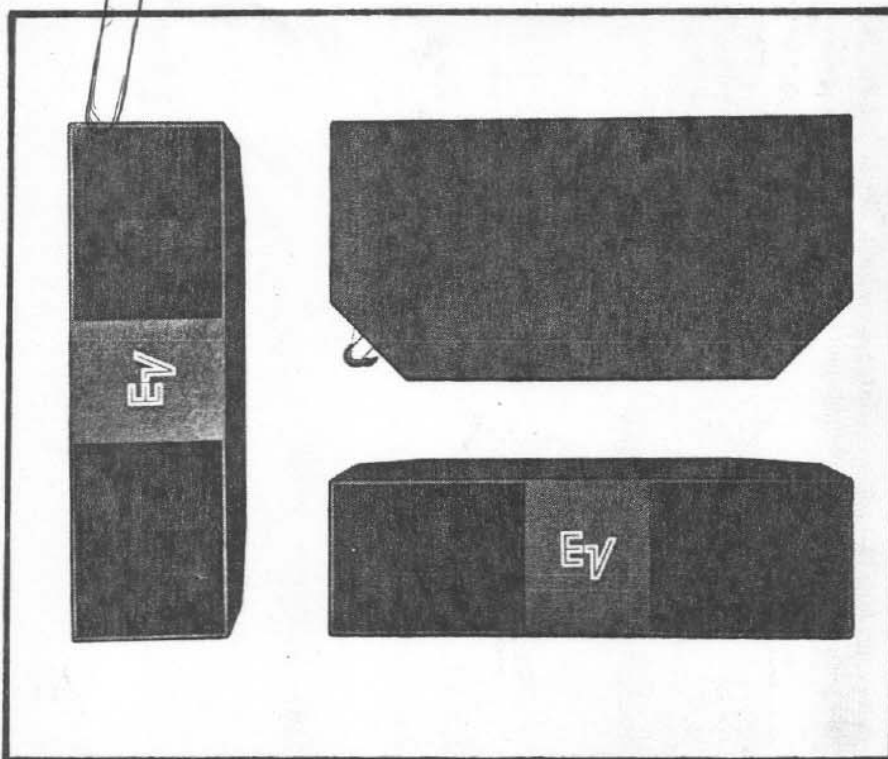




Electro-Voice®
a gulton company

Model TL4025 Folded Horn Bass Speaker System

SPECIFICATIONS

Frequency Response:

40 – 500 Hz

Suggested Crossover Frequency:

125 Hz

Sound Pressure Level (1 watt at 1 meter):

104 dB (anechoic)

107 dB (half space)

Long-term Average Power Handling Capacity (see Power Handling Section):

400 watts

(per EIA Standard RS-426A)

Maximum SPL at 4 Feet, Full Power:

128 dB (anechoic)

131 dB (half space)

WARNING: EXPOSURE TO SOUND PRESSURES OF THIS MAGNITUDE CAN CAUSE PERMANENT HEARING IMPAIRMENT.

Beamwidth:

At frequencies below 125 Hz beamwidth becomes greater than 180 degrees

Driver:

EVM-15L Pro-Line

Impedance,

Nominal:

8 ohms

Minimum:

7.7 ohms

Dimensions:

46.3 cm (18.25 inches) high

76.2 cm (30.00 inches) deep

152.4 cm (60.00 inches) wide

Material and Finish:

15 ply baltic birch with a black textured epoxy paint

Connection:

1/4-inch phone jack

Net Weight:

76.2 kg (168 lbs)

DESCRIPTION

The Electro-Voice Model TL4025 is a high efficiency, horn-loaded speaker system designed to be used as a low-frequency component in ultra-high-sound-pressure-level music systems. The high efficiency of this horn combined with the 400 watt continuous power capacity for the EVM-15L Pro-Line driver provides the potential for very high sound pressure levels.

The unique geometry of this folded-horn system, a "dual S" scheme, permits the use of a hyperbolic-exponential taper rate to scavenge maximum low-frequency output from the horn.

Designed to be used with the Electro-Voice TL1225 horn-loaded mid-bass speaker system and an EV RC60A, HR60, or HR6040A constant-directivity high frequency horn, the resulting systems are high level, wide band, controlled dispersion loudspeaker arrays ideally suited for reproduction of music in larger rooms and out-of-doors.

