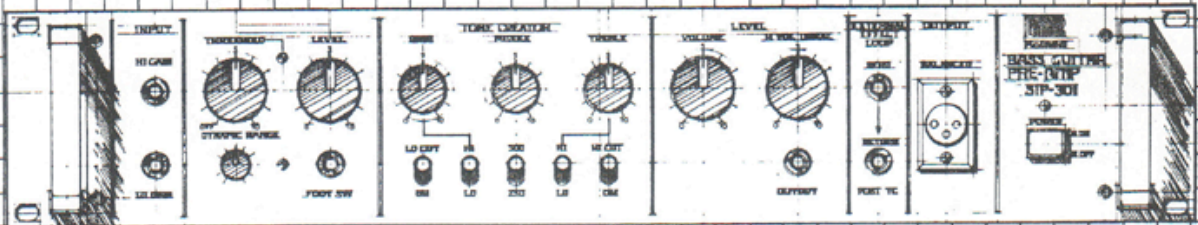


BASS PRE-AMP SIP-301

OWNER'S MANUAL



The Roland Rack

FEATURES

- A newly designed compressor circuit allows free adjustment of threshold levels and dynamic range for a wide range of effects.
- Special tone creator section for a wide variety of tone color effects.
- Crossover network produces dual outputs to eliminate muddy sounds.
- Balanced and unbalanced outputs.
- Unbalanced output and effect loop jacks on the front and rear panels.

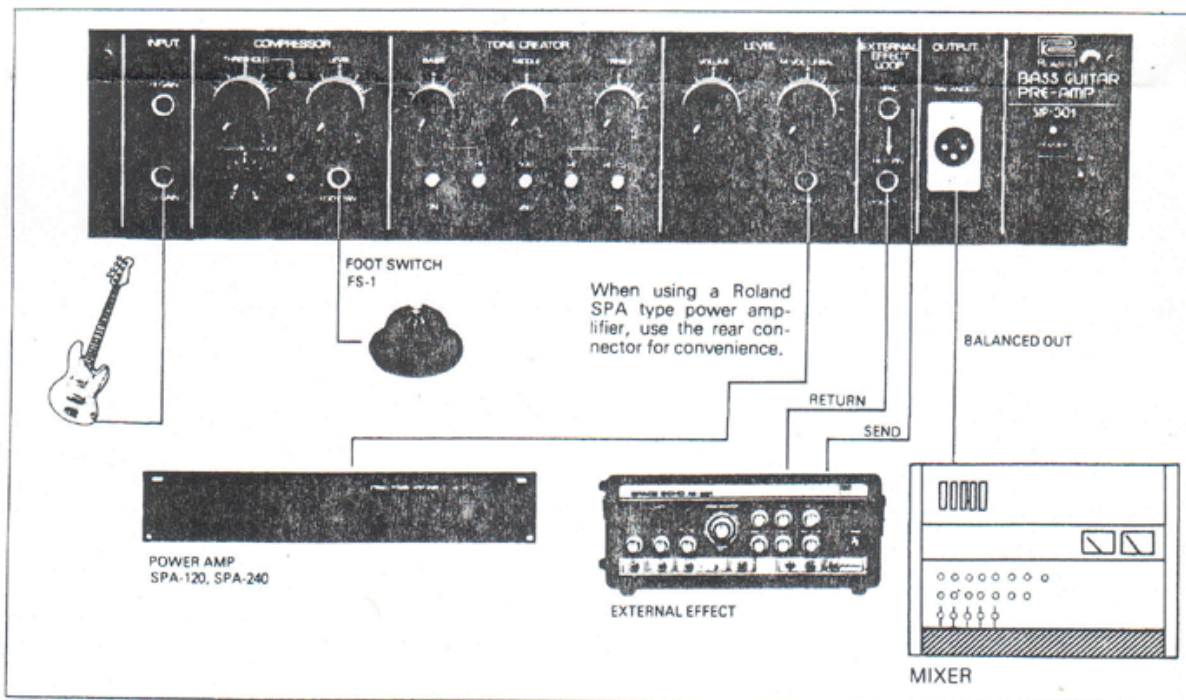
BEFORE STARTING

- Check with your local Roland dealer if you want to use the SIP-301 in a foreign country.
- Plug the SIP-301 in before turning on the power switch.

