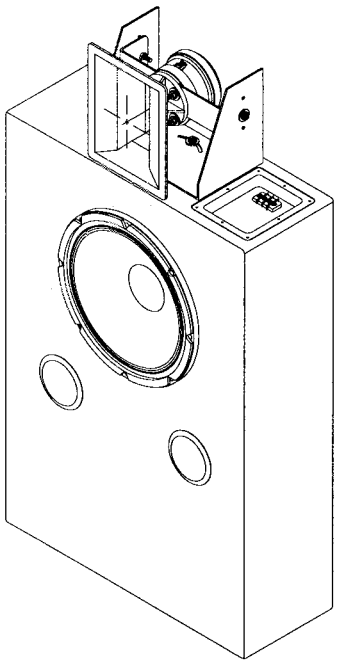
Cinema Systems

TS992-LX

Biamped Theatre Stage System



- **Only compact design 10 in. (254 mm) deep, overall**
- **THX® approved for small-sized rooms up to 1,274 m³ (45,000 ft³) with stage-to-last-row distances up to 12 m (40 ft)***
- **Digital Dynamics Capable™—DH2As1 compression driver and EVX-150A 15-in. woofer are highly resistant to long-term mechanical fatigue**
- **Wideband response—30-20,000 Hz**
- **90° x 90° coverage pattern appropriate for small rooms**

Description

The TS992-LX is a Digital Dynamics Capable™ biamplified theatre stage system. It is designed for absolute minimum depth—only 10 in. (254 mm) deep—but with similar performance as the large-format, THX®-approved TS9040D-LX. Electro-Voice has combined its expertise in constant-directivity horns, high-frequency compression drivers and low-frequency reproducers to produce a stage system with superior performance in all areas: uniform dispersion to the highest frequencies, high efficiency, high power-handling capacity and wide, smooth frequency response.

The TS992-LX features a single ultrahigh-reliability, ultrahigh-output 15 in. (381 mm) EVX-150B woofer, with continuous program power capacity of 1,000 watts. The EVX-150B is crossed over at 1,150 Hz where its coverage pattern is a perfect match to that of the HP99C compact 90° x 90° horn to which a DH2As1 medium-format "short nose" compression driver is mounted. The unique, 90° vertical coverage angle of the HP99C horn provides more uniform coverage at the front of small rooms.

All components of the TS992-LX are black finished to eliminate any light reflections back through the screen. The high-frequency horn is matte black and the black textured finish of the low-frequency system is of low reflectivity. The TS992-LX is mechanically designed for easy installation, including convenient system connection and horn aiming (see Installation section).

The TS992-LX provides high performance for all film-sound formats in small-sized rooms. THX® recommends the TS992-LX in rooms of up to 1,274 m³ (45,000 ft³) in volume and stage-to-last-row distances of up to 40 ft (12 m).

Frequency Response

Figure 4 shows the TS992-LX frequency response with presets of the Electro-Voice Dx34A digital speaker system processor (see Crossover and Basic Equalization section). The measurement was made with a swept sine-wave signal, 4 volts at 500 Hz, in an anechoic (echoless) environment. The microphone was at a distance of 10 ft (3.0 m), on an axis at the lower edge of the high-frequency horn. Figure 3 shows the frequency response of the individual sections of the TS992-LX, measured under the same conditions but with a 4-volt input constant with frequency, the results of which were then normalized to 1 watt/1 meter.

Crossover and Basic System Equalization

In THX® installations, crossover and basic system equalization is provided by a dedicated THX® crossover/EQ/signal-delay unit. In conventional installations, the Electro-Voice XEQ-2 analog crossover/equalizer/delay equipped with the appropriate optional crossover and horn EQ modules or the Electro-Voice Dx34A digital speaker system processor may be used. Contact Electro-Voice for information on specific XEQ-2 modules and Dx34A presets.

