

AMP FACTORY

GP-20

GUITAR AMP PROCESSOR

Owner's Manual

Thank you, and congratulations on your choice of BOSS GP-20 Guitar Amp Processor.

Before using this unit, carefully read the sections entitled: "USING THE UNIT SAFELY" and "IMPORTANT NOTES" (p. 24-26; p. 2-3).

These sections provide important information concerning the proper operation of the unit. Additionally, in order to feel assured that you have gained a good grasp of every feature provided by your new unit, Owner's manual should be read in its entirety. The manual should be saved and kept on hand as a convenient reference.

Main Features

- You can get 22 kinds of realistic amplifier modeling sounds, from great amps of years gone by original amps.
- Supports a wide range of uses, from live performances to recording.
- Provided with "MANUAL" and "MEMORY" settings that let you switch between two tones instantly with the press of a pedal, letting you switch between lead and backing for powerful live performances.
- Equipped with digital outputs that enable recording through digital connections.
- The controls and pedals provide simple and intuitive operation.
- Can run on battery power (six AA type).



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BOSS

IMPORTANT NOTES

In addition to the items listed under "USING THE UNIT SAFELY" on page 2, please read and observe the following:

Power Supply: Use of Batteries

- Do not use this unit on the same power circuit with any device that will generate line noise (such as an electric motor or variable lighting system).
- The AC adaptor will begin to generate heat after long hours of consecutive use. This is normal, and is not a cause for concern.
- The use of an AC adaptor is recommended as the unit's power consumption is relatively high. Should you prefer to use batteries, please use the alkaline type.
- Batteries should always be installed or replaced before connecting any other devices. This way, you can prevent malfunction and/or damage to speakers or other devices.
- Batteries are supplied with the unit. The life of these batteries may be limited, however, since their primary purpose was to enable testing.
- Before connecting this unit to other devices, turn off the power to all units. This will help prevent malfunctions and/or damage to speakers or other devices.

Placement

- Using the unit near power amplifiers (or other equipment containing large power transformers) may induce hum. To alleviate the problem, change the orientation of this unit; or move it farther away from the source of interference.
- This device may interfere with radio and television reception. Do not use this device in the vicinity of such receivers.
- To avoid possible breakdown, do not use the unit in a wet area, such as an area exposed to rain or other moisture.

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 cloth impregnated with a mild, non-abrasive 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 possibility of discoloration and/or deformation.

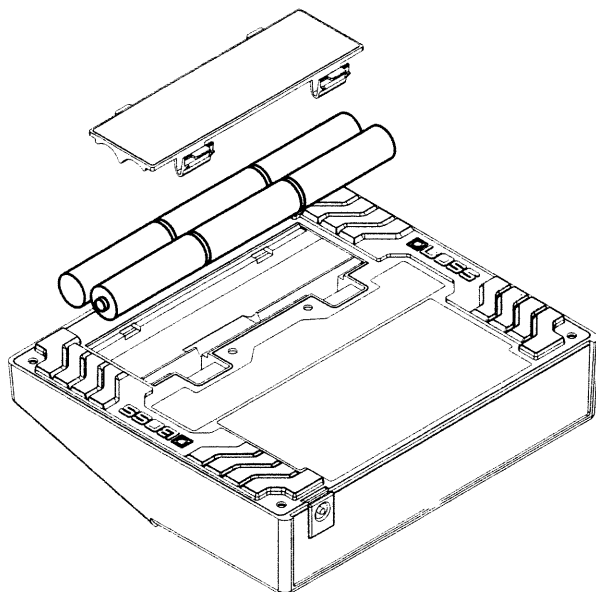
Additional Precautions

- Please be aware that the contents of memory can be irretrievably lost as a result of a malfunction, or the improper operation of the unit. To protect yourself against the risk of losing important data, we recommend that you periodically save a backup copy of important data you have stored in the unit's memory on a paper.
- Unfortunately, it may be impossible to restore the contents of data that was stored in the unit's memory once it has been lost. Roland Corporation assumes no liability concerning such loss of data.
- Use a reasonable amount of care when using the unit's buttons, knobs, or other controls; and when using its jacks and connectors. Rough handling can lead to malfunctions.
- When connecting / disconnecting all cables, grasp the connector itself—never pull on the cable. This way you will avoid causing shorts, or damage to the cable's internal elements.
- To avoid disturbing your neighbors, try to keep the unit's volume at reasonable levels. You may prefer to use headphones, so you do not need to be concerned about those around you (especially when it is late at night).
- When you need to transport the unit, package it in the box (including padding) that it came in, if possible. Otherwise, you will need to use equivalent packaging materials.

Installing Batteries

Insert the included batteries as shown in figure, being careful to orient the batteries correctly.

* Make sure the "+" and "-" ends of the batteries are oriented correctly.



When the batteries run down, the POWER indicator gets dim. If this happens, replace with new batteries.



When replacing the batteries, use six AA type.

* Do not mix fresh batteries with used ones, or mix batteries of different types. Doing so can result in fluid leakage.

* Battery life can vary depending on battery type.



Continuous usage time under battery power is about 25 hours with alkaline batteries and about 9 hours with carbon batteries. (This may vary according to usage conditions.)

