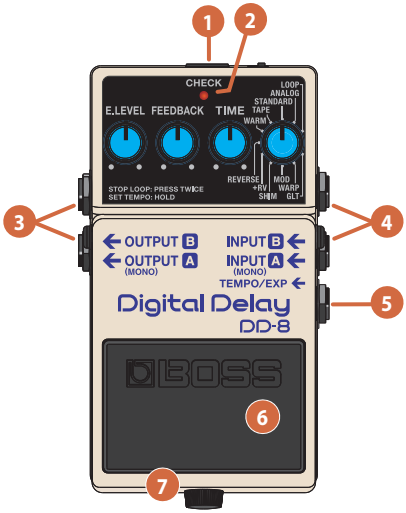
DD-8 Digital Delay

Reference Manual

BOSS

Panel Descriptions



1 DC IN jack

Accepts connection of an AC Adaptor (PSA series; sold separately). By using an AC Adaptor, you can play without being concerned about how much battery power you have left.

* **If there are batteries in the unit while an AC adaptor is being used, normal operation will continue should the line voltage be interrupted (power blackout or power cord disconnection).**
* **Use only the specified AC adaptor (PSA-series).**
* **If the AC adaptor is connected while power is on, the power supply is drawn from the AC adaptor.**

2 CHECK indicator

This is a combination indicator, which indicates whether the effect is on or off, indicates the various functions, and functions as the battery check indicator.

The indicator lights when an effect is ON.

* **If this indicator goes dim or no longer lights while an effect is ON, or when the functions are indicated, the battery is near exhaustion and should be replaced immediately. For instructions on changing the batteries, refer to "Changing the Battery" (p. 21).**
* **The CHECK indicator shows whether the effect is on or off, and indicates the different functions. It does not indicate whether the power to the device is on or not.**

3 OUTPUT-A (MONO) jack, OUTPUT-B jack

The output jacks are used to connect the unit to an amplifier or another effects unit.

* **The unit's functions differ according to how it is connected. Refer to "Setting the Output Method" (p. 15).**

4 INPUT-A (MONO) jack, INPUT-B jack

These jacks accept input signals (coming from a guitar, some other musical instrument, or another effects unit).

* **The unit's functions differ according to how it is connected. Refer to "Setting the Output Method" (p. 15).**
* **The INPUT-A (MONO) and INPUT-B jacks double as power switches. Power to the unit is turned on when you plug into the INPUT-A (MONO) or INPUT-B jack; the power is turned off when the cable is unplugged. Be sure to disconnect any cord plugged into the INPUT-A (MONO) or INPUT-B jack when not using this effects device.**

5 TEMPO/EXP jack

This jack is for connecting a footswitch (FS-5U, FS-6, FS-7; sold separately) or an expression pedal (Roland EV-5, FV-500H, FV-500L, EV-30; sold separately).

This jack lets you use a footswitch to set the tempo, control the loop, or turn TWIST on/off, or use an expression pedal to control various parameters.

* **For details, refer to "Setting the Tempo Using a Footswitch" (p. 12), "Using a footswitch to control the loop function" (p. 14), "Using the TWIST Function" (p. 14), or "Control Using an Expression Pedal" (p. 19).**

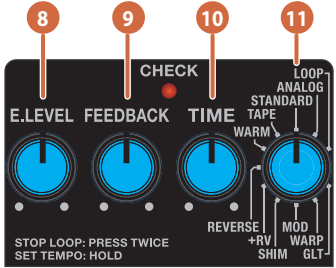
6 Pedal switch

This is used for switching the effect on and off, and for switching between the different functions.

7 Thumbscrew

When this screw is loosened, the pedal will open, allowing you to change the battery.

* **For instructions on changing the battery, refer to "Changing the Battery" (p. 21).**



8 [E.LEVEL] knob

This adjusts the volume of the effect sound. Turn the knob clockwise to increase the effect sound. When set at the three o'clock position, the effect is played at the same volume as the direct sound.

* **When the [E.LEVEL] knob is set to MAX while in REVERSE mode, only the effect sound is output, with the effect sound at the same level as the input sound.**

9 [FEEDBACK] knob

This adjusts the feedback level. The number of times the delay sound is repeated increases as the knob is turned to the right.

