



SPECIFICATIONS

Output Power,

TR300: 300 watts TR600: 600 watts AT300: 300 watts

Primary Voltages/Impedances.

TR300: 49.0 V rms/8 ohms 34.6 V rms/4 ohms TR600: 69.3 V rms/8 ohms 49.0 V rms/4 ohms

Secondary Voltages/Impedances, TR300: 70.7 V rms/16.7 ohms

TR600: 70.7 V rms/8.33 ohms

Frequency Response at Rated Output, TR300: 35.15,000 Hz 🛫 [

TR600: 35-15,000 Hz AT300: 35-15,000 Hz

Total Harmonic Distortion at Rated Output:

TR300: <1% TR600: <1% AT300: <1%

Insertion Loss at Rated Output, 35-15,000 Hz,

TR300: <1 dB TR600: <1 dB Dimensions,

Height,

TR300: 111 mm (43.8 in.) TR600: 130 mm (5.10 in.) AT300: 105 mm (4.13 in.)

Width,

TR300: 133 mm (5.25 in.) TR600: 152 mm (6.0 in.) AT300: 88 mm (3.45 in.)

TR300: 100 mm (3.44 in.) TR600: 116 mm (4.56 in.) AT300: 97 mm (3.81 in.) Net Weight,

TR300: 5.6 kg (12.3 lb) TR600: 8.8 kg (19.3 lb) AT300: 3.8 kg (8.4 lb) Shipping Weight, TR300: 5.9 kg (12.9 lb)

TR300: 5.9 kg (12.9 lb) TR600: 9.1 kg (20.1 lb) AT300: 4.0 kg (8.9 lb)

DESCRIPTION

The Electro-Voice TR300/600 300/600-watt, 70.7-volt output transformers provide convenient and efficient transmission of amplifier power to distributed sound systems in installations which also require transformer isolation between the power amplifier and loudspeaker load. The TR300/600's dual 4-and 8-ohm primary windings offer flexibility in amplifier selection.

Primary and secondary windings are electronically isolated maintaining low insertion loss, low distortion and high efficiency. For convenient installation, the 0.25-inch blade-type quick-connect spade-lug terminals permit the use of either wrap-and-solder connections or crimp-type quick-connect wire terminals.

The Electro-Voice AT300 autoformer is designed to provide maximum flexibility in matching a wide variety of loudspeaker loads to power amplifier outputs.

APPLICATIONS

Figures 2 and 3 show two typical connections for both the TR300 and TR600. Figure 2 shows the proper connection of an

amplifier designed to deliver 300 (600) watts into 4 ohms. Figure 3 shows the connection of a two-channel amplifier designed to deliver 300 (600) watts into 8 ohms when bridged. In both instances, the summed power taps of the typical load of the paralleled loudspeakers equipped with the 70.7-volt transformers should be 300 (600) watts or less. This results in the minimum load impedance (R_{min}) of 16.7 (8.33) ohms.

Amplifiers smaller than 300 (600) watts may be used with the TR300 (TR600). In this case, however, the total load on the secondary must be greater than or equal to R_{min} :

$$R_{min} = \frac{(70.7)^2}{P_{AMP}}$$

For example, the R_{min} for a 200-watt amplifier would be:

$$R_{min} = \frac{(70.7)^2}{200}$$

= 25 ohms

For a load equal to R_{min} , the full amplifier output will be delivered to the load. For loads of higher impedance ($R_{\rm L}$) the power delivered ($P_{\rm DEL}$) will be reduced, according to the following formula:

$$P_{DEL} = P_{AMP} \left(\frac{R_{min}}{R_L} \right)$$

Of course, the full power of the TR300 (TR600) will not be utilized.

The AT300 autoformer consists of a single winding with multiple taps. It is intended to provide impedance and voltage conversions without primary-to-secondary isolation.

Any combinations of taps may be used as the primary (source) and secondary (load) connections.

Figure 5 shows the layout of taps and their voltage and impedance ratios relative to the common terminal.

The transformer wires are color coded and are identified on the body of the autoformer with the impedances that would be most commonly connected. The 16-, 8- and 4-ohm taps are the most common loudspeaker impedances. The 5.33-ohm tap is for three 16-ohm speakers connected in parallel and the 2.67-ohm tap is for three 8-ohm loudspeakers in parallel.

ARCHITECTS' AND ENGINEERS' **SPECIFICATIONS**

The TR300 output transformer shall have an output power of 300 watts and a secondary voltage of 70.7 V rms at 16.7-ohm impedance. Primary voltages shall be 49.0 V rms at an 8-ohm impedance and 34.6 V at a 4-ohm impedance.

