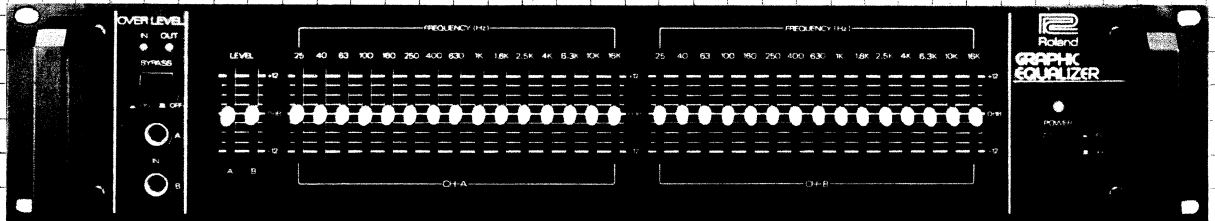


 Roland

# STEREO GRAPHIC EQUALIZER SEQ-315

OWNER'S MANUAL



# The Roland Rack

## GRAPHIC EQUALIZER

The SEQ-315 is a 2/3 octave, 15 band ( $\pm 12\text{dB}$ ) stereo graphic equalizer. From equalizing the frequencies of halls and sound equipments to the equalization of the tone quality of instrument sounds, this graphic equalizer can be used for a variety of purposes in stereo (2 channel).

### Features

- The SEQ-315 is equipped with two sets of equalization circuits that permit the level control of  $\pm 12\text{dB}$  of each band at 2/3 octaves over a range of 20Hz to 16 kHz.
- Each channel is equipped with controls that adjust the total level without changing the set equalized curve. Equalization with a high signal to noise ratio is consistently achieved.
- The SEQ-315 is equipped with two types of input/output jacks, Balanced (XLR) and Unbalanced (standard) so that it can adapt to a wide variety of performance applications.
- The unit also comes with the input/output selector (only for unbalanced), level indicators and the bypass switch.
- The SEQ-315 has been designed to be easily mounted on as 19" EIA rack.

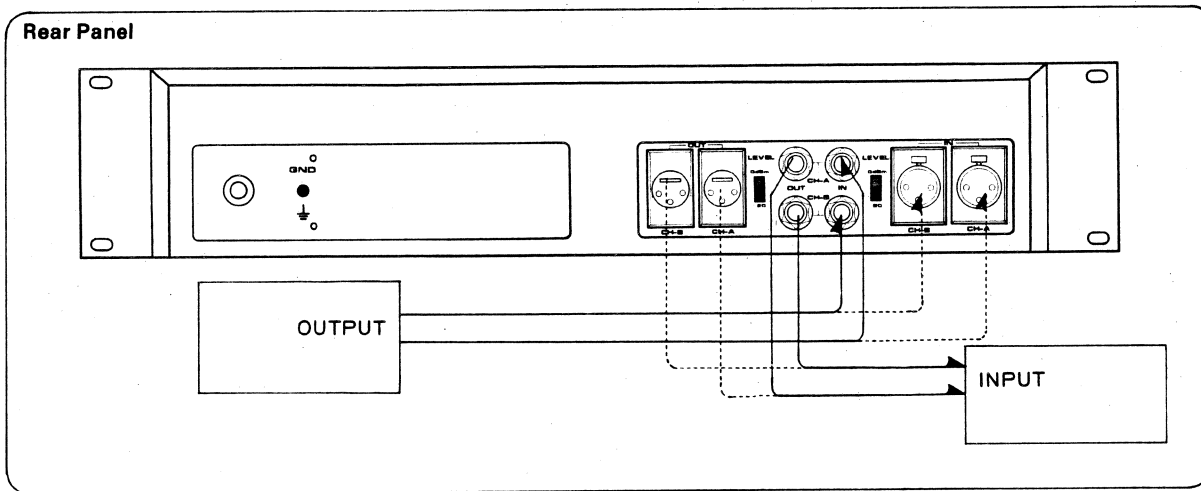
### Before Starting

- Make sure the line voltage in your area meets the requirements given on the nameplate.
- For use of the SEQ-315 in a foreign country, check with your local Roland dealer.
- Plug the SEQ-315 in before turning on the power switch.

