



**ELECTRO-VOICE, INC., 600 Cecil Street, Buchanan, Michigan 49107**  
MANUFACTURING PLANTS AT ■ BUCHANAN, MI ■ NEWPORT, TN ■ SEVIERVILLE, TN ■ OKLAHOMA CITY, OK ■ CANANOQUE, ONT.  
©Electro-Voice Inc. 1991 ■ Litho in U.S.A. Part Number 531580—116



**Electro-Voice®**

**S-40T**  
**Compact Monitor**  
**Loudspeaker**

**SPECIFICATIONS**  
**Frequency Response, 1 Meter on Axis, Swept 1/3-Octave, Anechoic Environment  $\pm 3$  dB:**  
85-20,000 Hz  
**Usable Low-Frequency Limit (10-dB-down point):**  
65 Hz  
**Long-Term Average Power Handling Capacity:**  
1 - 30 Watts Selectable in 3dB Steps (Transformer-Limited)  
**Sound Pressure Level at 1 Meter, 1 Watt Input, Anechoic Environment, Band-Limited Pink Noise Signal, 300 to 2,000 Hz:**  
84 dB  
**Dispersion Angle Included by 6-dB-Down Points on Polar Responses, Indicated One-Third-Octave Bands of Pink Noise, Horizontal and Vertical, 1,500-10,000 Hz:**  
 $100^{\circ} \pm 25^{\circ}$   
**Directivity Factor  $R_0$  (Q), 1,500-20,000 Hz Median:**  
9.5 (+13.4, -5.4)  
**Directivity Index  $D_i$ , 2,000-20,000 Hz Median:**  
9.8 dB (+3.8 dB, -3.6 dB)  
**Transducer Complement, High-Frequency:**  
2.5cm (1 inch) Soft-Dome Tweeter  
**Low-Frequency:**  
13cm (5¼ inch) Polypropylene Woofer  
**Box Tuning Frequency:**  
75 Hz  
**Crossover Frequency:**  
3,500 Hz

**Nominal Impedance:**

| Power Tap | Impedance     |               |
|-----------|---------------|---------------|
|           | 100-Volt      | 70-Volt       |
| 30W       | 335 $\Omega$  | 167 $\Omega$  |
| 15W       | 670 $\Omega$  | 335 $\Omega$  |
| 7.5W      | 1360 $\Omega$ | 670 $\Omega$  |
| 3.7W      | 2700 $\Omega$ | 1360 $\Omega$ |
| 1.9W      | 5400 $\Omega$ | 2700 $\Omega$ |
| 0.94W     | N/A           | 5400 $\Omega$ |

**Input Connection:**  
Barrier Strip  
**Enclosure Materials:**  
High impact polystyrene structural foam  
**Colors:**  
Black or white  
**Optional Accessories:**  
S-40MB Black, mounting bracket  
S-40MB White, mounting bracket  
**Dimensions:**  
24.9 cm (9.8 in.) high,  
17.8 cm (7.0 in.) wide,  
16.8 cm (6.6 in.) deep  
**Net Weight (Each):**  
3.3 kg (7.2 lb)  
**Shipping Weight (Pair):**  
7.1 kg (15.7 lb)

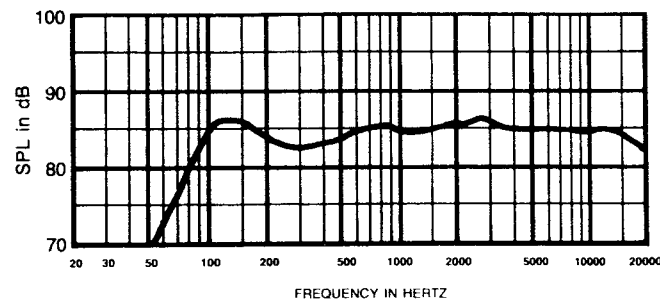
**DESCRIPTION**  
The Electro-Voice S-40T is an extremely compact high-performance monitor loudspeaker system. It is ideally suited for indoor

or outdoor applications requiring high-quality sound reproduction. As a foreground or background loudspeaker in restaurants and clubs, monitor speaker in churches, schools, conference rooms and hotels, the S-40T is an excellent choice for professional users. An internal, 30-watt line transformer allows easy connection to 70-volt or 100-volt speaker lines in distributed sound systems. Threaded inserts in the cabinet combined with the optional mounting hardware provide a flexible mounting system for virtually any application.

