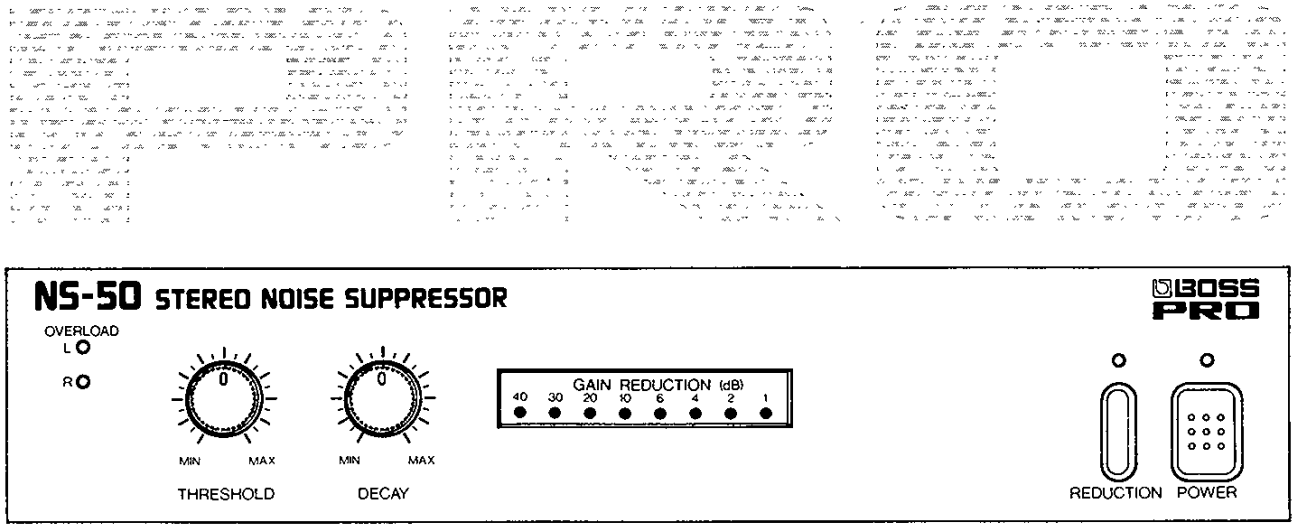
BOSS

NS-50 STEREO NOISE SUPPRESSOR

Owner's Manual



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Thank you, and congratulations on your choice of the BOSS [NS-50] Stereo Noise Suppressor.

To make sure you enjoy the complete range of functions the NS-50 provides, and to ensure satisfaction for years to come, please take the time to completely read this Owner's Manual before starting out.

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■ Features

- This unit is a noise reduction device (with stereo output) that is compatible with both the Effect Loop and Single End BOSS original methods.
- Since signals from an instrument are detected directly, noise is suppressed regardless of whether other effects devices are "in" or "out".
- The current operational status is shown by means of the Gain Reduction Indicators, making it easier to make desired settings.
- In a departure from conventional noise reduction methods employing low-pass filters, this unit takes advantage of high-performance VCAs and high-speed envelope detection circuitry. These components provide noise reduction that corresponds to the volume of the instrument, once the level has dropped below the threshold level. As a result, an extremely natural noise reduction effect, with no deterioration in tone or expressive content, is obtained.
- By employing the optional RAD-50 Rack Mount Adaptor, two units can be used together as a set which mounts into a 1U space in a standard 19-inch rack.

■ Important Notes

When using an AC adaptor, be sure that it is one supplied by the manufacturer. Use of any other power adaptor could result in damage, malfunction, or electric shock.

Power Supply

- When making any connections with other devices, always turn off the power to all equipment first; this will help prevent damage or malfunction.
- Do not use this unit on the same power circuit with any device that will generate line noise, such as a motor or variable lighting system.
- The power supply required for this unit is shown on its nameplate. Ensure that the line voltage of your installation meets this requirement.
- Avoid damaging the power cord; do not step on it, place heavy objects on it etc.
- When disconnecting the AC adaptor from the outlet, grasp the plug itself; never pull on the cord.
- If the unit is to remain unused for a long period of time, unplug the power cord.