Installation

The TS992-LX incorporates two pre-assembled units for quick, trouble-free and low-cost installation. With only two screws the High-Frequency unit (HPK992) can be securely mounted to the Low Frequency unit (TL15-1XS). The HPK992 allows ±30° of horizontal horn aiming and +10°/–15° of vertical aiming. For complete installation instructions see Figure 2 and the section on Mounting the HPK992.

Limited Warranty

Electro-Voice products are guaranteed against malfunction due to defects in materials or workmanship for a specified period,

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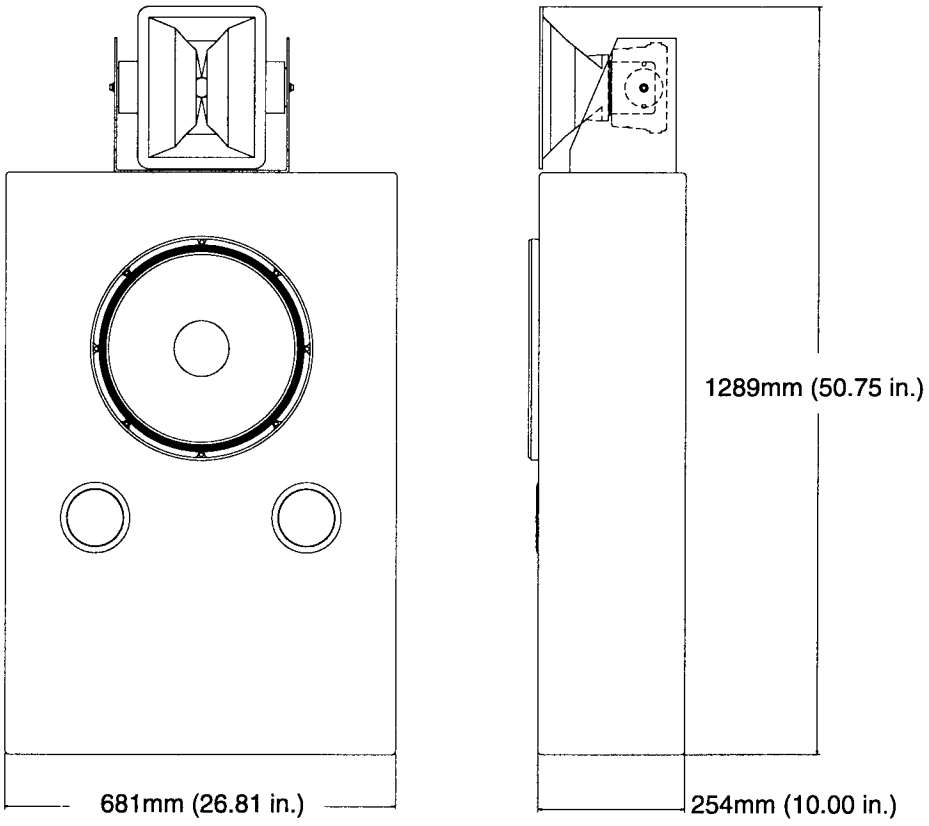
as noted in the individual product-line statement(s) below, or in the individual product data sheet or owner's manual, beginning with the date of original purchase. If such malfunction occurs during the specified period, the product will be repaired or replaced (at our option) without charge. The product 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 Service or any of its authorized service representatives. **Obtaining Warranty Service:** To obtain warranty service, a customer must deliver the product, prepaid, to Electro-Voice Service 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 Service at 600 Cecil Street, Buchanan, MI 49107 (800/234-6831 or FAX 616/695-4743). **Incidental and Consequential Damages Excluded:** Product repair or replacement and return to the customer are the 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.

For warranty repair or service information, contact the service repair department at: 616/695-6831 or 800/685-2606.

For technical assistance, contact Technical Support at 800/234-6831 or 616/695-6831, M-F, 8:00 a.m. to 5:00 p.m. Eastern Time.

Specifications subject to change without notice.

Figure 1—Dimensions



Mounting HPK992 to the TL15-1XS
Refer to Figure 2 for the following steps.

1. Remove the two center most screws on top of the TL15-1XS, that are the closestest and farthest from the front of the enclosure.

