SDE-3000D
DUAL DIGITAL DELAY

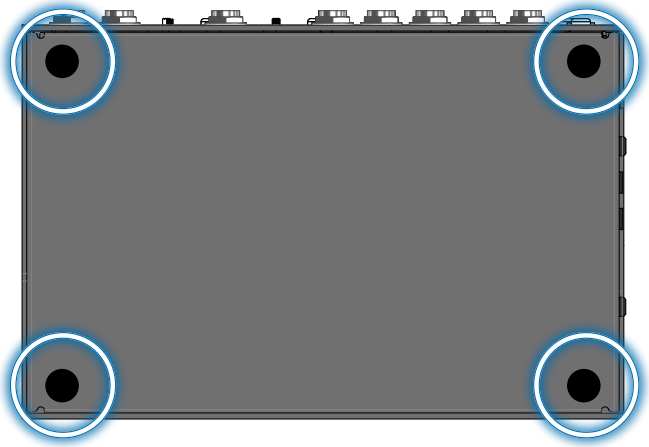
Reference Manual

Getting Ready

Attaching the Rubber Feet

You can attach the rubber feet (included) if necessary.

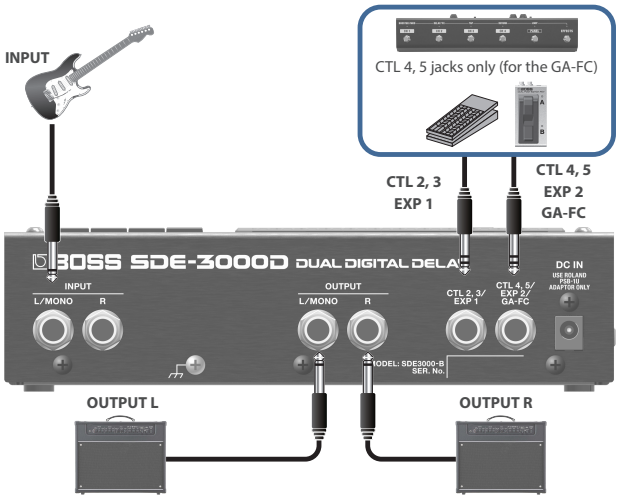
Attach them in the locations shown in the illustration.



* 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-3000D.

For details, refer to "Connecting an Amp and Configuring the Input/ Output Settings" (p. 9).

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.

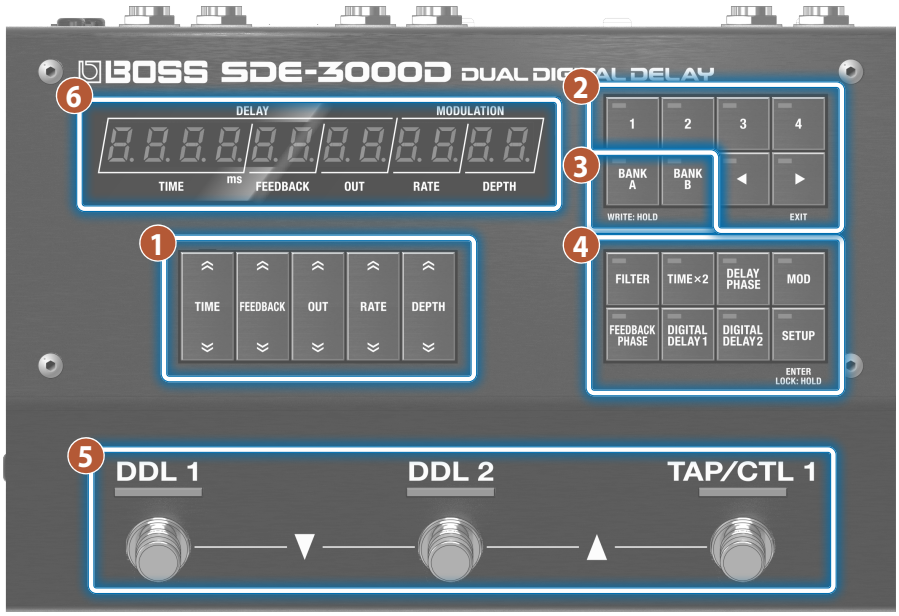
This turns the power of the SDE-3000D on.

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. 15)
	[◄] [►] buttons Switches the play screen in the following order: Input level ⇔ Parameter ⇔ Tempo ⇔ Bank/memory
3 Bank 	**[BANK A] [BANK B] buttons** Switches between banks A and B. You can select the bank C memories (C.01 and up) by using your feet (p. 6).

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.
	[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.
5 Switches	**[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".

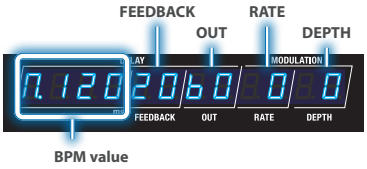
1. Press the [◄] [►] buttons to switch between displays.

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

Parameter display

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

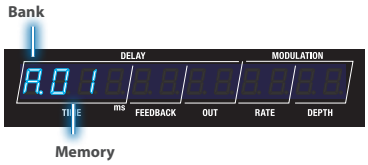
BPM display



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

You can change the function that's controlled by the [TAP/CLT 1] switch.
For details, refer to "Configuring the CTL Function (CTL)" (p. 25).

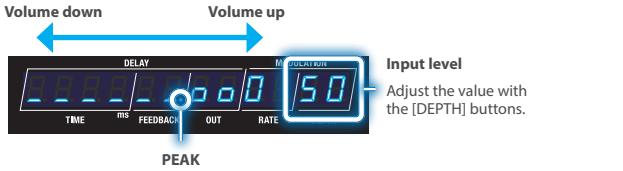
Bank/memory display



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.



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

Rear Panel

Area	Explanation
A	**INPUT 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	INPUT R jack When you connect a device to this jack, the L/R jack pair automatically switches to stereo input. In this case, this jack is used to input the R (right) channel.
C	**OUTPUT 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.
D	**OUTPUT R jack** Connect this to your guitar amp, mixer or other audio equipment.
E	**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. 24).

Area	Explanation
F	**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.
G	**DC IN jack** Connect the AC adaptor here. The SDE-3000D powers up when the AC adaptor is connected to the DC IN jack.
H	**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. 31)

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

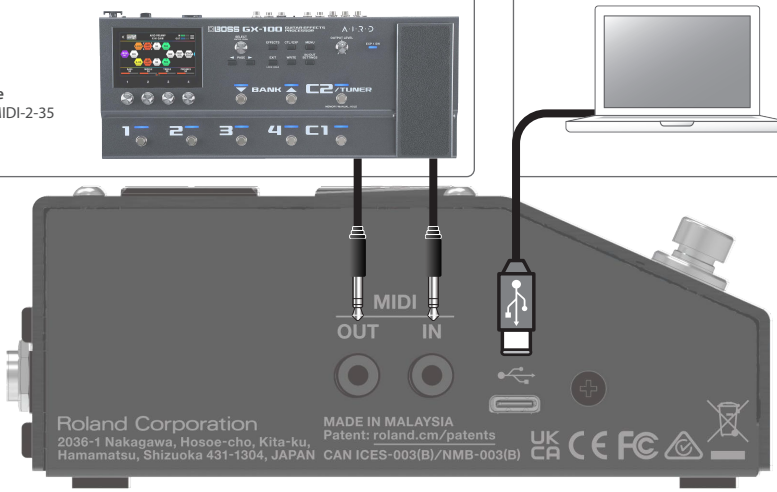
TRS/MIDI connecting cable
BMIDI-5-35, BMIDI-1-35, BMIDI-2-35

USB port (USB Type-C *)

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

➡ "Connecting to a Computer" (p. 34)

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



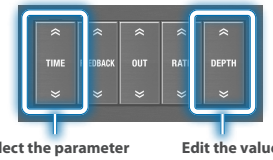
Configuring the Footswitch Mode

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.

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 "FSMd" and "MMod" parameters, and then use the [DEPTH] buttons to change the value.



Select the parameter Edit the value

Parameter	Value	Explanation
FSMd (Footswitch Mode)	MAnuAL (Manual)	Manual mode. Selects one memory at a time.
	MEMory (Memory)	Memory mode. Selects two memories at a time.
MMod (M. Mode)	iMMEd iAt (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-3000D has 100 memories, and you can select the memories via foot control.

Memories: A.01–A.04, B.01–B.04, C.01–C.92

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)

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

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

Memory mode

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 A.01 is selected, the [DDL 1] switch selects and turns on/off the delay for A.01 (odd-numbered memories), and the [DDL 2] switch selects and turns on/off the delay for A.02 (the even-numbered memories).

