SPECIFICATIONS

ProISO | J•ISO
---|---
Freq. response | 20Hz to 18kHz +/- 1dB | 10Hz to 50kHz +/- 1dB
THD @ 1k | 0.01% | 0.001%
Stereo Inputs | Balanced, low-Z, +4dB line-level, 600-Ohm, female XLR, pin-2 hot | Balanced, low-Z, +4dB line-level, 600-Ohm, female XLR, pin-2 hot
Outputs | Unbalanced, high-Z, -10dB line-level | RCA, ¼", and 3.5mm TRS
Power | None, completely passive | None, completely passive
Size | 3.25" x 5" x 1.875" | 3.25" x 5" x 1.875"
Weight | 2 lbs. | 2 lbs.

INPUT PANEL
2. Ground lift disconnects the signal ground to eliminate buzz and hum caused by ground loops.
1. XLR INPUT for balanced, low-impedance, +4dB line-level signals.
3. Secondary Ground Lift used for instances where two separate devices are connected to the outputs.

OUTPUT PANEL
4. Output Level provides signal attenuation to prevent clipping.
5. 3.5mm TRS output connection for stereo -10dB consumer audio devices like the iPod.
6. RCA Phono left and right stereo outputs for -10dB consumer audio electronics.
7. ¼" Phone left and right stereo outputs for high-impedance audio electronics like mixers.

CONSTRUCTION
8. Bookend design 14 gauge steel outer shell creates protective zone around connectors and switches.
9. I-beam enclosure eliminates stress that could torque the PC board and cause solder joint failure.
10. PCB mounted switches are high-cycle rated for long life.
11. Jensen (J•ISO) and Radial (ProISO) transformers offer outstanding audio performance.
12. Military-grade double-sided PCB with plated through-holes is bolted to welded steel standoffs.
13. Full-bottom no-slip pad This provides electrical isolation and plenty of "stay-put" friction.

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J•ISO
Pro-ISO
Users Guide

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CONGRATULATIONS on your purchase of the Radial J•ISO or ProISO passive signal conversion tools. As with all Radial products the J•ISO and ProISO are easy to use and ensure the best audio quality. This short manual contains all the information you need to start using the tools right away. For more information on the J•ISO, ProISO and other Radial products, visit our web site at www.radialeng.com. The Radial J•ISO and ProISO are thoughtfully designed and useful devices that will provide you with years of reliable service. Enjoy!

INTRODUCTION
The Radial J•ISO and ProISO are two channel line-level signal conversion tools with transformer isolation to prevent noise from ground loops. Both units are identical except for the audio transformers. The J•ISO features two premium Jensen audio transformers. The ProISO uses high quality Radial transformers. Both units convert +4dB balanced signals to -10dB unbalanced with optimum signal-to-noise and signal transfer quality.

These devices allow you to connect professional balanced audio gear to consumer unbalanced. In addition to standard RCA stereo outputs, both units are equipped with ¼” instrument and 3.5mm jacks, allowing virtually any -10dB audio device (such as computer sound cards) to be connected without adapters.

For instance, the J•ISO and ProISO are great tools to interface a pro mixing console or high-end microphone preamp with your iPod to make a recording device (such as computer sound cards) to be connected without adapters.

USING THE ProISO
All Radial Engineering products are designed for simple, straightforward use. However, attention taken during set-up will ensure success. Before connecting ensure the sound system is turned off and all levels are set to zero. This will avoid any pops in the sound system that could cause damage to speakers, headphones or your ears.

1. Connect the balanced +4dB audio source to the XLR inputs using balanced cables.
2. Use unbalanced cables to connect the outputs to the destination audio device. Unbalanced cables should be kept under 20 feet in length to maintain the best fidelity.
3. To confirm audio quality, you should monitor the destination audio device with a set of headphones or a stereo loudspeaker system.
4. Turn the source audio level up slowly and listen for noise. In the event you encounter hum or buzz, simply depress the ground lift switch.
5. Bring the source audio up to unity-gain. If the sound is distorted (clipping) turn the LEVEL control down. You are now set to go!

A major benefit of using transformers is the elimination of noise caused by ground loops. The transformer isolates the devices connected to it by decoupling the signal ground between the input and output. This isolation effectively breaks ground loops between devices and blocks hum and buzz.

GROUND LIFT
To make grounding as flexible as possible, both units feature a ground LIFT switch. When in the lifted position, the input signal ground is decoupled through the audio transformer and isolated from the output signal ground. If you hear hum or buzz, try depressing the LIFT switch and use the position that produces the least noise.

LEVEL CONTROL
The J•ISO and ProISO feature a variable audio level control that can be called upon to attenuate hot signals and prevent the destination audio device from clipping.

RCA & 3.5mm JACKS
Consumer audio electronics such as CD players, computer sound cards and MP3 players connect directly using the 3.5mm and RCA inputs, thus eliminating the need for cumbersome adaptors. Two ¼” phone jacks are also provided. All output jacks are wired in parallel and can be used to split the stereo signal and send it to a second audio device. You can connect a laptop to the RCA outputs and an MP3 player to the 3.5mm phone jack and record the signal on both. Keep in mind that the source audio level may need to be increased to drive the additional load that a second device presents.

SECONDARY GROUND LIFT
A secondary recessed ground lift switch is accessed through a small hole in the side of the enclosure. This switch disconnects the common ground connection between the left and right output jacks. For normal stereo operation with one audio device connected to the outputs, this switch can be set either open (pushed “out”) or closed (pushed “in”).

However, if you intend to connect a second device or use the J•ISO in dual mono mode (where the left and right output channels drive two separate audio devices) there may be a gain in noise performance by depressing this switch. If you hear hum or buzz while operating with two devices connected, try toggling the recessed switch and use the setting that produces the least noise.

The J•ISO and ProISO do not require any power to operate. They are extremely portable and plug-and-play easy to use. The circuit is 100% passive and will not add any noise to the signal. The rugged construction is compact enough to take anywhere and dependable for service out on the road.

XLR INPUTS
These inputs are intended for professional audio equipment with a balanced +4dB line output. The ProISO uses the AES standard XLR pin-out where PIN-2 is hot (+) and PIN-3 cold (-).

AUDIO TRANSFORMERS
A pair of audio transformers converts the low-impedance balanced +4dB source signal into a high-impedance, unbalanced output. Jensen and Radial transformers are exceptional for their linear frequency response and ability to handle high input levels without distortion.

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