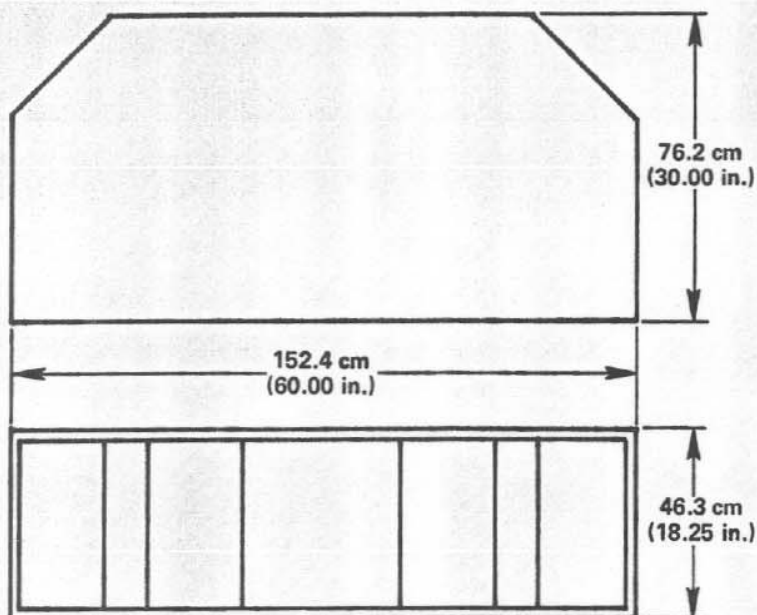


FIGURE 1 — Dimensions

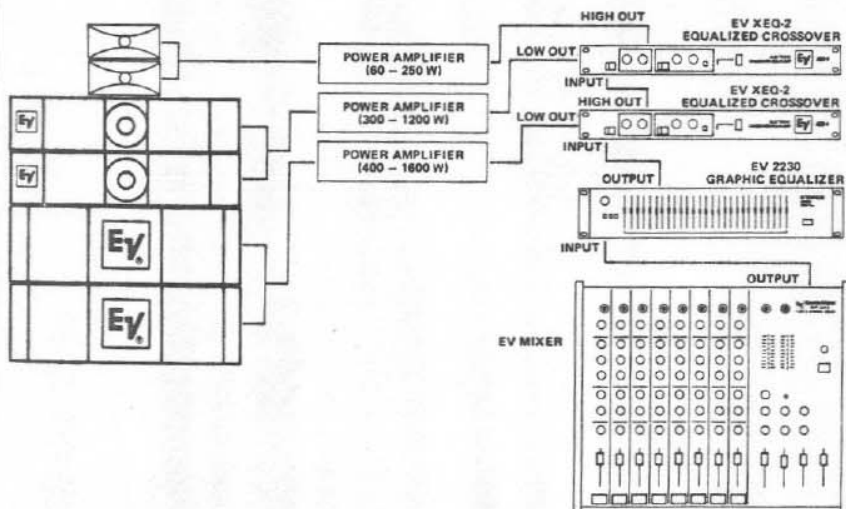


FIGURE 2 — System Connection

Intended to be used as a portable music system component, the TL4025 is ruggedly constructed of 15-ply baltic birch. All joints are dado cut and the cabinet is finished with a specially formulated textured epoxy coating. Although the size and weight of the TL4025 are substantial, the system is surprisingly mobile. The cabinet is supplied with a spring loaded handle, and two high quality casters, making it easy for one person to move.

A 1/4-inch phone jack on the rear access panel provides electrical connection to the EVM-15L Pro-Line driver.

APPLICATIONS

Because of its high efficiency and high power handling capacity, the TL4025 is specially adapted to systems designed for high sound pressures in larger rooms. For auditoriums, large halls and out-of-doors, the system may include multiple units. A single TL4025, however, is capable of producing an RMS sound pressure of 120 dB at a distance of 10 feet under anechoic conditions.

The least complex full-range system using the TL4025 would consist of a three-way combination of a TL4025, TL1225 mid-bass system and the appropriate EV 60-degree constant directivity high-frequency horn connected to separate amplifiers from low-level crossovers as shown in Figure 2.