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 even-numbered memories

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

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

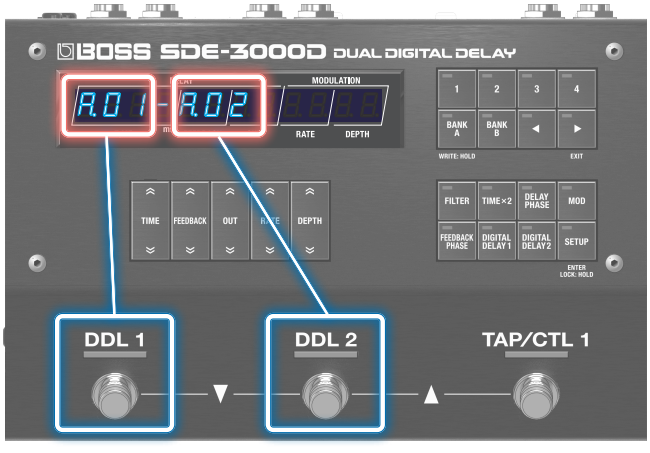
The display changes with each operation. The memory does not switch until you perform the next operation.

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

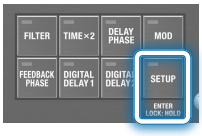
Selects and turns on/off the even-numbered memories

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

Configuring the Input and Output Settings

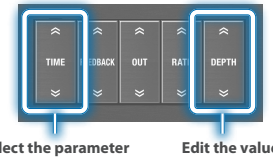
Configuring the Input/Output to Match the Connected Device

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.



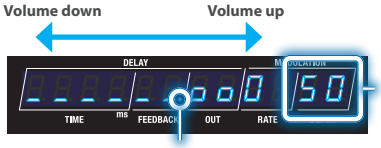
Select the parameter　　Edit the value

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
out (Output Setting)	StErEo (STEREO)	The sound is output in stereo from the OUTPUT L/MONO and R jacks.
	d ir.EFFI (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.
	d ir.MutE (DIRECT MUTE)	Mutes the direct sound.
un iGA 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.
in.Vol (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



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 "outGA in", and then use the [DEPTH] buttons to change the value.

Output gain parameters (in MASTER settings)

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

Connecting an Amp and Configuring the Input/Output Settings

The SDE-3000D 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 "MASTER".

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

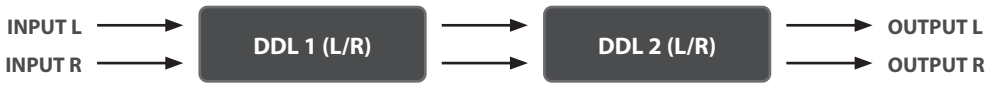
4. Use the [TIME] buttons to select "StrucT", and then use the [DEPTH] buttons to change the value.

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
StrucT (Structure)	SEr 1 (Series)	The two delays are connected in series.
	PArA 1 (Parallel 1)	The two delays are connected in parallel.
	PArA2 (Parallel 2)	Outputs the sound independently from the two delays via the OUTPUT L/MONO and R jacks.

Connected in series (serial)

In series

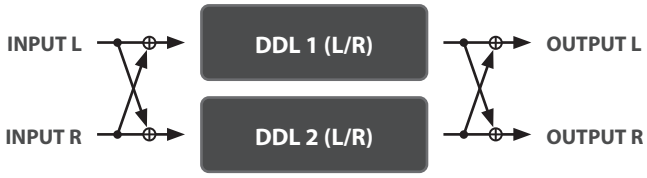
The two delays are connected in series.



Parallel connection

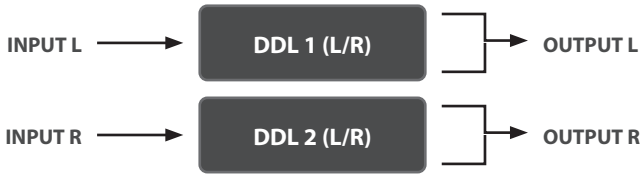
Parallel 1

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.

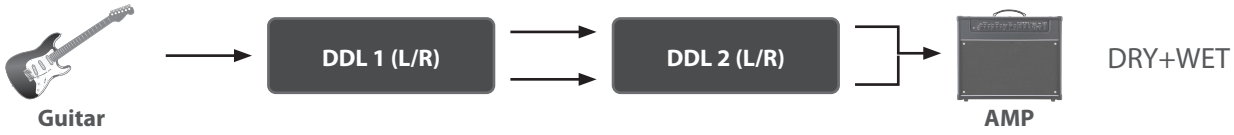
IN OUT settings

[SETUP] → "in out"

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
out (Output Setting)	StErEo (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)

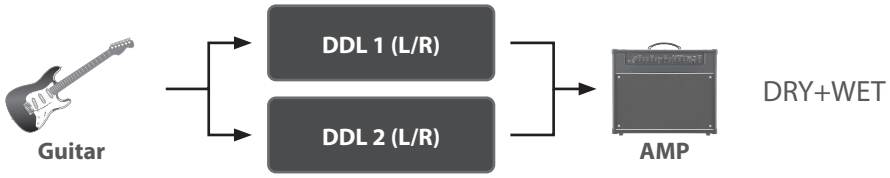
The two delays are connected in series.



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-3000D 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

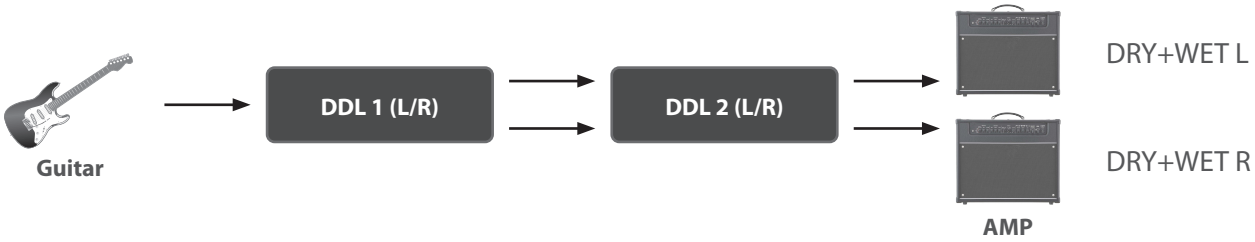
IN OUT settings

[SETUP] → "in out"

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
out (Output Setting)	StErEo (STEREO)	The sound is output in stereo from the OUTPUT L/MONO and R jacks.

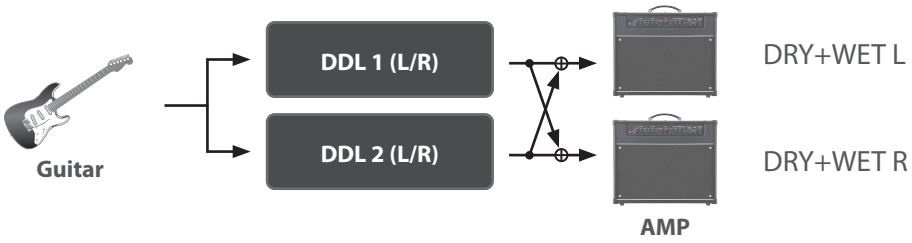
Delay structure (in series: connected one after another)

The two delays are connected in series.



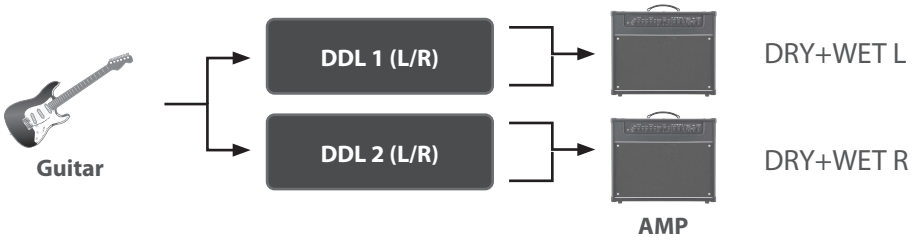
Delay structure (parallel 1: connected separately in parallel)

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

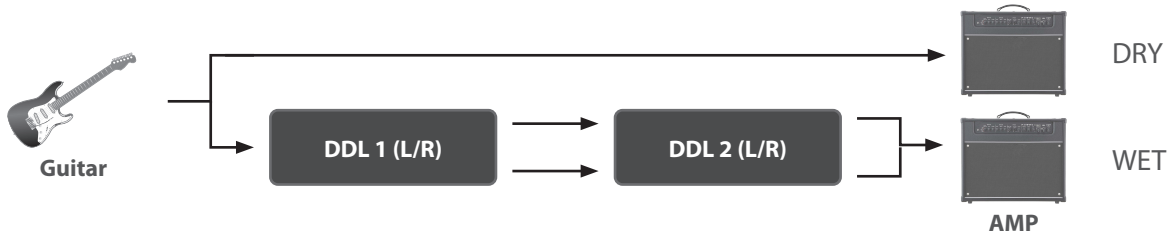
IN OUT settings

[SETUP] → "in out"

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
out (Output Setting)	dir.EFX (L: DIRECT, R: EFX)	The direct sound is output from the OUTPUT L/MONO jack, and the delay sound is output from the OUTPUT R jack.
	dir.MUTE (Direct Mute)	

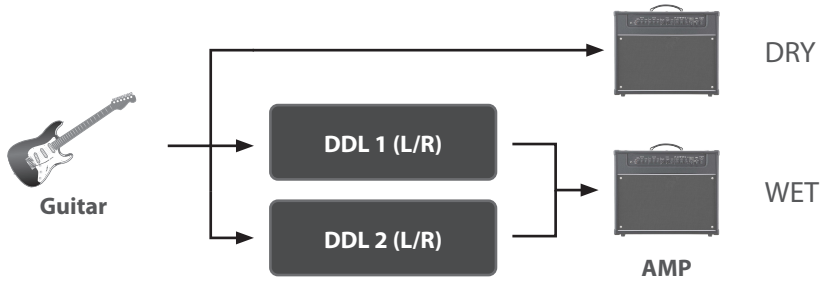
Delay structure (in series: connected one after another)

The two delays are connected in series.