Placement

- Do not subject the unit to temperature extremes (eg. direct sunlight in an enclosed vehicle). Avoid using or storing the unit in dusty or humid areas or areas that are subject to high vibration levels.
- Using the unit near power amplifiers (or other equipment containing large transformers) may induce hum.
- This unit may interfere with radio and television reception. Do not use this unit in the vicinity of such receivers.

Maintenance

- For everyday cleaning wipe the unit with a soft, dry cloth (or one that has been slightly dampened with water). To remove stubborn dirt, use a mild neutral detergent. Afterwards, be sure to wipe the unit thoroughly with a soft, dry cloth.
- Never use benzene, thinners, alcohol or solvents of any kind, to avoid the risk of discoloration and/or deformation.

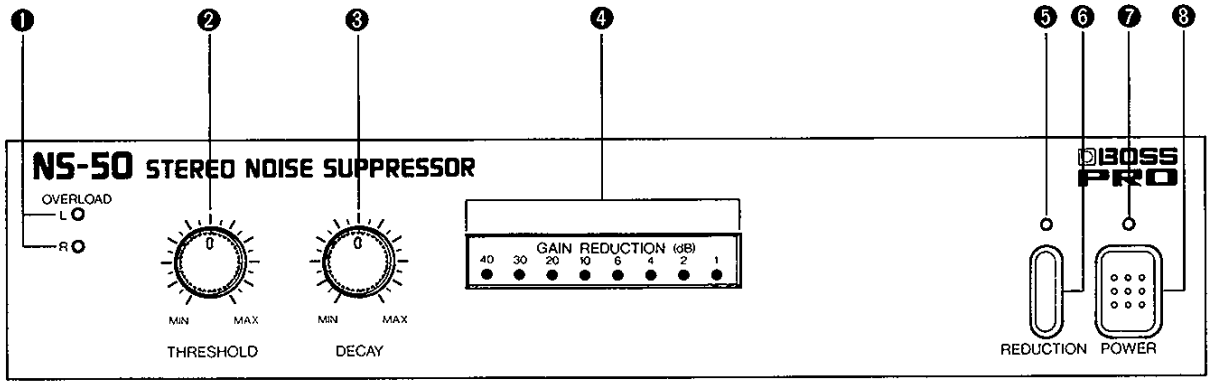
Additional Precautions

- Protect the unit from strong impact.
- Do not allow objects or liquids of any kind to penetrate the unit. In the event of such an occurrence, discontinue use immediately. Contact qualified service personnel as soon as possible.
- Never strike or apply strong pressure to the display.
- Before using the unit in a foreign country, consult with qualified service personnel.
- Should a malfunction occur (or if you suspect there is a problem) discontinue use immediately. Contact qualified service personnel as soon as possible.

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■ PANEL DESCRIPTIONS

<Front Panel>



❶ Overload Indicators L, R

These indicators light when the input signals are too high.

* **These indicators light 6dB prior to the clipping point (level at which distortion starts to occur).**

Should the indicators light too frequently, carry out the steps described below. They will ensure that the indicators light only on input peaks.

- Lower the output level of the device you have connected to the Input jacks.
- Move the Level switch ⓭ on the unit's rear panel to the "+4dBm" position.

❷ Threshold Level Knob

Allows for adjustment of the level at which the Noise Suppressor will take effect (Threshold Level). It should be adjusted to match the input level at the "Guitar In" jack ⓯ (Input Jacks ⓬), and the noise level. When the noise level is high, turn the knob clockwise (↷) to raise the Threshold Level.

❸ Decay Knob

Provides adjustment of the length of time it will take for sound to decay when the signal level at the "Guitar In" Jack ⓯ (Input Jack ⓬) has dropped below the threshold level. Clockwise rotation (↷), increases the Decay Time. Ordinarily, it should be set at "MIN".

❹ Gain Reduction Indicators

Provides an indication of the operational status (extent to which the effect is being applied) of the Noise Suppressor.

❺ Reduction Indicator

Lights when Reduction is "In".

❻ Reduction Switch

Allows Reduction to be switched "In" or "Out". When the switch is in (▂), the input signal is routed through the Noise Suppressor before being output. When the switch is out (▀), the signal is output directly (bypassed).

❼ Power Indicator

Lights when the Power Switch is turned on, indicating that the unit is ready for operation.

