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 SRP-301 in a foreign country.
- Plug the SRP-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 SRP-301 output. To disconnect, remove the cord from the SRP-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.
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 1, 2
Use the HI GAIN INPUT 1 with low output level instruments and the LO GAIN INPUT 2 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

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**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.

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**EXTERNAL EFFECT LOOP**

- **SEND Jack○ : RETURN Jack○**
  - For use with an external effects device.

  - **SEND○ -- INPUT -- 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.

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**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.

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*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
Determines the frequency which divides the HIGH FREQUENCY OUTPUT from the LOW FREQUENCY OUTPUT. Continuously variable between 50 Hz and 400 Hz.

HIGH FREQUENCY OUTPUT Jack
LOW FREQUENCY OUTPUT Jack

UNBALANCED OUTPUT Jack
Can be simultaneously used with the front panel UNBALANCED OUTPUT jack.

EXTERNAL EFFECT LOOP SEND
EXTERNAL EFFECT LOOP RETURN
See "EXTERNAL EFFECT LOOP", p.4.

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

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

(0dBm = 0.775 V RMS)

**Input impedance**

| HI:  | 250kΩ |
| LO:  | 100kΩ |

**Output level**

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

(0dBm = 0.775 V RMS)

**Output impedance:**

Balanced: greater than 60kΩ
Unbalanced: greater than 4 kΩ

**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 1:6.8

**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 (7 dB to +13 dB/6 kHz)

**Selectable:** Bass (35 Hz/45 Hz)

Middle (250 Hz/500 Hz)

Treble (4 kHz/8 kHz)

**Filter:**

LO Cut (60 Hz, 12 dB/oct)

HI Cut (8 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 600Ω)

LO Freq Out

(greater than 600Ω)

**Ext. Effect Loop:**

Send: 20 kΩ: 800Ω

Return: 150Ω: 50 kΩ

**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

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**ACCESSORY (Sold separately)**

**FOOT SWITCH**

FS-1