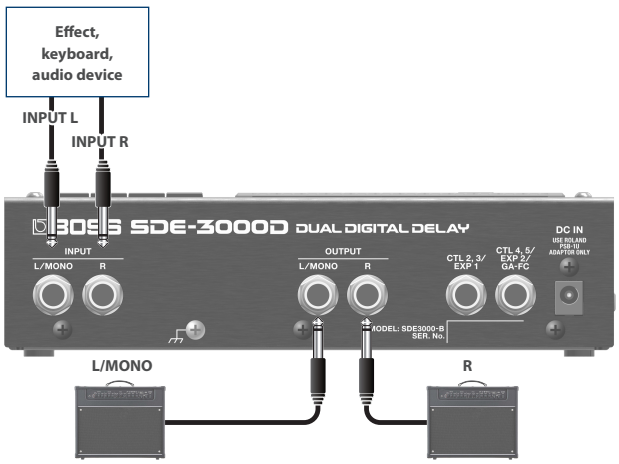
Delay structure (parallel 1/2: connected separately in parallel)

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.



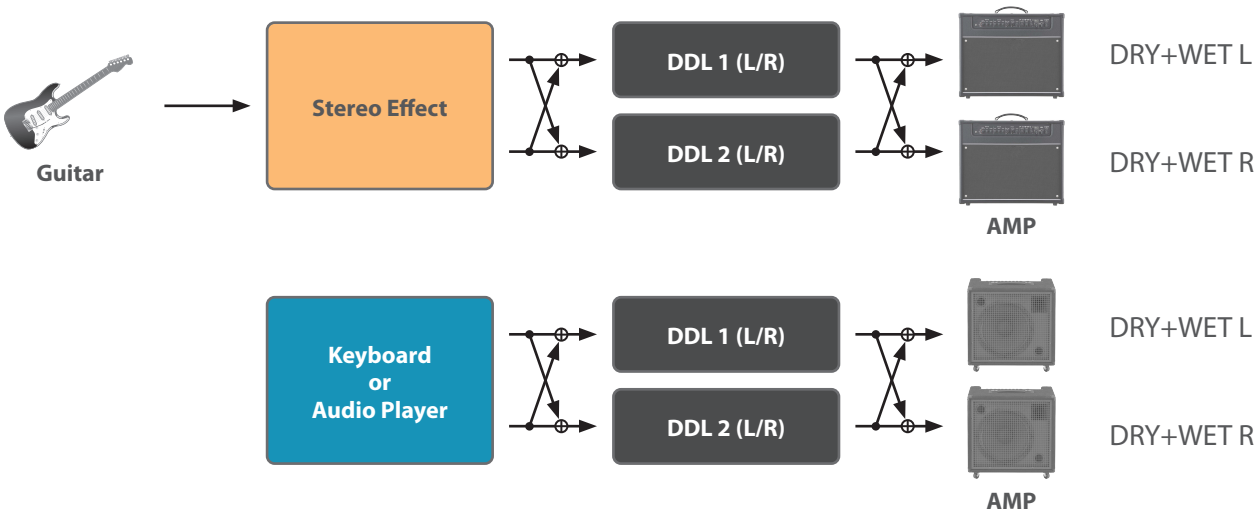
IN OUT settings

[SETUP] → "in out"

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
out (Output Setting)	StErEo (STEREO)	The sound is output in stereo from the OUTPUT L/MONO and R jacks.

Delay structure (parallel 1: connected separately in parallel)

The two delays are connected in parallel.



Using the Foot Volume

Configuring the Foot Volume

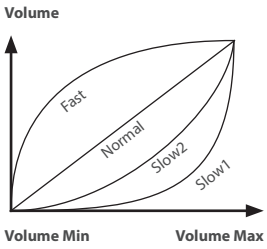
This is a volume control effect. Operate this with an expression pedal that's connected to the CTL 2, 3/EXP1 jack or the CTL 4, 5/EXP2/GA-FC jack.

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
F.VoL.SW (Foot Vol Switch)	oFF (off) on (on)	Turns the foot volume on/off.
PEdAL.PoS (Pedal Position)	0– 100	Sets the volume.
VoL.Min (Volume Min)	0– 100	Sets the volume when the heel of the EXP Pedal is depressed.
VoL.MAX (Volume Max)	0– 100	Selects the volume when the toe of the EXP Pedal is depressed.
CURVE (Curve)	SLoW 1 (Slow1) SLoW2 (Slow2) norMAL (Normal) FASt (Fast)	You can select how the actual volume changes relative to the amount the pedal is pressed. 
F.VPrF (Foot Vol Preference)	MEMorY (Memory) SYSTEM (System)	Sets whether the foot volume should follow the settings for the memories, or whether it should follow the system settings.

Preference parameters

"Preference parameters" are available on this unit.

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

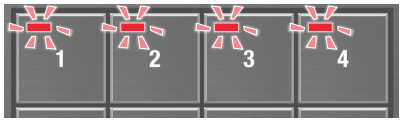
Select "SYSTEM" (System) to follow the system settings, so that the same settings are used even when switching to a different memory. Change the setting as appropriate for your use case.

Selecting a Memory

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

Button (indicator color)	Bank (memory)
[BANK A] button	BANK A (1–4)
[BANK B] button	BANK B (1–4)

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	Sets the delay time.	
	00– 1500	0.0–1500 ms (TIMEx2 off)
	00–3000	0.0–3000 ms (TIMEx2 on)
	Note	Sets the time as a note value (*1).
[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, oF (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""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 1SW (DDL 1 Switch) d2SW (DDL 2 Switch)	Turns DDL 1 or DDL 2 on/off.	
	oFF (Off)	Off
	on (On)	On
d 1tYP (DDL 1 type) d2tYP (DDL 2 type)	Sets the type for DDL 1 or DDL 2.	
	StErEo (Stereo)	A stereo-in/out delay.
	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 inK (DDL 1 Timelink) d2tNL inK (DDL 2 Timelink)	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).	
	oFF (Off)	Sets the left-right delay time independently.
	on (On)	Sets a common left-right delay time.
	oSt (Offset)	Links the left and right channel delay times while maintaining the offset. This also follows the tap tempo.
d 1oFFSt (DDL 1 Offset) d2oFFSt (DDL 2 Offset)	When d 1tNL inK, d2tNL inK is oSt, this parameter is shown.	
	-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) d2WAVEFN (DDL 2 Waveform)	Selects the modulation waveform.	
	tri (Triangle)	Triangle wave This is the original SDE-3000 waveform.
	Sin (Sine)	Sine wave
d 1ModPH (DDL 1 Mod phase) d2ModPH (DD2. Mod phase)	Specifies the left-right phase.	
	nor (Normal)	Normal (in phase) The phase does not change.
	inV (Invert)	Inverted (reverse phase) The phase is inverted.
d 1Fb.EQtP (DDL 1 Feedback EQ type) d2Fb.EQtP (DDL 2 Feedback EQ type)	Selects the EQ type that's applied to the delay feedback.	
	oFF (Off)	The feedback EQ is off.
	orG (Original)	This is the original characteristic for the SDE-3000.
	uSr (User)	This can be freely configured in the user settings.

Parameter	Value/Explanation	
d 1Fb.LCF (DDL 1 Feedback EQ Lo Freq) d2Fb.LCF (DDL 2 Feedback EQ Lo Freq) *1	Cuts the frequency region below the specified frequency (low-cut filter).	
	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)
d 1Fb.HCF (DDL 1 Feedback EQ hi Freq) d2Fb.HCF (DDL 2 Feedback EQ hi Freq) *1	Cuts the frequency region above the specified frequency (high-cut filter).	
	b30– 12.5k	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.
d 1Fb.HCG (DDL 1 Feedback EQ Hc Gain) d2Fb.HCG (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 1Fb.EQtP (DDL 1 Feedback EQ type) and d2Fb.EQtP (DDL 2 Feedback EQ type) parameters are set to uSr (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	
d 1tML inK (DDL 1 Timelink) d2tML inK (DDL 2 Timelink)	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).	
	oFF (Off)	Sets the left-right delay time independently.
	on (On)	Sets a common left-right delay time.
	oSt (Offset)	Links the left and right channel delay times while maintaining the offset. This also follows the tap tempo.
d 1oFFSt (DDL 1 Offset) d2oFFSt (DDL 2 Offset)	When d 1tML inK, d2tML inK is oSt, this parameter is shown.	
	-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 1tML inK" "d2tML inK", 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 1tML inK" "d2tML inK", 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 1tML inK" "d2tML inK", and then use the [DEPTH] buttons to change the value to "oSt".**

4. Use the [TIME] buttons to select "d loFFSt" or "d2.oFFSt", 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).

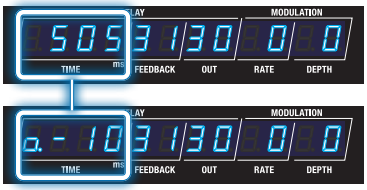
MEMO

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 "⌂") is shown.
From this screen, you can press the [TIME] buttons to edit the offset value.