* **This cannot be used in LOOP mode.**
* **In GLT mode, this adjusts the depth of the GLT effect.**
* **Oscillation may occur when the knob is set at certain positions.**

10 [TIME] knob

This adjusts the delay time. Turning the knob clockwise lengthens the delay time.

* **This cannot be used in LOOP mode.**
* **The delay times that can be set vary according to the position of the [MODE] knob.**

11 [MODE] knob

This switches the delay effect.

12 [CARRYOVER] switch

This selects whether the delay sound remains (ON) or does not remain (OFF) when you turn off the effect.

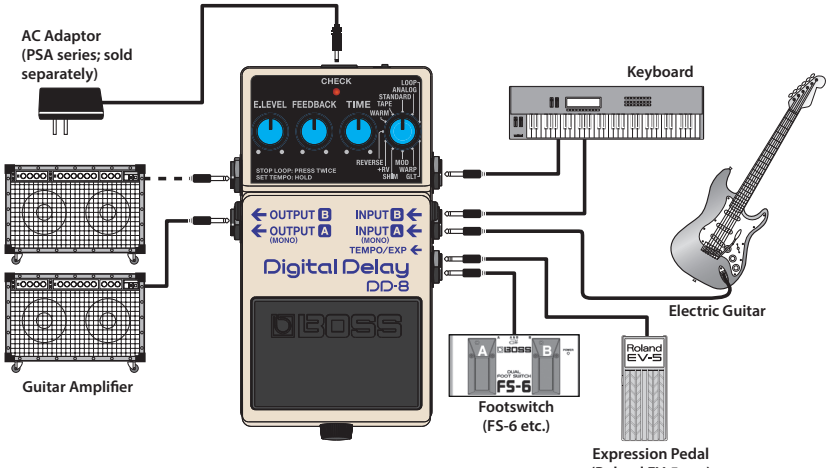
Characteristics of each mode

MODE knob	Explanation	Delay time
STANDARD	Clear digital delay.	20–800 ms
ANALOG	Mild analog delay.	20–800 ms
TAPE	Sound with the modulation that is distinctive of a tape echo unit.	20–800 ms
WARM	Mild digital delay.	20–800 ms
REVERSE	Delay played backward.	300–5000 ms
+RV	Delay with reverb.	20–800 ms
SHIM	Delay with pitch-shifted sound added.	200–800 ms
MOD	Digital delay with modulation.	20–800 ms
WARP	Creates a dreamlike sound.	20–800 ms
GLT	Creates a machine-gun-like sound. The effect is applied while you hold down the pedal switch.	10–400 ms
LOOP	Records your performance, and repeatedly plays it back. For more information, refer to "Using the LOOP (Overdubbing) Function" (p. 13).	40 sec. *1

*1:In LOOP mode, the maximum recording time is 20 seconds for stereo input or 40 seconds for mono input.

*** If you specify the long delay output setting, the delay time is doubled. For details, refer to "Setting the Output Method" (p. 15).**

Connections

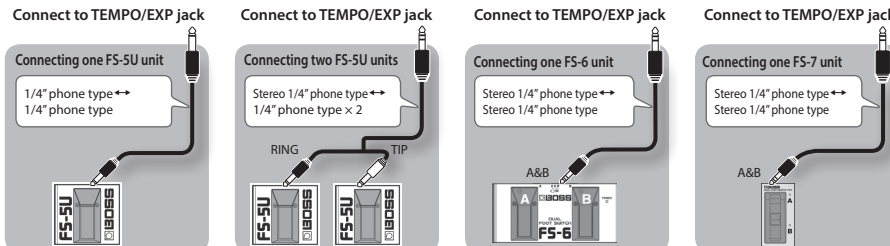


You can obtain a variety of different delay effects by changing how the connections are made.
For more information, refer to "Setting the Output Method" (p. 15).

Footswitch connections

Refer to the diagrams for details on the appropriate cables to use and the setting of the polarity switch.

