

Specifications

Max Input Level	+13 dB Phantom powered +6 dB Battery powered
Input Impedance	1 Meg Ohm
Max Output Level	+17 dB 10K Ohm load Phantom powered +12 dB 10K Ohm load Battery powered +11 dB 600 Ohm load Phantom powered +12 dB 600 Ohm load Battery powered
Output Impedance	680 Ohms Balanced
Signal to Noise	-100 dB unweighted -104 dB A weighted
Dynamic Range	117 dB 10K Ohm load Phantom powered 112 dB 10K Ohm load Battery powered 111 dB 600 Ohm load Phantom powered 107.5 dB 600 Ohm load Battery powered
Distortion	100 Hz .0027% 1KHz .0028% 10KHz .0037%
Frequency Response	20Hz to 20KHz, \pm 0.2 dB
Gain through Unit	6dB (Normal input, Pad switch out)
Pad Switch	-20 dB attenuation
Speaker Input	-40 dB attenuation, equivalent to 100:1 decrease in input level; -60 dB atten. available with Pad switch
Input Connectors	Insulated jack
Output Connector	3 pin XLR. Wired Pin 1 Ground, Pin 2 + Hot, Pin 3 - Cold. With Audio Ground (Pin 1) lift switch
Construction	All-steel chassis, fibreglass PCB
Battery Access	Twist connector opens chassis, snap-in battery holder inside. No tools required

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Using the DI-PLUS

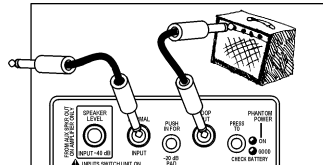
The DI-PLUS is a Direct Injection, or Direct, box. It is a self contained, stand alone unit designed to interface unbalanced high impedance lines with professional balanced low impedance inputs. In other words, it will convert an ordinary signal into one that is happy to travel down a long line and meet a mixing console at the other end. It has many applications for Live Sound, Studio or Broadcast use.

Typical uses are:

- Musical instruments - Bass guitar, synthesizers, electronic drums, drum machines
- Consumer audio products - cassette decks, tape decks, video cassette audio, computers, telephones.

Operating instructions

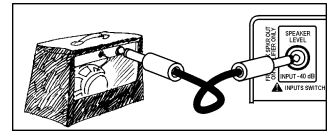
Normal Connection



Plug a jack lead with a high impedance source (instrument, unbalanced line or similar) into the Normal Input. This will turn the unit on and a balanced signal will appear at the XLR Balanced Output on the rear of the unit. This connects to the Input of the mixing console. If the signal needs monitoring, eg. an onstage am-

plifier, then connect a lead from the Loop Out to the amplifier. Pushing the Pad switch IN will reduce the input level by -20dB if required. Special Note. The DI-PLUS is a Line level device, so it is not designed to accept Microphone level signals.

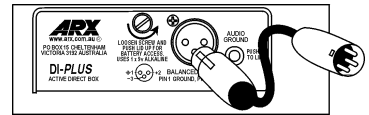
Connection from Amplifier



For applications where the sound of the instrument/amplifier combination is required, connect a lead from the Aux (or External) speaker output on the rear of the amplifier to the Speaker Level Input (-40dB) on the DI-PLUS. If the signal is still too hot, then switch the Pad switch IN as well to reduce the input by a further -20dB.

Note: Be sure to always use the **Aux** or **External** speaker output on the amplifier. **Never** disconnect the speakers on a valve/tube amplifier.

Output Connections



Connect a balanced microphone lead from the 3 pin XLR connector on the rear of the DI PLUS to an input channel of the mixing console. Pushing the Audio Ground Lift switch IN will isolate Pin 1 to stop Ground Loops if required.

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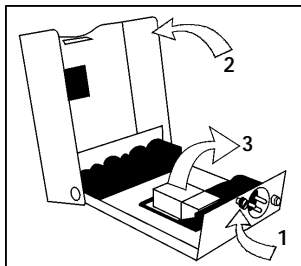
Power Requirements

The DI-PLUS is an active device, ie. it needs power to run. This power can be supplied 2 ways:

• Battery power.

The DI-PLUS has provision for 1 x 9 volt battery internally. To get to the battery compartment, unscrew the knurled captive bolt on the rear panel, and push the top part of the chassis upwards. The battery compartment will immediately be visible. Remove the old battery, replace with a new 9v alkaline battery and close the lid. Re-tighten the bolt finger tight only.

That's all there is to it. No tools, no screwdrivers required!



• Phantom power.

The DI-PLUS will also run on Phantom power if available on the mixing console. Switch the Phantom power ON on the channel the DI-PLUS is plugged into, and the Red Phantom power LED will light up on the DI-PLUS. This means the DI-

PLUS is now running on the Phantom power and the batteries are disengaged. If you switch the Phantom power off the DI-PLUS will revert to battery operation, although we recommend using Phantom Power if available as it gives an approx 6dB increase in overall headroom (see *Specifications*, p 4).

Did you know...

ARX manufacture a complete range of singles and multiple Direct boxes:

The **DI-4** is a 19" 1 RU AC powered unit which has 4 independent Direct boxes, each with high impedance Input and Loop out jack connectors, a 0 to +15dB level control, clip LED, balanced XLR output and individual audio ground lift switches. As well as Direct mode, it can also function as a 4 into 2 stereo line mixer, **at the same time**, with Pan controls, plus an Aux send and stereo Aux return. For total flexibility channels 1 and 2 can also be switched out of the mix to direct only.

