

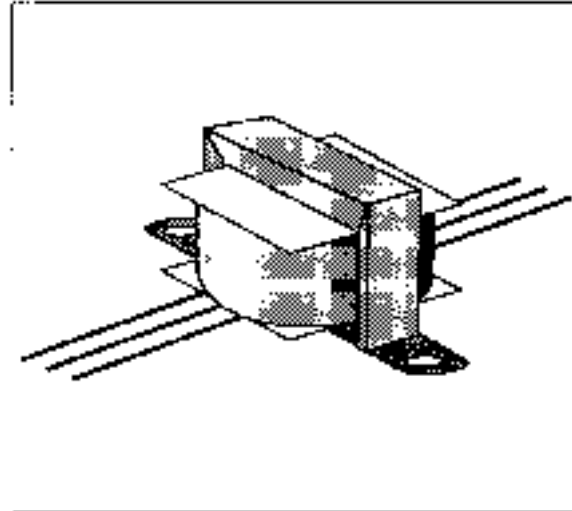


DBT-1 Direct Box Transformer

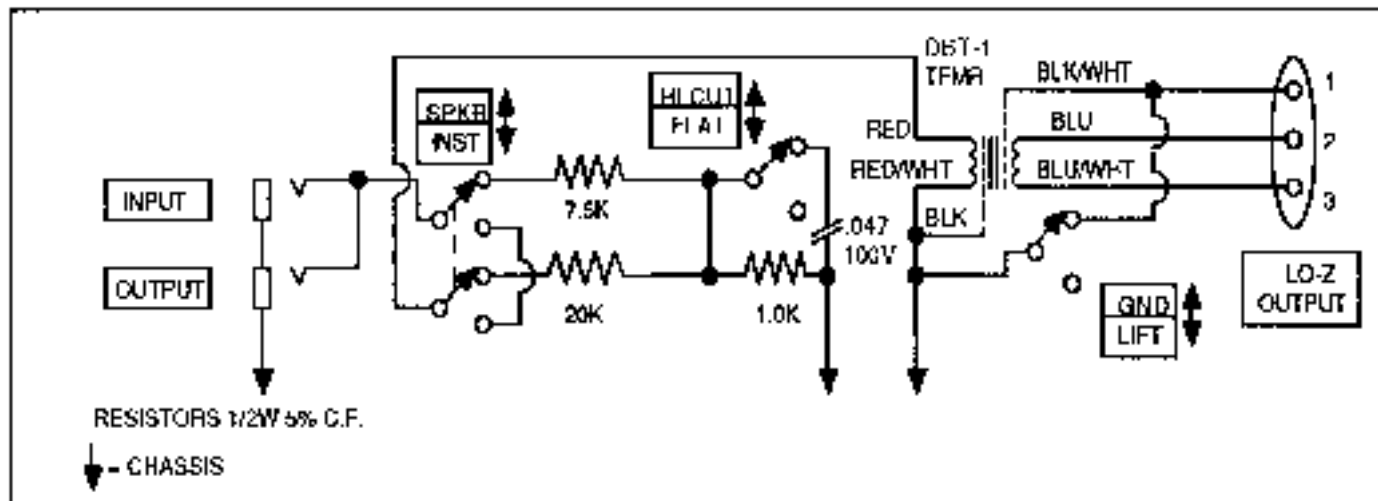
THE PRO CO MODEL DBT-1 TRANSFORMER

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. It is also very applicable to 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. 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 annoying 60 Hz hum and buzz. 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 (no overshoot or ringing) and low distortion even at low frequencies and high input levels.



TYPICAL APPLICATION



PRO CO MODEL DB-1 DIRECT BOX SCHEMATIC



DBT-1

Direct Box Transformer

DBT-1 GENERAL CHARACTERISTICS

TURNING RATIO:
11.55:1

IMPEDANCE RATIO:
20K/150

PRIMARY SOURCE IMPEDANCE:
20 kohm (typical instrument pickup)

SECONDARY LOAD IMPEDANCE:
1.0 kohm (typical mic preamp)

FARADAY SHIELD:
2 shields with separate leads

CORE MATERIAL:
80% nickel alloy

MAXIMUM INPUT LEVEL AT 20 HZ:
+16 dBv (re: 0.775v)

DBT-1 PHYSICAL CHARACTERISTICS

PACKAGE:
Open channel frame

TERMINATION:
4" (100 mm) #24 AWG color-coded wire leads

DIMENSIONS:
1.625" L X 1.00" W X .815" H
(41.3 mm L X 25.4 mm W X 20.7 mm H)

MOUNTING:
2 holes, .125" (3.6 mm) dia, 1.375" (34.9 mm) centers

DBT-1 TYPICAL PERFORMANCE

All measurements made with 20 kohm ohm source and 1.0 kohm load to simulate typical "real world" instrument pickup and mic preamp. 0 dBv ref. = .775 volt.

VOLTAGE LOSS (@ 1.0 kHz):
22.0 dB

INPUT IMPEDANCE:
150 kohm @ 1.0 kHz
105 kohm @ 10 kHz

SECONDARY SOURCE IMPEDANCE:
210 ohm @ 1.0 kHz
215 ohm @ 10 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

INPUT LEVEL @ 1% SATURATION:
+18 dBv @ 20 Hz
+21 dBv @ 30 Hz
+28 dBv @ 50 Hz

FREQUENCY RESPONSE (R_v: 1.0 kHz):
-0.5 dB @ 20 Hz
-0.25 dB @ 20 kHz
-3 dB @ 35 kHz

PHASE RESPONSE (@ 20 kHz):
-18 degrees

RISE TIME (2.0 kHz, 10%-90%):
4.5 uS

OVERSHOOT:
<1%

COMMON-MODE VOLTAGE (Maximum):
>1500V RMS

COMMON-MODE REJECTION RATIO:
>80 dB @ 1.0 kHz.

