

Quad Active DI Box

AR-416



UNIQUE 'REVERSIBLE' CASE ALLOWS THE AR-416 TO BE IDEALLY CONFIGURED FOR THE ROAD OR FOR THE STUDIO



For nearly 25 years, **BSS** have been manufacturing professional audio products that combine the highest levels of performance with technical excellence and proven reliability. All of this expertise and experience is encapsulated in the **AR-416 4-CHANNEL ACTIVE DI**.

No recording session or touring stage is complete these days without a liberal sprinkling of DI boxes and similar interfaces numbering in their dozens. Stereo and multi-channel samplers, MIDI voice modules, drum machines and sequencers, now form a major part of the composite soundmix along with the increasing numbers of acoustic instruments fitted with sophisticated electronic 'bug' pickups.

All these demand large numbers of high quality active DI channels, which until now meant a tiresome dependence on batteries or phantom power. Bringing the direct injection process firmly up to date, **BSS** have created the practical solution in simple but versatile form - the **AR-416 4-CHANNEL ACTIVE DI**.

Main powered and presented in a 1U, 19" package, the **AR-416** chassis is cleverly designed to have rack ears fitted either on the 'jackside' or the 'XLR-side' (or both). The mains cable exits through the side of the case. For the road, the four active DI outputs with Filter, Polarity and Earth-lift switching are made available to PA crew on the outside of the artist's equipment rack whilst inside, jack leads can be permanently connected between

samplers, voice modules, effects etc and the rear jack-side of the unit. The input attenuator is left preset safe inside the rack, a feature of benefit to Front-of-house and Monitor engineers alike.

Separate parallel and buffered Link outputs are available independently for feeding backline and/or a submixer mounted in the top of the rack. Stereo to mono summing is also possible using these outputs.

In the studio, the **AR-416** rackmounts in keyboard tables or equipment racks to give 1/4" jack Inputs, Link outputs and Earth-lift switching accessible from the front for guitars, keyboards and samplers etc. The active DI output XLR's inside the rack can be permanently plugged onto tielines wired to the console patchbay. In mobile OB or ENG situations, the unit is invaluable as a general purpose impedance matcher or floating isolation buffer for high level audio signals.

The electronics of the **AR-416 4-CHANNEL ACTIVE DI** are closely based on the familiar **AR-116** and **AR-133** Active DI Boxes, both in deference to their renowned sonic excellence and to ensure operational consistency. With characteristic attention to detail, the earth-lift function duplicated on both sides of the unit includes LED indicators to show the true ground status. Total isolation between channels is achieved by incorporating independent power supply regulators for each channel which in turn are fed from independent and floating secondary windings on the mains transformer.

FEATURES

- High impedance 1Mohm, 1/4" instrument jack per channel with both parallel and buffered Link outputs on 1/4" jacks to feed backline amps and/or local submixers.
- Low impedance professional XLR outputs, active buffered, transformer balanced and floating, capable of driving down to 600 ohms over long cable runs.
- Selectable 8KHz Lo-pass filter, polarity reverse and earth lift functions on 'XLR-side'.
- 3-way selectable input attenuator (0dB, 20dB, 40dB PAD) and another earth-lift switch on 'jack-side'. The two earth-lifts per channel have interactive LED indicators to show true status to avoid confusion.
- Total ground isolation with no significant crosstalk between channels and very low noise floor.
- Operational and performance criteria modelled on proven standards set by the much acclaimed AR-116 Active DI Box from **BSS**.

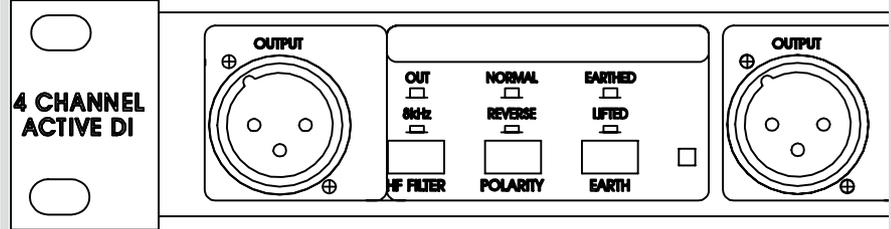


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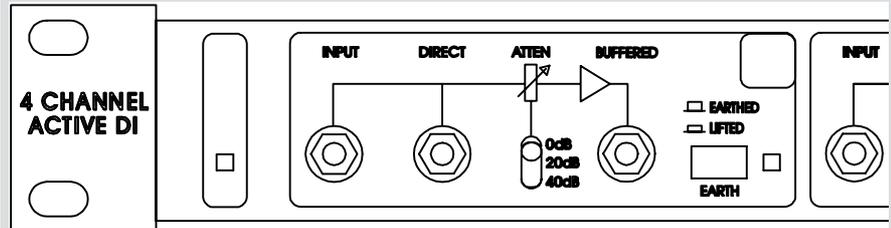
SOME APPLICATIONS

- Interfacing low level, high impedance outputs from electric or electronic musical instruments to feed low impedance, balanced inputs to stageboxes or mixing console.
- Touring musicians stage racks, to guarantee consistent quality of feeds to the PA without the tedious chore of batteries or the uncertainty of phantom power.
- Recording studio and Programming suite keyboard tables and equipment racks, as a high quality audio tie-line interface to maintain signal integrity between instruments and the mixing console.
- OB and ENG crews can use BSS Active DI Boxes as general purpose hi-level line drive and isolation buffers in the field.
- Any situation where impedance conversion or ground isolation is required to the highest professional standard without insertion loss.

ROAD VIEW



STUDIO VIEW



TECHNICAL SPECIFICATIONS

INPUTS

All on single 1/4" RTS jack socket,
 Atten at 0dB: Impedance 1Mohm, Maximum input level +10dBv
 Atten at 20dB: Impedance 10kOhm, Maximum input level +30dBv
 Atten at 40dB: Impedance 10kOhm, Maximum input level +50dBv

OUTPUTS

Direct: 1/4" RTS jack socket. Parallel wired directly from INPUT socket.
 Buffered: 1/4" RTS jack socket. Impedance 1 k ohm. Unity gain active buffered feed from input, Maximum output level +10dBv.

FREQUENCY RESPONSE

Within 3dB from 30Hz to 30kHz.

FILTER

Active on 20dB and 40dB attenuator switch settings only. First order filter -3dB at 8kHz.

INTERCHANNEL CROSSTALK

Within noise floor.

INPUT TO OUTPUT ISOLATION

Will withstand 1000v ac for 1 min with earthlift switch in lifted position.

NOISE

Input short circuit, 0dB atten, 20Hz to 20kHz: - 110dBv,
 Input source 100kOhm, 0dB atten, 20Hz to 20kHz: - 107dBv,

DISTORTION

Less than 0.01 % at any level up to +10dBv 150Hz to 20kHz.
 Less than 0.3% at any level up to + 10dBv 30 Hz.

POWER

Anchored power cord 190v-250v 50Hz or
 90v-120v user selectable.

In keeping with our policy of continued improvement, BSS Audio, reserves the right to alter specifications without further notice. This product was designed developed and produced by BSS Audio, Hertfordshire, England.

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