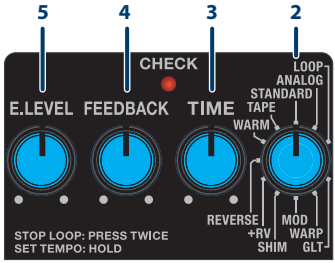
*** When connecting a footswitch, you must turn off the power before connecting or disconnecting cables. Failure to observe this precaution will cause malfunctions.**



Caution when making connections

* **To prevent malfunction and equipment failure, always turn down the volume, and turn off all the units before making any connections.**
* **Do not use connection cables that contain a built-in resistor.**
* **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.**
* **Once the connections have been completed, turn on power to your various devices in the order specified. By turning on devices in the wrong order, you risk causing malfunction and/or damage to speakers and other devices.**
  - When powering up: Turn on the power to your guitar amp last
  - When powering down: Turn off the power to your guitar amp first
* **When operating on battery power only, the unit's indicator will become dim when battery power gets too low. Replace the battery as soon as possible.**

Operating the Unit



1. Turn on the effect.

After you have finished making the connections, press the pedal switch to turn the effect on (the CHECK indicator lights red).

*** When in LOOP mode, the effect cannot be switched on or off.**

*** You can obtain a variety of different delay effects by changing how the connections are made. For more information, refer to "Setting the Output Method" (p. 15).**

2. Select the mode.

Use the [MODE] knob to select the mode to be used.

*** Operation differs depending on the mode. For details, refer to "Characteristics of each mode" (p. 5).**

3. Adjust the delay time.

Adjust the delay time with the [TIME] knob.

4. Adjust the feedback level.

Use the [FEEDBACK] knob to adjust the feedback level (or how much the sound is repeated).

*** Oscillation may occur with certain input sounds, or when the knob is set at certain positions.**

5. Adjust the volume.

Adjust the volume level of the effect sound with the [E.LEVEL] knob.

Using the Tempo Delay

Tempo input allows you to set the delay time to match the tempo of a song by repeatedly pressing the pedal switch in time with the desired tempo. You can also use this method to change the delay time to any setting you like as you perform.

Using tempo input, the delay time can be set within the range of 67–10000 ms.

This corresponds to a range of BPM=24–300.

Setting the TAP DIVISION

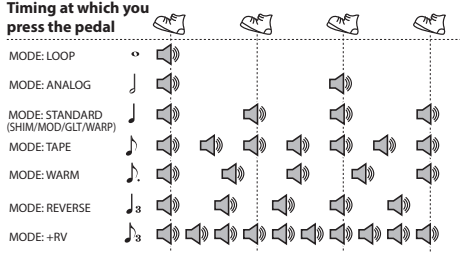
This specifies the note value corresponding to the delay time that is actually set when you press the pedal at quarter note intervals. Before using tap delay, you must first specify this TAP DIVISION.

1. **Make the connection to the INPUT-B jack and leave nothing connected to the INPUT-A (MONO) jack.**
2. **Hold down the pedal switch and insert the plug to INPUT-A (MONO) jack.**

   The unit is now in TAP DIVISION setting mode, and the CHECK indicator is lit orange.
3. **Select the TAP DIVISION.**

   Use the [MODE] knob to select the TAP DIVISION value.

According to the value that you select, the actual delay time will be as shown in the illustration.



* **With the factory settings, this is set to "quarter notes (STANDARD)."**

* **In GLT mode, the delay time is 1/4 of the above lengths.**

4. **Saving the setting.**

   When you press the pedal switch of the unit, the CHECK indicator blinks orange at high speed, and the setting is saved.

   After the setting is saved, the unit returns to the normal operating state.

* **Never switch off the power while the CHECK indicator is flashing rapidly.**
* **This setting is retained even while the power is turned off.**

Setting the tempo using the Pedal switch

1. Select the mode.

Use the [MODE] knob to select the mode to be used.

* **Tempo input is not possible when in WARP/GLT/LOOP modes.**

2. Switch to TEMPO mode.

Hold down the pedal switch for at least two seconds (the CHECK indicator lights green).

* **When a footswitch (the FS-5U, FS-6, FS-7; sold separately) is connected to the TEMPO/EXP jack, you won't be able to enter TEMPO mode by pressing the pedal switch.**

3. Begin inputting the tempo.

Press the pedal switch at quarter-note intervals in synchronization with the tempo of the song (the CHECK indicator blinks red/green).

The delay time is set according to the tempo and the TAP DIVISION value.

For example if TAP DIVISION is set to a dotted eighth note (WARM), and you press the pedal switch at quarter-note intervals in synchronization with the tempo of the song, the tempo is calculated based on that spacing, and the delay is applied with a length of a dotted eighth note at the calculated tempo.