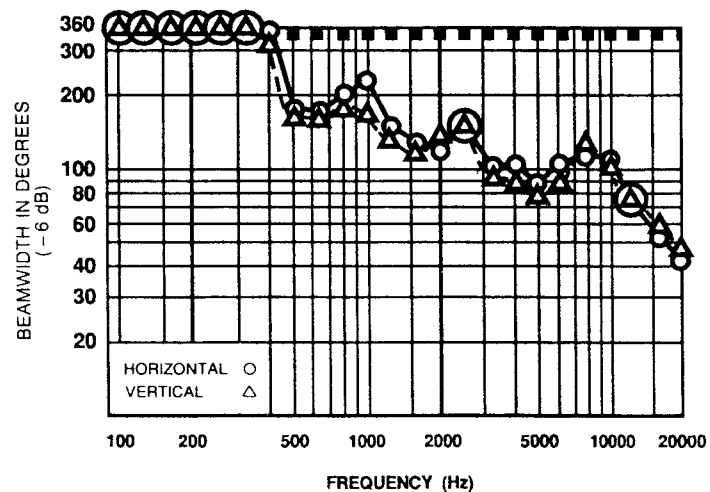
The low-frequency section is a 5¼" direct-radiating woofer with a polypropylene cone installed in an optimally vented high-impact polystyrene enclosure. This combination produces an exceptionally extended bass response with relatively high efficiency for an extremely small enclosure. The use of plastic materials for the enclosure and cone allow the loudspeaker system to be used in high-humidity environments.

The high-frequency section is a 1" direct-radiating soft dome tweeter. The tweeter is ferro-fluid cooled and uses flexible tinsel lead wires to prevent thermal or mechanical failure. These features in addition to the large magnetic system make this the most rugged tweeter ever used in a system this size. A self-resetting protection circuit is included in the high-frequency section of the crossover. If the input power to the tweeter exceeds the nominal rating, the protection circuit is activated and reduces the power delivered to the tweeter by 6 dB. The system will remain in this mode of operation until the input power is reduced to a safe level.

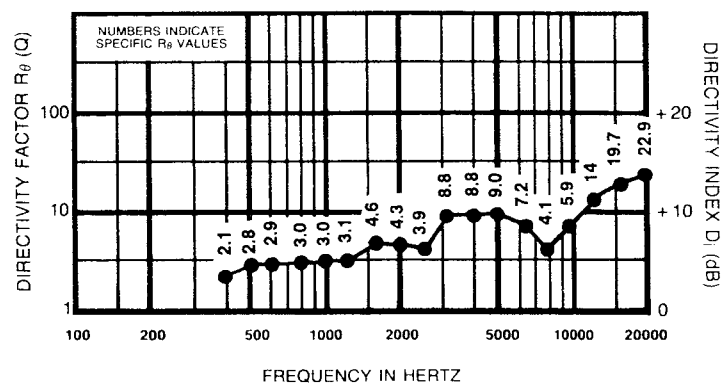
Both drivers feature low-flux-leakage designs enabling the speaker to be used in close