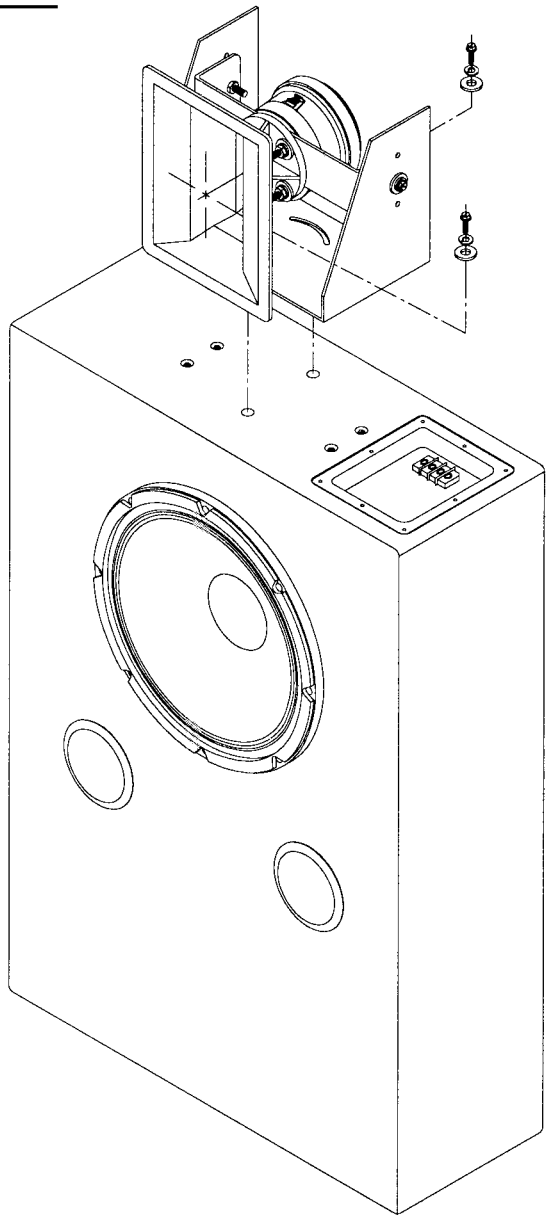
2. Remove the 2 Washers and 2 lock washers from the enclosed hardware package and assemble 2 screw lockwasher and washer assemblies.

3. Place the HPK992 on top of the TL15-1XS and aline the cresent shaped slots in the HPK992 bracket and the top of the enclosure with the vacant holes on the Low-frequency enclosure. Insert the two of the screw-washer assemblies previously assembled in the alined position, making sure the horn baffle is parrallel to the Tl15-1XS's top and even to it's face. Tightenthe two screws until HPK992 is securely fastened to the TL15-1XS

4. Vertical adjustments are made by loosening the two securing screws either side of the High frequency horn/driver-mounting bracket. Rotate the horn and driver assembly to the desired angle. (Note that reassignment of the vertical pivot points may have to be changed) When the desired verticle angle is made, tighten the the screws, fully compressing the lock washers, to ensure they do not loosen due to vibration and rotatethe horn from it's desired position.

5. Horizontal adjustments are made by loosening the two securing screws at the mounting bracket base. Rotate the horn and driver assembly to the desired angle. (Note that reassignment of the vertical pivot points may have to be changed)