4. Finish inputting the tempo.

Hold down the pedal switch for at least two seconds to complete the setting (the CHECK indicator lights red).

* **The tempo may become confused momentarily when you go from Step 3 to Step 4.**
* **Turning the [TIME] knob resets the delay time to that indicated by the knob's position.**

Setting the Tempo Using a Footswitch

Connecting a footswitch (FS-5U, FS-6, FS-7; sold separately) to the TEMPO/EXP jack lets you set the tempo delay by inputting the tempo.

* **You can input the tempo with the footswitch regardless of whether the effect is on or off.**

1. Connect the Footswitch to the TEMPO/EXP jack.

* **When connecting a footswitch, you must turn off the power before connecting or disconnecting cables. Failure to observe this precaution will cause malfunctions.**

2. Select the mode.

Use the [MODE] knob to select the mode to be used.

* **Inputting the tempo is not possible in LOOP mode.**

3. Start inputting the tempo.

Press the footswitch at quarter-note intervals in synchronization with the tempo of the song. (If the effect is off, the CHECK indicator blinks red; if the effect is on, the CHECK indicator blinks red/green.)

Footswitch	Operation
If one FS-5U unit is connected	Use the pedal to input the tempo.
If two FS-5U units are connected	Use the TIP pedal to input the tempo.
If an FS-6 or FS-7 are connected	Use switch B to input the tempo.

The delay time is set according to the tempo and the TAP DIVISION value.

> For example if TAP DIVISION is set to a dotted eighth note (WARM), and you press the pedal switch at quarter-note intervals in synchronization with the tempo of the song, the tempo is calculated based on that spacing, and the delay is applied with a length of a dotted eighth note at the calculated tempo.

* **Tempo input using the Pedal Switch is not possible.**
* **Turning the [TIME] knob resets the delay time to that indicated by the knob's position.**
* **The CHECK indicator flashes red in time with the interval with which you press the pedal.**

Using the LOOP (Overdubbing) Function

With the LOOP function, you can record up to 40 seconds of your performance, and then have that content played back repeatedly. You can also layer this as you perform something else, then record these together (overdub).

1. Select LOOP.

Set the MODE knob to LOOP (the CHECK indicator goes out).

2. Begin recording.

Recording starts when you press the pedal switch (the CHECK indicator flashes red).

* **The maximum recording time is 20 seconds for stereo input or 40 seconds for mono input.**
* **Recording continues even if you release the pedal switch.**

3. Stop recording → start playback.

When in the recording state, press the pedal switch to stop recording and transition to playback (the CHECK indicator is lit green).

4. Start overdubbing.

When in the playback state, press the pedal switch to start overdubbing (the CHECK indicator is lit orange).

5. Stop overdubbing → start playback.

When in the overdubbing state, press the pedal switch to stop overdubbing and transition to playback (the CHECK indicator is lit green).

6. Adjust the volume.

Use the [E.LEVEL] knob to adjust the volume of the playback sound.

7. Finish playback.

To stop playback, press the pedal switch twice. (If there is recorded data, the CHECK indicator blinks green.)

* **Press the pedal switch two times in succession, keeping the interval between presses to one second or less.**

Hold down the pedal switch for two seconds or longer to delete the recorded content.

Using a footswitch to control the loop function

If a footswitch (FS-5U, FS-6, FS-7; sold separately) is connected to the TEMPO/EXP jack, you can stop playback or erase.

*** When connecting a footswitch, you must turn off the power before connecting or disconnecting cables. Failure to observe this precaution will cause malfunctions.**

Footswitch	Operation
If one FS-5U unit is connected	Press the pedal to stop.
	Long-press the pedal to delete.
If two FS-5U units are connected	Press the RING pedal to delete.
	Press the TIP pedal to stop.
If an FS-6 or FS-7 are connected	Press switch A to delete.
	Press switch B to stop.

Using the TWIST Function

If a footswitch (sold separately: FS-5U, FS-6, FS-7) is connected to the TEMPO/EXP jack, you can use the TWIST function which creates an aggressive sense of rotation.

*** When connecting a footswitch, you must turn off the power before connecting or disconnecting cables. Failure to observe this precaution will cause malfunctions.**

*** Twist function cannot be used in LOOP mode.**

Footswitch	Operation
If two FS-5U units are connected	Press the RING pedal to apply the TWIST effect.
If an FS-6 or FS-7 are connected	Press switch A to apply the TWIST effect.