### Precautions

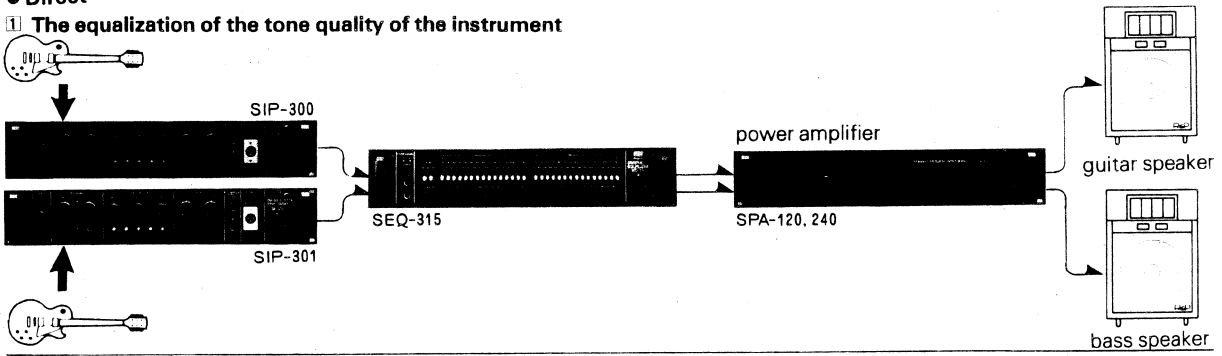
- Do not open this unit.
- Unplug this unit when not in use for a long period of time. Do not tug by the cord.
- Do not place heavy objects on the power cord.

### Connection

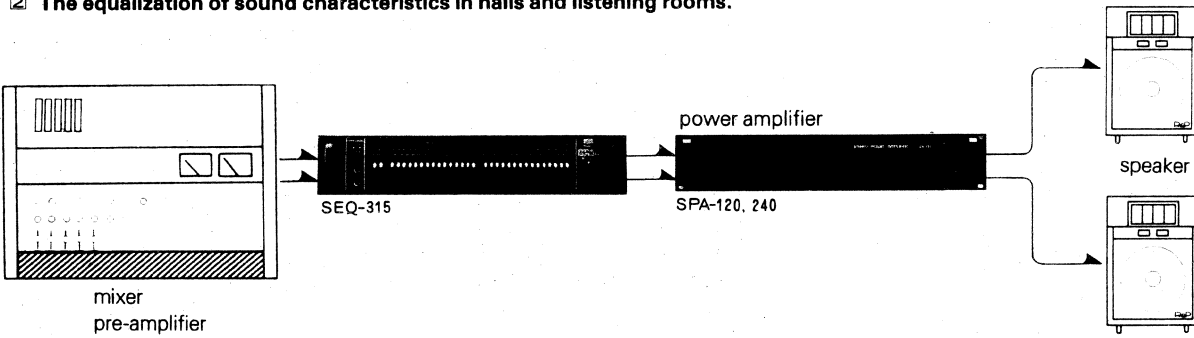


● Direct

1 The equalization of the tone quality of the instrument



2 The equalization of sound characteristics in halls and listening rooms.



•Level Selector (only works when the unbalanced standard jack is used)

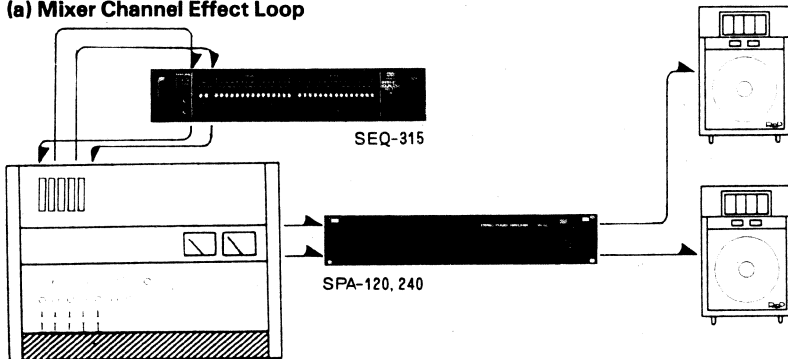
● Input Level Selector

	<ul style="list-style-type: none"> <li>•high level electronic/electric instrument</li> <li>•Roland Rack System</li> <li>•audio equipment (pre-amplifier, tape deck)</li> <li>•PA, mixer</li> </ul>
	<ul style="list-style-type: none"> <li>•guitar</li> <li>•microphone</li> <li>•low level equipment</li> </ul>

