PI-XX Line input isolator

- **Eliminates hum and buzz caused by ground loops**
- **Delivers exceptionally low distortion down to 20 Hz**
- **Ruler flat frequency response from 5 Hz to 40 kHz**
- **Plug and play easy to use, no power required**

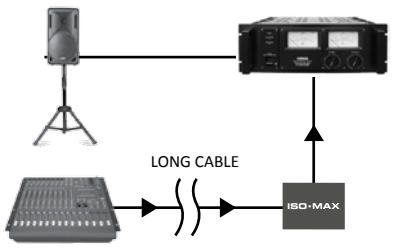


The Iso•Max PI-XX is a single channel line input isolator designed to eliminate noise in professional balanced audio systems by isolating the input of the connected device.

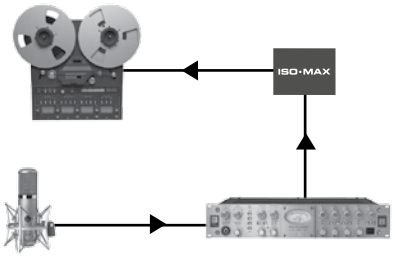
The design begins with an extruded aluminum case that comes standard with gold plated XLR connectors. Plug and play easy to use, this passive interface does not require any power to work. Inside is a high performance Jensen transformer that is able to withstand signal levels to +19 dBu at 20 Hz without discernible distortion. This provides galvanic isolation between the input and output to eliminate hum and buzz caused by ground loops, rejecting noise by as much as 124 dB.

You simply connect the PI-XX between the source and the input destination to eliminate ground loops, electromagnetic interference (EMI) and RFI problems. The PI-XX will quietly go to work without introducing distortion, phase shift or artifact of any kind.

Applications



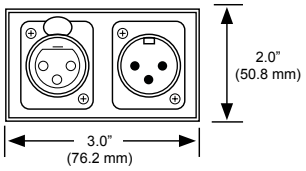
PI-XX with a PA system
Eliminating noise in a PA system can take hours of trouble shooting, particularly when the mixer, amplifiers and speakers are distanced apart. Connect the PI-XX at the input of your amplifier to eliminate ground loop hum and buzz.



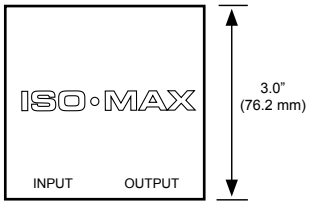
PI-XX in the studio
Recording and broadcast studios require a noise-free signal transfer while delivering the most accurate sound possible. The Iso•Max PI-XX eliminates ground loops and lowers RF without introducing distortion, phase shift or artifact.

Dimensions

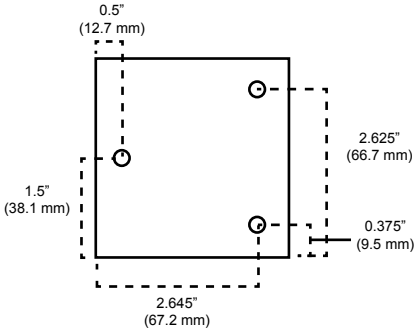
(FRONT)



(TOP)



(BOTTOM)



All Holes = 0.156" (3.96 mm) DIA x 0.3" (7.62 mm) 82 Degree C.S.

Connector options

The PI-XX comes standard with XLR input and output. It is also available special order with the following connector configurations for use with both balanced and unbalanced systems.