Making the Connections

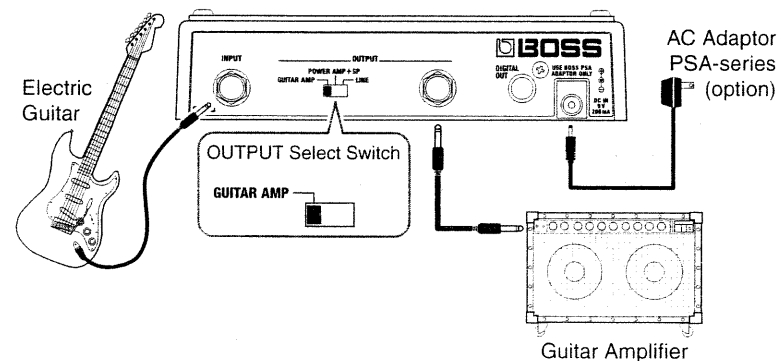


The setting of the OUTPUT Select switch is extremely important to obtaining 100% of the performance of GP-20. Be sure to use a setting that is appropriate for the device you have connected.

Connecting to the Guitar Amplifier

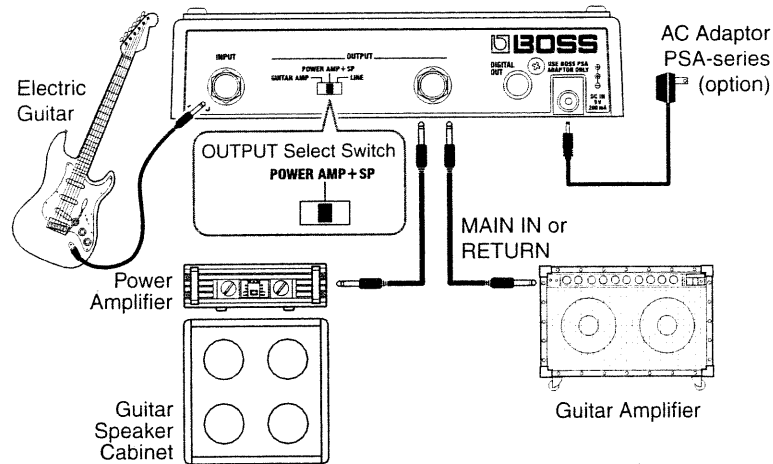
- * When the unit is running on battery power, the power comes on when you insert the connector plug into the INPUT jack.
- * To prevent malfunction and/or damage to speakers or other devices, always turn down the volume, and turn off the power on all devices before making any connections.
- * Once you've gotten hooked up correctly (p. 5-6), be sure to observe the following order when switching on the power to your equipment. 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 (or the like) last.
When powering down: Turn off the power to your guitar amp (or the like) first.
- * Always make sure to have the volume level turned down before switching on power. Even with the volume all the way down, you may still hear some sound when the power is switched on, but this is normal, and does not indicate a malfunction.
- * 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.
- * 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).

Connecting to Normal Input on the Guitar Amp

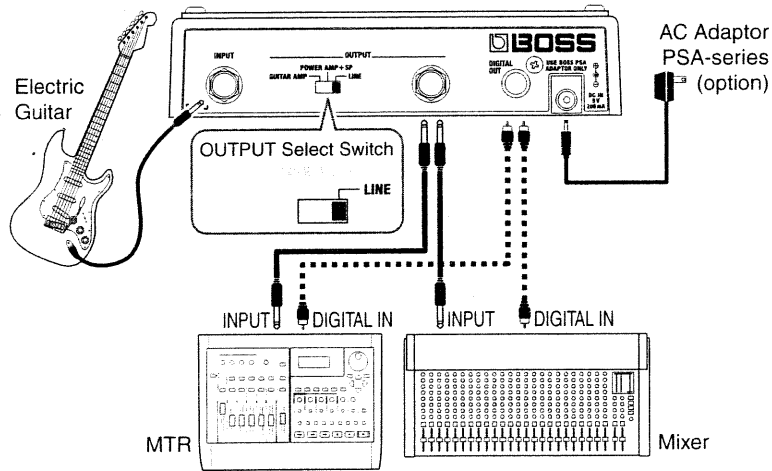


With a standard guitar amp, it may be a good idea to set all the tone controls (BASS, MIDDLE, and TREBLE) to their central positions first, then adjust from there. We also recommend using clean (undistorted) settings on the amp.

Using in Combination with a Power Amp and Guitar Speaker Cabinet, or Connecting to MAIN IN or RETURN on a Guitar Amp



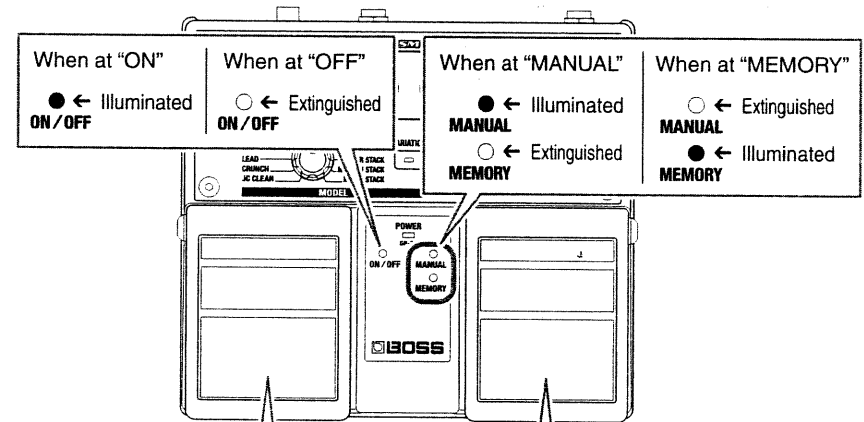
Connecting to an MTR or Mixer



Operation

Pedal Operation

The settings for "MANUAL" and "MODELING ON" are made when you switch on the power.