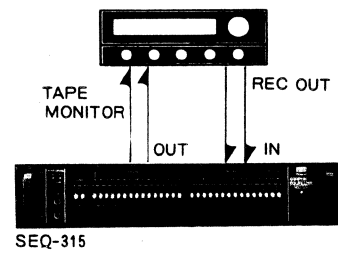
● Output Level Selector

	<ul style="list-style-type: none"> <li>•Roland Rack System</li> <li>•audio equipment (power amplifier, tape deck, etc)</li> <li>•PA, mixer</li> </ul>
	<ul style="list-style-type: none"> <li>•guitar amplifier</li> <li>•microphone amplifier</li> </ul>

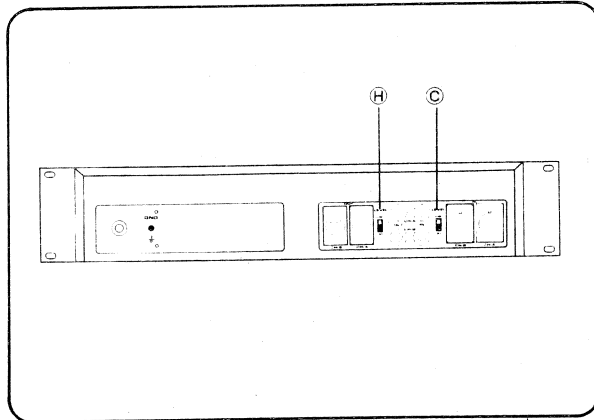
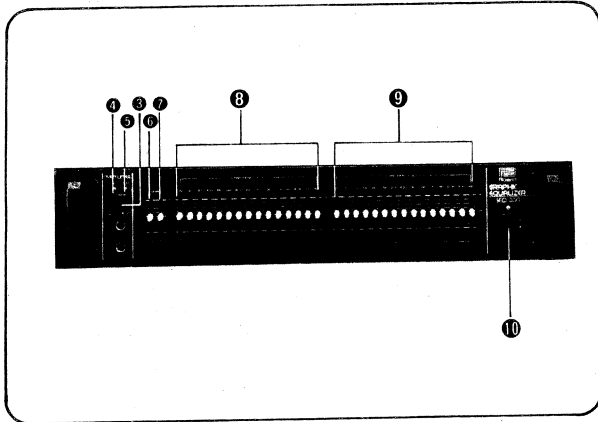
(a) Mixer Channel Effect Loop



(b) Audio Amplifier



## Operation



① After making the necessary connections, turn on the power ⑩ and turn off the Bypass Switch ③.

② While monitoring the input level indicator ④, set the input level with the Input Level Selection switch ② and the output volume of the connected equipment (instrument, pre-amplifier, etc.).

\*If the indicator ④ lights up, the output signal may be distorted.

③ Level Control ⑥ ⑦ and Frequency Control ⑧ ⑨ should be set at the middle (0dB).

④ The Output Level Selector Switch ④ and the volume of the amplifier, PA, or recording equipments should be adjusted. Start producing sounds.

⑤ Listening to the sound, start the process of equalization with the Frequency Control Sliders ⑧ ⑨.

\*Level Control ⑥ ⑦ can adjust the master level without changing the equalization curve established with the Frequency Control Sliders ⑧ ⑨.

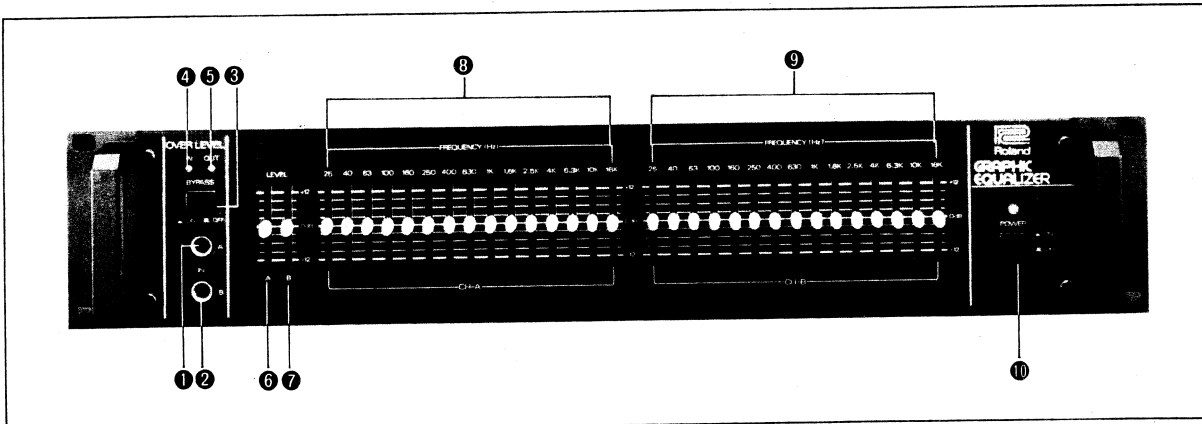
⑥ Within the limits of keeping the Output Level Indicator ⑤ unlit, raise the level Control ⑥ ⑦.