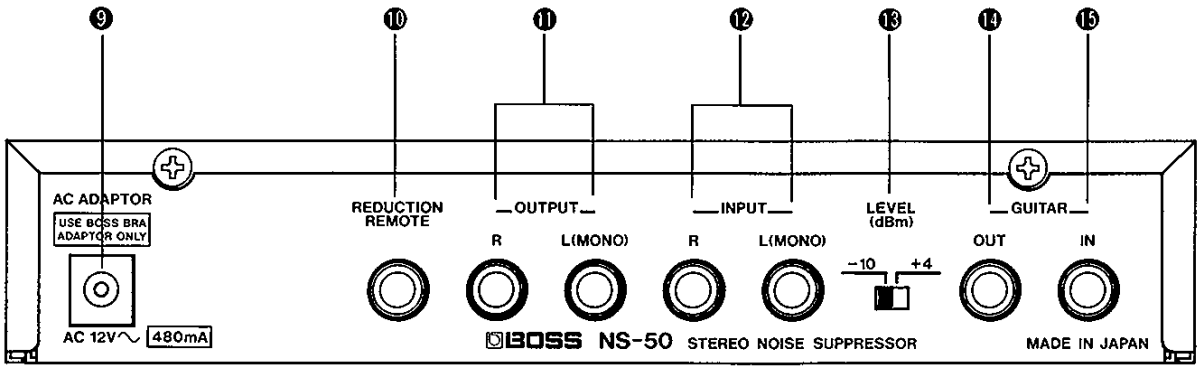
❽ Power Switch

Turns power on or off. When "On" (▂), the Power Indicator lights indicating that the unit is ready for operation.

* **Make sure you turn the volume on your amplifier to "0" before turning the power switch on.**
* **No signal will be output from the unit for a few seconds after power is turned on since a muting circuit is in effect at that time.**

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<Rear Panel>



⑨ Adaptor Jack

This jack accepts connection of the supplied AC Adaptor (BOSS BRA-120, 220, 240), specialized for use with this unit.

⑩ Reduction Remote Jack

This jack accepts connection of an optionally available foot switch (FS-5L). When connected, you have pedal control over switching Reduction In and Out. You can confirm the In/Out status by the Reduction Indicator ❺.

* **If a foot pedal is to be used, the Reduction switch ❻ on the front panel should first be set to "In" (▬).**

⑪ Output Jacks: L (MONO), R

These jacks are used for connecting the unit to an amplifier or mixer. When you wish to use the unit in monaural, use only the L (MONO) jack.

⑫ Input Jacks: L (MONO), R

These jacks are used for inputting signals from effects units. When you wish to use the unit in monaural, use only the L (MONO) jack.

⑬ Level Switch

This switch is used to select the rated input/output level. It should be set to either −10dBm or to +4 dBm, depending on the level of the device you have connected. Ordinarily, with a guitar or other electronic musical instrument, you should set it to the "−10dBm" position.

* **No change in the volume occurs as a result of changing the position of the Level Switch.**

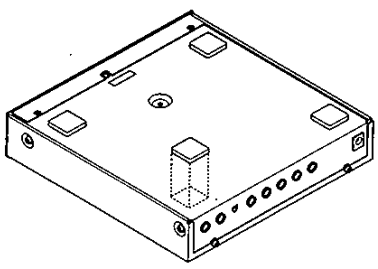
⑭ Guitar Out Jack

Output of the signal received at the "Guitar In" Jack ⑮ is provided from this jack, so it can be routed to other effects devices.

⑮ Guitar In Jack

Jack which accepts the connection of a guitar.

When using the unit without the optional Rack Mount Adaptor RAD-50, please attach the rubber feet as shown below.



