

FEATURES:

- » Convenient connection point for MP3 players and laptop computers, Instrument -Level Sources and a Mic Input to House Sound Systems.
- » Floating Transformer-Balanced XLR Output for Instrument and Line-Level Inputs
- » XLR Input for Microphone Pass-Thru
- » Single Rack Space
- » Ideal for installation in meeting rooms, churches, clubs, theaters, and "One-man-band" portable applications



REAR OF PANEL

DESCRIPTION:

The Pro Co iGate Audio Gateway is a device that provides simple and reliable connection of three different audio sources to the balanced microphone inputs of audio mixing consoles. It serves as a mic input, a direct box and an MP3 player interface all together in a conveniently packaged single rack-space unit. The iGate provides a pass-through input for a balanced microphone, inputs for the stereo headphone output of audio devices such as MP3 players, Apple® iPods, laptop computers and consumer-type CD and DVD players, and an input for unbalanced "instrument" signal sources.

MIC IN input is wired directly to MIC OUT on the rear panel for a convenient microphone pass-through. The INSTRUMENT input accepts unbalanced instrument or other signal sources and, through the use of the Pro Co DBT-1 direct box transformer, provides a floating transformer-balanced output through the INSTRUMENT OUT on the rear panel.

The iGate provides both a stereo mini COMPUTER/iPOD input and left/right RCA phono LINE LEVEL INPUT inputs for easy connection of MP3 or computer audio outputs with standard patch cables. A STEREO/MONO switch provides passive input summing to a dual mono output feed where required. The inputs may be used simultaneously. If only a single source is used, the second set of inputs may be used to derive an unbalanced mono feed for recording purposes.

All outputs (except MIC OUT) are transformer-isolated via the Pro Co audiophile-grade transformers. The transformers offer wide bandwidth, low distortion and phase shift. They are magnetically shielded in mu-metal cans and electrostatically isolated with dual Faraday shields. The result is near-ideal rejection of common-mode signals from all sources of RFI and EMI, including radio pickup, SCR dimmers and 60 Hz hum.

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DESCRIPTION:

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The GND/LIFT switch allows correct grounding for either AC or battery-powered sources, eliminating hum and buzz from ground loops between portable and house equipment. The GND/LIFT switch affects the COMPUTER/iPOD and LINE LEVEL IN L/R inputs only

The iGate'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. All functions are clearly identified by laser-engraved legends, providing an attractive and professional appearance in addition to trouble-free technical functionality. The iGate can be mounted in any standard 19" (482.6mm) rack. Top quality connectors and switches provide trouble-free service even in abusive situations such as remote broadcast and recording operations.

CONTROLS:

MIC IN: Female 3-pin XLR-type connector passes signal directly through to MIC OUT.

INSTRUMENT: 1/4" (6.3mm) phone jack accepts signals from instrument or other source. Input impedance-greater than 100 kohm.

COMPUTER/iPOD INPUT: 3.5 mm stereo mini phone jack accepts signals from unbalanced headphone-level sources such as MP3/CD/DVD players and computer audio cards.

LINE LEVEL INPUT LEFT/RIGHT: RCA phono-type jacks wired in parallel to the STEREO mini input.

GND LIFT: Rocker-type switch used to reduce hum and buzz by eliminating ground loops and providing proper grounding for various situations. Breaks connection point between input and output electrostatic shields. Only affects COMPUTER/iPOD INPUT and LINE LEVEL INPUT LEFT and RIGHT.

STEREO/MONO: Rocker-type switch provides input summing to combine stereo sources for mono output for applications where stereo operation is not required. Only affects COMPUTER/iPOD INPUT and LINE LEVEL INPUT LEFT and RIGHT.

MIC OUT: Male 3-pin XLR-type connector provides pass-through output for MIC IN signal. Connect to a mixing board microphone channel input.

INSTRUMENT OUT: Male 3-pin XLR-type connector provides balanced floating low-impedance output (pin 2 hot). Connect to a mixing board microphone channel input. Recommended load impedance: >1.0 kohm.

OUT L/R Male 3-pin XLR-type output jacks for connection of signal source from COMPUTER/iPOD INPUT and LINE LEVEL INPUTS LEFT and RIGHT to standard balanced line level inputs of professional audio mixers.

AUDIO GATEWAY

TYPICAL PERFORMANCE:

INSTRUMENT CHANNEL

NOTES: All measurements made with a 20 kohm source feeding IN/OUT and 1.0 kohm load on LO-Z OUTPUT to simulate typical "real world" instrument pick-up and mic preamp. 0 dBv ref. = .775 volt.

FREQUENCY RESPONSE:

20 Hz-20 kHz, +/- .5 dB @ -15 dBv output.
-3 dB @ approximately 85 kHz.

TOTAL HARMONIC DISTORTION:

< .03% 20 Hz-20 kHz @ -30 dBv output.
< .1% 30 Hz-20 kHz @ -15 dBv output.
< .25% 20 Hz-20 kHz @ -15 dBv output.