Each press of the ON/OFF pedal switches modeling on or off. When off, the sound coming in from the INPUT jack is output unchanged.

Each press of the MANUAL or MEMORY pedal switches the unit between "MANUAL," which produces the sound of the panel knob settings unchanged, and "MEMORY," where settings have been stored in advance.



By making the settings for lead sound and backing sound in "MANUAL" and "MEMORY," you can switch between lead and backing with a single action.

Panel Operation

For purposes of this explanation, first depress the ON/OFF pedal to turn on modeling (making the ON/OFF indicator light up), then depress the MANUAL or MEMORY pedal to set the unit to "MANUAL" (getting the MANUAL indicator to light up).

- 3.** Turn the BASS, MIDDLE, TREBLE, and PRESENCE knobs to adjust the sound.

* Depending on the chosen model, no sound may be produced when the BASS, MIDDLE, and TREBLE knobs are all at their minimum settings.

- 4.** Turn the MASTER knob to adjust the volume level.

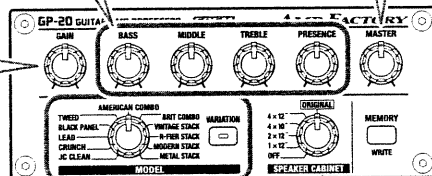
HINT

It may be a good idea to switch on or off using the ON/OFF pedal and adjust the volume to about the same level.

NOTE

Raising the MASTER volume too high by using other knob settings may produce unpleasant distortion. If that happens, lower the MASTER knob.

- 2.** Turn the GAIN knob to adjust the amount of distortion.



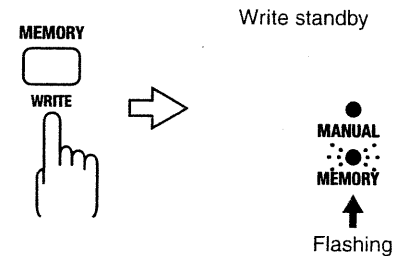
- 1.** Choose a model. Use the MODEL knob and the VARIATION button to choose the sound you want from among 22 types of models (guitar amps).

Storing Settings (Write Operation)

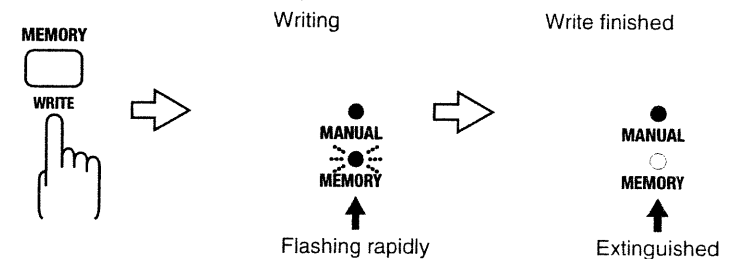
Storing the "MANUAL" Sound in Memory

NOTE Do not switch off the power while a write operation is in progress.

1. Create the sound you want when set to "MANUAL."
2. Press the WRITE button.
The MEMORY indicator flashes and the unit enters write standby.



3. Press the WRITE button again.
The MEMORY indicator flashes more rapidly, then goes out when the write operation finishes.



* To cancel the write operation, then before you press the WRITE button, press the VARIATION button or operate the MANUAL/MEMORY pedal.

Changing and Storing the "MEMORY" Sound

NOTE Do not switch off the power while a write operation is in progress.

1. Press the MANUAL/MEMORY pedal to change to the "MEMORY" sound.
2. Operate the knobs to change the sound.

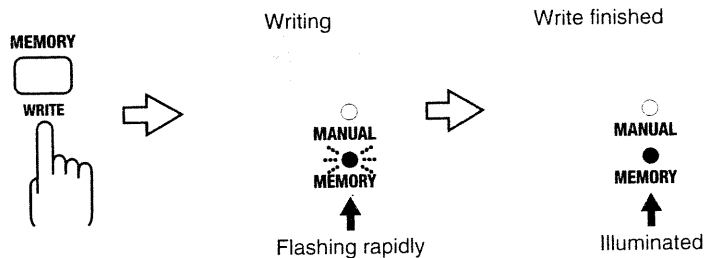
** To avoid sudden inadvertent changes in sound, the GAIN, BASS, MIDDLE, TREBLE, PRESENCE, and MASTER knobs are designed so that the setting does not change unless the knob is first turned as far as the stored setting value. Once the position of the knob matches the setting value stored in memory, the sound starts to change.*

When a setting changes, the MEMORY indicator flashes automatically and the unit enters write standby.

Write standby



3. Press the WRITE button.
The MEMORY indicator flashes more rapidly, then goes dark when the write operation finishes.



** To cancel the setting change and switch to "MANUAL," then before you press the WRITE button, operate the MANUAL/MEMORY pedal.*

Part Names and Functions

Front Panel

Tone Controls

BASS: This adjusts mainly the bass range.
MIDDLE: This adjusts mainly the midrange band.
TREBLE: This adjusts mainly the treble range.

