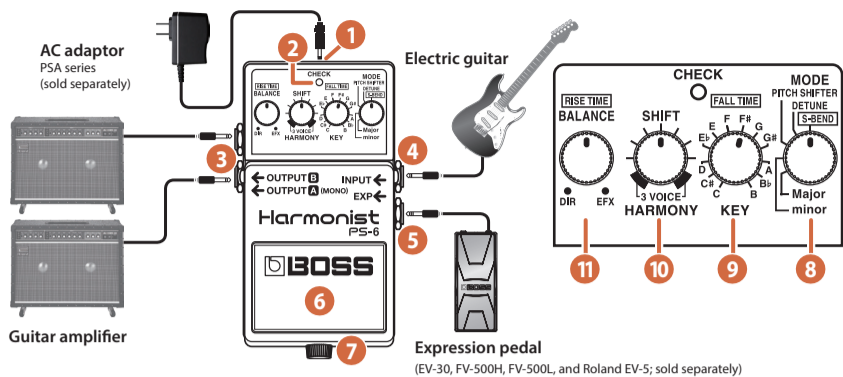




Before using this unit, carefully read the sections entitled: "USING THE UNIT SAFELY" and "IMPORTANT NOTES" (supplied on a separate sheet). After reading, keep the document(s) where it will be available for immediate reference.

Panel Descriptions



Name	Explanation
1 DC IN jack	Accepts connection of an AC Adaptor (sold separately: PSA series). By using an AC Adaptor, you can play without being concerned about how much battery power you have left. * Use only the specified AC adaptor (PSA series), and connect it to an AC outlet of the correct voltage. Do not use any other AC adaptor, since this may cause malfunction. * If the AC adaptor is connected while power is on, the power supply is drawn from the AC adaptor. * We recommend that you keep batteries installed in the unit even though you'll be powering it with the AC adaptor. That way, you'll be able to continue a performance even if the cord of the AC adaptor gets accidentally disconnected from the unit.
2 CHECK indicator	This indicator shows whether the effect is on or off, and also doubles as the battery check indicator. The indicator lights when the effect is on. * If you're powering the unit with a battery and the CHECK indicator goes dim—or doesn't light at all—when you try to turn the effect on, the battery is near depletion and should be replaced. → "Changing the Battery"
3 OUTPUT Jacks A (MONO), B	These output jacks can be connected to an amplifier or another effects unit. Use the A (MONO) jack when you want to use mono output. * The output will differ depending on the settings for the [MODE] knob and [SHIFT] knob. → "Description of Each Mode"

Name	Explanation
4 INPUT jack	This jack accepts signals coming from a guitar or other musical instrument, or another effects unit. * The INPUT jack doubles as the power switch. Power to the unit is turned on when you plug into the INPUT jack; the power is turned off when the cable is unplugged. To prevent unnecessary battery consumption, be sure to disconnect the plug from the INPUT jack when not using the effects unit.
5 EXP jack	Connect an expression pedal (sold separately) here. Depressing the pedal changes the amount of pitch shift. Pitch shifting is activated when you step on the pedal. When you release your foot from the pedal (minimum value) pitch changes become invalid. * Use only the specified expression pedal (FV-500H, FV-500L, EV-30, and Roland EV-5; sold separately). By connecting any other expression pedals, you risk causing malfunction and/or damage to the unit. * Set the Minimum Volume of the expression pedal to the minimum value (0). If not set to the minimum value, things won't work correctly.
6 Pedal switch	Pressing this switch will turn the effect on/off.
7 Thumbscrew	When this screw is loosened, the pedal will open, allowing you to change the battery. → "Changing the Battery"
8 [MODE] knob	Used to switch among the HARMONY (Major, minor), PITCH SHIFTER, DETUNE, and S-BEND modes. → "Description of Each Mode"
9 [KEY] knob ([FALL TIME] knob)	When in the HARMONY (Major, minor) mode Sets the key to play in when using the HARMONY (Major, minor) mode. * If the key for the song being performed is set incorrectly, the harmonies that are produced may not be at the right pitch. When in the S-BEND mode This adjusts the amount of time it is to take for the pitch to transition from the set pitch back to the original pitch (the FALL time).
10 [SHIFT] knob	When in the HARMONY (Major, minor) mode Sets the pitch for the harmonies. When in the PITCH SHIFTER/DETUNE/S-BEND modes Sets the amount of pitch shifting.
11 [BALANCE] knob ([RISE TIME] knob)	This Adjusts the output balance between the direct sound and the effect sound. When in the S-BEND mode It adjusts the amount of time it is to take to transition to the set pitch (the RISE time).

