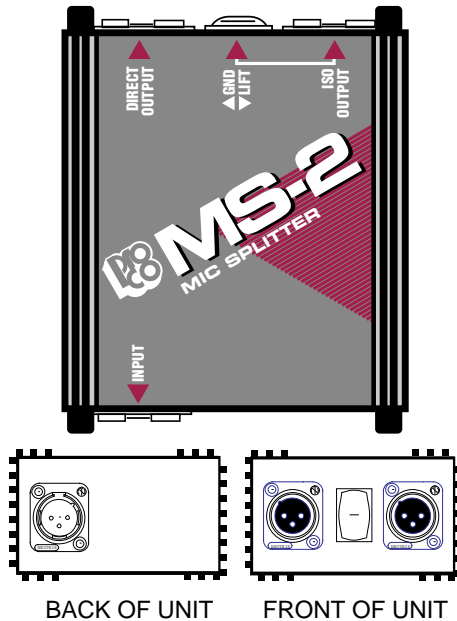


# PRO CO MONOFACE™ SERIES MODEL MS-2



## MS-2 MIC SPLITTER FEATURES

- Provides 2-Way Split for Low-Z Microphone
- Great for Musicians' Monitoring and Recording
- ENG Uses Include Press Conferences and Speeches
- Connects with Standard Mic Cables
- High-Quality Transformer-Isolated Output
- Rugged "Uni-box™" Construction for Protection and Shielding

### DESCRIPTION

The Pro Co Monoface MS-2 Mic Splitter splits a signal from a low-impedance microphone (or similar source) into two outputs, enabling two microphone preamplifiers to be fed from one source. Some applications include musicians' on-stage monitoring, live recording, ENG use at press conferences, and videotaping of lectures, public speeches, etc. It can also be used simply as an isolation transformer for long microphone lines feeding unbalanced inputs, or for any audio signal up to 0 dBv (.775 volt). Transformer isolation in such situations minimizes interference from SCR lighting dimmers, radio transmitters and 60 Hz AC power wiring. The transformer-isolated feed retains the advantage of common-mode noise rejection inherent in the use of balanced lines.

The MS-2 is fitted with standard 3-pin XLR-type connectors for INPUT, DIRECT OUTPUT, and ISOLATED OUTPUT, so hookup requires only standard microphone cables. The use of the Pro Co MBT-1 transformer allows the MS-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 transformer's dual electrostatic shields and GND/LIFT switch provide isolation and buzz-free operation in virtually any environment.

The MS-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

#### INPUT:

Female 3-pin XLR-type connector accepts signal from low-impedance (150 ohm nominal) microphone or similar source. Input impedance (with 1.0 kohm loads on DIRECT and both ISOLATED OUTPUTS): approx. 500 ohm.

#### DIRECT OUTPUT:

Male 3-pin XLR-type connector wired in parallel with INPUT provides signal to feed mixer input.

#### ISOLATED OUTPUTS:

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

#### GND/LIFTS:

GND position connects pin 1 of INPUT / DIRECT OUTPUT to pin 1 of ISOLATED OUTPUT. LIFT position "floats" ISOLATED OUTPUT. Used to reduce hum and buzz by eliminating ground loops and providing proper grounding for various conditions.



# PRO CO MODEL MS-2 MIC SPLITTER

## TYPICAL PERFORMANCE

All measurements made with 150 ohm source feeding INPUT and 1.0 kohm load on ISOLATED 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 65 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.

### PHASE RESPONSE:

Less than -20 degrees @ 20 kHz (ref. 1.0 kHz).

### RISE TIME:

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

### INPUT IMPEDANCE:

Greater than 1050 ohm @ 1.0 kHz.  
Greater than 1080 ohm @ 10 kHz.  
Nominal source impedance is 150 ohm.

### OUTPUT IMPEDANCE:

Less than 270 ohm @ 1.0 kHz.  
Less than 300 ohm @ 10 kHz.  
Nominal output impedance is 1.0 kohm.

### VOLTAGE LOSS:

Less than 1.0 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 mixer (or suitable power supply) connected to DIRECT OUTPUT.

## ENGINEERING SPECIFICATIONS

The microphone signal splitting unit shall be suitable for interfacing one (1) balanced or floating low-impedance (150 ohm nominal) microphone or similar signal source to two (2) balanced or floating low-impedance (1.0 kohm nominal) microphone preamplifier inputs. There shall be a 3-pin female XLR-type connector for input from the source. There shall be a parallel or direct output from a 3-pin male XLR-type connector. 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-1 Microphone Bridging Transformer. The primary electrostatic shield shall be connected to pin 1 of the source input and direct output connectors. The secondary electrostatic shield shall be connected to pin 1 of the transformer-isolated XLR output. There shall be a ground-lift switch to allow the shields to be connected together or isolated 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 splitting unit shall be a Pro Co Monoface MS-2 Mic Splitter.

## THE PRO CO MBT-1 TRANSFORMER

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. 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 (no overshoot or ringing) and low distortion even at low frequencies and high input levels.

