπ</i> are being used, this parameter is not shown. Toggles between on and off each time you operate the control. Turns on only while you are pressing down on the switch, and turns off otherwise.

GA-FC pedal jack

GA-FC



E 1FC (Exp1 Func) **E2FC** (Exp2 Func) Sets the functions of the EXP pedal.

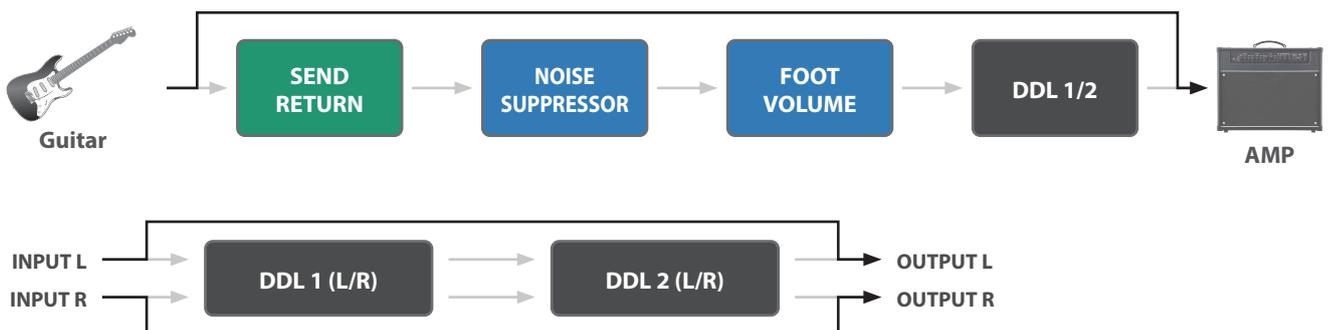
E 1SwF (E1 Switch Func) **E2SwF** (E2 Switch Func) Sets the functions of the footswitch.

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
	oFF (off)	The EXP 1 and EXP 2 pedals connected to the GA-FC are not used.
	FU (Foot Volume)	Adjusts the foot volume level (Pedal Position).
	d 1e 1NL (DDL 1 Time Lch)	L channel of DDL 1
	d 1e 1Nr (DDL 1 Time Rch)	R channel of DDL 1
	d2e 1NL (DDL 2 Time Lch)	L channel of DDL 2
	d2e 1Nr (DDL 2 Time Rch)	R channel of DDL 2
<i>E 1Fn</i> (Exp1 Func)	d 1FbF (DDL 1 Feedback)	DDL 1 Adjusts the amount of feedback.
<i>E2Fn</i> (Exp2 Func)	d2FbF (DDL 2 Feedback)	DDL 2
	d 1LEU (DDL 1 Level)	DDL 1 Adjusts the volume.
	d2LEU (DDL 2 Level)	DDL 2
	d 1NrAt (DDL 1 Modulation Rate)	DDL 1 Adjusts the modulation rate.
	d2NrAt (DDL 2 Modulation Rate)	DDL 2
	d 1NdPt (DDL 1 Modulation Depth)	DDL 1 Adjusts the modulation depth.
	d2NdPt (DDL 2 Modulation Depth)	DDL 2
	d 1rLUL (Direct Level)	Adjusts the direct level.
<i>E 1Min</i> (Exp1 Min) <i>E2Min</i> (Exp2 Min)		The variable range differs depending on the parameter. Sets the minimum value for the parameter controlled by an expression pedal connected to the GA-FC.
<i>E 1Max</i> (Exp1 Max) <i>E2Max</i> (Exp2 Max)		The variable range differs depending on the parameter. Sets the maximum value for the parameter controlled by an expression pedal connected to the GA-FC.

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
	oFF (off)	The GA-FC is not used.
	bPnTap (BPM Tap)	BPM
	d 12Tap (DDL 1/DDL 2 Tap)	DDL 1 and DDL 2 (at the same time)
	d 1LTap (DDL 1 Lch Tap)	L channel of DDL 1
	d 1RTap (DDL 1 Rch Tap)	R channel of DDL 1
	d 2LTap (DDL 2 Lch Tap)	L channel of DDL 2
	d 2RTap (DDL 2 Rch Tap)	R channel of DDL 2
	d 12Sw (DDL 1/DDL 2 Switch)	DDL 1 and DDL 2 (at the same time)
	d 1Sw (DDL 1 Switch)	DDL 1
	d 2Sw (DDL 2 Switch)	DDL 2
E 15HF (E1 Switch Func) E 25HF (E2 Switch Func)	d 12Hd (DDL 1/DDL 2 Hold)	DDL 1 and DDL 2 (at the same time)
	d 1HoLd (DDL 1 Hold)	DDL 1
	d 2HoLd (DDL 2 Hold)	DDL 2
	d 12MoM (DDL 1/DDL 2 MOMENT)	DDL 1 and DDL 2 (at the same time)
	d 1MoM (DDL 1 MOMENT)	DDL 1
	d 2MoM (DDL 2 MOMENT)	DDL 2
	bYPASS (Bypass)	Turns the bypass on/off. When this is on, the audio input is outputted as-is.
	MEUp (Memory up)	Switches to the next memory.
	MEdn (Memory down)	Switches to the previous memory.
	Send-Ret (Send/Return)	Turns the send/return on/off.
	MENum (Memory Number)	Sets the memory number.