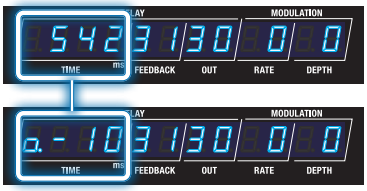
MEMO

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.

1. 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 "⌂") 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

1. 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 "MASTEr", and press the [SETUP] (ENTER) button.

3. Use the [TIME] buttons to select "d lCryoUr" or "d2.CryoUr", and then use the [DEPTH] buttons to change the value to "on".

Carryover parameter (in MASTER settings)

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
d lCryoUr (DDL 1 Caryover) d2.CryoUr (DDL 2 Caryover)	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.	
	oFF (Off)	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 "MASTER", 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 "MASTER".**

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
ModL inK (Mod Link)	This is shown when the structure is "Parallel 2".	
	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).
d irLEVEL (Direct Level)	0–100	Sets the direct level. When this is set to "60", the input/output balance is 1:1 (unity gain).
outGA in (Output Gain)	-12–12	Adjusts the output level.
tEMPoHLd (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

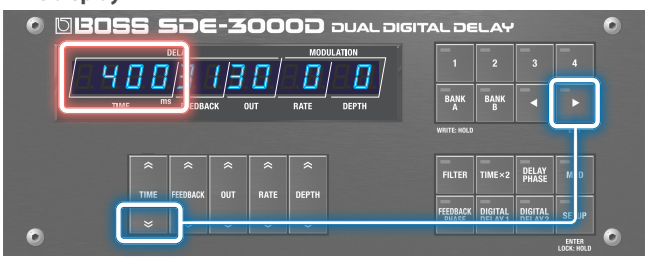
Switching Between Note Length and Time Display for the Delay Time

1. 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

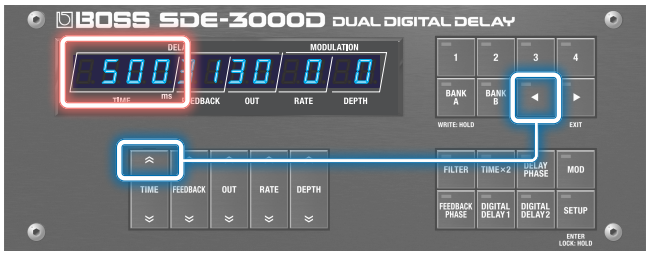
Make Large Changes to the Delay Time

1. 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



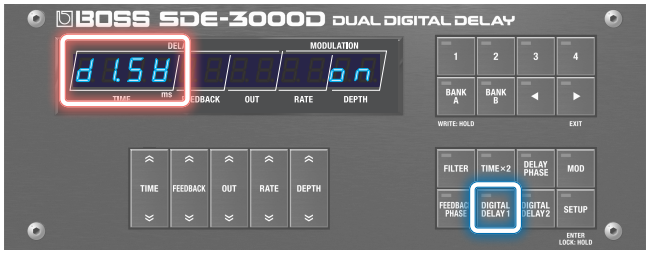
Decrease setting value significantly

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

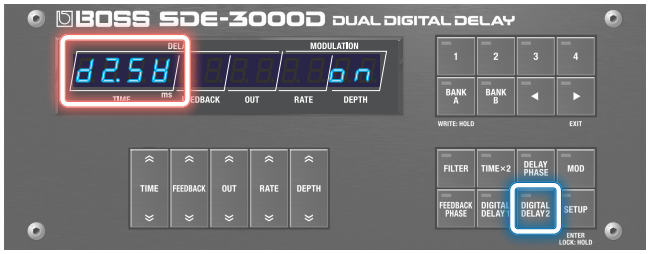
1. Press the [DIGITAL DELAY 1] and [DIGITAL DELAY 2] buttons when editing the delay.

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] (WRITE) button.

The write menu appears.

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

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.

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

4. To save the memory, press the [BANK A] (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)

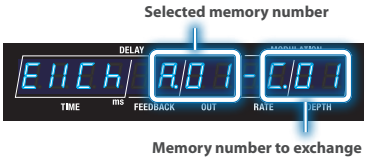
Here's how to swap (exchange) the memory number of the saved memory with a different one.

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

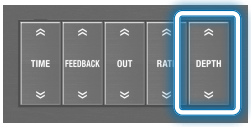
The write menu appears.

2. Use the [TIME] buttons to select "EXCHANGE", 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.



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

4. To exchange, press the [BANK A] (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.

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

The write menu appears.

2. Use the [TIME] buttons to select "INIT IAL I2E", 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] (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.

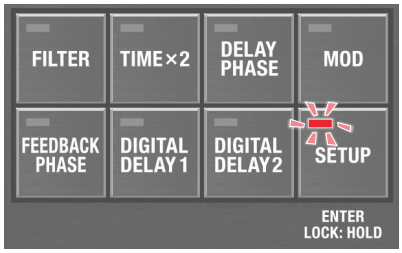
Lock ON

Lock OFF

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

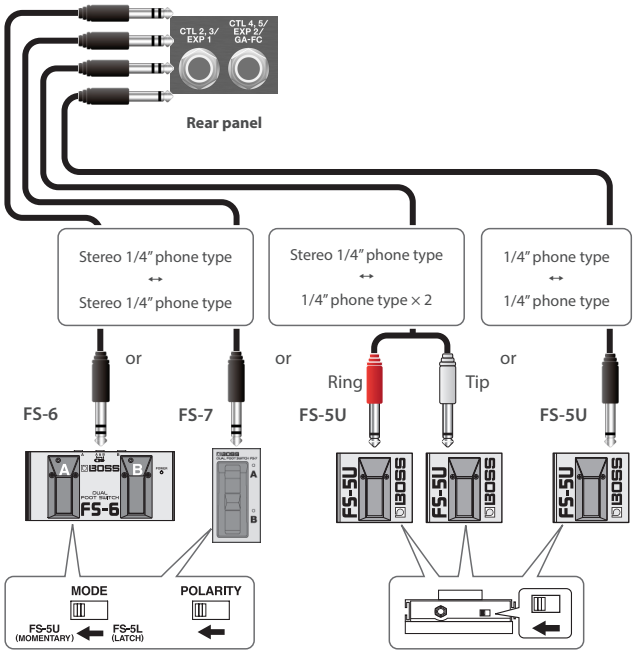
MEMO

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



Configuring the External Controllers

Connecting Footswitches



The polarity switch is set as shown in the illustration.

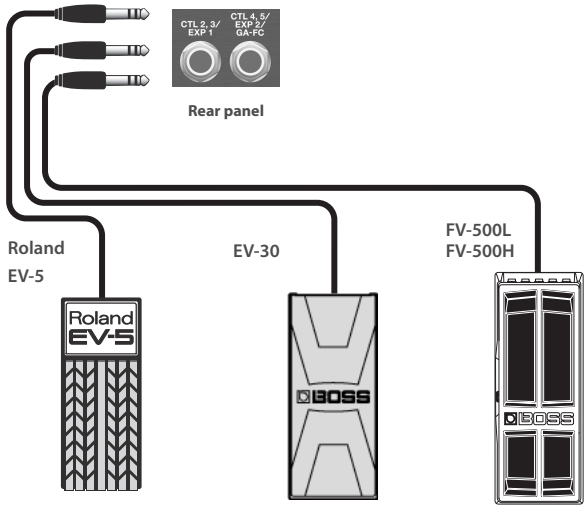
Footswitch		CTL 2, 3/EXP 1 jack	CTL4, 5/EXP2/GA-FC jack
FS-6	A	CTL 3	CTL 5
	B	CTL 2	CTL 4
FS-7	A	CTL 3	CTL 5
	B	CTL 2	CTL 4
FS-5U	RING (red)	CTL 2	CTL 4
	TIP	CTL 3	CTL 5

* 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
C 1.FnC (CTL 1 Function) ⋮ C5.FnC (CTL 5 Function)	oFF (Off)	Turns the CTL 1–CTL 5 switches OFF.
	bPMtAP (BPM Tap)	Tap to input the 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
	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
	d12SW (DDL 1/DDL 2 Switch)	DDL 1 and DDL 2 (at the same time)
	d1SW (DDL 1 Switch)	DDL 1
	d2SW (DDL 2 Switch)	DDL 2
	d12HLd (DDL 1/DDL 2 Hold)	DDL 1 and DDL 2 (at the same time)
	d1HoLd (DDL 1 Hold)	DDL 1
	d2HoLd (DDL 2 Hold)	DDL 2
	d12MoM (DDL 1/DDL 2 MOMENT)	DDL 1 and DDL 2 (at the same time)
	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. 30)
	MEMuP (Memory up)	Switches to the next memory.
	MEMdn (Memory down)	Switches to the previous memory.
	MEMnuM (MEMORY NUMBER)	Lets you assign a desired memory number for quick recall (this function is not available in C 1.FnC).