\*If the indicator ⑤ lights up, the output signal may be distorted.

⑦ If the volume is to be adjusted again, do so with the control on the connected unit.

The operation method for using the Balanced input and output (XLR connector) is in the same order as mentioned above. However, the Input Level Selection Switch ② and the Output Level Selection Switch ④ will not operate. Therefore, the input/output levels should be adjusted with each connected piece of equipment.

## Names and Functions of the Controls



### ● Front Panel

#### ① ② Unbalanced Input Jack A, B (standard)

Input from the Unbalanced Input Jacks A, B ① ② on the rear panel will be automatically cancelled when this jack on the front panel is used. (The input from the Balanced Input Jack A, B ③ ④ will not be cancelled).

#### ③ Bypass Switch

Musical instruments, pre-amplifiers, etc. will be directly connected with the stereo amplifiers and PA, etc. with the use of this switch.

\*The on-off of the bypass switch will be done mechanically. Therefore there is no relation between the on-off of the power switch. However if the bypass switch is manipulated during performance, a click noise will be produced.

#### ④ Input Level Indicator

#### ⑤ Output Level Indicator

Both of these indicators will light up when there is an overload in the level.

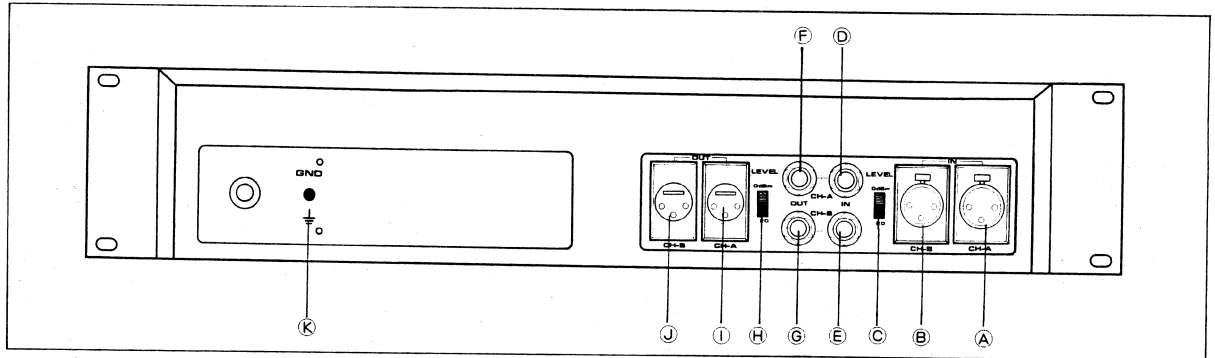
#### ⑥ ⑦ Level Control A, B

Without changing the equalization curve established by the Frequency Control A, B ⑧ ⑨ sliders, the whole level can be moved through a range of  $\pm 12\text{dB}$  with this slider.

### ⑧ ⑨ Frequency Control Sliders A, B

These sliders control the level of  $\pm 12$ dB for every frequency.

### ⑩ power Switch (with an indicator)



#### ● Rear Panel

Ⓐ Ⓑ **Balanced Input Jack (XLR connector)**

#### Ⓒ **Input Level Selection Switch**

The level can be chosen according to the output level of the connected equipment.

\*This switch only operates with Unbalanced Input A, B ① ② ③ ④.

\*Aside from low level inputs, use at the position of 0dBm.

Ⓔ ⑤ **Unbalanced Input Jack A, B (standard jack)**

\*If this jack is hooked up simultaneously with the input jack A, B ① ② on the front panel, the jacks on the front panel will be given the priority.

Ⓕ ⑥ **Unbalanced Output Jack A, B (standard jack)**

#### Ⓗ **Output Level Selection Switch**

The level can be chosen according to the input level of the connected instrument.

\*This switch only operates with Unbalanced Output A, B ⑦ ⑧.