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
E 15Hd 1HL (E1 Switch DDL 1 Hold Level)		When E 15HF , E 25HF are d 12Hd , d 1HoLd , or d 2HoLd , you can set the Hold Level.
E 15Hd 2HL (E1 Switch DDL 2 Hold Level)		
E 25Hd 1HL (E2 Switch DDL 1 Hold Level)	0-120	
E 25Hd 2HL (E2 Switch DDL 2 Hold Level)		
		Sets the Hold level.
		When E 15HF , E 25HF are oFF or Tap , this parameter is not shown.
E 15Mo (E1 Switch Mode)	toGGLE (Toggle)	Toggles between on and off each time you operate the control.
E 25Mo (E2 Switch Mode)	MoMent (Moment)	Turns on only while you are pressing down on the switch, and turns off otherwise.
E 15Num (E1 Switch Number)		When E 15HF , E 25HF are MENum , this sets the memory number to recall for E1 or E2 switch.
E 25Num (E2 Switch Number)	EVH 1-C84	EVH1-EVH8, A1-A4, B1-B4, C1-C84

Bypass circuit diagram (using an external controller to activate bypass)



Connecting with an External MIDI Device

Connecting External Devices

Connect an external device to this unit via MIDI when you want to exchange MIDI messages or synchronize to a clock signal.

MIDI (OUT/IN) jacks

Use TRS/TRS or TRS/MIDI connecting cables to connect this unit to an external MIDI device.

Sold separately: **TRS/MIDI connecting cable**
BMIDI-5-35, BMIDI-1-35 or BMIDI-2-35



With this unit, you can use MIDI to perform the following operations.

Operations from this unit

Operation	Explanation
Transmit program change messages	When you select a memory on this unit, the program change message specified in MIDI PC MAP (p. 38) is also transmitted. The external MIDI device that receives this program change message then switches to the corresponding settings.
Output control change messages	The data when operating a footswitch or expression pedal connected to the [CTL1] switch, the CTL 2, 3/EXP 1 jack or the CTL 4, 5/EXP2/GA-FC jack is output as control change messages. You can use these messages to control the parameters of an external MIDI device.

Operations from an external MIDI device

Operation	Explanation
Switch between memory numbers	The memories of this unit switch when the corresponding program change messages are received from the external MIDI device. This unit ignores Bank Select messages that are received.
Receive control change messages	This unit can receive control change messages to control a specified parameter while you're playing.

MIDI Settings (MIDI)

1. Press the [SETUP] button.
The parameter to set is shown in the display.
2. Use the [TIME] buttons to select "n id i", and press the [SETUP] (ENTER) button.

3. Use the [TIME] buttons to select a parameter, and then use the [DEPTH] buttons to change the value.

MIDI parameters

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
<i>rllCH</i> (Rx Channel)	<i>oFF</i> (off) <i>CH 1-CH 16</i> (CH.1-CH.16)	Specifies the MIDI receive channel. When this is "oFF", channel messages are not received.
<i>tlCH</i> (Tx Channel)	<i>oFF</i> (off) <i>CH 1-CH 16</i> (CH.1-CH.16) <i>rll</i> (Rx)	Specifies the MIDI transmit channel. When this is "oFF", channel messages are not transmitted. When this is set to "rll", the transmit channel is set to be the same as the receive channel.
<i>PC.in</i> (PC IN)	<i>oFF</i> (off) <i>oN</i> (on)	Specifies whether program changes are received (<i>oN</i>) or not received (<i>oFF</i>).
<i>PC.out</i> (PC OUT)	<i>oFF</i> (off) <i>oN</i> (on)	Specifies whether program changes are transmitted (<i>oN</i>) or not transmitted (<i>oFF</i>).
<i>CC.in</i> (CC IN)	<i>oFF</i> (off) <i>oN</i> (on)	Specifies whether control change messages are received (<i>oN</i>) or not (<i>oFF</i>). This unit can use CC messages it receives to control the same operations as a knob or footswitch via MIDI.
<i>CC.out</i> (CC OUT)	<i>oFF</i> (off) <i>oN</i> (on)	Specifies whether control changes are transmitted (<i>oN</i>) or not transmitted (<i>oFF</i>).
<i>d tl nEL</i> (DDL 1 Time L) <i>d tl nEr</i> (DDL 1 Time R) <i>d 2t nEL</i> (DDL 2 Time L) <i>d 2t nEr</i> (DDL 2 Time R)	<i>oFF</i> (off) <i>cc 0 1-cc 3 1</i> (CC01-CC31) <i>cc 64-cc 95</i> (CC64-CC95)	Specifies the controller number corresponding to each controller.
<i>d lFbL</i> (DDL 1 Feedback) <i>d 2FbL</i> (DDL 2 Feedback)		
<i>d lout</i> (DDL 1 Out) <i>d 2out</i> (DDL 2 Out)		
<i>d lndrAt</i> (DDL 1 Modulation Rate) <i>d 2ndrAt</i> (DDL 2 Modulation Rate)		