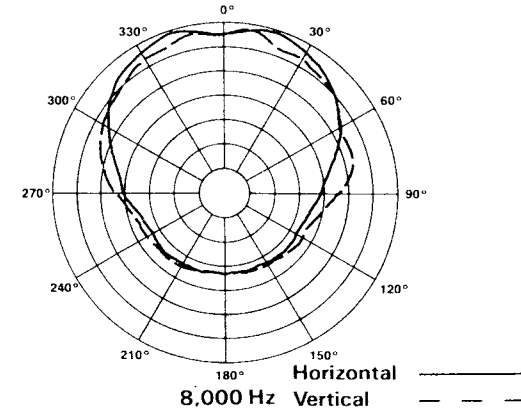
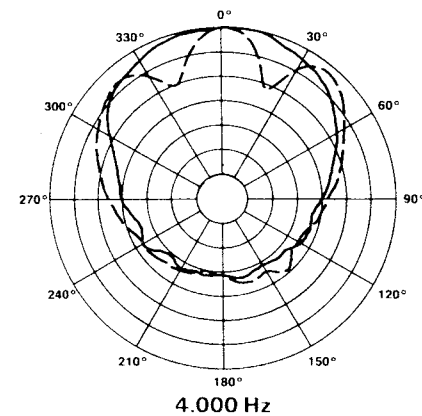
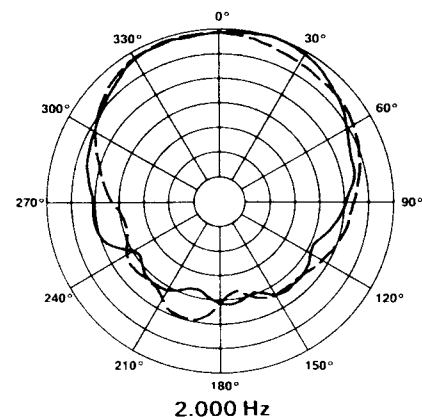
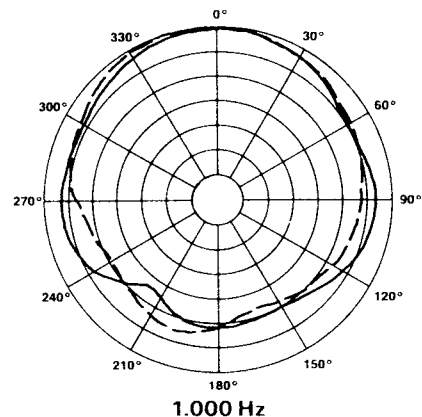
**FIGURE — 1**  
**Axial Frequency Response**



**FIGURE — 2**  
**Beamwidth vs. Frequency**



**FIGURE — 3**  
**Directivity vs. Frequency**  
**Whole Space (anechoic)**



**FIGURE — 4**  
**Polar Response**

proximity to video monitors. For very critical video monitoring applications, a minimum distance of four inches from the edge of the loudspeaker to the edge of the CRT is recommended.

#### FREQUENCY RESPONSE

The combination of 5¼-inch woofer, 1-inch tweeter and optimized crossover result in the wide and smooth frequency response shown in Figure 1. This response was measured at 1 meter, using a 1 watt input in an anechoic chamber. The response is 1/3-octave averaged and no external equalization was used.

#### DIRECTIVITY

The polar response of the S-40T speaker system at selected 1/3-octave bandwidths is shown in Figure 2. These polar responses were measured in an anechoic environment at 10 feet using 1/3-octave pink noise inputs. The frequencies selected are fully representative of the polar response of the system. A beamwidth plot of the system, utilizing the complete 1/3-octave polar data, is shown in Figure 3.  $R_{\theta}$  (Q) and directivity index (DI) are plotted in Figure 4.

#### INSTALLATION NOTES

Two ¼-20" threaded inserts are on the back of the S-40T. These are intended to be used with mounting systems having a 2-3/8" mounting center, such as the Omnimount Systems Series 25.

A U-type bracket, the S-40MB is also available in black or white. This will allow the S-40T to be mounted on walls or ceilings. Complete mounting instructions are included with the S-40MB.

Care should be taken to ensure that the chosen fixing point is strong enough to support the S-40T. Care should also be taken to ensure that the S-40T is not exposed to direct precipitation.

If the speaker system is not used with one of the mounting brackets, such as on a bookshelf, then the rubber feet that are included with the S-40T should be attached to the speaker. If the speaker is placed on the bottom side, then a rubber foot should be attached to each of the two rear corners only. This will compensate for the 3 draft that is molded into the cabinet, and allows the baffle to sit perpendicular to the surface that the speaker is placed on. If the speaker is to be placed on its side, then a rubber foot should be attached to each of the four corners. The nameplate that is attached to the grille may be rotated depending on which mounting orientation is used.