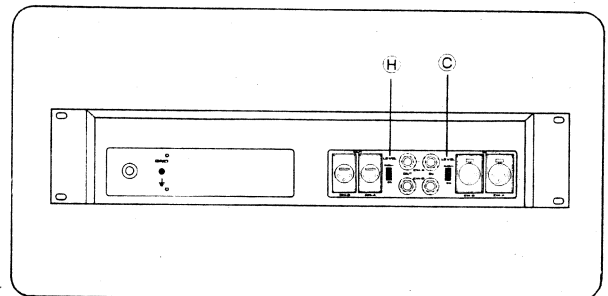
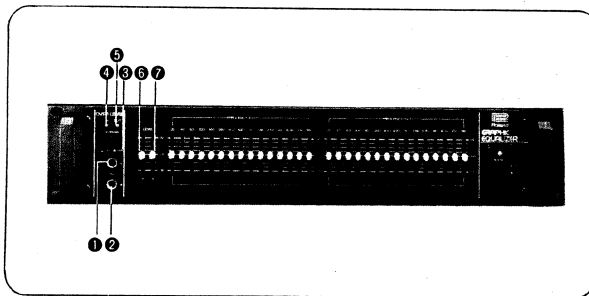
① ④ **Balanced Output Jack A, B (XLR connector)**

\*It can be used with the Unbalanced Output Jack A, B ⑦ ⑧ at the same time.

#### Ⓚ **GND**

By Connecting the GND (earth) terminal of each piece of equipment used, ground noise (hum) can be prevented.

## Using the SEQ-315



#### ● **Input/Output Jacks**

The SEQ-315 is equipped with input/output jacks of the balanced type (XLR connector) Ⓐ ③ ① ④ and the unbalanced type (standard jack) ① ② ③ ④ ⑤ ⑥. They can be used simultaneously. Therefore a combination of BALANCED-UNBALANCED can be made, but the bypass switch ⑧ will not move.

#### ● **Setting the Input/Output Level**

The most important point in obtaining a good effect, without losing the S/N ratio when using the SEQ-315 and other effect units is the setting of the proper input/output level.

For this, a high signal level is necessary without reaching the level where distortion in sound occurs.

The level is set according to the flow of the signals. Therefore if the level is to be set at several places, it should be done in order, starting from the input side. (See

"Operation" for the instructions).

Once the appropriate level is set, the volume should be controlled and adjusted with the amplifiers, PA, etc.

#### ● **Choosing the Input/Output Level Selection Switch**

When using the unbalanced type jack (standard), the right level for the connected equipment can be selected with the Input/Output Level Selection Switch ③ ④. The Connection Method (p.2.3) is one example for choosing the right level.

#### ● **The Input/Output Level Indicator**

The Input Level Indicator ① lights up when there is an overload in the input. For Balanced Input, this occurs at over 21 dBm and for Unbalanced Input, at 15 dBm (If the Input Level Selection Switch ③ is at  $-20$ dBm, it is  $-5$ dBm).

The Output Level Indicator ② lights up when Balanced Output is over 21dBm

and Unbalanced Output is over  $+15$ dBm (If the Output Level Selection Switch ④ is at  $-20$ dBm, it is  $-5$ dBm).

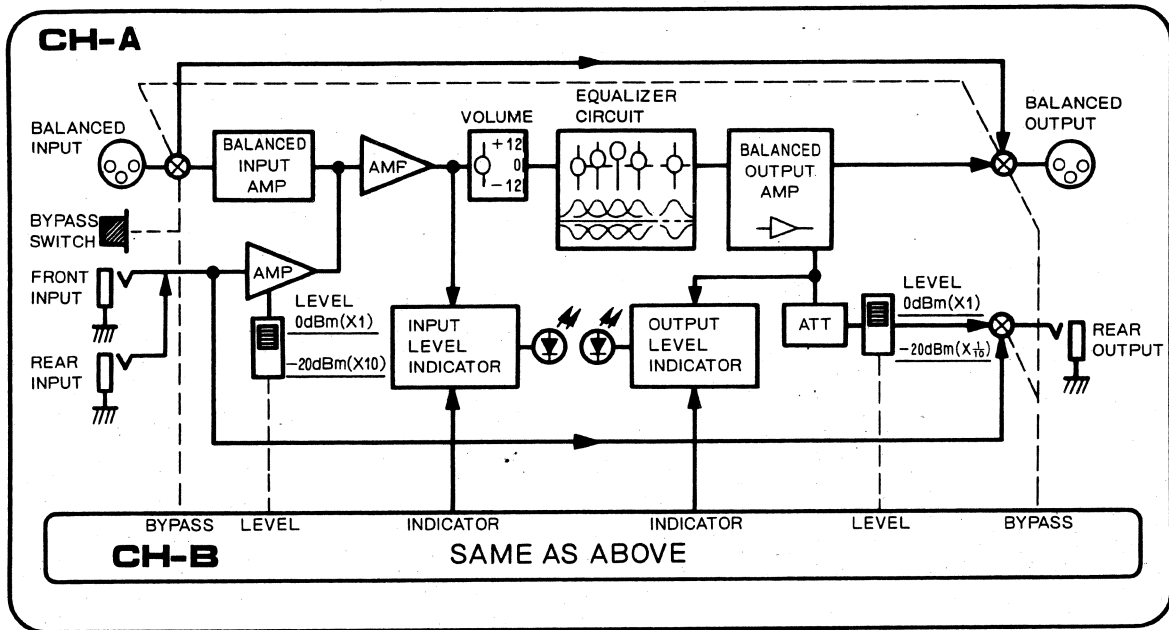
\*Both indicators will light up if the level of either one of the channels goes over the regular level.

