Radial™ Smart Sheet

PZ-DI™ ACOUSTIC DIRECT BOX

Order No. R800 2030

The Radial PZ-DI is an active direct box that has been optimized to work with the various types of pickups used on acoustic and orchestral instruments in a concert touring environment. The design begins with 3-position impedance selector to match the pickup: a 220k-ohm setting warms up magnetic pickups, a 1 meg-ohm setting replicates a classic DI box, and a 10 meg-ohm setting is used to eliminate the squawk and peaks that are common with piezo transducers. A variable high-pass filter lets you eliminate low-frequency resonance to improve clarity while reducing vibration borne feedback. A signal reducing -15dB pad and low-pass filter can also be engaged to gently smooth the over aggressive top-end produced by many active instruments. The PZ-DI is fully capable to work double duty as a standard direct box with front panel ¼" input and thru connectors to interface with an electric bass and the stage amplifier plus XLR out to feed the PA. The PZ-DI employs 48V phantom power with an innovative internal switching supply that at once elevates the rail voltage while reducing distortion of all types to deliver a smooth, natural tone with the same perfectly cascading even harmonics normally found on high-end studio preamps.

Features

- *Switchable impedance for all pickup types*
- *Variable low-cut filter to eliminate resonance*
- *48 volt phantom powered - no batteries!*
- *Extra headroom delivers amazing sound*

Applications

- *Piezo equipped orchestral instruments*
- *Magnetic sound-hole pickups on acoustics*
- *Acoustic guitars with active preamps*
- *Passive and active electric bass guitar*

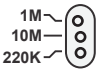
Cool Stuff

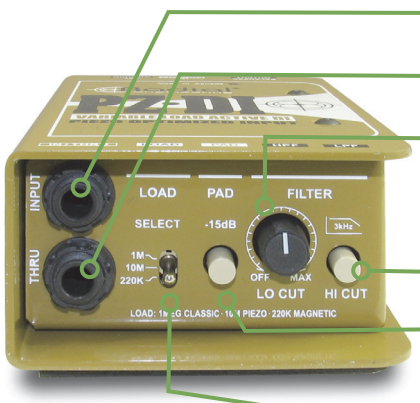
- *Compact design without too many controls*
- *Internal switching supply for more dynamics*
- *Lift the ground without losing phantom power*
- *Perfectly suited for virtually any instrument*

Adjusting the Load

The load adjustment switch works with a wide variety of pickups to maximize frequency response and minimize distortion. There are three settings to choose from.

1meg:	Traditional for DIs and amps, brightens the tone.
10meg:	Piezo transducers, makes them sound marvellous.
220k:	Magnetic pickups, warm natural sound.





INPUT: ¼" hi-Z input used to connect the instrument to the PZ-DI.

THRU: ¼" throughput used to feed an on-stage instrument amplifier.

LO-CUT: Variable high-pass filter is used to remove unwanted bass resonance. Variable from 5Hz to 500Hz.

HI-CUT: Fixed low-pass filter is used to gently roll-off frequencies above 3kHz to tame bright sounding instruments.

PAD: Reduces the input sensitivity by -15dB enabling the PZ-DI to be used with high output instruments such as active basses or keyboards.

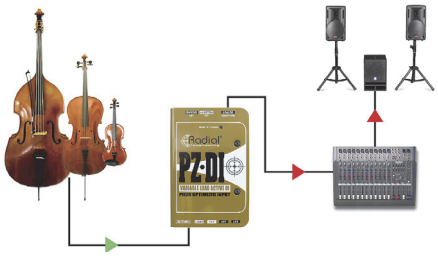
LOAD: 3-position switch lets you adjust the input impedance to optimize the load for the type of pickup being used.

XLR OUT: Balanced low impedance output used to connect the PZ-DI to the mixing console. Allows long cable runs in excess of 100 meters (300 feet) without noise.

PHASE: 180° polarity reverse toggles pin-2 and pin-3 at the XLR output. Used to tame acoustic hot spots on stage and help reduce resonant feedback.

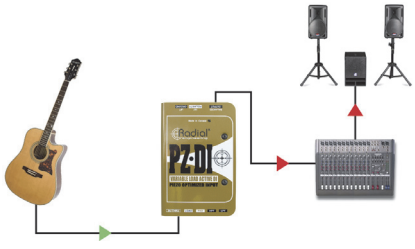
48V LED: Visual status of the 48V phantom power. When the LED is on, the PZ-DI is powered and ready to go.

LIFT: Ground lift switch disconnects the ground from the signal path and helps eliminate hum and buzz caused by ground loops.



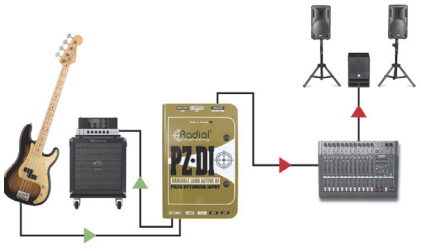
USING WITH A PIEZO TRANSDUCER

Piezo pickups often sound harsh and unnatural. The PZ-DI solves the problem with a 10 meg-ohm input impedance that extends the frequency response and smoothes out the peaky edges. Adjust the low-cut filter to size the instrument and reduce unwanted resonance.



USING WITH ACTIVE ACOUSTICS

The convenience of a built-in pickup and battery powered preamp makes it easy to plug-in and play. But with less than ideal electronics, these instruments end to sound brittle and unnatural. The PZ-DI helps with a low-pass filter that gently smoothes the top end plus a variable low-cut filter to eliminate resonance.



USING WITH MAGNETIC PICKUPS

Optimize the tone of the bass by setting the load to 220k-ohm. This produces a warmer tone and natural feel that is particularly useful when recording or when preparing to Reamp. When touring with low-output vintage instruments, set the impedance to 1 meg-ohm to reduce the load.