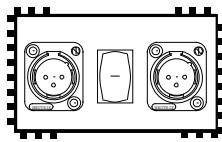
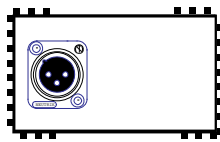


PRO CO MONOFACE™ SERIES MODEL MC-2



BACK OF UNIT



FRONT OF UNIT

MC-2 MIC COMBINER FEATURES

- Combines 2 Low-Z Microphone Signals
- Ideal for Recording and Live Sound
- Use for Backup Microphones at Press Conferences and Speeches
- Connects with Standard Mic Cables
- Polarity Reversing Switch Corrects Phase Cancellation
- High-Quality Transformer-Isolated Output
- Rugged "Uni-box™" Construction for Protection and Shielding

DESCRIPTION

The Pro Co Monoface MC-2 Mic Combiner passively combines the signals from two low-impedance microphone (or similar sources) into a single output. It is a handy "band-aid" for situations where the number of microphones required exceeds the number of mixer channels available, but separate equalization and level control for every microphone is not required. In a musical or recording situation, the MC-2 can combine mics from sources like dual bass drums, percussion "toys", stereo guitar amps, etc. Commercial sound uses include combining dual mics on a public speaker for redundancy and handling extra mics for audience participation at meetings. The MC-2's transformer isolation minimizes interference from SCR lighting dimmers, radio transmitters and 60 Hz AC power wiring, retaining the advantages of common-mode noise rejection inherent in the use of balanced lines.

The MC-2 is fitted with standard 3-pin XLR-type connectors for INPUT 1 and 2 and OUTPUT, so hookup requires only standard microphone cables. One input is provided with a REV / POL switch to change its polarity. This is very useful for correcting acoustical or electrical phase cancellation problems such as poor mic placement and miswired cables. The use of the Pro Co MBT-2 transformer allows the MC-2 to provide a floating, low-impedance output with wide, flat frequency response, ultra-low distortion, and no ringing or overshoot to degrade transient response.

The MC-2's ruggedly constructed "Uni-box™" enclosure is formed of extruded aluminum side channels and 16-gauge steel top, bottom and end plates and is designed to protect switches and connectors from accidental damage. The use of steel also provides excellent magnetic shielding for the transformer from 60Hz AC hum fields. Top-quality connectors and switches provide trouble-free service even in abusive situations such as remote broadcast and recording operations. The uniquely slotted side channels allow for stacking on top or strapping side-to-side of virtually any number of Pro Co Monoface devices using the Uni-box™ construction.

CONTROLS

INPUTS:

Female 3-pin XLR-type connectors accept signals from low-impedance (150 ohm nominal) microphones or similar sources. Input impedance (with 1.0 kohm load on OUTPUT): approx. 150 ohm.

REV/POL:

Reverses polarity of INPUT 2 to correct for out-of-phase microphone or cable wiring, compensate for phase cancellation from acoustical conditions or mic placement, or provide special effects.

OUTPUT:

Male 3-pin XLR-type connector provides floating transformer-isolated low-impedance output to feed mixer input. Recommended load impedance: 1.0 kohm.



PRO CO MODEL MC-2 MIC COMBINER

TYPICAL PERFORMANCE

All measurements made with 150 ohm sources feeding INPUTS and 1.0 kohm load on OUTPUT to simulate typical "real world" microphone and mic preamp. 0 dBv ref. = .775 volt.

FREQUENCY RESPONSE:

20 Hz-20 kHz, +/- .5 dB @ -15 dBv output.
-3 dB @ approximately 230 kHz.

TOTAL HARMONIC DISTORTION:

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

INPUT IMPEDANCE:

Greater than 235 ohm @ 1.0 kHz.
Greater than 285 ohm @ 10 kHz.
Nominal source impedance is 150 ohm.

OUTPUT IMPEDANCE:

Less than 180 ohm @ 1.0 kHz.
Less than 185 ohm @ 10 kHz.
Nominal output impedance is 1.0 kohm.

VOLTAGE LOSS:

Less than 7.0 dB @ 1.0 kHz.

MAXIMUM INPUT LEVEL FOR 1% THD:

0 dBv @ 20 Hz.
+4 dBv @ 30 Hz.
+8 dBv @ 50 Hz.

NOTE: Phantom power (if required) must be supplied by suitable power supply connected directly to microphones before MC-2 INPUTS.

ENGINEERING SPECIFICATIONS

The microphone signal combining unit shall be suitable for interfacing two (2) balanced or floating low-impedance (150 ohm nominal) microphone or similar signal sources to one (1) balanced or floating low-impedance (1.0 kohm nominal) microphone preamplifier input. There shall be two (2) 3-pin female XLR-type connectors for inputs from the sources. There shall be a transformer-isolated low-impedance output from a 3-pin male XLR-type connector. The transformer shall be a Pro Co MBT-2 Microphone Bridging Transformer. There shall be a polarity-reversing switch to interchange the connections between pins 2 and 3 of input connector 2 and the transformer winding as required.

The enclosure shall be constructed in the Pro Co "Uni-box™" design 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 recessed. 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 microphone signal combining unit shall be a Pro Co Monoface MC-2 Mic Combiner.

THE PRO CO MBT-2 TRANSFORMER

The MBT-2 is a carefully designed, custom-built 1:1:1 microphone bridging transformer whose characteristics are optimized for use with balanced low-impedance microphones or similar sources (including the Pro Co DB-1 and DB-4 Direct Boxes).

Special winding techniques and a high-permeability (80% nickel) core lamination preserve full frequency response while minimizing signal losses and other "loading" effects. Separate electrostatic shields for primary (input) and each secondary (output) winding reduce capacitive coupling of ground-borne electrical noise between main, stage monitor and recording or broadcast feed mixers, eliminating annoying 60-Hz hum and buzz. The source impedance of the MBT-2 is very similar to that of a low-impedance microphone to ensure proper matching to the input circuitry of the mixers. The result is clean transient response (no overshoot or ringing) and low distortion even at low frequencies and high input levels.