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
C2.nuM (CTL 2 Number) ⋮ C5.nuM (CTL 5 Number)	A0 1–04, b0 1–04, C0 1–92	When you set MEMnuM (MEMORY NUMBER) for C2.FnC (CTL 2 Function)–C5.FnC (CTL 5 Function), this can be assigned to the memories for each controller.
C 1d 1HoLd (CTL1 DDL 1 Hold) ⋮ C5.d2.HoLd (CTL5 DDL 2 Hold)	When C 1.FnC–C5.FnC is d 12.HLd, d 1HoLd, d2.HoLd	
	0– 120	Adjusts the Hold level.
C 1.Mod (CTL1.Mode) ⋮ C5.Mod (CTL5.Mode)	When C 1.FnC–C5.FnC are oFF, tAP or MEM.uP MEM.dn, this parameter is not shown.	
	toGGLE (Toggle)	Toggles between on and off each time you operate the control.
	MoMEnt (Moment)	Turns on only while you are pressing down on the switch, and turns off otherwise.
C 1.PrF (CTL1 PREFERENCE) ⋮ C5.PrF (CTL5 PREFERENCE)	MEMorY (Memory)	Sets whether to use to different settings per memory for the CTL switches (MEMorY), or to use the same settings for all memories (SYSTEM).
	SYSTEM (System)	
E 1.FnC (EXP1.Function) E2.FnC (EXP2.Functioon)	oFF (Off)	The EXP 1 and EXP 2 are not used.
	FU (Foot Volume)	Adjusts the volume for the foot volume control.
	d 1t 1nL (DDL 1 Time Lch)	L channel of DDL 1
	d 1t 1nr (DD1 Time Rch)	R channel of DDL 1
	d2t 1nL (DDL 2 Time Lch)	L channel of DDL 2
	d2t 1nr (DD2 Time Rch)	R channel of DDL 2
		Adjusts the delay time. * The note length is not shown.
	d 1FbL (DDL 1 Feedback)	DDL 1
	d2FbL (DDL 2 Feedback)	DDL 2
		Adjusts the amount of feedback.
	d 1outL (DDL 1 Out)	DDL 1
	d2outL (DDL 2 Out)	DDL 2
		Adjusts the delay volume.
	d 1MrAt (DDL 1 Modulation Rate)	DDL 1
	d2MrAt (DDL 2 Modulation Rate)	DDL 2
		Adjusts the modulation rate.
	d 1MdPt (DDL 1 Modulation Depth)	DDL 1
	d2MdPt (DDL 2 Modulation Depth)	DDL 2
		Adjusts the modulation depth.
	d 1r.LVL (Direct Level)	Adjusts the direct level.
E 1n 1n (EXP1.Min) E2.n 1n (EXP2.Min)	The variable range differs depending on the parameter.	Sets the minimum value for the parameter controlled by an expression pedal.
E 1nAll (EXP1.Max) E2.nAll (EXP2.Max)	The variable range differs depending on the parameter.	Sets the maximum value for the parameter controlled by an expression pedal.
E 1PrF (EXP1 PREFERENCE) E2.PrF (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)	

*1 The relevant C 1ModE (CTL1.Mode)–C5ModE (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)

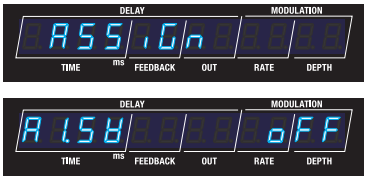
You can assign the functions you prefer to the [CTL 1] switch and to the footswitches you've connected.

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

1. Press the [SETUP] button.

The parameter to set is shown in the display.

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



3. Use the [TIME] buttons to select the switch assignment "A 1.SW" (Assign 1 Switch)–"A8.SW" (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	
A 1.SW (Assign 1 Switch) ⋮ A8.SW (Assign 8 Switch)	oFF (off) / on (on)	Turns Assign 1–8 on/off. When this is turned on, you can set the following parameters.	
A 1.SrC (Assign 1 Source) ⋮ A8.SrC (Assign 8 Source)	CtL 1–CtL5 (CTL 1–CTL 5)	CTL 1–CTL 5 switches	Select the controller used for the assignment.
	EXP 1 (EXP1) / EXP2 (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	
	GAFCE1 (GA-FC EXP1) / GAFCE2 (GA-FC EXP2)	GA-FC EXP1, EXP2 pedal (*1)	
	GAFCS1 (GA-FC S1) / GAFCS2 (GA-FC S2)	GA-FC S1, S2 (*1)	
	cc01–cc31 (CC01–CC31) / cc64–cc95 (CC64–CC95)	CC01–31, CC64–95	
A 1Mod (Assign 1 Mode) ⋮ A8Mod (Assign 8 Mode)	toGGLE (Toggle)	The setting is toggled OFF (minimum value) or ON (maximum value) with each operation.	
	MoMEnt (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

GAFCE1 (GA-FC EXP1)	GAFCE2 (GA-FC EXP2)	Sets the functions of the EXP pedal.
GAFCS1 (GA-FC S1)	GAFCS2 (GA-FC S2)	Sets the functions of the footswitch.

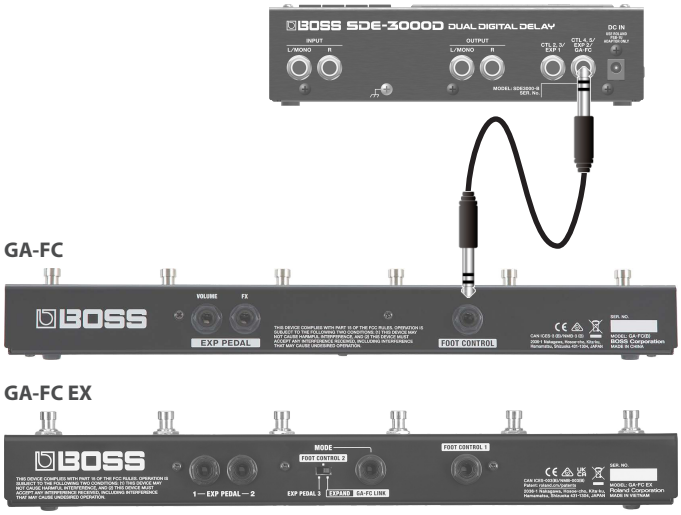
Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation	
A tArG (Assign 1 Target) ⋮ A8.tArG (Assign 8 Target)	This selects the function assigned to the controller. Set the minimum/maximum values for each selected function as a Min/Max value. Toggle between the "Min" and "MAX" parameters according to the mode for each assignment.		
	d1SW (DDL 1 Switch)	DDL 1	Turns the delay on/off.
	d2SW (DDL 2 Switch)	DDL 2	
	d1t1nL (DDL 1 Time Lch)	L channel of DDL 1	Adjusts the delay time.
	d1t1nr (DDL 1 Time Rch)	R channel of DDL 1	
	d2t1nL (DDL 2 Time Lch)	L channel of DDL 2	
	d2t1nr (DDL 2 Time Rch)	R channel of DDL 2	
	d1FbL (DDL 1 Feedback)	DDL 1	Adjusts the amount of feedback.
	d2FbL (DDL 2 Feedback)	DDL 2	
	d1outL (DDL 1 Output)	DDL 1	Adjusts the output volume of the delay sound.
	d2outL (DDL 2 Output)	DDL 2	
	d1rAtE (DDL 1 Rate)	DDL 1	Adjusts the delay rate.
	d2rAtE (DDL 2 Rate)	DDL 2	
	d1dEPt (DDL 1 Depth)	DDL 1	Adjusts the delay dept.
	d2dEPt (DDL 2 Depth)	DDL 2	
	d1Mod (DDL 1 Modulation)	DDL 1	Turns the modulation on/off. * Works the same as the [MOD] button on the top panel.
	d2Mod (DDL 2 Modulation)	DDL 2	
	d1FbPH (DDL 1 Feedback Phase)	DDL 1	Switches the FEEDBACK PHASE on/off. * Works the same as the [FEEDBACK PHASE] button on the top panel.
	d2FbPH (DDL 2 Feedback Phase)	DDL 2	
	d1rLEV (Direct Level)	Adjusts the direct level.	
	F.VoL.SW (Foot Volume Switch)	Turns the foot volume on/off.	
	PdLPoS (Pedal Position)	Pedal position	
A1Min (Assign 1 Min) ⋮ A8.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.	
A1MAX (Assign 1 Max) ⋮ A8.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
A1ACL (Assign 1 ACT Low) ⋮ A8.ACL (Assign 8 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.
A1ACH (Assign 1 ACT High) ⋮ A8.ACH (Assign 8 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. 28)

