Pro Co On Stage with the Best

TradeTools™

HJ4P

PROFESSIONAL HEADPHONE JUNCTION BOX

APPLICATION INFORMATION

CONTROLS:

AMP IN:
Female 3-pin XLR-type connector accepts signals from unbalanced speaker-level sources (power amplifier outputs).

LOOP OUT:
Male 3-pin XLR-type connector for "daisy chain" connection of multiple HJ4P units using standard microphone cables.

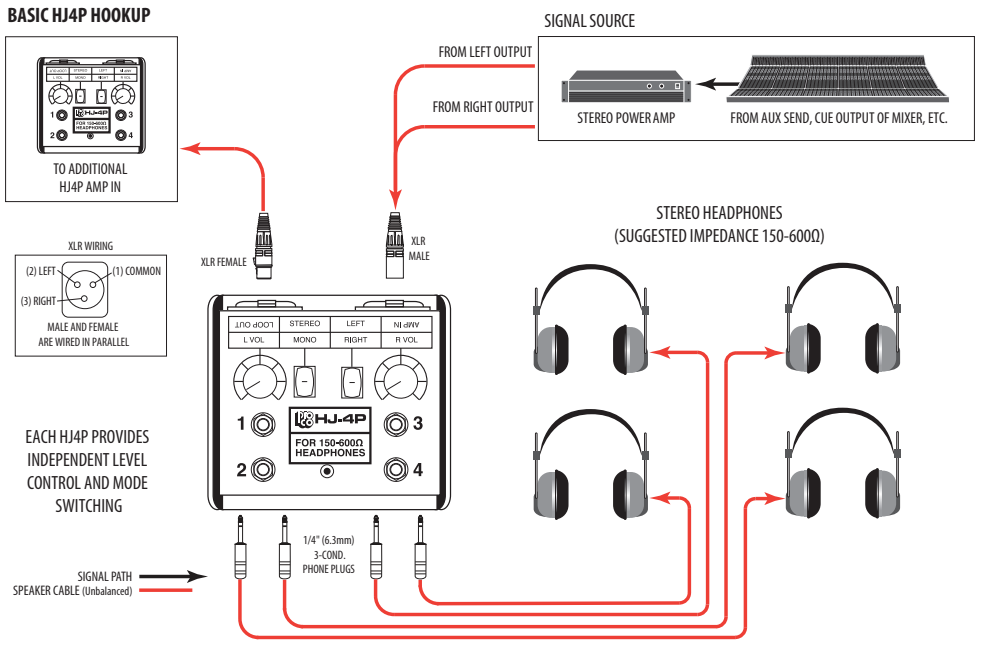
STEREO/MONO:
Rocker switch selects stereo mode (left input drives left side of headphones, right input drives right side) or mono mode (one input drives both sides of phones).

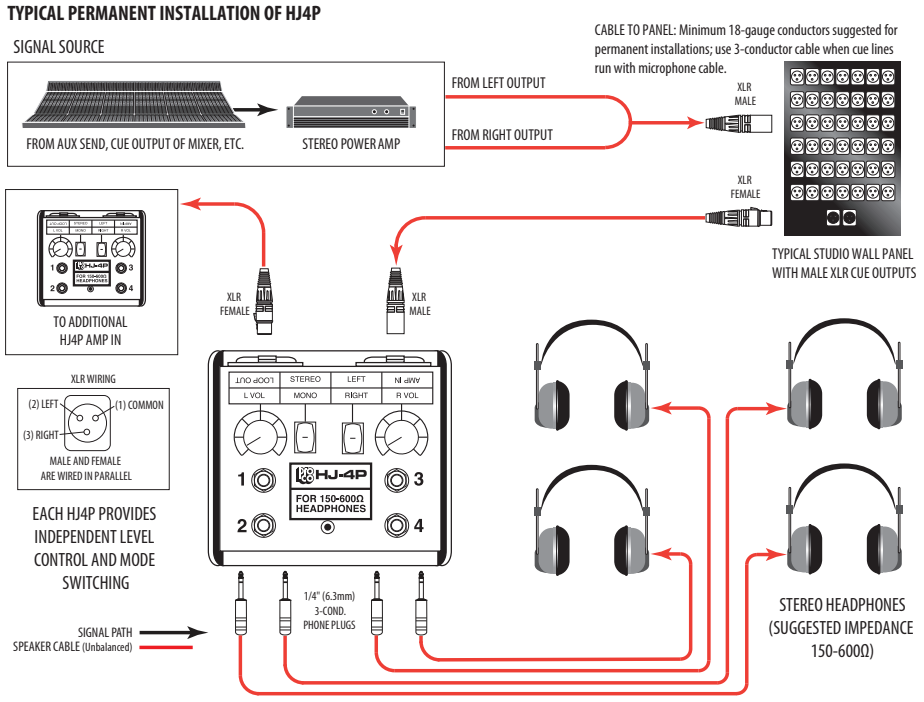
LEFT/RIGHT:
Rocker switch selects which input drives both sides of the phones when MONO mode is selected. (Has no effect in STEREO mode).