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
<i>d 1n d d P t</i> (DDL 1 Modulation Depth)		
<i>d 2n d d P t</i> (DDL 2 Modulation Depth)		
<i>d 1 F t o n</i> (DDL 1 Filter on)		
<i>d 2 F t o n</i> (DDL 2 Filter on)		
<i>d 1 t n o n</i> (DDL 1 Time on)		
<i>d 2 t n o n</i> (DDL 2 Time on)		
<i>d 1 P H o n</i> (DDL 1 Phase on)		
<i>d 2 P H o n</i> (DDL 2 Phase on)		
<i>d 1 n d o n</i> (DDL 1 Mod on)		
<i>d 2 n d o n</i> (DDL 2 Mod on)		
<i>d 1 F P o n</i> (DDL 1 Feedback Phase on)		
<i>d 2 F P o n</i> (DDL 2 Feedback Phase on)		
<i>d 1 2 t A P</i> (DDL 1/DDL 2 Tap)		
<i>d 1 L t A P</i> (DDL 1 Lch Tap)		
<i>d 1 r t A P</i> (DDL 1 Rch Tap)	oFF (off)	Specifies the controller number corresponding to each controller.
<i>d 2 L t A P</i> (DDL 2 Lch Tap)	cc 0 1 - cc 3 1 , (CC01–CC31)	
<i>d 2 r t A P</i> (DDL 2 Rch Tap)	cc b 4 - cc 9 5 (CC64–CC95)	
<i>d 1 H o L d</i> (DDL 1 Hold)		
<i>d 2 H o L d</i> (DDL 2 Hold)		
<i>d 1 M o m e n t</i> (DDL 1 Moment)		
<i>d 2 M o m e n t</i> (DDL 2 Moment)		
<i>S d r E t S w</i> (Send Return Switch)		
<i>F u P L P o S</i> (Foot Volume Pedal Position)		
<i>d i r L E V L</i> (Direct Level)		
<i>C t L 1</i> (Control 1)		
<i>C t L 2</i> (Control 2)		
<i>C t L 3</i> (Control 3)		
<i>C t L 4</i> (Control 4)		
<i>C t L 5</i> (Control 5)		
<i>E 1 P 1</i> (Exp 1)		
<i>E 1 P 2</i> (Exp 2)		
<i>b y P A S S</i> (Bypass)	oFF (off)	Specifies the controller number corresponding to each controller.
<i>d 1 S w</i> (DDL 1 Switch)	cc 0 1 - cc 3 1 , (CC01–CC31)	
<i>d 2 S w</i> (DDL 2 Switch)	cc b 4 - cc 9 5 (CC64–CC95)	

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
<i>S y n c</i> (Sync)		Specifies the input to which the tempo clock is synchronized. Guaranteed operating range: 40–250 BPM
	<i>i n t</i> (Internal)	Synchronizes with the internal tempo.
	<i>u s b</i> (USB)	Synchronizes to the MIDI clocks received via the USB port.
	<i>M I D I</i> (MIDI)	Synchronizes to the MIDI clocks received via the MIDI IN jack.
<i>r e a l t i m e m s g s r c</i> (Real Time Message Source)		This unit normally operates using its internal tempo, but synchronizes the tempo to the MIDI clock if MIDI clock data is received via the USB port or the MIDI IN connector. * When both USB and MIDI are input, USB is given priority.
	<i>i n t</i> (Internal)	Internal real-time messages are used as the clock source.
	<i>u s b</i> (USB)	Real-time messages from the USB port are used as the clock source.
	<i>M I D I</i> (MIDI)	Real-time messages from the MIDI IN jack are used as the clock source.
<i>M I D I t h r u</i> (MIDI Thru)		This specifies the jack from which to output the MIDI messages that are received at the MIDI IN jack.
	<i>o F F</i> (off)	Not transmitted.
	<i>u s b</i> (USB)	Transmitted from the USB port.
	<i>M I D I</i> (MIDI)	Transmitted from the MIDI OUT jack.
<i>u s b t h r u</i> (USB Thru)	<i>u n</i> (USB, MIDI)	Transmitted from the USB port and the MIDI OUT jack.
		This specifies the jack from which to output the MIDI messages that are received at the USB port.
	<i>o F F</i> (off)	Not transmitted.
	<i>u s b</i> (USB)	Transmitted from the USB port.
<i>d e v i c e i d</i> (Device ID)	<i>M I D I</i> (MIDI)	Transmitted from the MIDI OUT jack.
	<i>u n</i> (USB, MIDI)	Transmitted from the USB port and the MIDI OUT jack.
	1 7 - 3 2	Sets the device ID number for transmitting and receiving system exclusive messages.

