

Active Direct Inject Box



Why use a DI box

The main reason for using a DI box is to match the low level, high impedance signals from an instrument (guitar) pick-up to the low impedance inputs such as those found on the majority of mixing consoles. Any loading on the instruments pick-up due to mismatch, will affect the tonal quality and signal level. A DI also provides signal amplification for pick-up instruments and line balancing to drive long cable lengths without signal degradation.

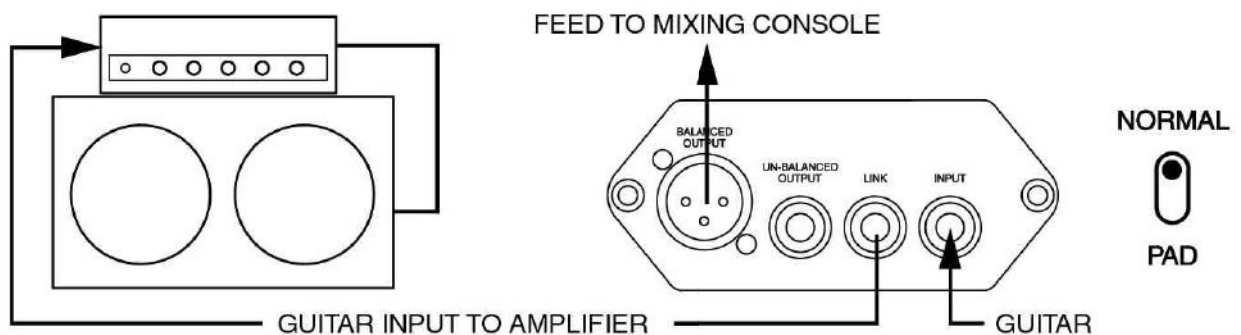
The DI2 Active Direct Inject box provides -

- Balanced and unbalanced outputs
- Link output
- Switchable gain
- Input switching for instrument or speaker input levels
- Ground lift switching

Using the DI2

Clean guitar feed

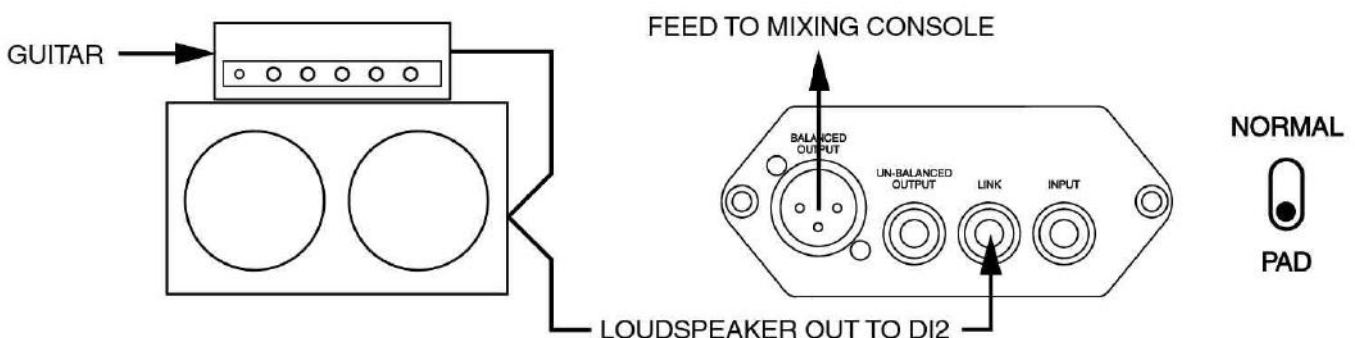
Plug the instrument into the INPUT and the instrument amplifier into the LINK jack. A clean feed ie. pre EQ, effects and amplifier can be taken from the BALANCED or UNBALANCED outputs of the DI2. The BALANCED output should be used where long cables are used and/or the signal is being fed into a mixing console's microphone input.



Speaker feed

Plug the output of the instrument amplifier into the INPUT ie. in parallel with the loudspeaker. Now the instrument feed from the BALANCED or UNBALANCED outputs of the DI2 includes all EQ, effects and amplifier distortion. The BALANCED output should be used where long cables are used and/or the signal is being fed into a mixing console's microphone input.