The **DI-6s** is a 19" 1 RU AC powered unit that has 6 independent Direct boxes, each with high impedance Input and Loop out jack connectors, a 0 to +15dB level control, clip LED, balanced XLR output and individual audio ground lift switches. It can also function as a 6 into 1 line mixer **at the same time**. A switch on the rear changes it from a 6 into 1 mixer to a 1 into 6 line distribution splitter, each split's level controlled by the six individual channel controls. A true Pro Audio toolbox!

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INTERNATIONAL LIFETIME WARRANTY

ARX Systems (ARX) warrants to the first purchaser of this DI-PLUS that it is free from defects in materials and workmanship under normal use and service. ARX's sole obligation under this warranty shall be to provide, without charge, parts and labour necessary to remedy defects, if any, which appear within twelve (12) months from date of purchase; and to supply parts only for the life of the product to the original purchaser.

This is our sole warranty. It does not cover finish or appearance items, nor does it apply if the DI-PLUS has been, in ARX's sole judgement:

- Subjected to misuse, abuse, negligence or accident;
- Repaired, worked on, or altered by persons not authorized by ARX,
- Connected, installed, adjusted or used otherwise than in accordance with the instructions supplied by ARX.

This warranty gives you and us specific legal rights, and you may also have other rights which can vary from state to state.

To obtain warranty service for your DI-PLUS, call or write to ARX or the dealer you purchased it from. They will give you the correct address to send your unit to. Have your sales receipt showing date of purchase handy, and include a copy with your DI-PLUS. Pack the unit well - we are not responsible for damage caused by unsuitable packing during shipment. Send the unit to us pre-paid, by a delivery service like FedEx, UPS, or any other service that can track the shipment. We will return it to you freight paid.

If you have any questions, or any part of this is unclear, please write to ARX Systems in the country of purchase, or to the address below.

PO Box 15, Cheltenham, Victoria 3192, Australia.
Phone: +61 (0)3 9555 7859 Fax: +61 (0)3 9555 6747
You can also Email the factory at: info@arx.com.au

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Owner's Manual

DI-PLUS Single Channel Active Direct Box

Thank you for choosing this ARX DI-PLUS, a major step forward in active direct boxes. We hope you enjoy using this unique product as much as we enjoyed creating it. As with all ARX equipment, it has undergone extensive factory testing and 'burn in' before shipping. To ensure continued trouble free use, please familiarise yourself with the contents of this manual before using.

Packaged in a single channel stand-alone format, the DI-PLUS represents a fresh look at active D.I. concepts.

• Precision engineered

Ultra quiet, ultra clean circuitry delivers maximum headroom whatever the signal. Premium grade components, plus an all-steel chassis gives excellent hum and noise specifications and superb audio quality in a tough, roadworthy package.

• Level control

The DI-PLUS features a Normal gain high impedance unbalanced input on the front panel, running to a balanced XLR output on the rear. There is also a separate -40dB Speaker Level input for signal coming from the External (auxiliary) speaker output of an amplifier. A global Pad switch drops both the normal input and the speaker input by a further 20dB, making it suitable for all applications, from the softest keyboard to the hottest broadcast levels.

• Battery compartment

The revolutionary simple 'clamshell' action of the DI-PLUS battery compartment makes battery changing extremely easy, even on the darkest stages. A 9v alkaline battery snaps into a PCB mounted battery holder for fast, secure location. No fragile battery clip leads to break, no tools required, no screws to lose. Production crew heaven!

• Automatic Phantom switching

The DI-PLUS will automatically switch itself to the console's own Phantom Power, if available, and an LED will indicate this mode. Turn the Phantom Power off and it will instantly revert back to battery mode.

• Rugged all-steel case

A lot of direct boxes are fitted into brittle cast alloy cases. Not this one! The tough all-steel inner and outer chassis of the DI-PLUS provide excellent RF/EMF shielding while making it a sturdy, heavy duty unit that is hard to dislodge, and hard to leave behind. Whether you're a Studio or Live Sound engineer, installation contractor, or broadcast engineer, you want all the dynamics and clarity of the original sound source transferred to the mixing console.

The ARX DI-PLUS provides a rugged, no-compromise solution to all direct injection and signal balancing requirements.

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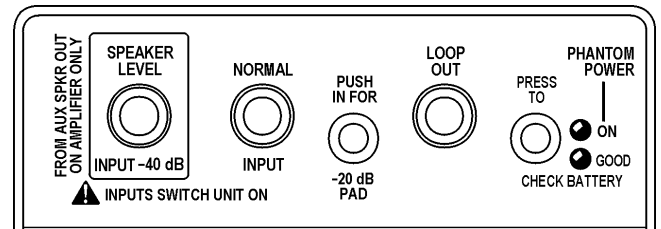
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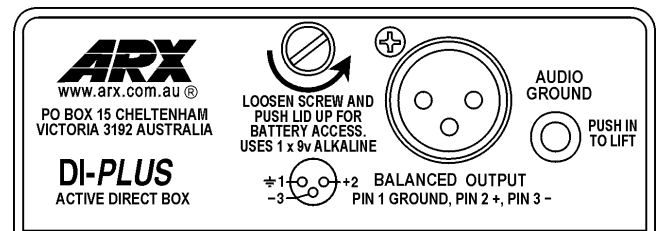
Front Panel Connections



- Speaker Level Input
- Normal Input
- Pad switch
- Loop out
- Battery check switch and green battery status LED.

- LED will light up when switch is pressed if battery is good
- Red Phantom power LED. Will illuminate if DI-PLUS detects Phantom power.

Rear Panel Connections



- Balanced XLR output connector. Pin 2 + Hot, Pin 3 - Cold, Pin 1 Audio Ground.

- Audio Ground lift switch. Will isolate Pin 1 when switched IN