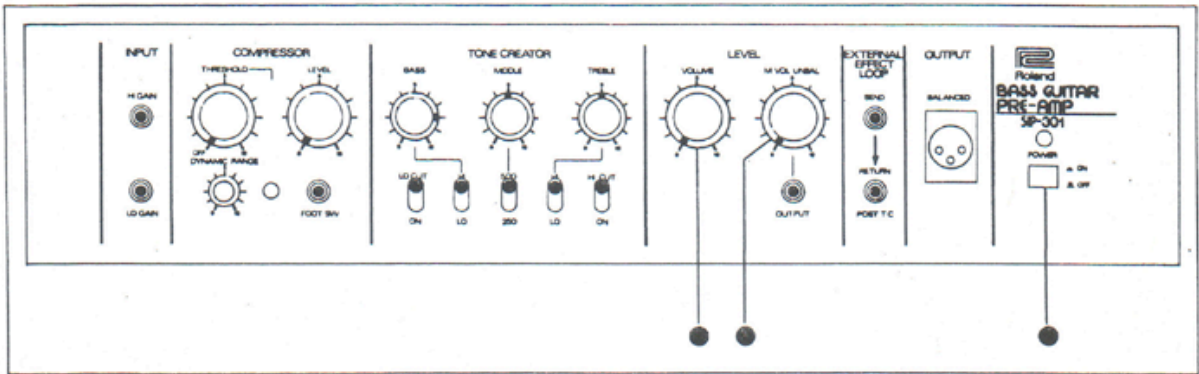
PRECAUTIONS

- Do not open this unit.
- Unplug this unit when it is not to be used for long periods of time. Unplug by grasping the plug rather than pulling on the cord.
- Be careful not to place heavy objects on the power cord.
- Avoid using this unit in very high or low temperature locations. Also keep away from heaters and coolers since this type of equipment will affect circuit and pitch stability.
- Avoid using this unit in very dusty or humid places.
- If it is necessary to use this unit in an area with neon or fluorescent lights, keep it as far away from these lights as possible since they will induce high levels of noise. Sometimes changing the angle of this unit in relation to the lights will help reduce noise.
- When connecting this unit, plug the cord into the external amplifier first, then plug the other end of the cord into the SIP-301 output. To disconnect, remove the cord from the SIP-301 first, then from the amplifier.
- To clean this unit, wipe with a cloth dampened with a neutral cleanser. Do not use solvents such as paint thinner.

CONNECTIONS



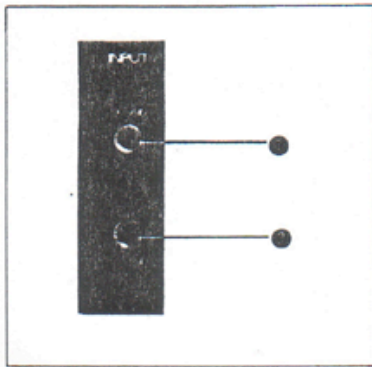
OPERATION



1. Make the connections shown in the connection diagram, then set the controls as shown above.
2. Turn on the POWER switch ●.
3. Slowly raise the LEVEL section VOLUME control ● and MASTER VOLUME control ● to obtain the normal guitar sound.
4. Try various settings of the COMPRESSOR and TONE CREATOR section controls.

NAMES AND FUNCTIONS OF THE CONTROLS

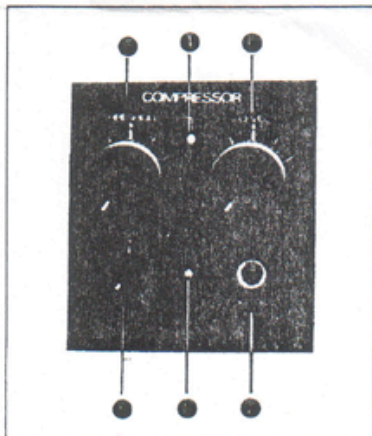
INPUT SECTION



INPUT Jacks ●, ●

Use the HI GAIN INPUT ● with low output level instruments and the LO GAIN INPUT ● with high output level instruments.

COMPRESSOR



THRESHOLD Control ●

Sets the level at which the compressor is activated. When the input sound reaches the level set by the THRESHOLD control ●, the compressor is activated and the output sound remains at a fixed level.