PI - XX

XLR-F IN, XLR-M OUT

PI - XB

XLR-F IN, BNC OUT

PI - RR

RCA IN / OUT

PI - RX

RCA IN, XLR-M OUT

PI - XR

XLR-F IN, RCA OUT

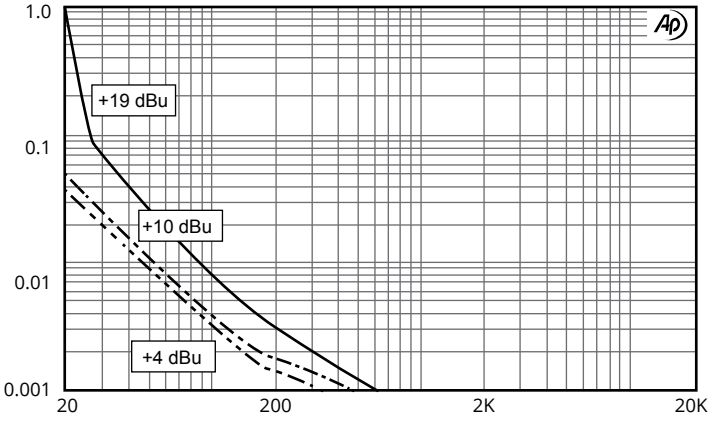
PI - PP

1/4" TRS IN / OUT

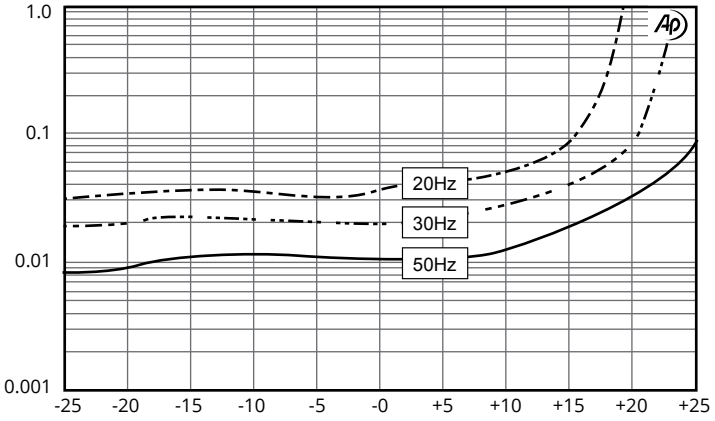
PI - XP

XLR-F IN, 1/4" TRS OUT

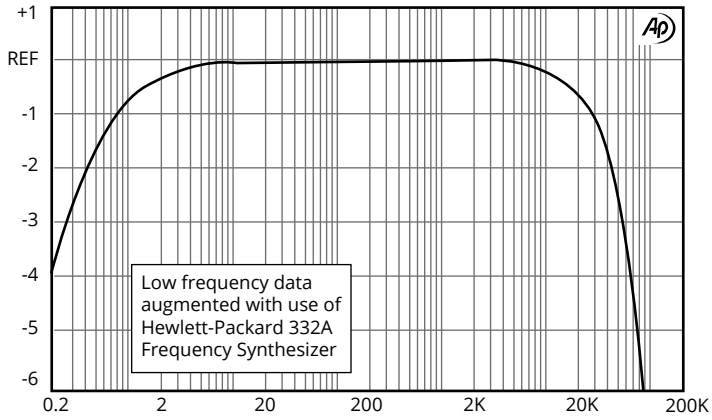
THD at FIXED INPUT LEVELS — THD+N (%) vs FREQUENCY (Hz)



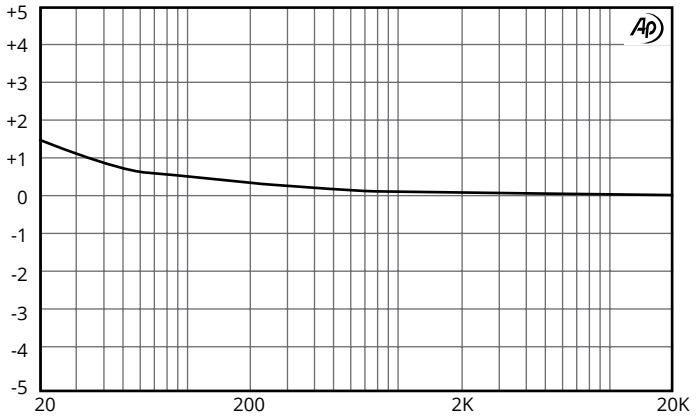
THD at FIXED FREQUENCIES — THD+N (%) vs INPUT LEVEL (dBU)



REFERENCE LEVEL RESPONSE — AMPLITUDE (dB) vs FREQUENCY (Hz)



DEVIATION FROM LINEAR PHASE — DEVIATION (Deg) vs FREQUENCY (Hz)

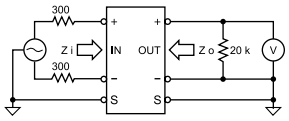


PARAMETER	CONDITIONS	MINIMUM	TYPICAL	MAXIMUM
Input impedance, Zi	1 kHz, +4 dBu, test circuit 1	22.0 kΩ	23.5 kΩ	25.0 kΩ
Insertion loss	1 kHz, +4 dBu, test circuit 1		1.6 dB	2.0 dB
Magnitude response, ref 1 kHz	20 Hz, +4 dBu, test circuit 1	-0.15 dB	-0.03 dB	±0.0 dB
	20 kHz, +4 dBu, test circuit 1	-1.0dB	-0.70 dB	±0.0 dB
Deviation from linear phase (DLP)	20 Hz to 20 kHz, +4 dBu, test circuit 1		+1.4/-0°	±2.0°
Distortion (THD)	1 kHz, +4 dBu, test circuit 1		<0.001%	
	20 Hz, +4 dBu, test circuit 1		0.04%	0.10%
Maximum 20 Hz input level	1% THD, test circuit 1	+17 dBu	+19 dBu	
Common - mode rejection ratio (CMRR) 600 Ω balanced / unbalanced source	60 Hz, test circuit 2 / 3		124 dB / 95 dB	
	3 kHz, test circuit 2 / 3	85 dB	95 dB / 85 dB	
Output impedance, Zo	1 kHz, test circuit 1		4.65 kΩ	
Allowable source impedance	(output impedance of device driving the ISO-MAX input)	0	600 Ω	2 kΩ
Allowable load impedance	(input impedance of device loading the ISO-MAX output)	10 kΩ	20 kΩ	∞
Allowable load capacitance	(cable & input capacitance loading the ISO-MAX output)	0	50 pF	100 pF
Optimal cable length	input		1 m (3')	3 m (10')
	output		1 m (3')	3 m (10')
Temperature range	operation or storage	0°C		70°C
Input to Output Voltage Difference*	any input to any output shield or any shield to case, 60 Hz			24 V RMS 34 V peak

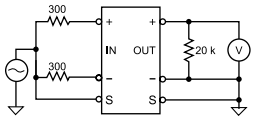
All levels are input unless noted, +4 dBu = 1.23 V RMS

* IMPORTANT NOTE: THIS PRODUCT IS NOT INTENDED FOR USE IN CIRCUMSTANCES WHERE THE DC OR PEAK AC VOLTAGE BETWEEN INPUT AND OUTPUT CONNECTIONS EXCEEDS 34 VOLTS OR WHERE ITS FAILURE COULD CAUSE INJURY OR DEATH.

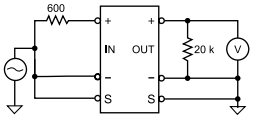
Test Circuit 1:



Test Circuit 2:



Test Circuit 3:



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