LEFT VOL:
Controls volume of left side of headphones.

RIGHT VOL:
Controls volume of right side of headphones.

HEADPHONE OUTPUTS:
¼" (6.3mm) stereo phone jacks for connection of 4 sets of stereo headphones, each with resistive isolation from the inputs. Recommended headphone nominal impedance is 150 to 600 ohm, but the HJ4P is useable with virtually any headphones. The amount of input power actually delivered to the headphones depends on the headphone impedance, with higher impedance phones receiving a higher percentage of input power.

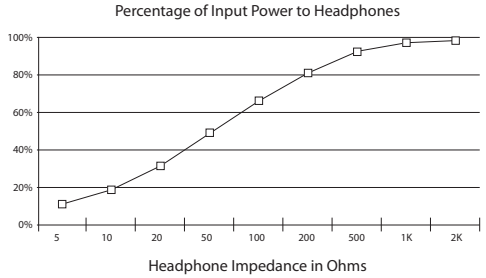




Pro Co Sound
225 Parsons Street | Kalamazoo, MI 49007
800-253-7360

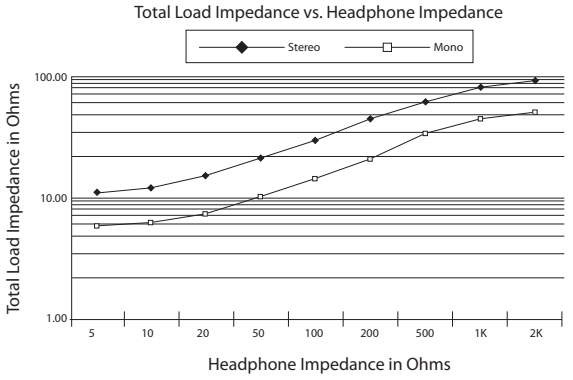
» www.procosound.com

NOTES:



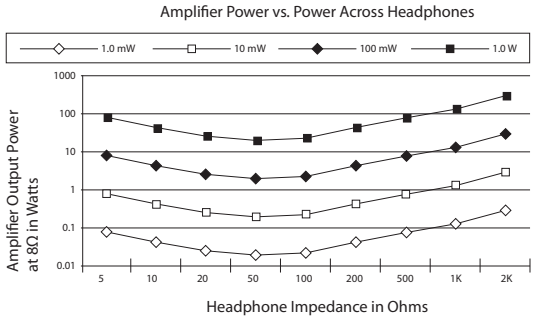
Percentage of Input Power to Headphones

Shows the percentage of power that is delivered to the HJ4P that actually reaches the headphones. Because of the 47 ohm current-limiting resistors, low-impedance headphones receive a much lower percentage of input power than higher impedance units.



Total Load Impedance vs. Headphone Impedance

Shows the actual load impedance seen by the amplifier when 4 sets of identical headphones of various impedances are connected to the HJ4P. The MONO load impedance will be half that of the STEREO load impedance because the left and right channels will appear in parallel.



Amplifier Power vs. Power Across Headphones

Shows the rated 8 ohm power required in the power amplifier to produce various power levels across headphones of various impedances. This can be used together with the rated sensitivity of the headphones being used to determine the power required from the amplifier to produce the desired level in the headphones. Headphone sensitivity is generally stated in decibels (dB) output at 1.0 milliwatt (mW) input. Increasing the input power by a factor of ten results in a 10 dB increase in output from the headphones. Hence, a set of phones with a rated sensitivity of 97 dB output at 1.0 mW input will produce 107 dB at 10 mW, 117 dB at 100 mW and 127 dB at 1.0 watt. Power amplifiers are basically constant-voltage devices, so the amount of power delivered to a load is dependent upon the impedance of the load. If output voltage remains constant, decreasing the load impedance will result in increased current flow through the load, which in turn results in more power being dissipated. Because of this, a power amplifier that delivers 10 watts to an 8 ohm load will only deliver 1 watt to an 80 ohm load. To put it simply, it takes a larger amplifier (producing a higher output voltage) to push high-impedance headphones to loud levels than it does to push low-impedance headphones. As can be seen from the graph, a set of 500 ohm headphones requires an amplifier with an 8 ohm power output of almost 100 watts to drive the headphones to a 1 watt level.

CIRCUIT DIAGRAM:

PRO CO MODEL: HJ4P

DIMENSIONS.....4.88" D x 4.25" W x 3.38" H
123.2mm D x 108.0mm W x 85.9mm H
WEIGHT.....2.50 lb/0.92 kg
SHIPPING WEIGHT.....3.00 lb/1.38 kg