At "0", the compressor does not operate.

THRESHOLD INDICATOR ●

Lights when the compressor is activated.

DYNAMIC RANGE Control ●

Compensates for loss of attack when the compressor is operating.

LEVEL Control ●

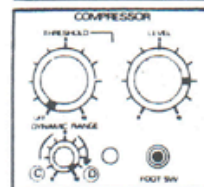
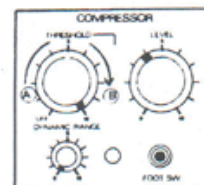
This controls the output level from the COMPRESSOR section.

FOOT SWITCH Jack ●

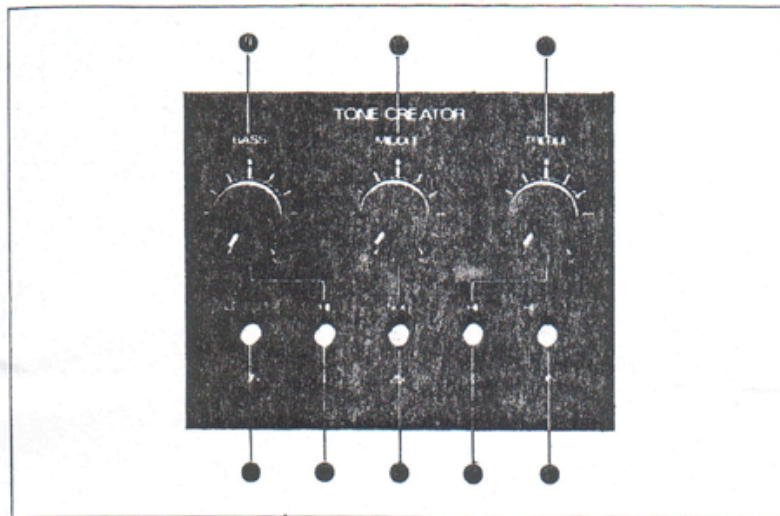
For using a foot switch (Roland FS-1; sold separately) to bypass the COMPRESSOR section from a remote position.

COMPRESSOR INDICATOR ●

Lights when the remote switch above has been set so that the compressor will work.



TONE CREATOR SECTION



BASS ● , MIDDLE ● , TREBLE ● Controls

For adjusting the bass, middle, and high frequency ranges. Turn clockwise to accent the respective frequencies.

FREQUENCY RANGE SELECTOR Switches ● , ● , ●

Selects the frequency cutoff points for the BASS ● , MIDDLE ● , and TREBLE ● controls.

● BASS	HI=45Hz/LO=35Hz
● MIDDLE	500Hz 250Hz
● TREBLE	HI=6kHz/LO=4kHz

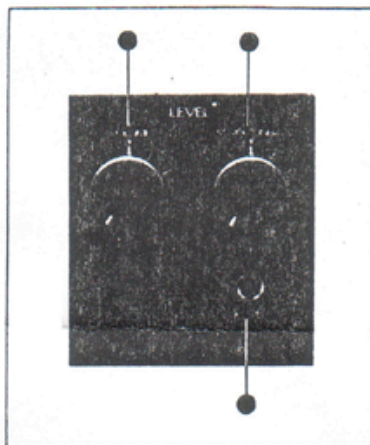
LO CUT FILTER Switch ●

At ON, cuts all frequencies below 60Hz at 12dB/oct. Prevents speaker damage from undesirable high level low frequencies and eliminates low frequency noise.

HI CUT FILTER Switch ●

At ON, cuts high frequencies above 6kHz at 12dB/oct. Removes undesirable high frequencies and high frequency noise from the output.

LEVEL SECTION



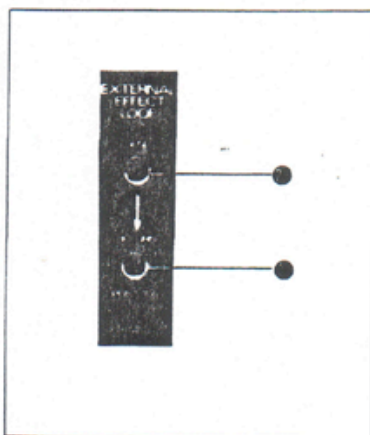
The SIP-301 is equipped with an output amplifier stage. The VOLUME control ● controls the input level to this stage while the MASTER VOLUME control ● controls the output level of the SIP-301.