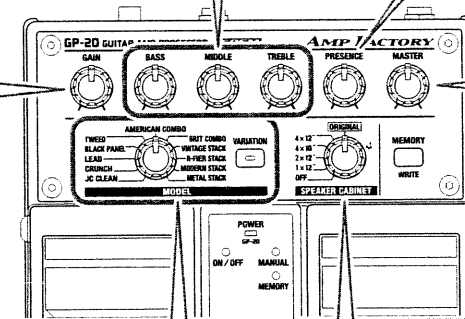
** With some kinds of modeling, the manner in which turning knobs produces a certain kind of effect may also be reproduced, so these three knobs have a mutual effect on each other.*

PRESENCE Knob
This adjusts the sound's presence.

GAIN Knob


This adjusts the amount of distortion and the volume level. Turning it clockwise makes distortion stronger and increases the volume level.

MASTER Knob
This adjusts the final volume level.




MODEL Knob VARIATION Button

Use the MODEL controls to choose the type of guitar amplifier, then press the VARIATION button to choose a variation of the guitar amp. The button's indicator lights up when you have chosen a variation.

 "MODEL Type List" (p. 12)



SPEAKER CABINET Knob

This chooses the type of speaker cabinet. When set to "ORIGINAL," the optimal speaker cabinet for the type of guitar amp is selected automatically.

 "SPEAKER CABINET Type List" (p. 13)

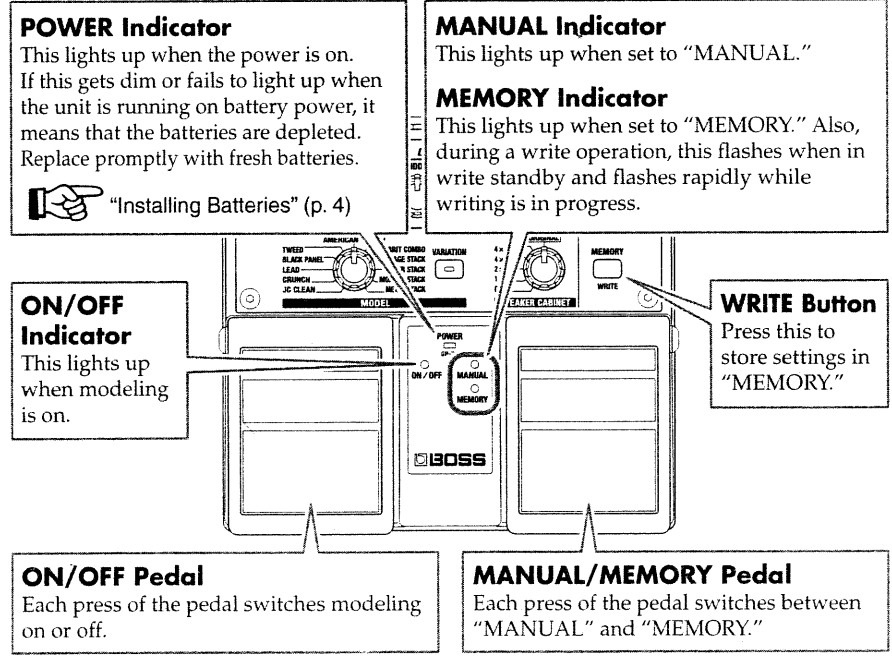
* The trademarks listed below are trademarks of their respective owners, which are separate companies from BOSS. Those companies are not affiliated with BOSS and have not licenced or authorized BOSS's GP-20. Their marks are used solely to identify the equipment whose sound is simulated by BOSS's GP-20.


MODEL Type List

Type	VARIATION is OFF VARIATION  ← Extinguished	VARIATION is ON VARIATION  ← Illuminated
JC CLEAN	This is the sound of the Roland JC-120.	This is a sound with flat response.
CRUNCH	This is a crunch sound that can produce natural distortion.	This is a persistent, fat, midrange sound suited to blues.
LEAD	This is powerful metal sound with high gain.	This is a lead sound with a distinctive midrange.
BLACK PANEL	This models a Fender Twin Reverb.	This models a Fender Twin Reverb with brightness on.
TWEEED	This models a Fender Bassman 4 x 10" Combo.	This models a Fender Pro Reverb.
AMERICAN COMBO	This models a MESA/Boogie combo amp.	This models a Matchless D/C-30.
BRIT COMBO	This models the lead sound of the VOX AC-30TB.	This models the clean sound of a VOX AC-30TB.
VINTAGE STACK	This models the sound input to Input I on a Marshall 1959.	This models the sound of a Marshall 1959 with Inputs I and II connected in parallel.
R-FIER STACK	This models the lead channel of a MESA/Boogie Dual Rectifier.	This models the rhythm channel of a MESA/Boogie Dual Rectifier.
MODERN STACK	This models a Soldano SLO-100.	This models the sound of a Marshall with a modified midrange boost.
METAL STACK	This models the lead channel of a Peavey EVH5150.	This models the rhythm channel of a Peavey 5150.

SPEAKER CABINET Type List

Type	Features
ORIGINAL	This is the built-in speaker of the amp you selected with MODEL.
4 x 12"	This is an optimal speaker cabinet for a large enclosed amp with four 12-inch speakers.
4 x 10"	This is a distinctive open-back speaker cabinet with four 10-inch speakers.
2 x 12"	This is a general open-back speaker cabinet with two 12-inch speakers.
1 x 12"	This is a compact open-back speaker cabinet with one 12-inch speaker.
OFF	No speaker-cabinet modeling is carried out.