Frequency response at the rated output shall be 35-15,000 Hz. Total harmonic distortion at the rated output and 35-15,000 Hz shall be less than 1%. Insertion loss at the rated output and 35-15,000 Hz is less than 1 dB. The transformer's dimensions shall be 111 mm (43.8 in.) high, 133 mm (5.25 in.) wide, and 100 mm (3.44 in.) deep. Net weight shall be 5.6 kg (12.3 lb). Shipping weight shall be 5.9 kg (12.9 lb).

> The TR600 output transformer shall have an output power of 600 watts and a secondary voltage of 70.7 V rms at an 8.33-ohm impedance. Primary voltages shall be 69.3 V rms at an 8-ohm impedance, and 49.0 V rms at a 4-ohm impedance. The transformer's frequency response at the rated output shall be 35-15,000 Hz.

> Total harmonic distortion at the rated output and at 35-15,000 Hz shall be less than 1 dB. The transformer's dimensions shall be 130 mm (5.10 in.) high, 152 mm (6.0 in.) wide, and 116 mm (4.56 in) deep. The net weight shall be 8.8 kg (19.3 lb). The shipping weight shall be 9.1 kg (20.1 lb).

> The AT300 300-watt autoformer shall consist of a single winding with multiple taps, which provides impedance and voltage conversions without primary-to-secondary isolation.

The autoformer shall have a frequency response of 35-15,000 Hz (±1 dB). Total harmonic distortion at 35-15,000 Hz shall be less than 1%. Dimensions of the autoformer shall be 105 mm (4.13 in.) high, 88 mm (3.45 in.) wide, and 97 mm (3.81 in.) deep. The net weight shall be 3.8 kg (8.4 lb). The shipping weight shall be 4.0 kg (8.9 lb).

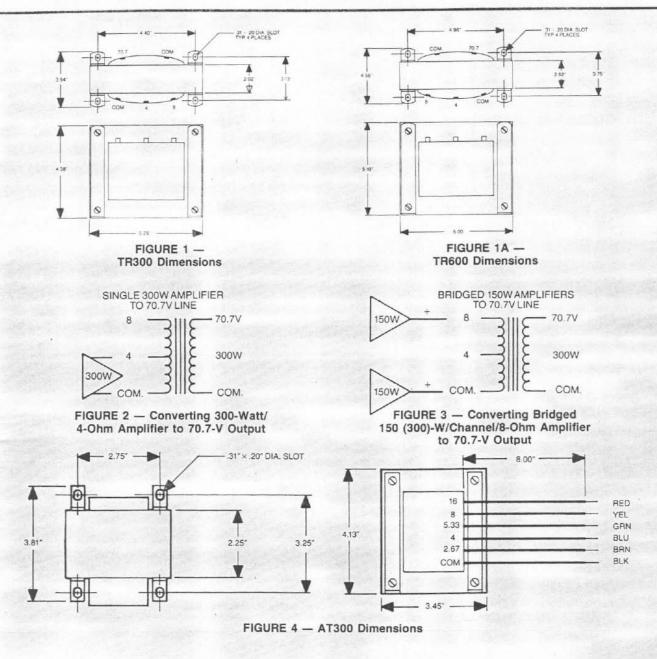
WARRANTY (Limited)

Electro-Voice Professional Sound Reinforcement Loudspeakers and Accessories are guaranteed for five years from date of original purchase against malfunction due to defects in workmanship and materials. If such malfunction occurs, unit will be repaired or replaced (at our option) without charge for materials or labor if delivered prepaid to the proper Electro-Voice service facility. Unit will be returned prepaid. Warranty does not extend to finish, appearance items, burned coils, or malfunction due to abuse or operation under other than specified conditions, including cone and/or coil damage resulting from improperly designed enclosures, nor does it extend to incidental or consequential damages. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion may not apply to you. Repair by other than Electro-Voice or its authorized service agencies will void this guarantee. A list of authorized warranty service agencies is available from Electro-Voice, Inc., 600 Cecil Street, Buchanan, MI 49107 (AC/616-695-6831); Electro-Voice, Inc., 3810 148th Avenue N.E., Redmond, WA 98052 (AC/206-881-9555); Electro-Voice, Inc., 10500 West Reno, Oklahoma City, OK 73125 (AC/405-324-5311); and/or Electro-Voice West, 8234 Doe Avenue, Visalia, CA 93291 (AC/209-651-7777). This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Service and repair address for this product: Electro-Voice, Inc., 10500 West Reno, Oklahoma City, OK 73125.

Specifications subject to change without notice.





	TAP	NO.	IMPEDANCE (OHMS)	VOLTAGE RATIO	IMPEDANCE RATIO
luuu.	REI	6	16	1.0	1.0
	YEL	5	8	0.707	0.5
4		N ——— 4	5.33	0.58	0.33
uluulu		J —— 3	4	0.5	0.25
	BRI	N2	2.67	0.41	0.167
3		(1		COMMON	

FIGURE 5 — AT300 Tap Layout, Voltage and Impedance Ratios

70.7 312.4W 156.2 W 104.1 W 78.1 W 52.1 W