The MASTER VOLUME control ● does not affect the output level at the balanced output ●.

UNBALANCED OUTPUT Jack ●

For connection to a power amplifier.

EXTERNAL EFFECT LOOP



SEND Jack ● ; RETURN Jack ●

For use with an external effects device.

SEND ● — ^{EXTERNAL DEVICE} [INPUT-OUTPUT] — RETURN ●

To prevent noise generated by ground loops,* the SEND jack ● is not grounded internally; the external effects device takes its common ground from the RETURN jack ● portion of the circuit. This means that the SEND jack ● cannot be used alone as a signal source, but must always be used as a loop in conjunction with the RETURN jack ●.

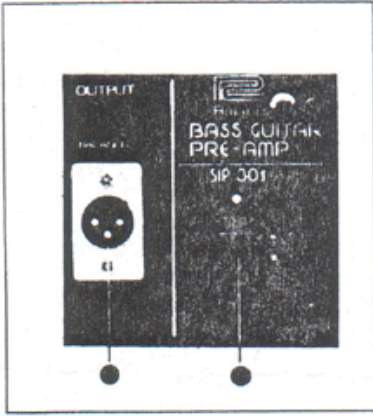
*Ground loop: more than one ground connection between two pieces of equipment, sometimes a major cause

of noise problems.

The SIP-301 has external effect loops on both the front panel and the rear panel. The rear panel effect loop comes before the TONE CREATOR section and the front panel effect loop comes after the TONE CREATOR section (see block diagram, p.6).

●The rear effect loop SEND ⊕ output impedance is 20kΩ; the front SEND ● is 800Ω.

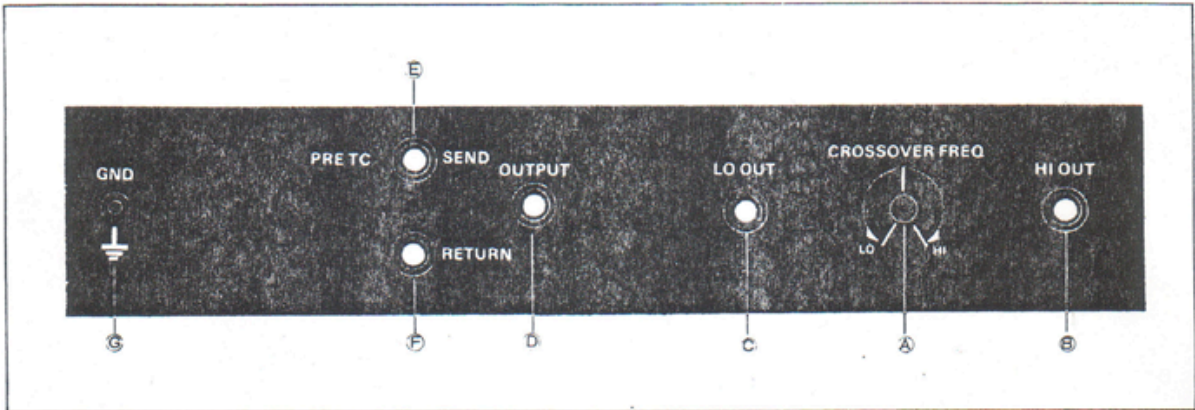
OUTPUT / POWER SWITCH



BALANCED OUTPUT Connector ●
The output level at the BALANCED OUTPUT ● is not controlled by the MASTER VOLUME control ●.

POWER Switch ● with pilot lamp

REAR PANEL



CROSSOVER FREQUENCY Control (A)
Determines the frequency which divides the HIGH FREQUENCY OUTPUT (B) from the LOW FREQUENCY OUTPUT (C). Continuously variable between 50Hz and 400Hz.

