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- » Recessed Switches and Surface-mounted Connectors Resist Damage
- » Rugged "Uni-box™" Construction for Superior Protection and Shielding

DESCRIPTION:

The Pro Co TradeTools DBA1 is an active circuit direct box that offers clean and reliable performance both on stage and in the studio environment. Like a passive direct box, it can be used for nearly any instrument or signal source, from electric bass, keyboards to drum machines and submixers. One of the advantage of active electronics is a much wider frequency response.

The DBA1 offers both electronic balancing and impedance matching. It features a 1/4" input and a parallel 1/4" output, plus an unbalanced XLR input for easy line checks. The input features a two step PAD for up to 40dB of attenuation and a clip indicator to warn when the input is being overdriven. On the output side, is a balanced XLR output, a ground lift switch, and a phantom power indicator to confirm the presence of phantom power at the mic cable.

The DBA1 utilizes Pro Co's industry leading MBT1 isolation transformer for signal-path decoupling. Low noise, a high dynamic range, and extended frequency response makes the DBA1 a great choice for all active direct injection needs.

Built for the road, but equally at home in the recording studio, the DBA1's rugged 16-gauge steel and aluminum "Uni-box" construction enclosure is finished in a durable black texture powder coat finish with black anodized aluminum side channels. Easy to read control graphics are incorporated into the Lexan® top panel overlay.

ENGINEERING SPECIFICATIONS:

The active electronic signal splitting/impedance matching unit shall be suitable for interfacing one (1) unbalanced high impedance or low impedance source to one (1) balanced or floating low impedance, microphone preamplifier input. There shall be two (2) 1/4" (6.3mm) 2-conductor phone jacks and one 3-pin XLR-type female connector, all connected in parallel to provide input, loop-through, and line check functions. There shall be a single switchable 40 dB attenuator, switchable in two equal positions of 20 dB each, additive, to accommodate line level signal sources. There shall be an LED input signal clip indicator lamp to indicate if the input signal exceeds the input circuits clip threshold. The LED indicators' threshold shall be set to .5 dBu before clip. The input and output circuits shall be decoupled thru the Pro Co MBT-1 transformer. There shall be a low-impedance output from a 3-pin XLR-type male connector. There shall be an LED indicator to indicate the presence of phantom power at the output connector. There shall be a ground-lift switch to allow the ground paths of the input circuit and output circuit to be common or isolated as needed. The XLR output connector shall be wired pin 2 "hot" or "in phase", pin 3 "cold" or "anti-phase" and pin 1 to "shield" or "ground".

The enclosure shall be the Pro Co "Uni-box" with 16-gauge steel black zinc finish top and bottom plates, 16-gauge black texture powder coated steel end plates and black anodized aluminum side

channels. Control functions shall be identified by a printed Lexan® top panel overlay. Switches shall be of the miniature "rocker" type and shall be flush-mounted. The enclosure shall be provided with two (2) miniature handles at each end (front and back) and four (4) non-conductive feet. The dimensions of the unit shall be 4.875" D x 4.375" W x 1.75" H (123.8mm D x 111.1mm W x 44.4mm H).

The signal splitting/impedance matching unit shall be a Pro Co TradeTools DBA1 Active Direct Box.

The MBT-1 is a carefully designed, custom-built 1:1 microphone bridging transformer whose characteristics are optimized for use with balanced low-impedance microphones or similar sources. Special winding techniques and a high-permeability (80% nickel) core lamination preserve full frequency response while minimizing signal losses and other "loading" effects. MU metal can and separate electrostatic shields for primary (input) and secondary (output) windings reduce capacitive coupling of ground-borne electrical noise between main and stage monitor or recording mixers, eliminating annoying 60-Hz hum and buzz. The source impedance of the MBT-1 is very similar to that of a low impedance microphone to ensure proper matching to the input circuitry of the mixer. The result is clean transient response (minimal overshoot or ringing) and low distortion even at low frequencies and high input levels.

TYPICAL PERFORMANCE:

FREQUENCY RESPONSE: 30 Hz-20 kHz, +/- 1.0 dB

NOISE FLOOR: < -107 dBu, un-weighted, 22 Hz - 22 kHz

POWER REQUIREMENTS: +30-48 VDC, 7mA, phantom power

INPUT IMPEDANCE: > 1 Mohm @ 1.0 kHz. (NO PAD)
> 47 kohm @ 1.0 kHz. (20 dB PAD)
> 43 kohm @ 1.0 kHz. (40dB PAD)

MAXIMUM INPUT LEVEL: +12 dBu (NO PAD)
+32 dBu (20 dB PAD)
+52 dBu (40 dB PAD)

MAXIMUM OUTPUT: +12 dBu

CLIP LIGHT LEVEL: +11.5 dBu

CONTROLS:

CLIP INDICATOR: A red LED that illuminates if the input signal reaches 11.5dBu.

PHANTOM POWER INDICATOR:

A blue LED that illuminates to indicate the presence of phantom power at the low impedance output

INPUTS: 1/4" (6.3mm) phone jack accepts signals from instrument or other source. Female XLR, pin 1 and 3 tied in an unbalanced configuration

OUTPUTS: 1/4" (6.3mm) phone jack provides "loop-through" (parallel) connection from input jack. Used when inserting DBA1 between instrument and amplifier.

LO-Z OUTPUT: Male 3-pin XLR-type connector provides balanced floating low-impedance output (pin 2 hot). Connect to mixing board microphone channel input.

0/20/40 dB PAD: A two step pad switch providing 20dB of attenuation at each step for a total of 40dB of attenuation maximum.

GND/LIFT: GND position connects INPUT and LO-Z OUTPUT grounds together. LIFT position "floats" LO-Z OUTPUT. Used to reduce hum and buzz by eliminating ground loops and providing proper grounding for various conditions.

PRO CO MODEL: DBA1

DIMENSIONS:.....4.88" D x 4.38" W x 1.75" H
123.8mm D x 111.1mm W x 44.4mm H

WEIGHT1.00 lb/0.46 kg

SHIPPING WEIGHT2.00 lb/0.92 kg

TOP VIEW

FRONT VIEW

SIDE VIEW