#### ● **The Bypass Switch During Performance**

Take note of the following points before making the settings.

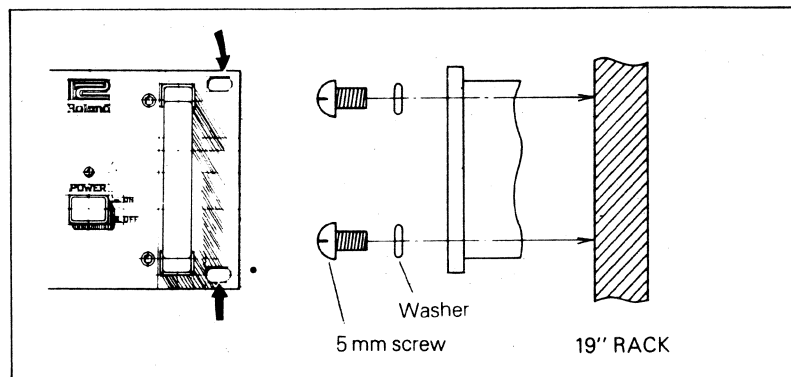
1. For the input/output jacks, use connectors of the type.
2. When using the unbalanced type (standard jack) as the input/output jack, set the Level Selector Switches ③ ④ to the same position.
3. If necessary, equalize the difference in levels with the Level Control ⑥ ⑦.

## Blockdiagram



### ● Rack Mounting the SEQ-315

The SEQ-315 can be mounted in a standard 19" rack using 5mm screws as shown in the drawing.



## SPECIFICATIONS

### STEREO GRAPHIC EQUALIZER

#### SEQ-315

##### Input Level

Balanced (XLR)	+ 24 dBm max.
Unbalanced (standard)	+ 20 dBm max.
Level Switch	(0dB / - 20dB)

##### Input Impedance

Balanced	26 kΩ
Unbalanced	100 kΩ

##### Output Level

Balanced	+ 24 dBm max.
Unbalanced	+ 20 dB max.
Level Switch	(0dB / - 20dB)

##### Load Impedance

Balanced	over 600 Ω
Unbalanced	over 10 kΩ

##### Distortion\*

(T.H.D./20Hz ~ 20kHz) 0.03%

##### Frequency Response\*

5Hz ~ 45kHz ( $+0$ / $-1.5$ dB)

##### S/N\*

80dB

##### Cross Talk\* (1kHz)

over 60dB  
\*Each control slider at "0"

### CONTROLS & SWITCHES

- Frequency Slider ⑧ ⑨
- Level Control ⑥ ⑦
- Bypass Switch ③
- Input Level Selector ④
- Output Level Selector ⑤
- Power Switch (with indicator) ⑩

### CONNECTION JACKS

- Input
  - Balanced (XLR) ① ②
  - Unbalanced (standard) ③ ④ ⑤
- Output
  - Balanced (XLR) ⑥ ⑦
  - Unbalanced (standard) ⑧ ⑨
- GND ⑩

### INDICATOR

- Input Level ④
- Output Level ⑤

### Power Consumption

8W

### Dimensions

482(W) × 92(H) × 247(D) mm

Standard 19" (EIA-2U) Rack Mount

### Weight

4.3kg



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