HIGH FREQUENCY OUTPUT Jack (B)

LOW FREQUENCY OUTPUT Jack (C)

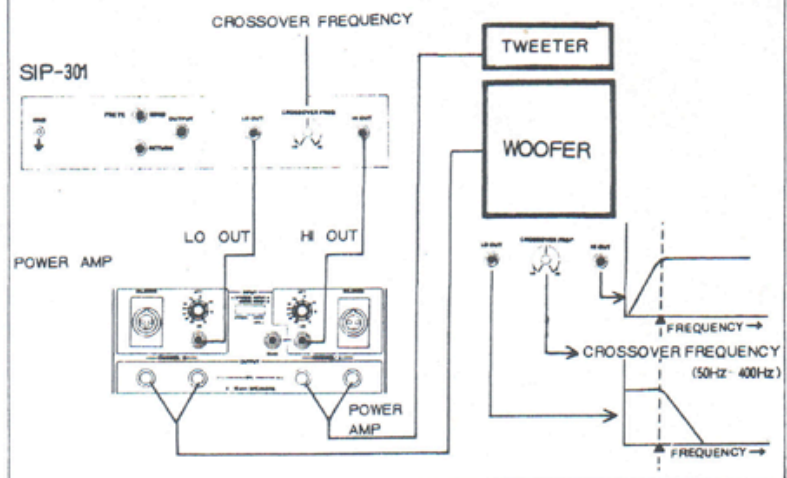
UNBALANCED OUTPUT Jack (D)
Can be simultaneously used with the front panel UNBALANCED OUTPUT jack ●.

EXTERNAL EFFECT LOOP SEND (E)

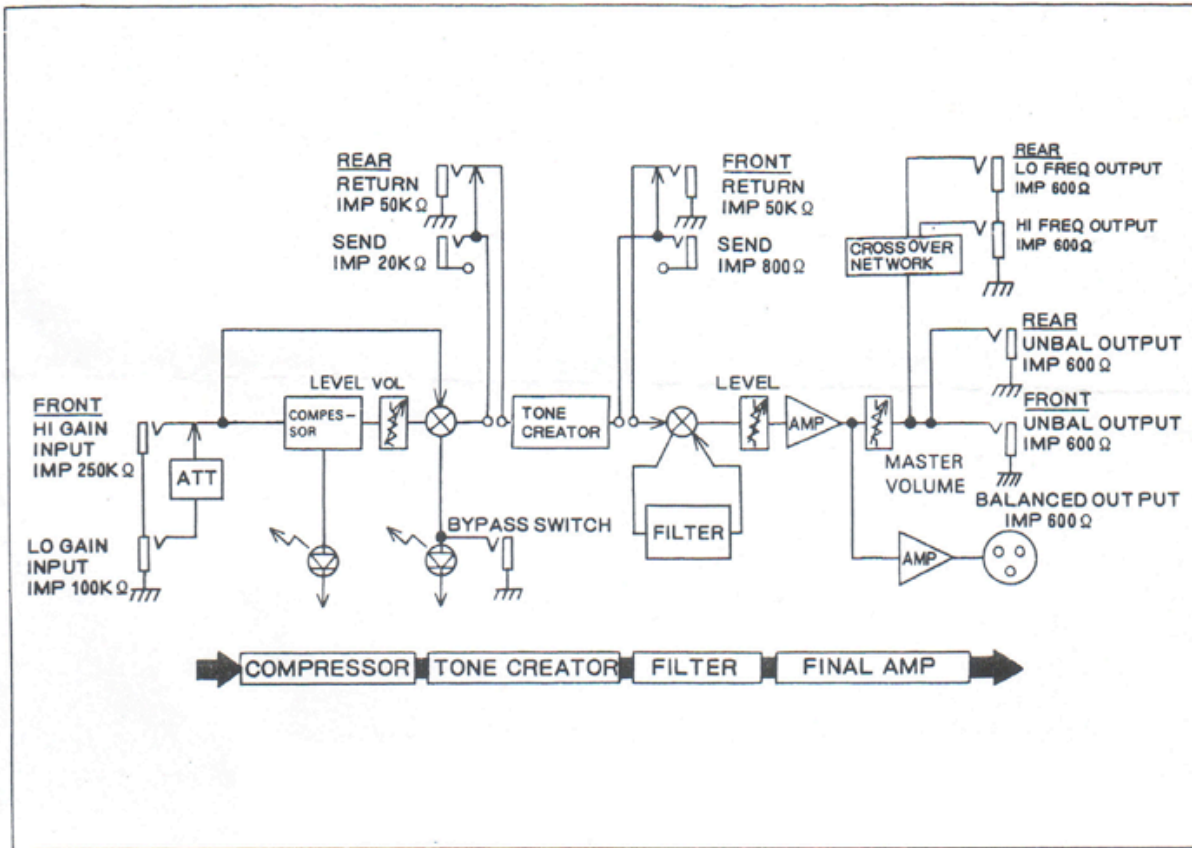
EXTERNAL EFFECT LOOP RETURN (F)
See "EXTERNAL EFFECT LOOP", p.4.