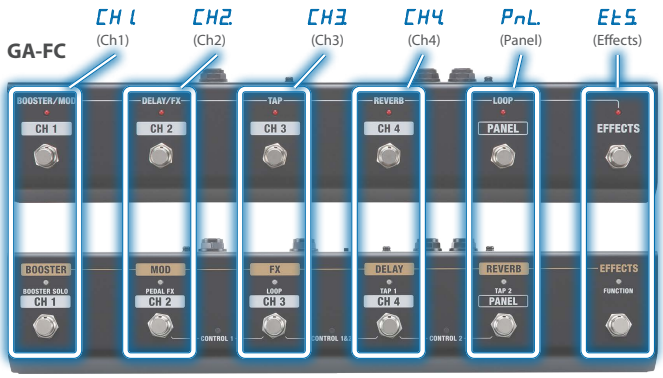
1. **Press the [SETUP] button.**
   The parameter to set is shown in the display.
2. **Use the [TIME] buttons to select "GA-FC", and press the [SETUP] (ENTER) button.**

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



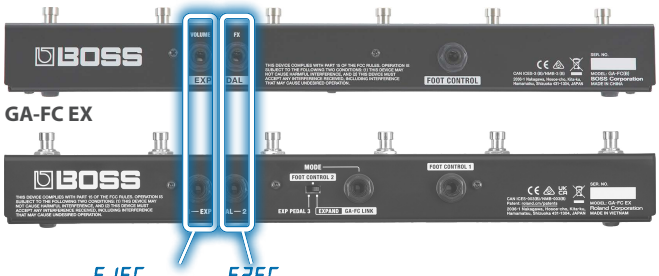
GA-FC EX

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation	
CH1.Fn (Ch1 Func) ⋮ CH4.Fn (Ch4 Func) PnL.Fn (Panel Func) EtS.Fn (Effects Func)	oFF (off)	The GA-FC is not used.	
	bPMtAP (BPM Tap)	BPM	Tap to input the delay time.
	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	
	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	
	d12SW (DDL 1/DDL 2 Switch)	DDL 1 and DDL 2 (at the same time)	Turns the effect(s) on/off.
	d1SW (DDL 1 Switch)	DDL 1	
	d2SW (DDL 2 Switch)	DDL 2	
	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).
	d1Hold (DDL 1 Hold)	DDL 1	
	d2Hold (DDL 2 Hold)	DDL 2	
	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. 30)	
	MEMuP (Memory up)	Switches to the next memory.	
	MEMdn (Memory down)	Switches to the previous memory.	
	MEMnuM (Memory Number)	Selects the memories that you set in CH1nuM–CH4nuM, PnL.nuM and EtS.nuM.	

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
CH1d1HLd (CH1 DDL 1 Hold) ⋮ CH4d1HLd (CH4 DDL 1 Hold) PnL.d1HLd (Panel DDL 1 Hold) Ets.d1HLd (Effects DDL 1 Hold) ⋮ Ets.d2.HLd (Effects DDL 2 Hold)	When CH1Fn–Ets.Fn is d12HLd, d1HoLd, d2HoLd	
	0–120	Sets the Hold level.
CH1nuM (CH1 Number) ⋮ CH4nuM (CH1 Number) PnL.nuM (Panel Number) Ets.nuM (Effects Number)	This sets the memory number to recall for each GA-FC switch.	
	A01–C92	A1–A4, B1–B4, C1–C92
CH1Md (CH1 Mode) ⋮ CH4Md (CH4 Mode) PnL.Md (Panel Mode) Ets.Md (Effects Mode)	When CH1Fn–Ets.Fn is oFF and tAP, MEN.uP, MEN.dn, MEN.nuM are being used, this parameter is not shown.	
	toGGLE (Toggle)	Toggles between on and off each time you operate the control.
	MoMEnt (Moment)	Turns on only while you are pressing down on the switch, and turns off otherwise.

GA-FC pedal jack

GA-FC



GA-FC EX

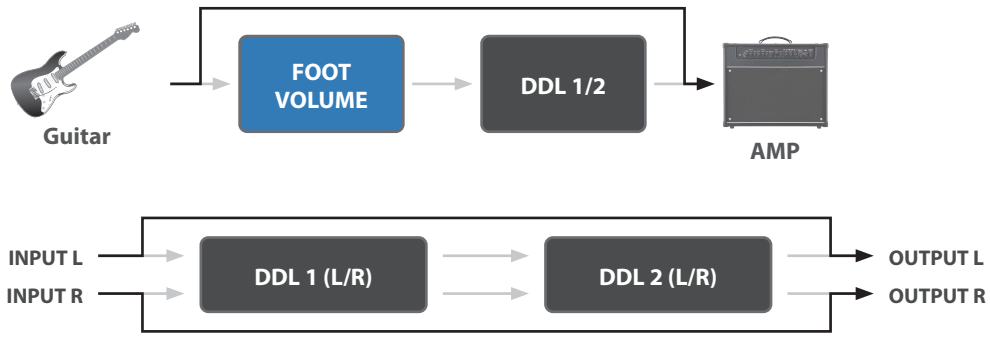
E1FC (Exp1 Func)	E2FC (Exp2 Func)	Sets the functions of the EXP pedal.
E1SWF (E1 Switch Func)	E2SWF (E2 Switch Func)	Sets the functions of the footswitch.

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation	
E1Fn (Exp1 Func) E2Fn (Exp2 Func)	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).	
	d1tiML (DDL 1 Time Lch)	L channel of DDL 1	Adjusts the delay time.
	d1tiMr (DD1 Time Rch)	R channel of DDL 1	
	d2tiML (DDL 2 Time Lch)	L channel of DDL 2	
	d2tiMr (DD2 Time Rch)	R channel of DDL 2	
	d1FbL (DDL 1 Feedback)	DDL 1	Adjusts the amount of feedback.
	d2FbL (DDL 2 Feedback)	DDL 2	
	d1LEU (DDL 1 Level)	DDL 1	Adjusts the volume.
	d2LEU (DDL 2 Level)	DDL 2	
	d1MrAt (DDL 1 Modulation Rate)	DDL 1	Adjusts the modulation rate.
	d2MrAt (DDL 2 Modulation Rate)	DDL 2	
	d1MdPt (DDL 1 Modulation Depth)	DDL 1	Adjusts the modulation depth.
	d2MdPt (DDL 2 Modulation Depth)	DDL 2	
	d1rLUL (Direct Level)	Adjusts the direct level.	
E1In1n (Exp1 Min) E2In1n (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.	
E1nAll (Exp1 Max) E2nAll (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	
E 1.SW.F (E1 Switch Func) E2.SW.F (E2 Switch Func)	oFF (off)	The GA-FC is not used.	
	bPMtAP (BPM Tap)	BPM	Tap to input the delay time.
	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	
	d2LtAP (DDL 2 Lch Tap)	L channel of DDL 2	
	d2rtAP (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)	Turns the effect(s) on/off.
	d 1SW (DDL 1 Switch)	DDL 1	
	d2SW (DDL 2 Switch)	DDL 2	
	d 12HLd (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.
	d 1HoLd (DDL 1 Hold)	DDL 1	
	d2HoLd (DDL 2 Hold)	DDL 2	
	d 12MoM (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.
	d 1MoM (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.	
	MEMuP (Memory up)	Switches to the next memory.	
	MEMdn (Memory down)	Switches to the previous memory.	
	MEMnuM (Memory Number)	Sets the memory number.	