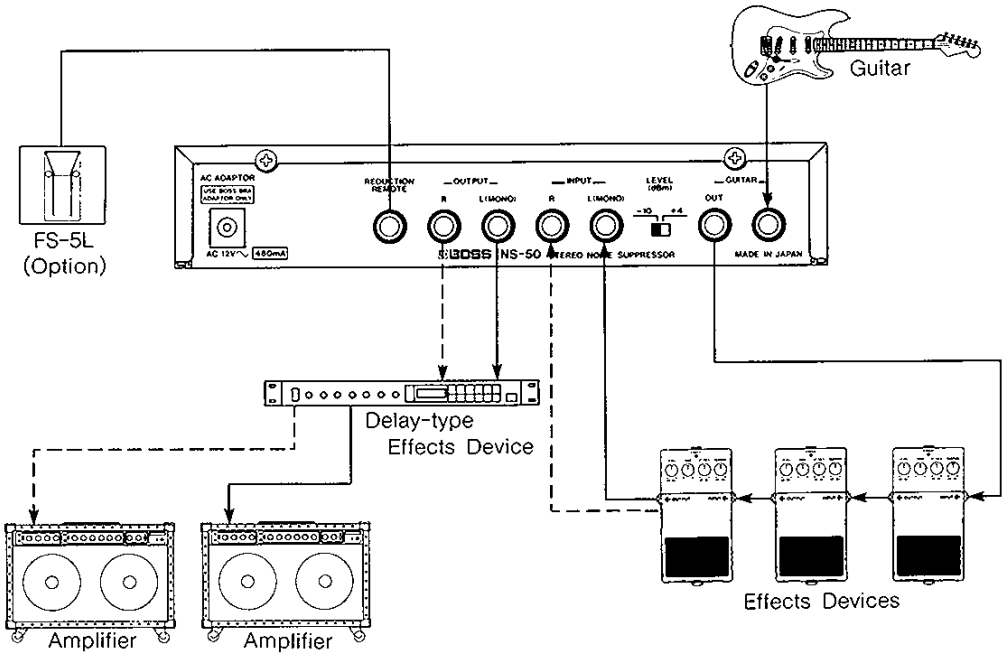
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■ MAKING CONNECTIONS

<Setup Employing Effects Loop>

This setup is effective for using a guitar. While providing you with the Noise Reduction effect, it is not influenced by the settings for other effects devices.

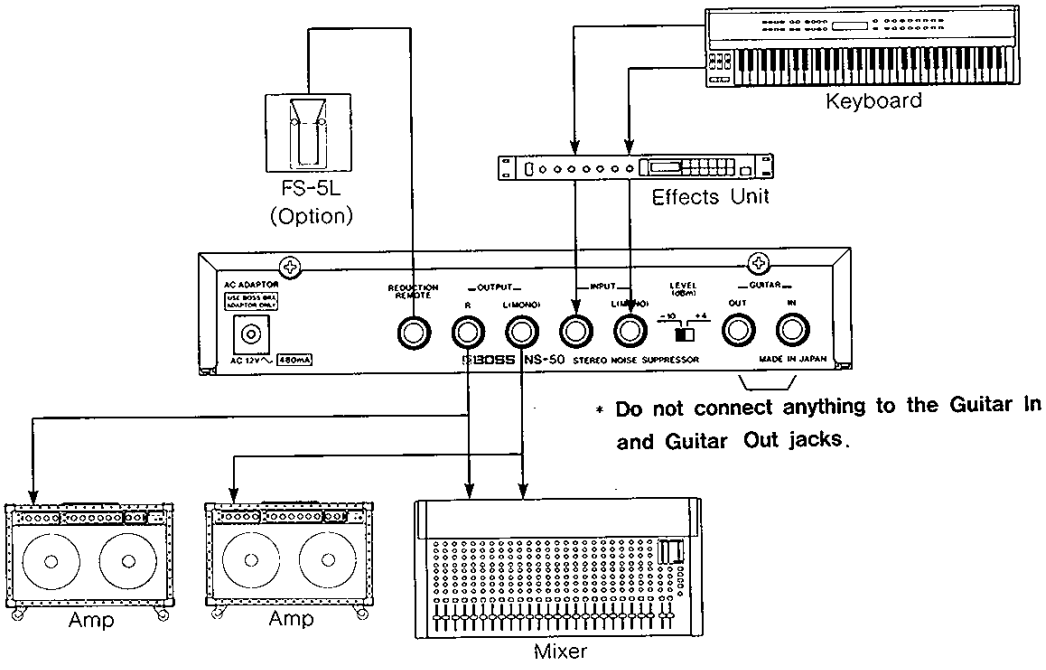
* **Effects devices designed for delay or reverb should not be included in the effects loop. Connect them so they are positioned between the NS-50 and the amplifier or mixer.**