Configuring the Program Change Map for the Memories

You can use the program change map to customize which memories on the SDE-3000EVH correspond to which program change messages sent from an external MIDI device.

1. Press the [SETUP] button.

The parameter to set is shown in the display.

2. Use the [TIME] buttons to select “PC 128”.



3. Press the [SETUP] button.



4. Use the [TIME] buttons to select the program number, and use the [DEPTH] buttons to set the memory number.

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
PC.00 1-PC.128	EVH 1-128	This sets the memory number that corresponds to the program number.

Connecting to a Computer

Using the USB Port (USB Type-C®)

Installing the USB Driver

You must install the USB driver before connecting this unit to a computer.

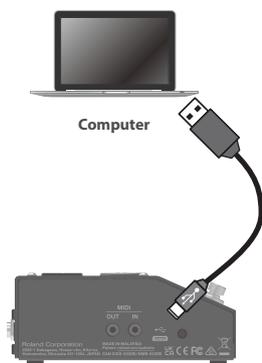
Download the USB driver from the BOSS website.

Install this special driver before making a USB connection. For details, refer to Readme.htm in the downloaded file.

→ <https://www.boss.info/support/>

Connecting to a Computer

1. Connect your computer using a commercially available USB cable that supports USB 2.0.



SDE-3000EVH

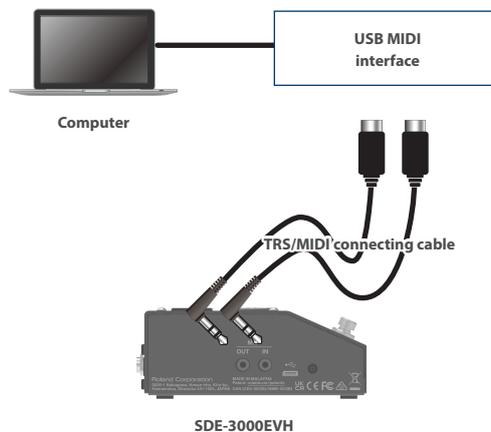
NOTE

An error message is shown when the USB connection is severed.



Using the MIDI Jacks on the Side Panel

Use TRS/TRS or TRS/MIDI connecting cables to connect this unit to an external MIDI device.



SDE-3000EVH

Sold separately:

TRS/TRS connecting cable
BCC-1-3535, BCC-2-3535

TRS/MIDI connecting cable
BMIDI-5-35, BMIDI-1-35, BMIDI-2-35

NOTE

An error message is shown when the MIDI IN connection is severed.



Check whether there is a problem with the MIDI cable connected to the MIDI IN jack of this unit, or whether the MIDI cable has not come loose.

System Settings

Configuring the Range of Memories Selectable with the Foot Pedal (Memory Extent)

1. Press the [SETUP] button.

The parameter to set is shown in the display.

2. Use the [TIME] buttons to select "SYSTEM", and press the [SETUP] (ENTER) button.



3. Use the [TIME] buttons to select a parameter, and then use the [DEPTH] buttons to change the value.

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
MEMMIN (Memory Min)	EVH 1-C.04	This sets the range of memories that you can select with the foot pedal.
MEMMAX (Memory Max)		

Example

Bank	EVH	A	B	C
Memory	1 ... 8	1 ... 4	1 ... 4	1 ... 84

Range of memories that can be selected using the pedal (EVH1-C.01)

Inheriting EXP Pedal Setting when Switching Memory (EXP Hold)

1. Press the [SETUP] button.

The parameter to set is shown in the display.

2. Use the [TIME] button to select "SYSTEM", and then press the [SETUP] button.



3. Use the [TIME] buttons to select a parameter, and then use the [DEPTH] buttons to change the value.

Parameter [TIME] button	Value [DEPTH] button	Explanation
EXP1PLHD (EXP 1 Pedal Hold) EXP2PLHD (EXP 2 Pedal Hold)	OFF	The operational status of the <i>EXP1</i> and <i>EXP2</i> is not carried over when memories are switched.
	ON	The operational status of the EXP 1 and EXP 2 is carried over when memories are switched, if the <i>EXP1</i> and <i>EXP2</i> setting is the same as the previous memory. For example, if EXP PEDAL FUNCTION is set to FOOT VOLUME in both memories (the one before and the one after the change), the volume corresponding to the position (angle) the pedal is in at the time of the memory change will be maintained after the memory change. On the other hand, if the memory being changed to is set to WAH, the volume is in accordance with the value set within the memory, and you'll obtain a wah effect that is in accordance with a value that reflects the current position (angle) of the pedal.

Restoring the Unit to the Factory Settings

Here's how to restore the SDE-3000EVH to its factory settings.

1. Press the [SETUP] button.



The parameter to set is shown in the display.



