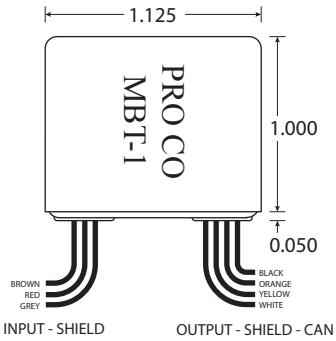
On Stage with the Best

MBT-1

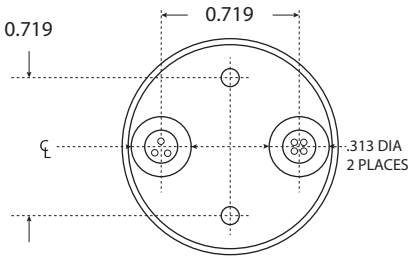
MICROPHONE BRIDGING TRANSFORMER

DESCRIPTION:

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.



28 AWG, STRANDED, TINNED COPPER
COLOR-CODED LEADS
9" MINIMUM LENGTH



PHYSICAL CHARACTERISTICS

PACKAGE: MU metal can
TERMINATION: 9" (228mm) 28 AWG tinned copper, color-coded leads
DIMENSIONS: 1.125" L x 1.125" W x 1.050" H
(28.575 L x 28.575 W x 26.670 H)
MOUNTING: 2 holes, 0.09375" (2.38mm) dia, 0.7185" (18.25mm) centers

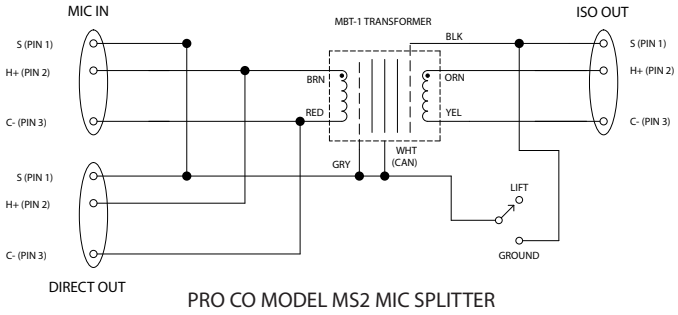
Note: Pro Co recommends using only #4 Type B self-tapping screws to mount transformer through mounting holes. Allow no more than 0.15" penetration into the transformer housing.

TYPICAL PERFORMANCE:

All measurements made with 150 ohm source and 1.0 kohm load to simulate typical "real world" microphone and mic preamps. 0 dBv ref. = .775 volt.

VOLTAGE LOSS: < 1.0 dB @ 1.0 kHz.
INPUT IMPEDANCE: > 1050 ohm @ 1.0 kHz.
> 1080 ohm @ 10 kHz.
Nominal source impedance is 150 ohm.
SECONDARY SOURCE IMPEDANCE: < 270 ohm @ 1.0 kHz.
< 300 ohm @ 10 kHz.
Nominal output impedance is 1.0 kohm.
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.
MAX INPUT LEVEL FOR 1% THD: 0 dBv @ 20 Hz.
+4 dBv @ 30 Hz.
+8 dBv @ 50 Hz.
FREQUENCY RESPONSE: 20 Hz-20 kHz, +/- .5 dB @ -15 dBv output.
-3 dB @ approximately 65 kHz.
PHASE RESPONSE: < -20 degrees @ 20 kHz (ref. 1.0 kHz).
RISE TIME: < 4.5 µ Sec. (2.0 kHz square wave, 10%-90%).
OVERSHOOT: < 1%
COMMON-MODE VOLTAGE (MAXIMUM): > 1500V RMS
COMMON MODE REJECTION RATIO: > 80 dB @ 1.0 kHz

TYPICAL APPLICATION



PRO CO MODEL MS2 MIC SPLITTER

GENERAL CHARACTERISTICS

TURNS RATIO: 1:1
IMPEDANCE RATIO: 150:150 ohm.
PRIMARY SOURCE IMPEDANCE: 1.0 kohm (typical microphone)
SECONDARY LOAD IMPEDANCE: 1.0 kohm (typical microphone preamp)
FARADAY SHIELD: 2 shields with separate leads
CORE MATERIAL: 80% nickel alloy
MAXIMUM INPUT LEVEL AT 20 HZ: 0 dBv (ref. = 0.775 v)

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