<Single End Setup>

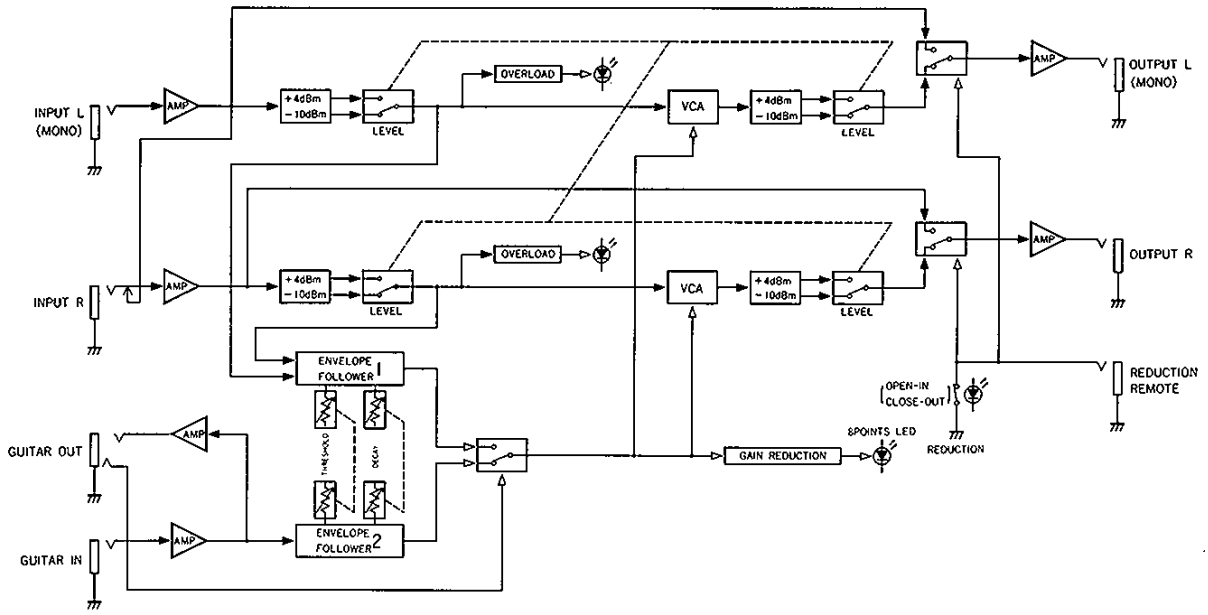
Most appropriate with stereo output from sources such as keyboards.

* **The NS-50 should be connected at the end of the signal path, after all other effects devices, including those producing delay or reverb.**



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■ BLOCK DIAGRAM



■ SPECIFICATIONS

Rated Input Level: −10dBm/+4dBm

Input Impedance: 1MΩ(GUITAR IN)
47kΩ(INPUT L/R)

Rated Output Level: −10dBm/+4dBm

Output Impedance: 1kΩ(GUITAR IN)
600Ω(OUTPUT L/R)

Output Load Impedance: over 10kΩ (GUITAR OUT)
over 10kΩ (OUTPUT L/R)

Frequency Response: (IN)5Hz to 40kHz (±3dB)

Residual Noise: Less than −100dBm(IHF-A)
(LEVEL SWITCH:−10dBm)

Controls: Threshold, Decay

Switches: Power, REDUCTION In/Out, Level

Indicators: Power, REDUCTION In/Out,
Gain Reduction, Overload L/R

Jacks: Guitar In, Guitar Out, Input L(Mono)/R,
Output L(Mono)/R, REDUCTION Remote,
AC Adaptor In

Power: 12V AC (BOSS BRA-120, 220, 240)

Current Draw: 480mA

Dimensions: 218(W)×44(H)×235(D)mm
8−5/8"(W)×1−3/4"(H)×9-5/16"(D)

Weight: 1.4kg / 3lb 2oz

Accessories: AC Adaptor BOSS BRA-120, 220, 240
Foot Rubber ×4

Options: Rack Mount Adaptor RAD-50
※ Not attachable to Rack Mount Adaptor RAD-10.
Foot Switch FS-5L

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

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