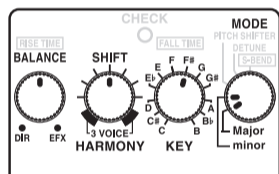
Description of Each Mode

HARMONY

Adds effect-processed sound (maximum of two sounds) to the input sound, thus creating three-voice harmonies.

* Use only for single notes, not chords.

* Using a tuner to make sure your instruments are properly tuned. Tune after setting the reference pitch A4 to 440 Hz.



1. Using the [KEY] knob and [MODE] knob (Major, minor), select the key you're going to perform in.

2. Using the [SHIFT] knob, select the pitch for the harmonies.



With a stereo connection, the following will be output.

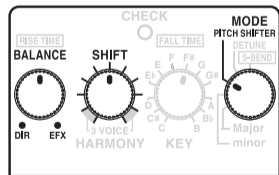
Harmonics	OUTPUT A	OUTPUT B
+1oct & -1oct	effect sound (+1 oct) & direct sound	effect sound (-1 oct) & direct sound
-4th & -6th	effect sound (-4th) & direct sound	effect sound (-6th) & direct sound
-1oct, -6th, -3rd, 3rd, 5th, 6th, +1oct	effect sound	direct sound
3rd & 5th	effect sound (3rd) & direct sound	effect sound (5th) & direct sound
3rd & -4th	effect sound (3rd) & direct sound	effect sound (-4th) & direct sound

PITCH SHIFTER

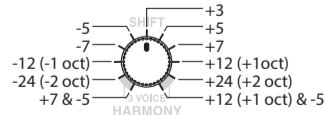
Outputs a sound that's been pitch shifted up or down by up to two octaves.

* This can be used both for single notes and chords.

* In this mode, the [KEY] knob has no effect.



1. Using the [SHIFT] knob, select the amount of pitch shifting.



With a stereo connection, the following will be output.

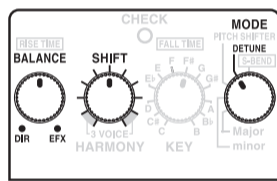
Amount of pitch shifting	OUTPUT A	OUTPUT B
+7 & -5	effect sound (+7) & direct sound	effect sound (-5) & direct sound
-24 (-2 oct), -12 (-1 oct), -7, -5, +3, +5, +7, +12 (+1 oct), +24 (+2 oct)	effect sound	direct sound
+12 (+1 oct) & -5	effect sound (+12) & direct sound	effect sound (-5) & direct sound

DETUNE

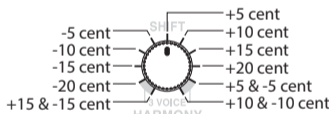
Adds sound that has been shifted only slightly to the input sound.

* This can be used both for single notes and chords.

* In this mode, the [KEY] knob has no effect.



1. Using the [SHIFT] knob, select the amount of pitch shifting.



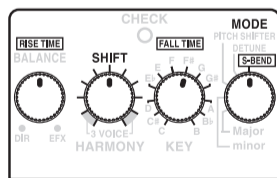
With a stereo connection, the following will be output.