The EV XEQ-2 crossover should be used with the EQ C equalization module and a 1250 Hz crossover module constructed using the BMK blank supplied with the XEQ-2 and the following resistor values: RL1 = 113 kilo ohms, RL2 = 91 kilo ohms, RL3 = 15 kilo ohms, RH1 = 20 kilo ohms, RH2 = 7.5 kilo ohms and RH3 = 130 kilo ohms.

FREQUENCY RESPONSE

The frequency response shown in Figure 3 is a full space response measured in the Electro-Voice anechoic chamber, and is based on 1/3 octave pink noise. The actual response in a specific room will depend upon the room dimensions and the placement of the horn or horns in that room. In situ measurements are recommended for an accurate determination of frequency response. For example, Figure 4 shows the average room response of two TL4025 loudspeakers in a movie theatre converted to a night club. This example is fully described in P.A. Bible Addition No. 10.

POWER HANDLING

Proper use of the TL4025 requires an understanding of the power test used to determine the 400 watt rating. This rating is based on extensive design testing using the EIA Standard RS-426A procedures. The EIA test spectrum uses equalized white noise applied for a period of 8 hours. The spectrum is filtered to provide a 6-dB per octave rolloff below 40 Hz and above 318 Hz. When measured using a constant percentage bandwidth analyzer (1/3 octave) the spectrum is down 3-dB at 100 Hz and 1200 Hz, with a 3-dB per octave slope above 1220 Hz. The long term average power is 400 watts with instantaneous peaks limited to 6-dB (1600 watts). Voltages used in the test are based on a 6 ohm EIA equivalent impedance, so that the 400 watts continuous power is produced with an application of 49 volts true RMS. The restriction of peaks to 6-dB (98 volts) is important since some sound sources have peak to average ratios much greater than 6-dB. Without a limitation of these higher peaks, speaker damage can result from a 400 watt RMS signal.

Based on the EIA test and rating, peak voltages to the TL4025 should not exceed 98 volts.

PLACEMENT

The TL4025 can be placed either vertically or horizontally and perform equally well. Complete suggestions for system arrays and cabinet placement are discussed in Form 2314, (Special Application Note "EV TL1225/TL4025 Speaker Systems"). This publication is available free of charge from Electro-Voice.

WARRANTY (Limited) —

Electro-Voice loudspeakers are guaranteed for five years from date of original purchase against malfunction due to defects in workmanship and materials. If such malfunction occurs, the 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 cover finish, appearance items, burned coils, or other malfunction due to abuse or operation at other than specified conditions. Repair by other than Electro-Voice or its authorized service agencies will void this guarantee.

For repair information and service locations, please write: Service Dept., Electro-Voice, Inc., 600 Cecil Street, Buchanan, Michigan 49107 (Phone: 616/695-6831) or Electro-Voice West, 8234 Doe St., Visalia, California 93277 (Phone: 209/651-7777).

Electro-Voice also maintains complete facilities for non-warranty service of EV products.

Specifications subject to change without notice.

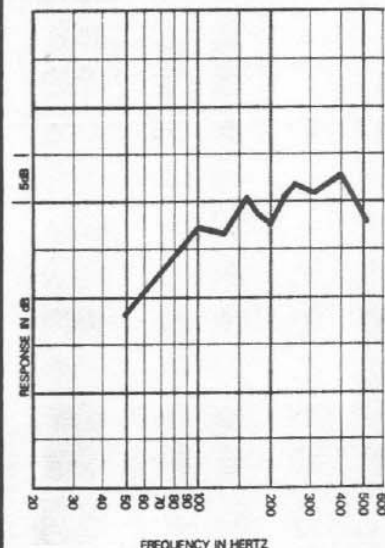


FIGURE 3 — Anechoic Response

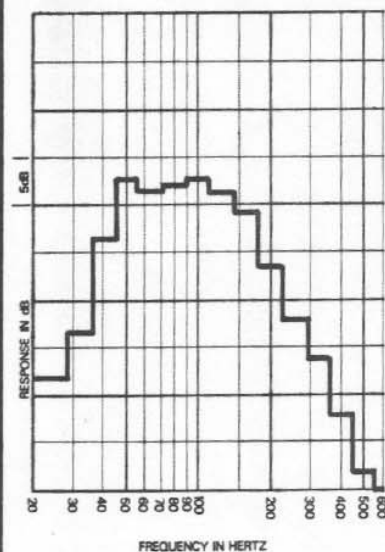


FIGURE 4 — Sub-woofer Curve