POWER Indicator
This lights up when the power is on. If this gets dim or fails to light up when the unit is running on battery power, it means that the batteries are depleted. Replace promptly with fresh batteries.
 "Installing Batteries" (p. 4)

MANUAL Indicator
This lights up when set to "MANUAL."

MEMORY Indicator
This lights up when set to "MEMORY." Also, during a write operation, this flashes when in write standby and flashes rapidly while writing is in progress.

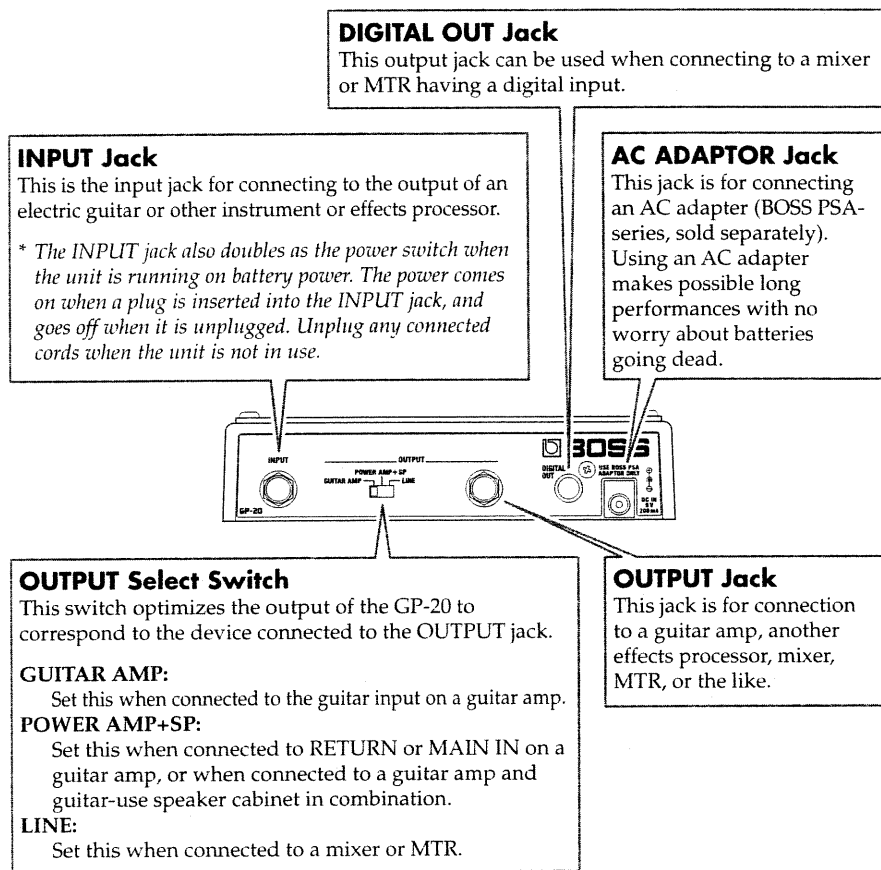
ON/OFF Indicator
This lights up when modeling is on.

WRITE Button
Press this to store settings in "MEMORY."

ON/OFF Pedal
Each press of the pedal switches modeling on or off.

MANUAL/MEMORY Pedal
Each press of the pedal switches between "MANUAL" and "MEMORY."

Rear Panel



Noise Suppressor On/Off Settings

The GP-20 has a built-in noise suppressor to cancel out noise and hum picked up by the guitar.

The following procedure lets you set the noise suppressor on or off.

** The setting (on or off) is stored in memory when the power is switched off.*

** At the factory settings, this is set to ON.*

- Switch off the power.
When running on battery power:
Disconnect the connection plug from the INPUT jack.
When running on power from an AC adaptor:
Disconnect the plug from the AC ADAPTOR jack.
- While holding down the VARIATION button and the MEMORY button, switch on the power.
When running on battery power:
Insert the connection plug into the INPUT jack.
When running on power from an AC adaptor:
Insert the AC adaptor plug into the AC ADAPTOR jack.
When you release the button, the VARIATION indicator flashes.
- Set the noise suppressor on or off pressing the ON/OFF pedal.
ON/OFF indicator illuminated: On
ON/OFF indicator dark: Off
- Press the VARIATION button.
After the VARIATION indicator begins flashing rapidly, the setting is stored in memory and the unit returns to its ordinary state.

Returning Settings to Their Factory Defaults

You can return the settings in memories and noise suppressor to their factory defaults.



When this operation is carried out, everything that is now in memory is lost.

1. Switch off the power.

When running on battery power:

Disconnect the connection plug from the INPUT jack.

When running on power from an AC adaptor:

Disconnect the plug from the AC ADAPTOR jack.

2. While holding down the WRITE button, switch on the power.

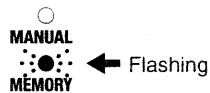
When running on battery power:

Insert the connection plug into the INPUT jack.

When running on power from an AC adaptor:

Insert the AC adaptor plug into the AC ADAPTOR jack.

When you release the button, the MEMORY indicator flashes.



* To cancel the operation, press the left or right pedal.

3. Press the WRITE button.

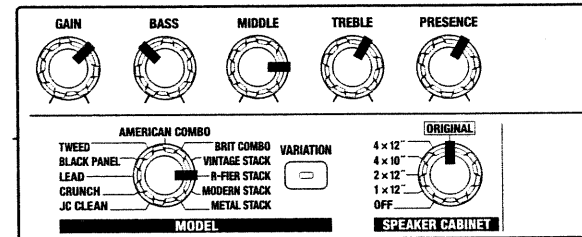
The MEMORY indicator flashes more rapidly, then goes out when the settings return to their factory defaults.