2. Use the [TIME] buttons to select "FCLrESEt".



3. Press the [SETUP] button.



4. Use the [TIME] and [DEPTH] buttons to select the areas (ranges) affected by the factory reset.

Press the [▶] (EXIT) button if you want to cancel and return to the menu.

Target	Explanation
545	System settings
EVH 1-EVH8	EVH 1-8
RD 1-RD4	1-4 in bank A
b.D 1-b.D4	1-4 in bank B
C.D 1-C84	1-84 in bank C

MEMO

To reset everything, select "545 - C84".

5. Press the [BANK A/B] button.

A confirmation message appears.



"SURE" blinks in the display.

6. Press the [BANK A/B] button to execute the factory reset.

Once the factory reset is complete, the unit returns to play screen.

Main Specifications

Sampling Frequency	48 kHz
AD Conversion	24 bits + AF method * AF method (Adaptive Focus method) This is a proprietary method from Roland & BOSS that vastly improves the signal-to-noise (SN) ratio of the AD and DA converters.
DA Conversion	32 bits
Processing	32-bit floating point
Effects	SDE-3000 STEREO DELAY x 2 NOISE SUPPRESSOR FOOT VOLUME
Memory	100
Nominal Input Level	INPUT MONO jack: -10 dBu INPUT L/MONO jacks: -10 dBu RETURN/INPUT R jacks: -10 dBu
Maximum Input Level	INPUT MONO jack: +12 dBu INPUT L/MONO jacks: +12 dBu RETURN/INPUT R jacks: +12 dBu
Input Impedance	INPUT MONO jack: 1 MΩ INPUT L/MONO jacks: 1 MΩ RETURN/INPUT R: 1 M ohm or 180 kΩ (switching)
Nominal Output Level	OUTPUT DIRECT jack: -10 dBu OUTPUT EFX L jack: -10 dBu OUTPUT EFX R jack: -10 dBu OUTPUT L/MONO jacks: -10 dBu OUTPUT R jack: -10 dBu SEND: -10 dBu
Output Impedance	OUTPUT DIRECT jack: 1 kΩ OUTPUT EFX L jack: 1 kΩ OUTPUT EFX R jack: 1 kΩ OUTPUT L/MONO jacks: 1 kΩ OUTPUT R jack: 1 kΩ SEND: 1 kΩ
Recommended Load Impedance	OUTPUT DIRECT jack: 10 kΩ or greater OUTPUT EFX L jack: 10 kΩ or greater OUTPUT EFX R jack: 10 kΩ or greater OUTPUT L/MONO jack: 10 kΩ or greater OUTPUT R jack: 10 kΩ or greater SEND: 10 kΩ or greater
Controls	[TIME] buttons [FEEDBACK] buttons [OUT] buttons [RATE] buttons [DEPTH] buttons [1]–[4] buttons [BANK A/B] button [EVH] button [◀] button [▶] button [FILTER] button [TIME x 2] button [DELAY PHASE] button [MOD] button [FEEDBACK PHASE] button [DIGITAL DELAY1] button [DIGITAL DELAY2] button [SETUP] button [DDL1] switch [DDL2] switch [TAP/CTL1] switch GND LIFT switch RETURN IMPEDANCE switch

* 0 dBu = 0.775 Vrms

* This document explains the specifications of the product at the time that the document was issued. For the latest information, refer to the Roland website.

Display	7 segments, 12 digits LED
Connectors	INPUT MONO jack: 1/4-inch phone type INPUT L/MONO jack: 1/4-inch phone type OUTPUT (DIRECT, EFX L, EFX R) jacks: 1/4-inch phone type OUTPUT (L/MONO, R) jacks: 1/4-inch phone type SEND jack: 1/4-inch phone type RETURN/INPUT R jack: 1/4-inch phone type CTL2,3/EXP1 jack: 1/4-inch TRS phone type CTL4,5/EXP2/GA-FC jack: 1/4-inch TRS phone type MIDI (IN, OUT) jacks: Stereo miniature phone type USB port: USB Type-C® DC IN jack
Power Supply	AC Adaptor
Current Draw	450 mA
Dimensions	199 (W) x 135 (D) x 54 (H) mm (including rubber foot) 7-7/8 (W) x 5-3/8 (D) x 2-1/8 (H) inches (including rubber foot)
Weight (excluding AC adaptor)	1.1 kg 2 lbs 7 oz
Accessories	AC adaptor (PSB-1U + AC Cord Set) GND LIFT CABLE x 3 STARTUP GUIDE Leaflet "USING THE UNIT SAFELY" Leaflet "Usage of Ground Lift Cable" Rubber foot x 4
Options	Footswitch: FS-5U, FS-5L Dual footswitch: FS-6, FS-7 Expression Pedal: EV-30, FV-500L, FV-500H, Roland EV-5 Foot Controller :GA-FC, GA-FC EX MIDI/TRS connecting cable: BMIDI-5-35, BMIDI-1-35, BMIDI-2-35, BCC-1-3535, BCC-2-3535

