



FEATURES:

- » Better Sound from Projectors, Computers and DVDs
- » Ideal for Churches, Meeting Rooms, and Schools
- » Output is Transformer-isolated and includes a Hum Cancel Switch
- » 16Ω Dummy Load Prevents Amplifier Damage
- » Input Level Control
- » Stereo Line Inputs are Mixed to Mono Output
- » Independent XLR Microphone Input
- » Barrier Strip Output Connections

DESCRIPTION:

The Pro Co TradeTools AVP1V Audio/Video Interface is a standard dual-gang wall plate that allows the line- or speaker-level outputs of movie projectors, audio and video tape/cassette recorders, phonographs, etc. to be connected to microphone inputs of house P.A. systems. The AVP1V provides audio interfacing and isolation with wide frequency response and low distortion.

The AVP1V provides a 1/4" phone jack input for movie projectors and similar monaural A/V equipment. This input allows the AVP1V to be safely connected to the speaker outputs of older tube-type equipment: a 16-ohm, 5-watt load resistor simulates the speaker impedance to prevent damage to the amplifier output stage, while a high-frequency filter reduces hiss from noisy electronics. The AVP1V also features a 10kW linear input level control with a 0 to 10 calibrated knob.

Left and right RCA phono jack LINE INPUTs are resistively mixed to monaural, a handy feature for use with CD players

and cassette recorders. (They can also be used as recording outputs for whatever is connected to the SPEAKER INPUT jack.)

The DBT-1 transformer provides a floating 150-ohm output to an easy-to-use screw-type barrier strip (requiring no crimp-on terminals) for fast wiring installation. The HUM CANCEL switch eliminates hum and buzz from AC ground loops between equipment. For further versatility of operation, there is also an independent low-impedance microphone input via a female XLR-type connector wired to the output barrier strip.

The AVP1V is built on a standard stainless steel or black anodized aluminum wall plate designed for mounting in any standard two-gang masonry box. With its lustrous brushed finish and laser engraved legends, the AVP1V is both functional and attractive, complementing a wide variety of decors.

ENGINEERING SPECIFICATIONS:

The wall-mounted impedance-matching unit shall be suitable for interfacing 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" 3-conductor phone jack, marked "SPEAKER INPUT". This input shall be wired to accept a 2-conductor plug and shall incorporate a 20 dB attenuator with a 16 ohm, 5.0 watt load resistor to accommodate speaker-level sources. It shall also incorporate a filter to further attenuate high frequencies by 6 dB per octave above 8.0 kHz. There shall be two (2) RCA phono jack inputs, marked "LINE INPUT L/R". These inputs shall incorporate a resistive mixing network to sum the signals from stereo line-level sources. The input connectors shall be electrically isolated from the mounting plate. There shall be one (1) 10kW linear input level control with a 0 to 10 calibrated knob. There shall be a transformer-isolated low-impedance output on a screw-type barrier strip. 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 to the enclosure. The secondary electrostatic shield shall be connected to the output barrier strip. There shall be a miniature "rocker" type switch marked "HUM CANCEL" to allow the shields to be connected together or isolated as required. There shall also be a female XLR-type connector marked "MIC INPUT" and connected separately to the output barrier strip. This connector shall be wired with pin 2 "in-phase" to suit low-impedance microphones. There shall be no electrical connection between the impedance-matching circuit and the microphone circuit.

The unit shall be suitable for mounting in a 2-gang masonry-type electrical box (Appleton M2-250 or equivalent). It shall be constructed of .040" #302 stainless steel and provided with a brushed finish. Control functions shall be identified by an engraved legend filled with enamel paint. The dimensions of the unit shall be approximately 2-1/2" D by 4-1/2" W by 4-1/2" H.

The impedance matching unit shall be a Pro Co TradeTools AVP1V Audio Visual Interface.

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. 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 P.A. 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 (minimal overshoot or ringing) and low distortion even at low frequencies and high input levels.

TYPICAL PERFORMANCE:

NOTES: All measurements made with 0 ohm source feeding INPUT and 1.0 kohm load on MIC LEVEL OUTPUT to simulate typical "real world" projector and mic preamp. 0 dBv ref. = .775 volt.

- FREQUENCY RESPONSE:** 20 Hz-20 kHz, +/- .5 dB @ -15 dBv output.
-3 dB @ approximately 85 kHz.
SPEAKER INPUT introduces 6 dB/octave attenuation above 8.0 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.
< 22 dB @ 1.0 kHz
- VOLTAGE STEPDOWN:** < 22 dB @ 1.0 kHz
SPEAKER INPUT attenuates signal by 20 dB.

- INPUT IMPEDANCE:** > 130 kohm @ 1.0 kHz (LINE IN L/R jacks, monaural source).
Approximately 4.0 kohm (LINE IN L/R jacks, stereo source, resistively mixed).
Approximately 16 ohm (SPEAKER INPUT jack).
Nominal source impedance is 0 ohm. SPEAKER INPUT jack loads source with 16 ohm 5.0 watt dummy load.
- OUTPUT IMPEDANCE:** < 200 ohm @ 1.0 kHz.
Nominal load impedance is >1.0 kohm.
- MAXIMUM INPUT LEVEL @ 50 HZ FOR 1% THD:**
+26 dBv (LINE IN jack),
+46 dBv (SPEAKER IN jack)

CONTROLS:

- SPEAKER INPUT:** 1/4" 3-conductor phone jack, wired for use with standard 2-conductor plug, accepts signals from unbalanced line-level or speaker-level sources such as phonographs, audio and video tape recorders and movie projectors. Has 16-ohm, 5-watt dummy load, 20 dB attenuator network, and low-pass filter (-3 dB @ 8 kHz, 6 dB/octave). Input impedance: approx. 16 ohm.
- LINE INPUT L/R:** RCA phono jacks, resistively mixed to monaural, for signals from nominal -10 dBv sources such as radio, cassette or VCR outputs. Input impedance: approx. 4 kohm.

- INPUT LEVEL CONTROL:** 10kW linear input level control with a 0 to 10 calibrated knob.
- MIC IN:** Female 3-pin XLR-type connector provides independent microphone input (brought out to output barrier strip) for announcer, lecturer, etc.
- HUM CANCEL:** Ground-lift switch, used to reduce hum and buzz by eliminating ground loops and providing proper grounding for various conditions. Breaks connection between input and output shields.

