



Di2 Mk3 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 on equipment such as those found on the majority of mixing consoles. Any loading on the instruments pick-up due to mis-match, will affect both 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.

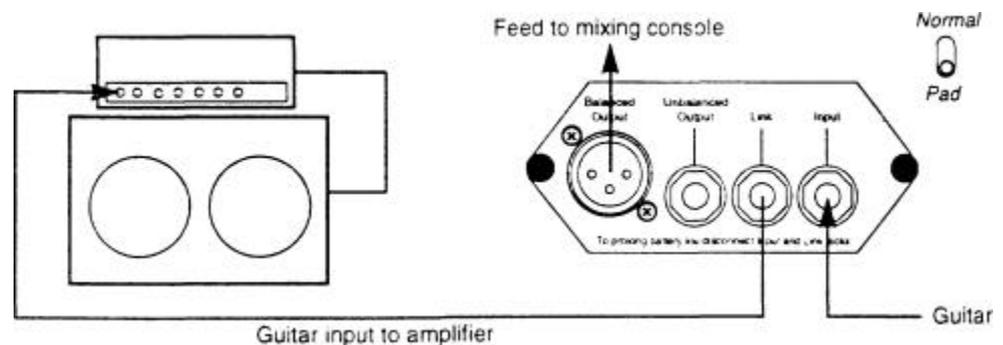
The Di2 Active Direct Inject box provides –

- 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

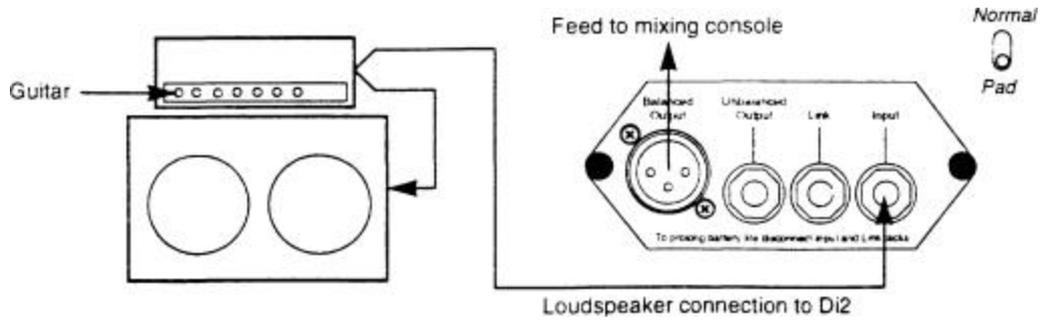
Plug the instrument into the Input and the instrument amplifier input into the Link jack. A clean feed i.e. pre EQ, effects and amplifier can be taken from the Balanced or Unbalanced outputs of the Di2. The Balanced output should be used where long cables are used and/or the signal is being fed to a mixing console's microphone input.



Speaker feed

Plug the speaker output of the instrument amplifier into the Input i.e. in parallel with the loudspeaker. Now 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 to a mixing console's microphone input.

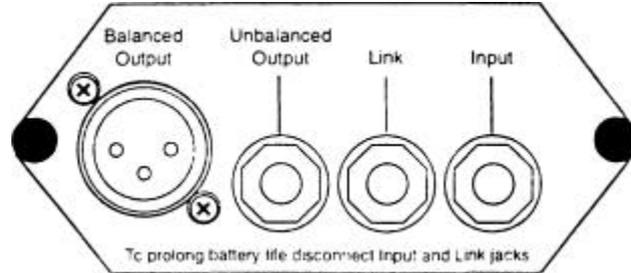
NB: The PAD switch should be in the PAD position for this application.



Level matching

The Di2 can be used to convert the low level, unbalanced 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 direct connection the PAD switch should be in the NORMAL position or 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 the PAD switch 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

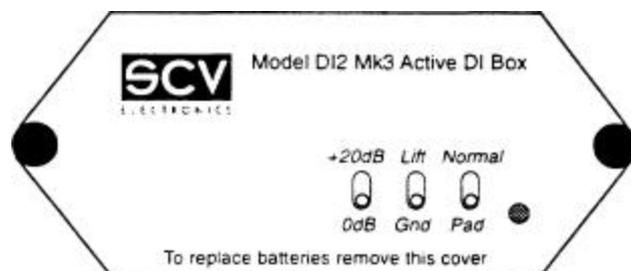
This XLR provides a low impedance balanced signal suitable for connection to mixing console microphone inputs.

The balanced output should be used for long cable runs where it provides interference rejection.

Unbalanced Output

A unbalanced output suitable for connecting to unbalanced equipment inputs.

Controls



NORMAL/PAD switch

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

+20/0dB gain switch

Provides 20dB gain boost for low level signals to reduce signal degradation associated with long cables. Also enables connection to a 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

The DI2 can be powered from two 9V batteries which are fitted by removing two screws securing the Controls panel. Suitable battery types include MN1604, PP3, 6LR61.

Alternatively the unit can be powered from the standard microphone Phantom Power available from the mixing console. Using phantom power source overrides the internal batteries.

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. To prolong battery life unplug the INPUT or LINK jacks from the unit. The green 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.

DI2 specifications

Frequency response		
20Hz to 20kHz		+0, -2dB
Signal to noise ratio		
0dB switch position		-97dB
+20dB switch position		-86dB
Distortion		
1kHz, 0dB switch position		<0.1%
Input Impedance		
Normal switch position		1M Ω
Pad switch position		10k Ω
Output load (recommended)		
Balanced output		>300 Ω
Unbalanced output		>2k Ω
Power requirements		
Phantom power supply		15V to 48V
Phantom power current		1mA
Pin assignment		
Balanced output		Pin 1: Gnd, Pin 2: Hot (signal +) and Pin 3: Cold (signal -).

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