IMPORTANT: Before connecting an amp, select the appropriate impedance for it with the front panel Impedance Switch (refer to “Impedance Switch” on page 2). Never reduce impedance while playing!

The Reducer is a passive device and needs no electrical power. After the impedance is set, connect guitar amp and cabinet as shown below.

Here you connect the amp's loudspeaker output. Connector variant and pin configurations follow industry standards: Unbalanced 1/4” jack (TS) connector with the signal at the tip and ground at the sleeve. As with any typical amp and cabinet cabling, it is critical to observe loudspeaker cable of a minimum 1.5 mm² cross section. Instrument or line cables can lead to amplifier damage! We recommend to use cables with a maximum length of 3 meters/10 feet for lossless signal transmission.

IMPORTANT WARNING ON CONNECTING GUITAR AMPS
Many guitar amps are not designed for sustained maximum level operation, and if run this way, it can lead to overloads and power amp damage. At high levels, amps can produce high frequency oscillations which can destroy output transformers. Moreover, this can cause audible unwanted output transformer distortion. Such problems are not a result of Reducer use, but reside within the guitar amp. Even in situations where you might wish to push the guitar amp to its limits in conjunction with the Reducer, you should always be sure to allow for ample power reserves to avoid endangering the amp itself! Therefore we strongly recommend that the guitar amp should never be run at over 70% of its maximal signal level!
At the OUTPUT the amp signal appears as reduced with the front panel controls. It allows for the connection of a 4, 8 or 16 ohm cabinet. Reduction starts at 0 dB (unity gain) followed by two -3 dB and -5 dB switch settings. The variable values range from -7 dB to infinite. With this “volume control” between amp and cab, the guitar amp can be driven into saturation also at moderate listening levels.

Connector variant and connections follow industry standards: Unbalanced 1/4” jack connector with the signal at the tip and ground at the sleeve. As with any typical amp and cabinet cabling, it is critical to observe loudspeaker cable of a minimum 1.5mm² cross section. Instrument or line cables can lead to amplifier damage! We recommend to use cables with a maximum length of 3 meters/10 feet for lossless signal transmission.

With the REDUCTION SWITCH on the left side of the front panel you select the first reduction values: 0 dB (unity gain), -3 dB, and -5 dB. Selecting the VARIABLE switch position activates the central REDUCTION CONTROL for further, continuous reduction ranging from -7 dB to infinite mute). IMPORTANT: The scaled values are only valid for 8 ohms operation. With 16 ohms, deviations of reduction values are small, with 4 ohms, the following values apply: Switch to -3 dB = ca. 5 dB reduction, switch to -5 dB = ca. 10 dB reduction. As a rule of thumb, reduction values are roughly doubled in 4 ohms operation. The control range of the Reduction Control at 4 ohms: 0 dB to ∞. Therefore, it does not continue seamlessly in fully right position after the -5 dB switch and must eventually be set accordingly.

The central REDUCTION CONTROL is only active when the REDUCTION SWITCH is set to VARIABLE. Set fully left mutes the signal, turned fully right results in a power reduction of -7 dB. A 7 dB reduction can be compared approximately to the volume that results from a “half power” setting at guitar amps; usually this is still pretty loud in many situations.

With the IMPEDANCE SWITCH to the right you select the required impedance for your amplifier. Check the impedance of your amplifier at its speaker output. IMPORTANT: Just as with any cabinet connection, selecting an impedance lower than needed can destroy the amplifier. Therefore, double check selection of the appropriate impedance before use. Never reduce impedance while playing!

Selecting a higher impedance than necessary does not harm any device. Whenever you may be in doubt about the required impedance for an amp, select the highest impedance (16 ohms) – you may lose power, but not your amp.

**Input**
- Socket: 1/4” TS (Mono Jack)

**Impedance**
- @4 Ohms: 90 W RMS/120 W Peak
- @8 Ohms: 200 W RMS/260 W Peak
- @16 Ohms: 160 W RMS/180 W Peak

**Max. input load**
@4 Ohms: 90 W RMS/120 W Peak
@8 Ohms: 200 W RMS/260 W Peak
@16 Ohms: 160 W RMS/180 W Peak

**Output**
- Socket: 1/4” TS (Mono Jack)

**Dimensions**
- Height: 68 mm, 85 mm with feet
- Depth: 190 mm, 208 mm with controls and sockets
- Width: 179 mm

**Weight**
1.8 kg / 3.97 lbs

The construction of the REDUCER, Model 1160, is in compliance with the standards and regulations of the European Community.

Further information: spl.info

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