Memory: "R-FIER STACK (Factory-default memory settings)" (p. 17)

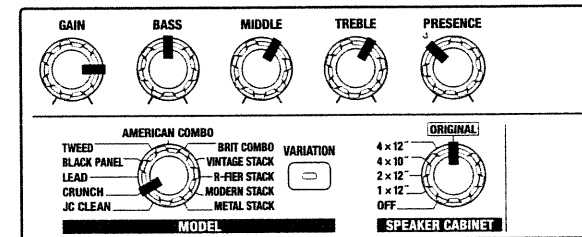
Noise Suppressor: On

Sample Settings

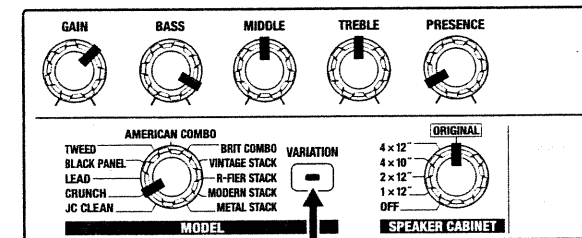
R-FIER STACK (Factory-default memory settings)



CRUNCH



MILD CRUNCH



Illuminated

LEAD

Diagram showing sample settings for the LEAD mode. The top row contains five knobs labeled GAIN, BASS, MIDDLE, TREBLE, and PRESENCE. Below them are two larger knobs labeled AMERICAN COMBO and ORIGINAL, and a VARIATION button. The AMERICAN COMBO knob is set to LEAD. The ORIGINAL knob is set to 4x12". The VARIATION button is illuminated.

TWEED CLEAN

Diagram showing sample settings for the TWEED CLEAN mode. The top row contains five knobs labeled GAIN, BASS, MIDDLE, TREBLE, and PRESENCE. Below them are two larger knobs labeled AMERICAN COMBO and ORIGINAL, and a VARIATION button. The AMERICAN COMBO knob is set to TWEED. The ORIGINAL knob is set to 4x12". The VARIATION button is illuminated.

Illuminated

CLEAN

Diagram showing sample settings for the CLEAN mode. The top row contains five knobs labeled GAIN, BASS, MIDDLE, TREBLE, and PRESENCE. Below them are two larger knobs labeled AMERICAN COMBO and ORIGINAL, and a VARIATION button. The AMERICAN COMBO knob is set to JC CLEAN. The ORIGINAL knob is set to 4x12". The VARIATION button is not illuminated.

MATCH DRIVE

Diagram showing sample settings for the MATCH DRIVE mode. The top row contains five knobs labeled GAIN, BASS, MIDDLE, TREBLE, and PRESENCE. Below them are two larger knobs labeled AMERICAN COMBO and ORIGINAL, and a VARIATION button. The AMERICAN COMBO knob is set to LEAD. The ORIGINAL knob is set to 4x12". The VARIATION button is illuminated.

Illuminated

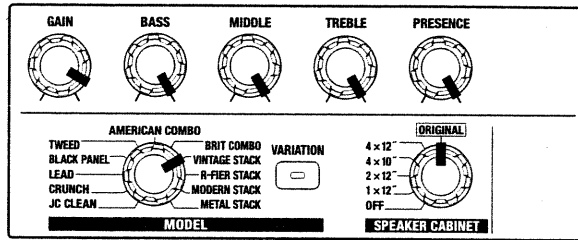
TWEED CRUNCH

Diagram showing sample settings for the TWEED CRUNCH mode. The top row contains five knobs labeled GAIN, BASS, MIDDLE, TREBLE, and PRESENCE. Below them are two larger knobs labeled AMERICAN COMBO and ORIGINAL, and a VARIATION button. The AMERICAN COMBO knob is set to CRUNCH. The ORIGINAL knob is set to 4x12". The VARIATION button is not illuminated.

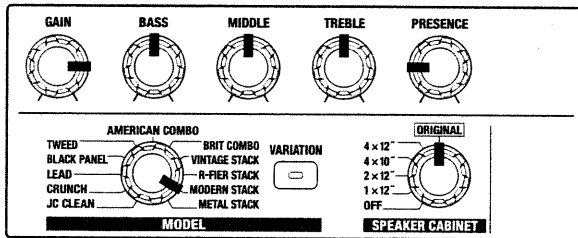
60's BRIT COMBO

Diagram showing sample settings for the 60's BRIT COMBO mode. The top row contains five knobs labeled GAIN, BASS, MIDDLE, TREBLE, and PRESENCE. Below them are two larger knobs labeled AMERICAN COMBO and ORIGINAL, and a VARIATION button. The AMERICAN COMBO knob is set to BRIT COMBO. The ORIGINAL knob is set to 4x12". The VARIATION button is not illuminated.