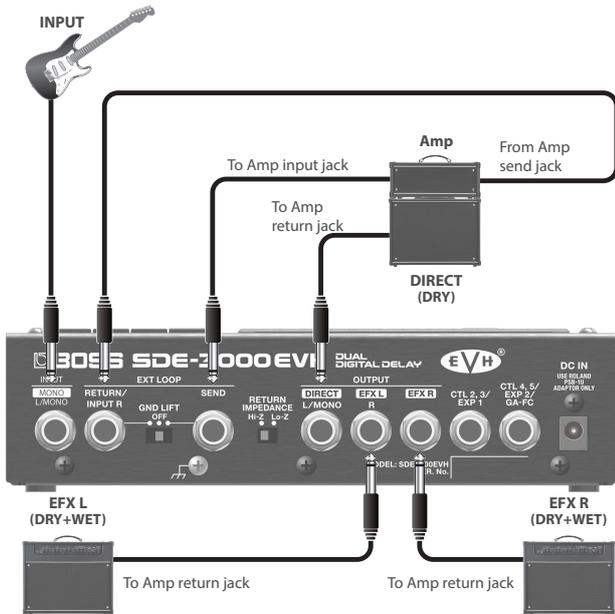
Preset List

Four Eddie Van Halen settings are saved as EVH memories (the detailed parameters are unreleased). Further, there are two types of each of these four settings: a type for output to three amps, and a type for output to a pair of amps in stereo. The OUT LEVEL parameters are optimized for each type.

Outputting to three amps (3-out setting)



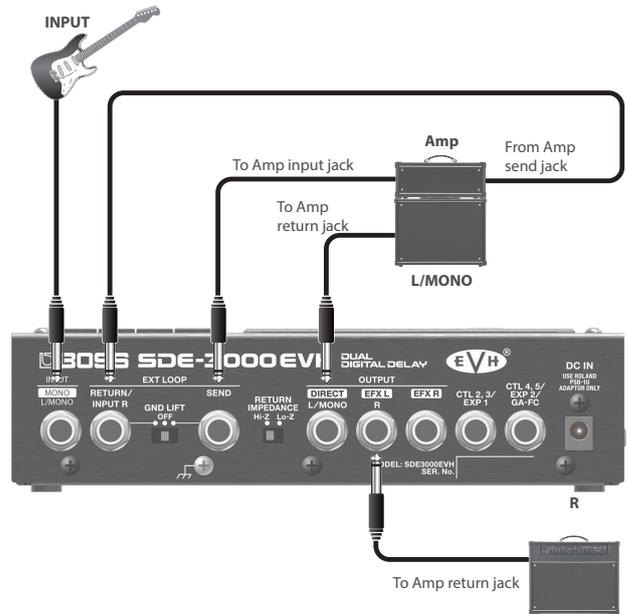
EVH1–EVH4 are memories used when outputting to three amps.



Outputting to two amps (stereo out setting)



EVH5–EVH8 are memories used when outputting in stereo.



Output setting	1	2	3	4
3 out	EVH1	EVH2	EVH3	EVH4
Stereo out	EVH5	EVH6	EVH7	EVH8

MEMO

- The parameters of the corresponding settings (EVH1/EVH5, EVH2/EVH6, EVH3/EVH7, EVH4/EVH8) are set to the same values, except for the OUT LEVEL.
- The delay's OUT LEVEL parameter for EVH1–4 is preadjusted for use with three outputs, whereas the OUT LEVEL parameter for EVH5–8 is preadjusted for use with a stereo output.
- All of the EVH memories (EVH1–8) can be used for either stereo or three-amp output.
- Although the output setting automatically switches according to the number of amps (1–3) connected when you connect an amp, the currently selected EVH memory does not automatically switch to a memory that matches the output setting. You must select a memory that's appropriate for the amp(s) you've connected.
- EVH presets 1-4 are designed to work with a full W/D/W rig. Preset 1 is a long delay with complimentary delay times in the left and right channels. Preset 2 is similar but with medium delay times. Preset 3 is similar but with short delay times. Preset 4 is a mono echo, featuring a delay time Eddie often used on early recordings.
- Press the [EVH] button again to access EVH presets 5-8. They are similar to 1-4 but tweaked to work with more typical stereo or mono rigs.

Preset List

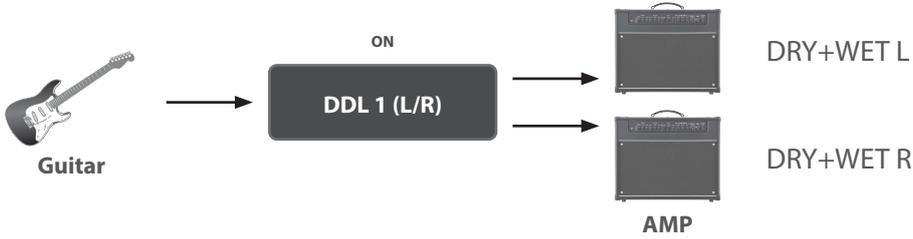
Presets A01 through B04 were created to demonstrate the range of the SDE-3000EVH capabilities. A01-A04 are basic delays that only use DDL1:

A.01

DDL 1 is set to sixteenth note.