Amount of pitch shifting	OUTPUT A	OUTPUT B
+15 & -15	effect sound (+15) & direct sound	effect sound (-15) & direct sound
-20, -15, -10, -5, +5, +10, +15, +20	effect sound	direct sound
+5 & -5	effect sound (+5) & direct sound	effect sound (-5) & direct sound
+10 & -10	effect sound (+10) & direct sound	effect sound (-10) & direct sound

S-BEND (Super Bend)

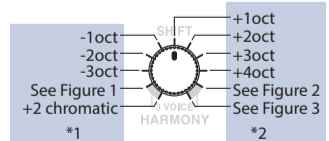
Provides a pitch up/pitch down effect that's impossible to obtain using a guitar's tremolo bar.

The S-BEND effect will be obtained while you step on the pedal.



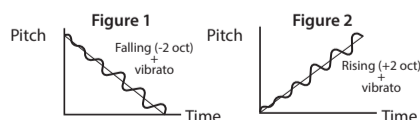
1. Using the [SHIFT] knob, choose the type of pitch up/pitch down effect that you want to use.

2. Using the [RISE TIME] knob and [FALL TIME] knob, adjust the time that the effect is to be applied.

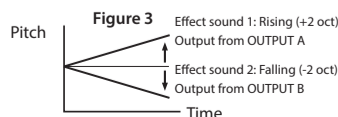


*1 This can be used both for single notes and chords.

*2 Use only for single notes, not chords.



The same effect sound is output from both OUTPUT A and OUTPUT B.



For monaural use, make the connection to the OUTPUT A.

Precautions When Connecting

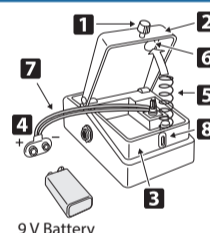
- To prevent malfunction and equipment failure, always turn down the volume, and turn off all the units before making any connections.
- Before connecting or disconnecting any patch cords, be sure all the volume controls in your system are set to minimum.
- Once everything is properly connected, be sure to follow the procedure below to turn on their power. If you turn on equipment in the wrong order, you risk causing malfunction or equipment failure.

When powering up: Turn on the power to your guitar amp last.
When powering down: Turn off the power to your guitar amp first.

- This unit is equipped with a protection circuit. A brief interval (a few seconds) after power up is required before the unit will operate normally.

Changing the Battery

- Hold down the pedal and loosen the thumbscrew 1, then open the pedal 2.
* The pedal can be opened without detaching the thumbscrew completely.
- Remove the old battery from the battery housing 3, and remove the battery snap 4 connected to it.
- Connect the battery snap to the new battery, and place the battery inside the battery housing.
* Be sure to carefully observe the battery's polarity (+ versus -).
- Slip the coil spring 5 onto the spring base 6 on the back of the pedal, and then close the pedal.
* Carefully avoid getting the battery snap cord 7 caught in the pedal, coil spring, and battery housing.
- Insert the thumbscrew into the guide bush hole 8 and tighten it securely.



Main Specifications

Nominal Input Level	-20dBu
Input Impedance	1MΩ
Nominal Output Level	-20dBu
Output Impedance	1kΩ
Recommended Load Impedance	10 kΩ or greater
Power Supply	DC 9 V; Alkaline battery (9 V, 6LR61)/Carbon-zinc battery (9 V, 6F22), AC Adaptor (PSA series: optional)
Current Draw	45 mA * Expected battery life under continuous use: Alkaline: 9.5 hours Carbon: 2 hours These figures will vary depending on the actual conditions of use.
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	420 g/15 oz (including Battery)
Accessories	Owner's Manual, Leaflet ("USING THE UNIT SAFELY"/"IMPORTANT NOTES," and "Information"), Alkaline battery (9 V, 6LR61)
Options	AC adaptor: PSA series Expression pedal: EV-30, FV-500H, FV-500L, 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.

Use of Batteries

- The battery that was supplied with the unit is for temporary use, intended primarily for testing the unit's operation. We suggest replacing this with an alkaline dry cell.
- 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).