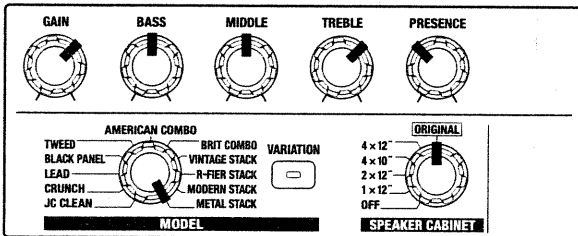
VINTAGE STACK



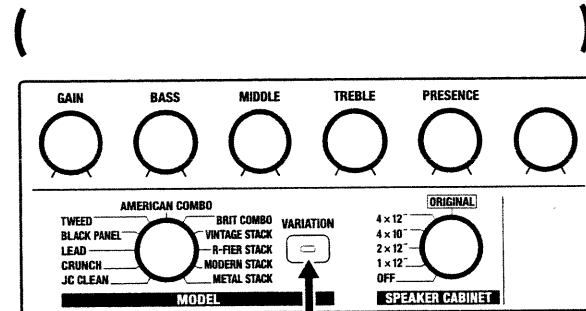
MODERN STACK



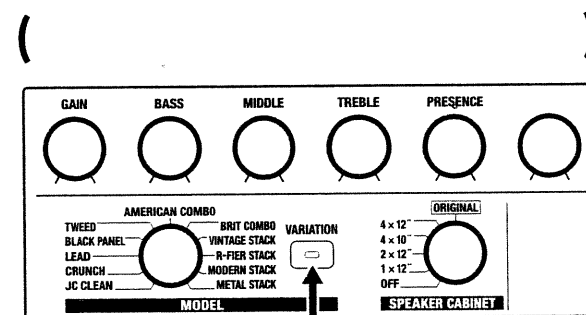
METAL STACK



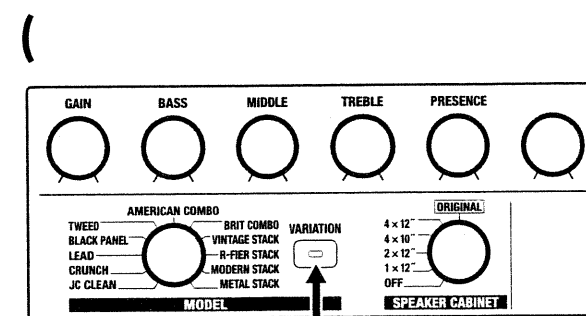
Setting Memo



(Illuminated / Extinguished)



(Illuminated / Extinguished)



(Illuminated / Extinguished)

Specifications

GP-20: Guitar Amp Processor

Nominal Input Level

INPUT -20 dBu

Input Impedance

1 M Ω

Nominal Output Level

OUTPUT -20 dBu

Output Impedance

1 k Ω

Recommended Load Impedance

10 k Ω or greater

Dynamic Range

108 dB (IHF-A typ.)

Controls

ON/OFF Pedal
MANUAL/MEMORY Pedal
GAIN Knob
BASS Knob
MIDDLE Knob
TREBLE Knob
PRESENCE Knob
MASTER Knob
MODEL Knob
SPEAKER CABINET Knob
VARIATION Button
MEMORY/WRITE Button
OUTPUT Select Switch

Indicators

POWER Indicator
(serves also as battery check indicator)
ON/OFF Indicator
MANUAL Indicator
MEMORY Indicator
VARIATION Indicator

Connectors

INPUT Jack (Normal type)
OUTPUT Jack (Normal type)
DIGITAL OUT Jack (RCA PIN type)
AC Adaptor Jack

Power

DC 9V: Dry battery (AA type) x 6, AC Adaptor

Power Consumption

85 mA (9 V max.)

* Expected battery life under continuous use:

Carbon: 9 hours

Alkaline: 25 hours

These figures will vary depending on the actual conditions of use.

Dimensions

173 (W) x 158 (D) x 57 (H) mm
6-13/16 (W) x 6-1/4 (D) x 2-1/4 (H) inches

Weight

1.1 kg / 2 lbs 7 oz (including batteries)

Accessories

Owner's Manual
Roland Service (Information sheet)
Dry battery (AA type) x 6

Options

AC Adaptor (PSA-series)

* 0 dBu = 0.775 Vrms



In the interest of product improvement, the specifications and/or appearance of this unit are subject to change without prior notice.

If You Think There's a Problem

The power doesn't come on.

○ Is the guitar connected correctly to the INPUT jack?

→ Check the connections again.

* When running off batteries, the unit won't switch on unless there's something plugged into the INPUT jack. This helps conserve the batteries.

○ Have the batteries run down?

→ Replace with fresh batteries (p. 4).

○ Is the specified AC adaptor (PSA-series sold separately) connected correctly?

→ Check the connections again (p. 5-6).

There is no sound/volume is too low.

○ Is the other equipment connected correctly?

→ Check the connections again (p. 5-6).

○ Is the volume turned down on the connected guitar amp, effects processor, or other device?

→ Check the settings on the connected equipment (p. 5-6).

○ Are the tone controls (BASS, MIDDLE, and TREBLE) all turned down all the way?

→ The tone controls have the same effect as on the amplifier that is modeled, so depending on the type of modeling you have selected, there may be no sound produced when all the tone controls are turned down all the way.

Noise is produced.

○ Is the guitar connected properly to the INPUT jack?

→ When you are using the AC adapter, the power comes on even when a connector is not plugged into the INPUT jack. This means that noise may be produced when nothing is connected to the INPUT jack. Make sure everything is connected properly before switching on the power to your equipment.

USING THE UNIT SAFELY

INSTRUCTIONS FOR THE PREVENTION OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS

About ⚠ WARNING and ⚠ CAUTION Notices




⚠ WARNING	Used for instructions intended to alert the user to the risk of death or severe injury should the unit be used improperly.
⚠ CAUTION	Used for instructions intended to alert the user to the risk of injury or material damage should the unit be used improperly. * Material damage refers to damage or other adverse effects caused with respect to the home and all its furnishings, as well to domestic animals or pets.