STRUCTURE: SERI

BPM: 120

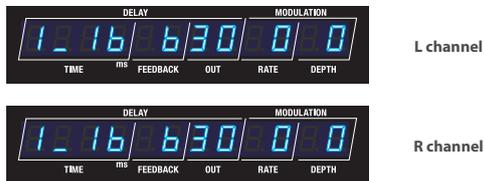


DDL 1 parameter

DDL 1 SW: ON

DDL 1 TYPE: STEREO

DDL 1 TIME LINK: OFF

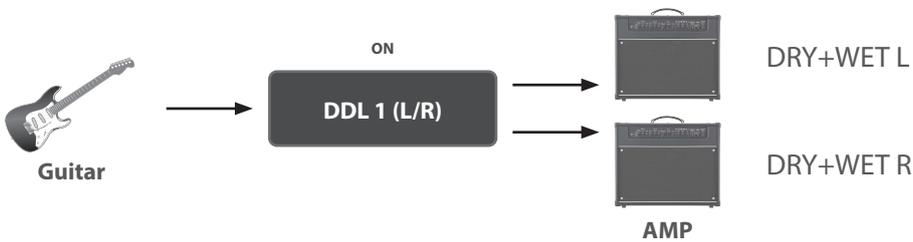


A.02

DDL 1 is set to 400 msec.

STRUCTURE: SERI

BPM: 160

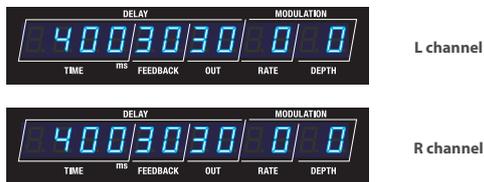


DDL 1 parameter

DDL 1 SW: ON

DDL 1 TYPE: STEREO

DDL 1 TIME LINK: ON

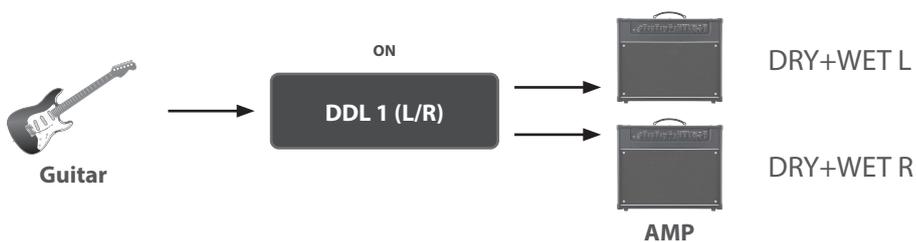


A.03

DDL 1 is set to 450 msec.

STRUCTURE: SERI

BPM: 120



DDL 1 parameter

DDL 1 SW: ON

DDL 1 TYPE: STEREO

DDL 1 TIME LINK: ON

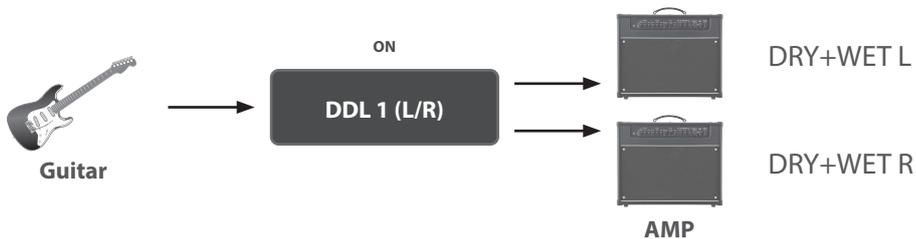


A.04

DDL 1 is set to 380 msec.

STRUCTURE: SERI

BPM: 120



DDL 1 parameter

DDL 1 SW: ON

DDL 1 TYPE: STEREO

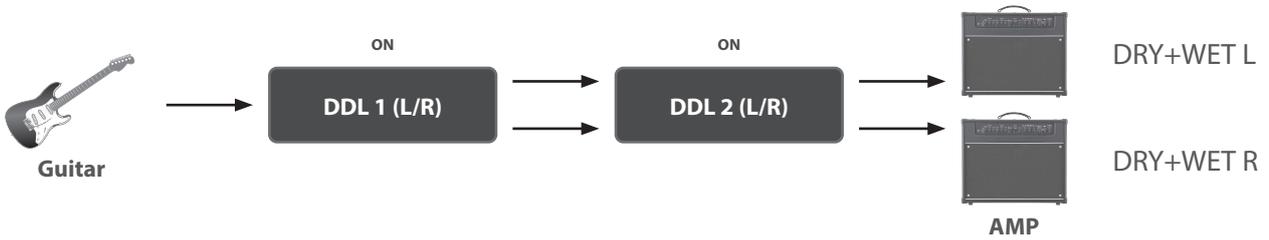
DDL 1 TIME LINK: ON



B.01

DDL 1 is set as follows: 15 msec for Lch, 10 msec for Rch. DDL 2 is set to 370 msec.