#### TRANSFORMER SETTINGS

A transformer and power-selector switch are installed in the rear of the enclosure. The

level of the S-40T may be adjusted by changing the switch setting using a screwdriver. Clockwise increases the power. Since the same switch and transformer are used for either the 100-volt or 70-volt line, the power setting depends upon the amplifier output that is used, 100-volt or 70-volt.

**CAUTION:** When connected to a 100-volt line do not use the switch setting marked "DO NOT USE" as this may result in excessive power driving the S-40T or excessive distortion.

#### ARCHITECTS AND ENGINEERS SPECIFICATIONS

The loudspeaker shall be a two-way system consisting of a 13 cm (5¼ inch) low-frequency loudspeaker, 2.5 cm (1 inch) high-frequency loudspeaker, 30-watt line transformer, and frequency dividing network installed in a vented enclosure.

The line transformer shall have power taps for 30 watts, 15 watts, 7.5 watts, 3.7 watts, 1.9 watts, and 0.94 watts. The power taps shall be switch selectable. The dividing network crossover frequency shall be 3,500 Hz. The dividing network shall include a protection circuit for the high-frequency loudspeaker. The loudspeaker system shall meet the following performance criteria: Power handling, 30 watts. Frequency response,  $\pm 3$  dB from 85 Hz to 20 kHz. Pressure sensitivity, 84 dB SPL at one watt, 100 Hz to 10 kHz measured at a distance of one meter on axis. The enclosure shall be molded of high impact polystyrene structural foam. The unit shall be 24.9 cm (9.8 inch) high, 17.8 cm (7.0 inch) wide, 16.8 cm (6.6 inch) deep. The loudspeaker system shall be the Electro-Voice model S-40T.

**WARRANTY (Limited)** — Electro-Voice products are guaranteed against malfunction due to defects in materials or workmanship for a specified period, as noted in the individual product-line statement(s) below, or in the individual product data sheet or owner's manual, beginning with the date of original purchase. If such malfunction occurs during the specified period, the product will be repaired or replaced (at our option) without charge. The product will be returned to the customer prepaid. **Exclusions and Limitations:** The Limited Warranty does not apply to: (a) exterior finish or appearance; (b) certain specific items described in the individual product-line statement(s) below, or in the individual product data sheet or owner's manual; (c) malfunction resulting from use or operation of the product other than as specified in the product data sheet or owner's manual; (d) malfunction resulting from misuse or abuse of the product; or (e) malfunction occurring at any time after repairs have been made to the product by anyone other than Electro-Voice or any of its authorized service representatives. **Obtaining Warranty Service:** To obtain warranty service, a customer must deliver the product, prepaid, to Electro-Voice or any of its authorized service representatives together with proof of purchase of the product in the form of a bill of

sale or receipted invoice. A list of authorized service representatives is available from Electro-Voice at 600 Cecil Street, Buchanan, MI 49107 (616/695-6831) and/or Electro-Voice West, at 8234 Doe Avenue, Visalia, CA 93291 (209/651-7777). **Incidental and Consequential Damages Excluded:** Product repair or replacement and return to the customer are only remedies provided to the customer. Electro-Voice shall not be liable for any incidental or consequential damages including, without limitation, injury to persons or property or loss of use. Some states do not allow the exclusion or limitation of incidental or consequential damages so the above limitation or exclusion may not apply to you. **Other Rights:** This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

**Electro-Voice Speakers and Speaker Systems** are guaranteed against malfunction due to defects in materials or workmanship for a period of five (5) years from the date of original purchase. The Limited Warranty does not apply to burned voice coils or malfunctions such as cone and/or coil damage resulting from improperly designed enclosures. Electro-Voice active electronics associated with the speaker systems are guaranteed for three (3) years from the date of original purchase. Additional details are included in the Uniform Limited Warranty statement.

Service and repair of this product: Electro-Voice, Inc., 600 Cecil Street, Buchanan, Michigan 49107.

Specifications subject to change without notice.