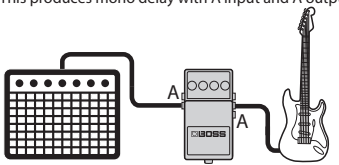
*** If only one FS-5U unit is connected, the TWIST function cannot be used.**

Setting the Output Method

With the DD-8, you can obtain a variety of different delay effects by changing how the connections are made.

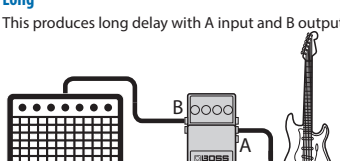
Normal

This produces mono delay with A input and A output.



Long

This produces long delay with A input and B output.

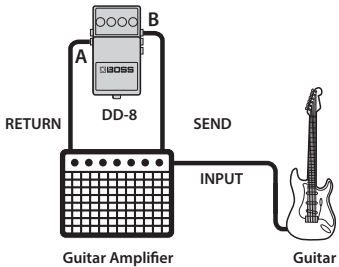


MODE	Normal delay	Long delay
LOOP	40 sec. *1	40 sec.
STANDARD	20–800 ms	40–1600 ms
ANALOG	20–800 ms	40–1600 ms
TAPE	20–800 ms	40–1600 ms
WARM	20–800 ms	40–1600 ms
REVERSE	300–5000 ms	600–10000 ms
+RV	20–800 ms	40–1600 ms
SHIM	200–800 ms	400–1600 ms
MOD	20–800 ms	40–1600 ms
WARP	20–800 ms	40–1600 ms
GLT	10–400 ms	20–800 ms

*1:In LOOP mode, the maximum recording time is 20 seconds for stereo input or 40 seconds for mono input.

Direct Mute

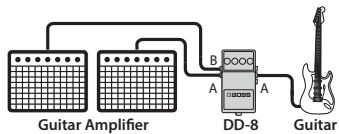
This produces effect output with B input and A output.



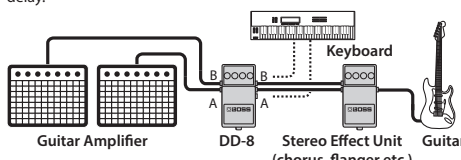
* **The direct sound is not output from A, regardless of whether the effect is on or off.**
* **Be sure to lower the output level of any device being connected.**

Stereo

With A input and A/B output, this provides mono-in stereo-out delay.



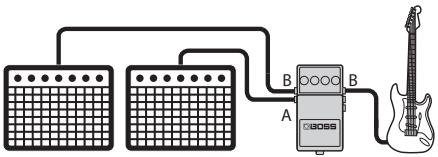
With A/B input and A/B output, this provides stereo-in stereo-out delay.



* **You can select any of three types of stereo delay modes. For more information, refer to "Setting the Mode for Stereo Delay" (p. 18).**

Effect + Direct

This produces effect + direct output with B input and A/B output.



* **A: effect, B: direct**
* **Switching off the effect outputs the direct sound from A.**

Setting the Mode for Stereo Delay

When using the DD-8 as a stereo delay, you can choose among three different types of stereo delay effect.

* **For detailed information on how to make the connections for stereo delay, refer to "Stereo" (p. 16).**

1. **Make the connection to the INPUT-A (MONO) jack and leave nothing connected to the INPUT-B jack.**
2. **Hold down the pedal switch and insert the plug to INPUT-B jack.**

   The setting mode for stereo delay is enabled, and the CHECK indicator lights in orange.
3. **Select the stereo delay effect.**

   Use the [MODE] knob to select the mode for stereo delay.

MODE knob	Effect	Explanation
LOOP	Panning	Panning delay.
ANALOG	Wide stereo	Stereo delay with a sense of wide space in the reverberant sound.
STANDARD	Stereo	Linked parallel delays for A and B.
TAPE	Panning	Panning delay.
WARM		
REVERSE		
+RV		
SHIM		
MOD		
GLT		
WARP		

* **With the factory settings, this is set to "STANDARD."**

4. **Save the settings.**

   Press the pedal switch to make the CHECK indicator rapidly flash in orange and save the settings.

   After the settings have been saved, the unit returns to normal operation.