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
E 1.SW.d 1HL (E1 Switch DDL 1 Hold Level) E 1.SW.d2HL (E1 Switch DDL 2 Hold Level) E2.SW.d 1HL (E2 Switch DDL 1 Hold Level) E2.SW.d2HL (E2 Switch DDL 2Hold Level)	When E 1.SW.F, E2.SW.F are d 12HLd, d 1HoLd, or d2HoLd, you can set the Hold Level.	
	0– 120	Sets the Hold level.
E 1.SW.M (E1 Switch Mode) E2.SW.M (E2 Switch Mode)	When E 1.SW.F, E2.SW.F are oFF or tAP, this parameter is not shown.	
	toGGLE (Toggle)	Toggles between on and off each time you operate the control.
	MoMEnt (Moment)	Turns on only while you are pressing down on the switch, and turns off otherwise.
E 1.SW.nuM (E1 Switch Number) E2.SW.nuM (E2 Switch Number)	When E 1.SW.F, E2.SW.F are MEMnuM, this sets the memory number to recall for E1 or E2 switch.	
	A0 1–C.92	A1–A4, B1–B4, C1–C92

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



Connecting with an External MIDI Device

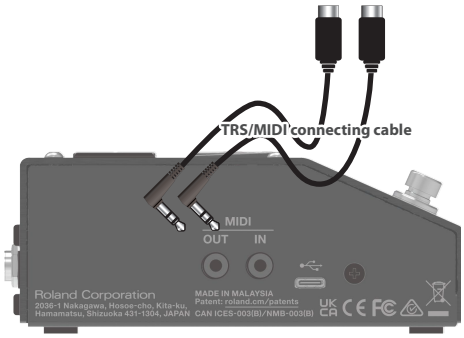
Connecting External Devices

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. 33) 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 "Mid", 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
rILCH (Rx Channel)	oFF (off) CH.1–CH.16 (CH.1–CH.16)	Specifies the MIDI receive channel. When this is "oFF", channel messages are not received.
tILCH (Tx Channel)	oFF (off) CH.1–CH.16 (CH.1–CH.16) rEC (Rx)	Specifies the MIDI transmit channel. When this is "oFF", channel messages are not transmitted. When this is set to "rEC", the transmit channel is set to be the same as the receive channel.
PC.in (PC IN)	oFF (off) on (on)	Specifies whether program changes are received (on) or not received (oFF).
PC.out (PC OUT)	oFF (off) on (on)	Specifies whether program changes are transmitted (on) or not transmitted (oFF).
CC.in (CC IN)	oFF (off) on (on)	Specifies whether control change messages are received (on) or not (oFF). This unit can use CC messages it receives to control the same operations as a knob or footswitch via MIDI.
CC.out (CC OUT)	oFF (off) on (on)	Specifies whether control changes are transmitted (on) or not transmitted (oFF).
d1t.mEL (DDL 1 Time L) d1t.mEr (DDL 1 Time R) d2t.mEL (DDL 2 Time L) d2t.mEr (DDL 2 Time R)	oFF (off) cc01–cc31 (CC01–CC31) cc64–cc95 (CC64–CC95)	Specifies the controller number corresponding to each controller.
d1FbC (DDL 1 Feedback) d2FbC (DDL 2 Feedback)		
d1outC (DDL 1 Out) d2outC (DDL 2 Out)		
d1Mdrt (DDL 1 Modulation Rate) d2Mdrt (DDL 2 Modulation Rate)		

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
d1.Mod.dPt (DDL 1 Modulation Depth) d2.Mod.dPt (DDL 2 Modulation Depth)		
d1.Flt on (DDL 1 Filter on) d2.Flt on (DDL 2 Filter on)		
d1.tiM on (DDL 1 Time on) d2.tiM on (DDL 2 Time on)		
d1.PHS on (DDL 1 Phase on) d2.PHS on (DDL 2 Phase on)		
d1.Mod on (DDL 1 Mod on) d2.Mod on (DDL 2 Mod on)		
d1.F.P on (DDL 1 Feedback Phase on) d2.F.P on (DDL 2 Feedback Phase on)		
d1.2.tAP (DDL 1/DDL 2 Tap) d1.L.tAP (DDL 1 Lch Tap) d1.r.tAP (DDL 1 Rch Tap) d2.L.tAP (DDL 2 Lch Tap) d2.r.tAP (DDL 2 Rch Tap)	oFF (off) cc01–cc31 (CC01–CC31) ccb4–cc95 (CC64–CC95)	Specifies the controller number corresponding to each controller.
d1.Hold (DDL 1 Hold) d2.Hold (DDL 2 Hold)		
d1.Mon (DDL 1 Moment) d2.Mon (DDL 2 Moment)		
FU.PL.Pos (Foot Volume Pedal Position)		
dir.LEVL (Direct Level)		
CtL 1 (Control 1) CtL2 (Control 2) CtL3 (Control 3) CtL4 (Control 4) CtL5 (Control 5)		
EXP1 (Exp 1) EXP2 (Exp 2)		
bYPASS (Bypass)		
d1.SW (DDL 1 Switch) d2.SW (DDL 2 Switch)		

Parameter [TIME] buttons	Value [DEPTH] buttons	Explanation
SYnC (Sync)	Specifies the input to which the tempo clock is synchronized. Guaranteed operating range: 40–250 BPM	
	int (Internal)	Synchronizes with the internal tempo.
	usb (USB)	Synchronizes to the MIDI clocks received via the USB port.
	Mid (MIDI)	Synchronizes to the MIDI clocks received via the MIDI IN jack.
	Auto (Auto)	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.
rtM.SrC (Real Time Message Source)	Specifies the source of real-time messages that are output to the MIDI OUT jack or USB port.	
	int (Internal)	Internal real-time messages are used as the clock source.
	usb (USB)	Real-time messages from the USB port are used as the clock source.
	Mid (MIDI)	Real-time messages from the MIDI IN jack are used as the clock source.
Mid tHru (MIDI Thru)	This specifies the jack from which to output the MIDI messages that are received at the MIDI IN jack.	
	oFF (off)	Not transmitted.
	usb (USB)	Transmitted from the USB port.
	Mid (MIDI)	Transmitted from the MIDI OUT jack.
	uM (USB, MIDI)	Transmitted from the USB port and the MIDI OUT jack.
usb.tHru (USB Thru)	This specifies the jack from which to output the MIDI messages that are received at the USB port.	
	oFF (off)	Not transmitted.
	usb (USB)	Transmitted from the USB port.
	Mid (MIDI)	Transmitted from the MIDI OUT jack.
	uM (USB, MIDI)	Transmitted from the USB port and the MIDI OUT jack.
dEV iCE.id (Device ID)	17–32	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-3000D 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 "Mid PC MAP".

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.001–PC.128	A01–C92	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.

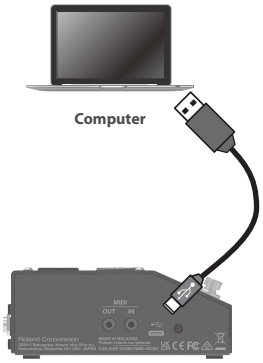
Download the USB driver from the BOSS website.

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.

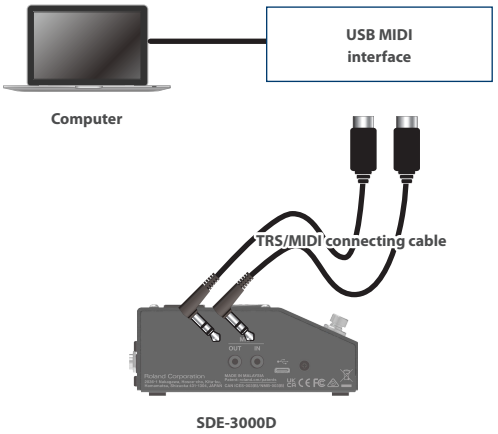


NOTE

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.



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.

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
MEM.in (Memory Min)	A01–C92	This sets the range of memories that you can select with the foot pedal.
MEM.MAX (Memory Max)		

Example

Bank	A			B			C		
Memory	1	…	4	1	…	4	1	…	92

MEM.in (Memory Min) — MEM.MAX (Memory Max)

Range of memories that can be selected using the pedal (A.01–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 "SYSTEN", 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
EXP 1PLHd (EXP 1 Pedal Hold) EXP2PLHd (EXP 2 Pedal Hold)	oFF	The operational status of the E 1FnC and E2FnC 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 E 1FnC and E2FnC 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-3000D 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 "FCt.rESEt".

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
SYS	System settings
A.01–A.04	1–4 in bank A
b.01–b.04	1–4 in bank B
C.01–C.92	1–92 in bank C

MEMO

To reset everything, select "SYS - C.92".

5. Press the [BANK A] button.

A confirmation message appears.

"SURE" blinks in the display.

6. Press the [BANK A] 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 FOOT VOLUME
Memory	100
Nominal Input Level	INPUT (L/MONO, R): -10 dBu
Maximum Input Level	INPUT (L/MONO, R): +12 dBu
Input Impedance	INPUT (L/MONO, R): 1 MΩ
Nominal Output Level	OUTPUT (L/MONO, R): -10 dBu
Output Impedance	OUTPUT (L/MONO, R): 1 kΩ
Recommended Load Impedance	OUTPUT (L/MONO, R): 10 kΩ or greater
Controls	[TIME] buttons [FEEDBACK] buttons [OUT] buttons [RATE] buttons [DEPTH] buttons [1]–[4] buttons [BANK A] button [BANK B] button [◄] button [►] button [FILTER] button [TIME×2] button [DELAY PHASE] button [MOD] button [FEEDBACK PHASE] button [DIGITAL DELAY1] button [DIGITAL DELAY2] button [SETUP] button

Display	7 segments, 12 digits LED
Connectors	INPUT (L/MONO, R) jack: 1/4-inch phone type OUTPUT (L/MONO, R) jacks: 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) STARTUP GUIDE Leaflet "USING THE UNIT SAFELY" 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

* 0 dBu = 0.775 Vrms

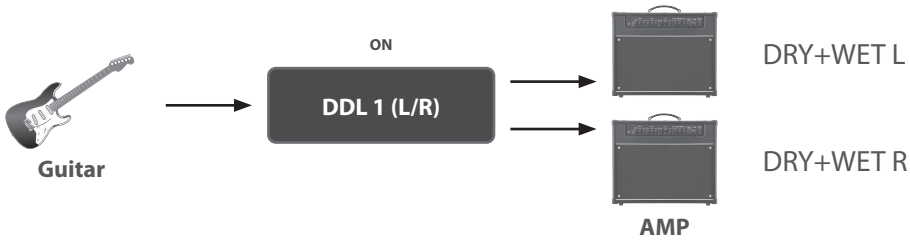
* This document explains the specifications of the product at the time that the document was issued. For the latest information, refer to the Roland website.