STRUCTURE: SERI
BPM: 120



DDL 1 parameter
DDL 1 SW: ON
DDL 1 TYPE: STEREO
DDL 1 TIME LINK: OFF



L channel



R channel

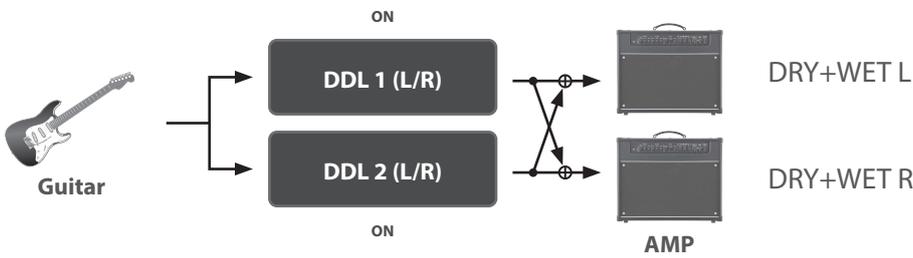
DDL 2 parameter
DDL 2 SW: OFF
DDL 2 TYPE: STEREO
DDL 2 TIMELINK: ON



B.02

DDL 1 is set to 446 msec and DDL 2 is set to 45 msec. This slight difference in delay time between the L/R channels gives a spacious feeling to the sound.

STRUCTURE: PARA1
BPM: 160



DDL 1 parameter
DDL 1 SW: ON
DDL 1 TYPE: STEREO
DDL 1 TIME LINK: ON



L channel



R channel

DDL 2 parameter
DDL 2 SW: OFF
DDL 2 TYPE: STEREO
DDL 2 TIMELINK: ON

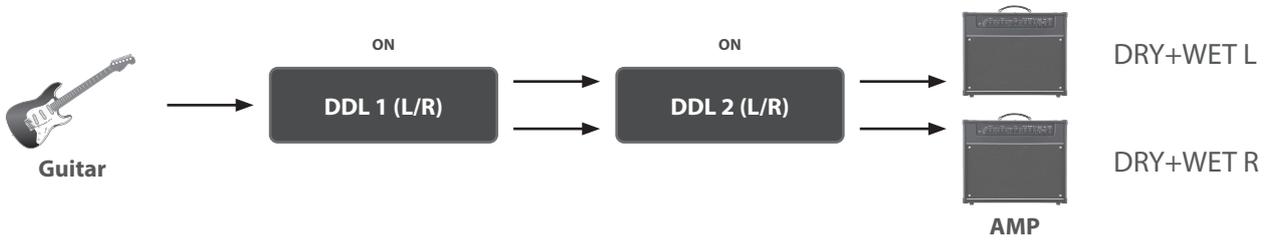


B.03

DDL 1 is set as follows: 502 msec for Lch, 498 msec for Rch. DDL 2 is set as follows: 373 msec for Lch, 375 msec for Rch. The two delays are connected in series for a spacious delay sound.

STRUCTURE: SERI

BPM: 120



DDL 1 parameter

DDL 1 SW: ON
DDL 1 TYPE: STEREO
DDL 1 TIME LINK: OFF



L channel



R channel

DDL 2 parameter

DDL 2 SW: OFF
DDL 2 TYPE: STEREO
DDL 2 TIMELINK: OFF

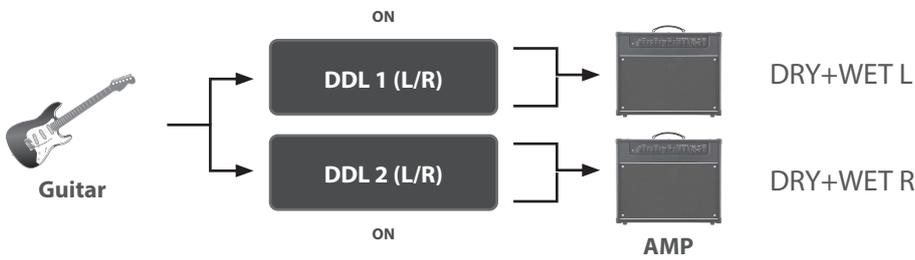


B.04

This delay combines DDL 1 (eighth-note delay) and DDL 2 (quarter note delay) in series.

STRUCTURE: PARA2

BPM: 120



DDL 1 parameter

DDL 1 SW: ON
DDL 1 TYPE: STEREO
DDL 1 TIME LINK: ON



L channel



R channel

DDL 2 parameter

DDL 2 SW: OFF
DDL 2 TYPE: STEREO
DDL 2 TIMELINK: ON