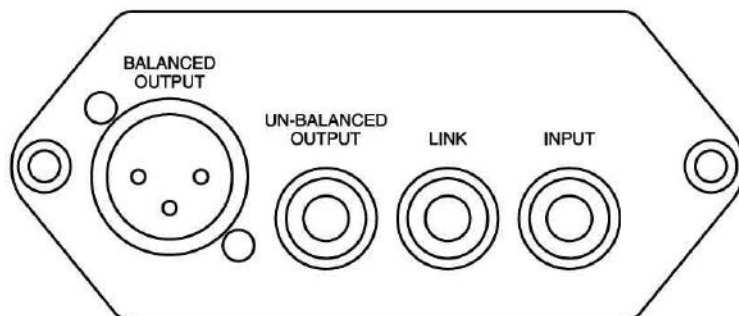
NB: The PAD switch should be in the PAD position for this application



Level matching

The DI2 can be used to convert the low level output of a keyboard, CD player or disco console to a balanced, line level signal. Connect the source signal into the INPUT socket and use the +20dB switch to boost the signal to line level.

Connections



INPUT

This socket is used to directly connect a pick-up instrument or the output of an instrument amplifier. For pick-up connection the PAD switch should be in the NORMAL position and for amplifier connection in the PAD position.

The unit may be used to balance an unbalanced signal by connecting the line to the INPUT socket with PAD in the NORMAL position.

LINK

This socket provides an output at instrument level for simultaneous connection to a guitar amplifier. The PAD switch should be in the NORMAL position.

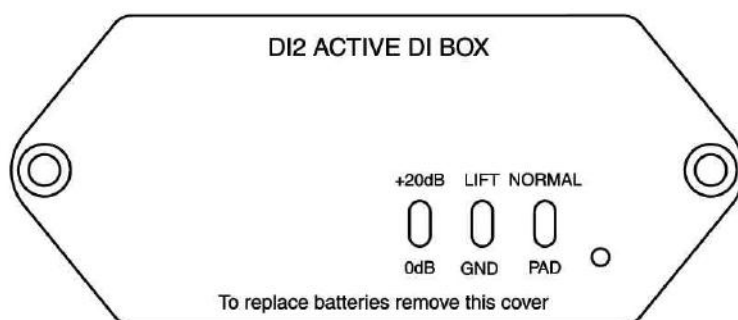
BALANCED OUTPUT

This XLR provides a low impedance balanced signal suitable for connection to mixing console microphone inputs. The balanced output should be used for long cable runs where it provides interference rejection.

UNBALANCED OUTPUT

An unbalanced output suitable for connecting to unbalanced equipment inputs.

Controls



NORMAL/PAD switch

The NORMAL position should be used with instrument pick-ups and the PAD position should be used when connecting to the speaker output of an instrument amplifier.

+20dB/0dB switch

Provides 20dB gain boost for low level signals to reduce degradation associated with long cables. Also enables connection to console's line inputs.

Gnd/Lift switch

In the LIFT position this switch is used to prevent ground loop hum and to prevent the possibility of DC voltages appearing at the console's inputs.

Powering the DI2

Battery

The DI2 can be powered from two 9V batteries which are fitted by removing the two screws securing the Switch panel. Suitable battery types include MN1604, PP3 & 6LR61. Batteries are not included. Plugging a jack into the INPUT or LINK sockets on the DI2 switches the unit on. To ensure this happens the mating plug must be a MONO type. The blue LED lights when a plug is inserted and power is available. To prolong battery life disconnect both the INPUT and LINK jacks from the unit.

Phantom Power

Alternatively the unit can be powered from the standard microphone Phantom Power available from the mixing console. Using a Phantom Power source overrides the internal batteries. The blue LED lights when Phantom Power is present.

When powered by Phantom Power and batteries are not fitted the two internal battery connectors should be plugged together.

DI2 Specifications

Frequency Response	+0, -2dB, 20Hz to 20kHz
Signal to Noise Ratio	-97dBu, 0dB switch position -86dBu, +20dB switch position
Distortion	<0.1%, 1kHz, 0dB switch position
Input Impedance	1M Ohm, Normal switch position 10k Ohm, Pad switch position
Output load (recommended)	>300 Ohm, balanced output >2k Ohm, unbalanced output
Power requirements	15V to 48V, Phantom power 1mA, Phantom power current
Output XLR Pin Assignment	Pin 1 = Gnd, Pin 2 = Hot (signal +), Pin 3 = Cold (signal -)

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