Preset List

A.01

The standard delay setting.
This is a short delay with DDL 1 set to 500 msec and DDL 2 set to 250 msec.
The delay gives a feeling of depth by combining two delays connected in series.

STRUCTURE: SERI



DDL 1 parameter

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

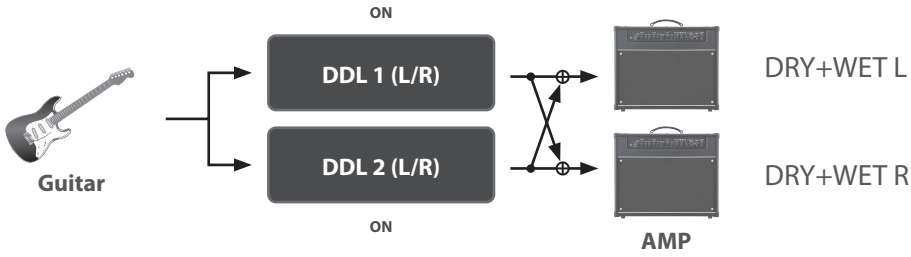
DDL 2 parameter

DDL 2 SW: OFF
DDL 2 TYPE: STEREO
DDL 2 TIME LINK: ON

A.02

A delay sound that gives a dotted eighth note feel, with the delays connected in parallel.
DDL 1 is set to 600 msec, and DDL 2 is set to 450 msec.

STRUCTURE: PARA1



DDL 1 parameter

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

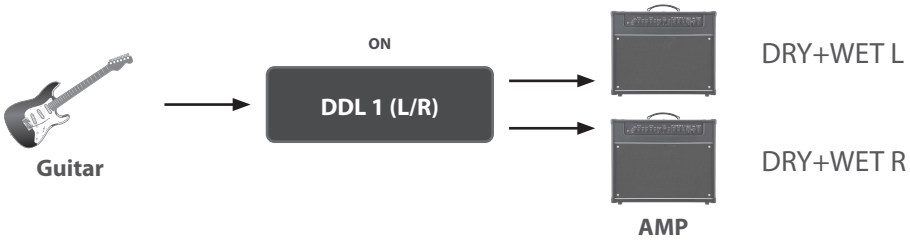
DDL 2 parameter

DDL 2 SW: ON
DDL 2 TYPE: STEREO
DDL 2 TIME LINK: ON

A.03

A delay with DDL 1 set to 800 msec (long) and DDL 2 set to 400 msec (medium).
Turn DDL 2 on for a dreamlike long delay.

STRUCTURE: SERI



DDL 1 parameter

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

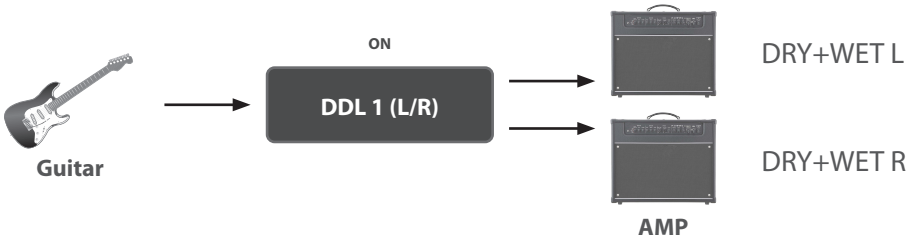
DDL 2 parameter

DDL 2 SW: OFF
DDL 2 TYPE: STEREO
DDL 2 TIME LINK: ON

A.04

A delay sound with two delays (DDL 1: 220 msec, DDL 2: 660 msec) connected in parallel.

STRUCTURE: SERI



DDL 1 parameter

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

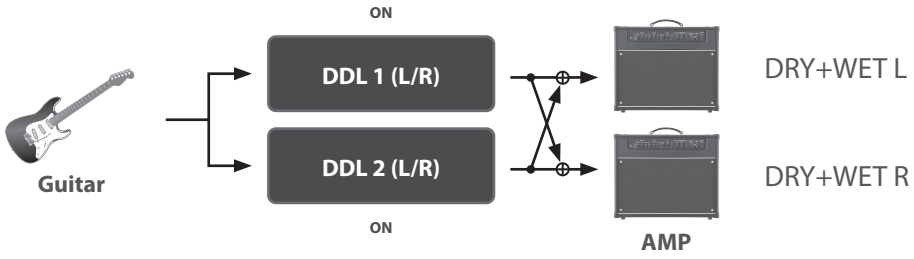
DDL 2 parameter

DDL 2 SW: ON
DDL 2 TYPE: STEREO
DDL 2 TIME LINK: ON

B.01

A delay sound with two delays connected in parallel (DDL 1: modulation delay, 500 msec; DDL 2: short delay, 250 msec).

STRUCTURE: PARA1



DDL 1 parameter

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

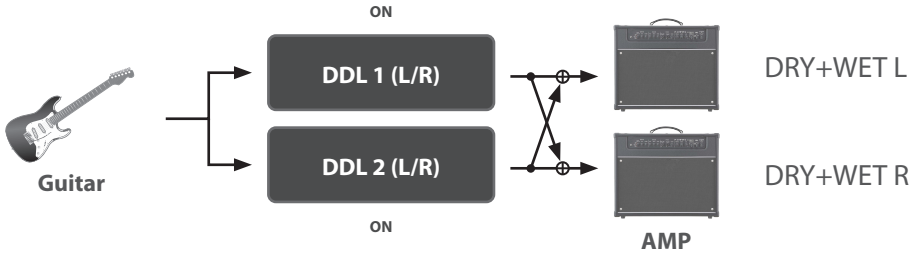
DDL 2 parameter

DDL 2 SW: ON
DDL 2 TYPE: STEREO
DDL 2 TIME LINK: ON

B.02

A delay sound with two modulation delays connected in parallel (DDL 1: 550 msec, DDL 2: 225 msec).

STRUCTURE: PARA1



DDL 1 parameter

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

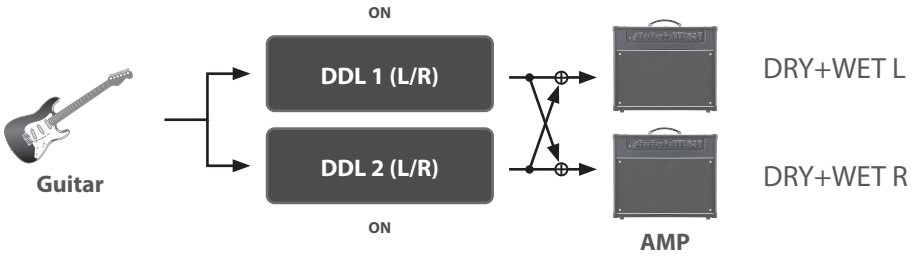
DDL 2 parameter

DDL 2 SW: ON
DDL 2 TYPE: STEREO
DDL 2 TIME LINK: ON

B.03

A delay sound that combines a filter and modulation.

STRUCTURE: PARA1



DDL 1 parameter

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

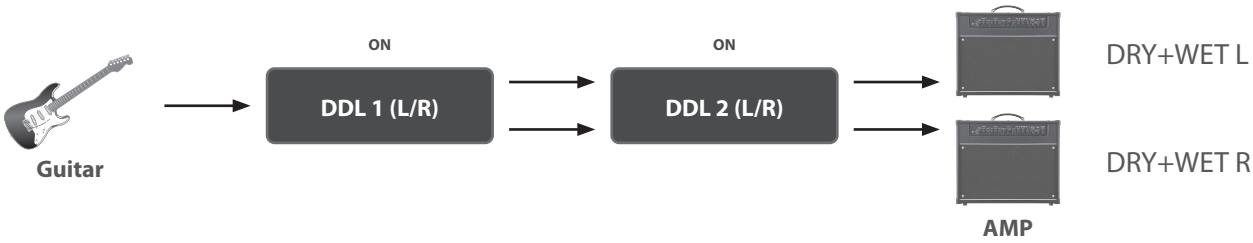
DDL 2 parameter

DDL 2 SW: ON
DDL 2 TYPE: STEREO
DDL 2 TIME LINK: ON

B.04

A short reverb sound, with the DDL 2 delay (35 msec) added to the DDL 1 delay (530 msec).

STRUCTURE: SERI



DDL 1 parameter

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

DDL 2 parameter

DDL 2 SW: ON
DDL 2 TYPE: STEREO
DDL 2 TIME LINK: ON