PHASE RESPONSE:

< -18 degrees @ 20 kHz (ref. 1.0 kHz).

RISE TIME:

< 4.5 microseconds (2.0 kHz square wave, 10%-90%).

VOLTAGE STEPDOWN:

< 22 dB @ 1.0 kHz.

INPUT IMPEDANCE:

> 130 kohm @ 1.0 kHz (INST mode).
> 105 kohm @ 10 kHz (INST mode).
Nominal source impedance is 20 kohm.

OUTPUT IMPEDANCE:

< 200 ohm @ 1.0 kHz.
< 215 ohm @ 10 kHz.
Nominal load impedance is 1.0 kohm.

MAXIMUM INPUT LEVEL @ 50 HZ FOR 1% THD:

+16 dBv @ 20 Hz.
+21 dBv @ 30 Hz.
+26 dBv @ 50 Hz.

COMPUTER/iPOD INPUT CHANNEL

FREQUENCY RESPONSE (Re: 1.0 kHz):

+2dB @ 20 Hz
-.6dB @ 20 kHz
-4dB @ 65 kHz

TOTAL HARMONIC DISTORTION:

< .1% 30 Hz-20 kHz
@ -15 dBv output

VOLTAGE LOSS (@1.0 kHz):

1.0 dB

INPUT IMPEDANCE:

150 kohm

SECONDARY SOURCE IMPEDANCE:

270 ohm @1.0 kHz

INSULATION:

> 600V winding/shield/winding



ENGINEERING SPECIFICATIONS:

The rack-mounted unit shall be suitable for interfacing:

One balanced low impedance source to the one (1) balanced or floating low-impedance (1.0 kohm nominal) microphone preamplifier input. There shall be one (1) 3-pin female XLR connector labelled "MIC IN" to provide input for the source. There shall be a 3-pin male XLR connector labelled "MIC OUT" wired pin 1 to pin 1, pin 2 to pin 2 and pin 3 to pin 3 with respect to the input.

One (1) unbalanced high- or low-impedance source to one (1) balanced or floating low-impedance (1.0 kohm nominal) microphone preamplifier input. There shall be one (1) 1/4" (6.3mm) 2-conductor phone jack labelled "INSTRUMENT" to provide input for the source. There shall be a transformer-isolated low-impedance output from a 3-pin male XLR-type connector labelled "INSTRUMENT OUT". The transformer shall be a Pro Co DBT-1 Direct Box Transformer. The primary electrostatic shield shall be connected to the source input ground and the enclosure. The XLR output connector shall be wired with pin 2 "hot" or "in phase" and pin 3 "cold" or anti-phase with respect to the input.

One (1) unbalanced stereo headphone output to one (1) stereo balanced or floating low-impedance (1.0 kohm nominal) microphone preamplifier inputs. There shall be one (1) stereo 3.5 mm phone jack marked "COMPUTER/iPOD INPUT". This input shall be wired to accept a standard 3.5 stereo plug. Additionally, there shall be two (2) RCA-type jacks marked "LINE LEVEL INPUTS L" and "R". The input connectors shall be electrically isolated from the mounting plate. There shall be a transformer-isolated, low-impedance outputs on 3-pin male XLR-type connectors labelled "OUT L" and "R". The transformers shall be a Pro Co MBT-1 Microphone Bridging Transformers. The magnetic and the primary electrostatic shield of the transformer shall be connected to the unbalanced input connectors. The secondary electrostatic shields shall be connected to the output barrier strip. There shall be a miniature rocker-type switch marked "GROUNDLIFT" to allow the shields to be connected together or isolated as required.

The enclosure shall be the Pro Co "Uni-box" rack-mount design with 16-gauge steel black zinc finish top and bottom plates, 1/8" black anodized aluminum front plates, back plates and side channels. Control functions shall be identified by laser engraving on the front and back panels. Switches shall be of the miniature type and shall be flush-mounted. The enclosure shall be provided with 2 miniature handles mounted on the front plate. The enclosure shall be suitable for standard 19" EIA rack mounting. The dimensions of the unit shall be approximately 4-3/4" D by 19"W by 1-3/4" H. (120.7mm D by 482.6mm W by 44.5mm H).

The one space rack impedance-matching unit shall be a Pro Co TradeTools iGate.

The DBT-1 is a carefully designed, custom-built impedance-matching transformer whose characteristics are optimized for use with high-impedance sources such as electric bass guitars and other unbalanced sources such as keyboard instruments. 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 stage amps and PA or recording mixers, eliminating EM/RF and ground noise. The source impedance of the DBT-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.

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.

PRO CO MODEL: iGate

DIMENSIONS.....19" W x 1.75" H x 1.50" D
 482.6mm W x 44.5mm H x 31.8mm D
 WEIGHT.....3.60 lb/1.62 kg
 SHIPPING WEIGHT.....5.00 lb/2.25 kg