GND (GROUND) (G)
For making common ground connections with other equipment.

The SIP-301 is equipped with a crossover network which divides the output into two frequency ranges, low and mid-high range, for feeding two separate amplifiers for producing clean "big power" sounds.

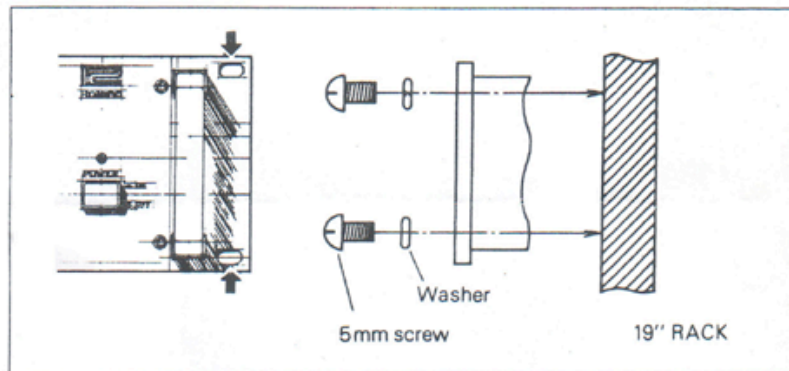


BLOCK DIAGRAM



● Rack Mounting the SIP-301

The SIP-301 can be mounted in a standard 19" rack using 5mm screws as shown in the drawing.



SPECIFICATIONS

BASS PRE-AMP SIP-301

Input level

HI: min*	-38 dBm
max	+14 dBm
LO: min*	-28 dBm
max	+24 dBm

(*Nominal level: +4 dBm;
EFFECT: ON; other controls max)
(0 dBm = 0.775 V RMS)

Input impedance

HI:	250 k Ω
LO:	100 k Ω

Output level

Balanced: nom	+4 dBm
max	+20 dBm
Unbalanced: nom	+0.5 dBm
max	+16 dBm

(0 dBm = 0.775 V RMS)

Output impedance:

Balanced:	greater than 600 Ω
Unbalanced:	greater than 47 k Ω

Frequency range: 20 Hz – 30 kHz

S/N: greater than 74 dB

Distortion: 0.1% (20 Hz – 10 kHz,
+10 dBm Unbalanced)

Compressor: Ratio 1:1 to 1:6.6

Controls & Switches

Compressor: Threshold ●
(-50 dB to -30 dB)
Dynamic Range ●
(25 dB)
Level ●
Threshold Indicator ●

Tone Creator:

Bass ● (-15 dB to +15 dB/45 Hz)
Middle ● (-9 dB to +14 dB/500 Hz)
Treble ● (-17 dB to +21 dB/6 kHz)

Selectable: Bass ● (35 Hz/45 Hz)
Middle ● (250 Hz/500 Hz)
Treble ● (4 kHz/6 kHz)

Filter: LO Cut ● (60 Hz, 12 dB/oct)
HI Cut ● (6 kHz, 12 dB/oct)

Final Amp: Volume ●
Master Volume ●

Crossover Network: Crossover
Frequency ● (50 Hz – 400 Hz)

Power Switch(with indicator) ●

Connectors

Input: HI GAIN ●
LO GAIN ●

Output: Balanced (XLR) ●
Unbalanced (Standard 1/4" jack)
● ●
HI Freq Out
(greater than 600 Ω) ●
LO Freq Out
(greater than 600 Ω) ●

Ext. Effect Loop:

Send ●: 20 k Ω ●: 800 Ω
Return ●: 50 Ω ●: 50 k Ω

Foot SW: Compressor Bypass
(FS-1) ● (LED ●)

GND ●

Power Consumption: 6W

Dimensions: 482(W) x 92(H) x
247(D) mm
Type EIA-2U rack mount

Weight: 4.1 kg

ACCESSORY (Sold separately)



FOOT SWITCH
FS-1