* **Never switch off the power while the CHECK indicator is flashing rapidly.**

* **This setting is retained even while the power is turned off.**

Control Using an Expression Pedal

Connecting an expression pedal (Roland EV-5, BOSS FV-500H, FV-500L, EV-30; sold separately) to the TEMPO/EXP jack enables you to control the respective parameters of the [E.LEVEL], [FEEDBACK], and [TIME] knobs.

* **Use only the specified expression pedal. By connecting any other expression pedals, you risk causing malfunction and/or damage to the unit.**

Making the Settings for Expression Pedal Functions

1. Hold down the pedal switch and connect the expression pedal.

The function-setting mode for the expression pedal is enabled and the CHECK indicator lights in orange.

* **The setting mode cannot be entered while LOOP mode is selected.**
* **When connecting an expression pedal to the TEMPO/EXP jack, set the minimum volume for the connected expression pedal to the "MIN" position.**

2. Make the settings for the parameters.

Turn the [E.LEVEL], [FEEDBACK], and [D.TIME] knobs to set the maximum values of the ranges you want to control. If you don't want to control a particular parameter with the expression pedal, set its value to the "MIN" position.

* **You can set only the maximum value of a parameter range controlled using the expression pedal. Setting the minimum value is not possible.**

3. Save the parameters.

Press the pedal switch to make the CHECK indicator rapidly flash in orange and save the settings.

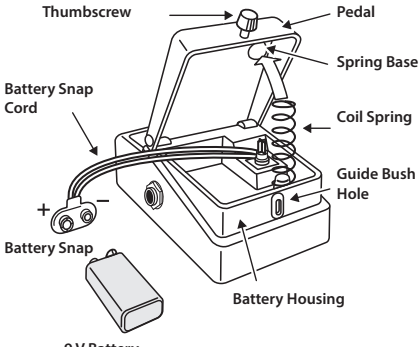
After the settings have been saved, the unit returns to normal operation.

* **Never switch off the power while the CHECK indicator is flashing rapidly.**
* **This setting is retained even while the power is turned off.**

Use of Battery

* **If operating this unit on batteries, please use alkaline batteries.**
* **If you handle batteries improperly, you risk explosion and fluid leakage. Make sure that you carefully observe all of the items related to batteries that are listed in "USING THE UNIT SAFELY" and "IMPORTANT NOTES" (supplied on a separate sheet).**
* **When operating on battery power only, the unit's indicator will become dim when battery power gets too low. Replace the battery as soon as possible.**
* **Batteries should always be installed or replaced before connecting any other devices. This way, you can prevent malfunction and damage.**

Changing the Battery



1. **Hold down the pedal and loosen the thumbscrew, then open the pedal upward.**
   * The pedal can be opened without detaching the thumbscrew completely.
2. **Remove the old battery from the battery housing, and remove the snap cord connected to it.**
3. **Connect the snap cord to the new battery, and place the battery inside the battery housing.**
   * Be sure to carefully observe the battery's polarity (+ versus -).
4. **Slip the coil spring onto the spring base on the back of the pedal, and then close the pedal.**
   * Carefully avoid getting the snap cord caught in the pedal, coil spring, and battery housing.
5. **Insert the thumb screw into the guide bush hole and tighten it securely.**

Main Specifications

Nominal Input Level	-20 dBu
Input Impedance	1 MΩ
Nominal Output Level	-20 dBu
Output Impedance	1 kΩ
Recommended Load Impedance	10 kΩ or greater
Power Supply	DC 9 V: Alkaline battery (9 V, 6LR61) AC adaptor (PSA series: sold separately)
Current Draw	100 mA * Expected battery life under continuous use (These figures will vary depending on the actual conditions of use.) Alkaline: Approx. 3.5 hours
Dimensions	73 (W) x 129 (D) x 59 (H) mm 2-7/8 (W) x 5-1/8 (D) x 2-3/8 (H) inches
Weight	440 g / 1 lb (including battery)
Accessories	Leaflet ("USING THE UNIT SAFELY," "IMPORTANT NOTES," and "Information") Alkaline battery (9 V, 6LR61)
Options	AC adaptor: PSA series Footswitch: FS-5U, FS-6, FS-7 Expression pedal: FV-500H, FV-500L, EV-30, Roland EV-5

*** 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.**