About the Symbols




⚠	The ⚠ symbol alerts the user to important instructions or warnings. The specific meaning of the symbol is determined by the design contained within the triangle. In the case of the symbol at left, it is used for general cautions, warnings, or alerts to danger.
⊘	The ⊘ symbol alerts the user to items that must never be carried out (are forbidden). The specific thing that must not be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the unit must never be disassembled.
⦿	The ⦿ symbol alerts the user to things that must be carried out. The specific thing that must be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the power-cord plug must be unplugged from the outlet.

ALWAYS OBSERVE THE FOLLOWING





⚠ WARNING



- Before using this unit, make sure to read the instructions below, and the Owner's Manual. 
- Do not open (or modify in any way) the unit or its AC adaptor. 
- Do not attempt to repair the unit, or replace parts within it (except when this manual provides specific instructions directing you to do so). Refer all servicing to your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page. 

⚠ WARNING





- Never use or store the unit in places that are:
 - Subject to temperature extremes (e.g., direct sunlight in an enclosed vehicle, near a heating duct, on top of heat-generating equipment); or are 
 - Damp (e.g., baths, washrooms, on wet floors); or are 
 - Humid; or are
 - Exposed to rain; or are
 - Dusty; or are
 - Subject to high levels of vibration.
- Make sure you always have the unit placed so it is level and sure to remain stable. Never place it on stands that could wobble, or on inclined surfaces. 

⚠ WARNING

- Use only the specified AC adaptor (PSA-series), and make sure the line voltage at the installation matches the input voltage specified on the AC adaptor's body. Other AC adaptors may use a different polarity, or be designed for a different voltage, so their use could result in damage, malfunction, or electric shock. 

- Do not excessively twist or bend the power cord, nor place heavy objects on it. Doing so can damage the cord, producing severed elements and short circuits. Damaged cords are fire and shock hazards! 
- This unit, either alone or in combination with an amplifier and headphones or speakers, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level, or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should immediately stop using the unit, and consult an audiologist. 

- Do not allow any objects (e.g., flammable material, coins, pins); or liquids of any kind (water, soft drinks, etc.) to penetrate the unit. 


⚠ WARNING

- Immediately turn the power off, remove the AC adaptor from the outlet, and request servicing by your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page when:
 - The AC adaptor or the power-supply cord has been damaged; or
 - Objects have fallen into, or liquid has been spilled onto the unit; or
 - The unit has been exposed to rain (or otherwise has become wet); or
 - The unit does not appear to operate normally or exhibits a marked change in performance.
- In households with small children, an adult should provide supervision until the child is capable of following all the rules essential for the safe operation of the unit. 
- Protect the unit from strong impact. (Do not drop it!) 
- Do not force the unit's power-supply cord to share an outlet with an unreasonable number of other devices. Be especially careful when using extension cords—the total power used by all devices you have connected to the extension cord's outlet must never exceed the power rating (watts/amperes) for the extension cord. Excessive loads can cause the insulation on the cord to heat up and eventually melt through. 
- Before using the unit in a foreign country, consult with your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page. 

WARNING

- Batteries must never be recharged, heated, taken apart, or thrown into fire or water.



CAUTION

- The unit and the AC adaptor should be located so their location or position does not interfere with their proper ventilation.



- Always grasp only the plug or the body of the AC adaptor when plugging into, or unplugging from, an outlet or this unit.



- Whenever the unit is to remain unused for an extended period of time, disconnect the AC adaptor.



- Try to prevent cords and cables from becoming entangled. Also, all cords and cables should be placed so they are out of the reach of children.



- Never climb on top of, nor place heavy objects on the unit.



- Never handle the AC adaptor body, or its plugs, with wet hands when plugging into, or unplugging from, an outlet or this unit.



- Before moving the unit, disconnect the AC adaptor and all cords coming from external devices.



CAUTION

- Before cleaning the unit, turn off the power and unplug the AC adaptor from the outlet.



- Whenever you suspect the possibility of lightning in your area, disconnect the AC adaptor from the outlet.



- If used improperly, batteries may explode or leak and cause damage or injury. In the interest of safety, please read and observe the following precautions (p. 4).



- Carefully follow the installation instructions for batteries, and make sure you observe the correct polarity.



- Avoid using new batteries together with used ones. In addition, avoid mixing different types of batteries.

- Remove the batteries whenever the unit is to remain unused for an extended period of time.

- If a battery has leaked, use a soft piece of cloth or paper towel to wipe all remnants of the discharge from the battery compartment. Then install new batteries. To avoid inflammation of the skin, make sure that none of the battery discharge gets onto your hands or skin. Exercise the utmost caution so that none of the discharge gets near your eyes. Immediately rinse the affected area with running water if any of the discharge has entered the eyes.

- Never keep batteries together with metallic objects such as ballpoint pens, necklaces, hairpins, etc.

- Used batteries must be disposed of in compliance with whatever regulations for their safe disposal that may be observed in the region in which you live.



For EU Countries
This product complies with the requirements of European Directive 89/336/EEC.

For the USA

FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Unauthorized changes or modification to this system can void the users authority to operate this equipment. This equipment requires shielded interface cables in order to meet FCC class B Limit.

For Canada

NOTICE

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

AVIS

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

 Roland®

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