Figure 2—Mounting the HPK992



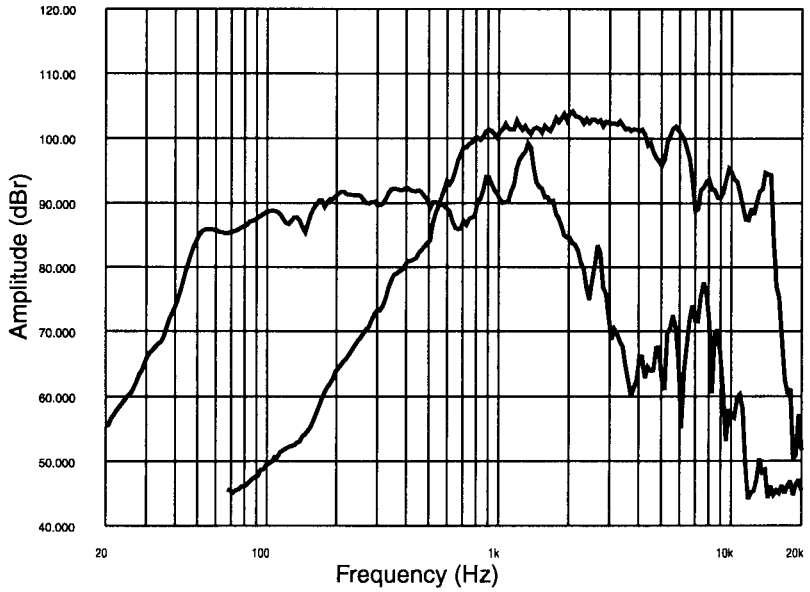


Figure 3—TS992-LX Typical Frequency Response of High- and Low-Frequency Sections Alone (swept sine-wave input, anechoic environment, 4 volts at 10 feet, mic on an axis coincident with lower edge of the HF horn)

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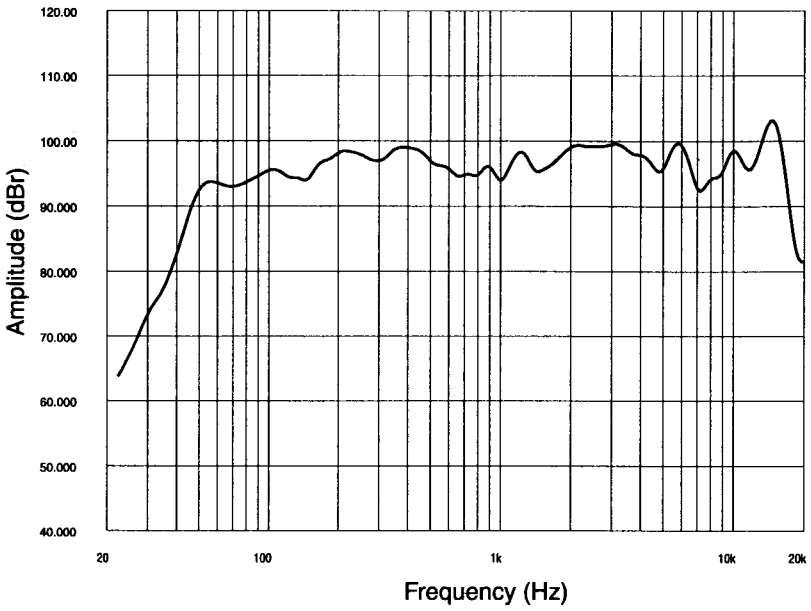
Figure 4—TS992-LX Typical Frequency Response with Presets using the Dx34A Digital Speaker System Processor (swept sine-wave input, anechoic environment, 4 volts at 500 Hz at 10 feet, mic on an axis coincident with lower edge of the HF horn) Normalized to 1 Watt 1 Meter.



Specifications**

Usable Frequency Response (see Figure 4):
30-20,000 Hz

Low-Frequency 3-dB-Down Point:
38 Hz

Usable Low-Frequency Limit (10-dB-down point):
30 Hz

Recommended Crossover Frequency: (see Crossover and Basic System Equalization section)
1,150 Hz

Crossover Slopes,
Recommended:
24 dB per octave
Minimum:
12 dB per octave

Sound Pressure Level at 1 Meter, 1 Watt Input,
LF (100- to 800-Hz average):
96 dB
LF (65- to 125-Hz average):
94 dB
HF (800- to 5,000-Hz average):
110 dB

Power Capacity Average Power-Handling Capacity,
Low Frequency (per EIA RS-426-A 1980):
600 watts
Low Frequency, Continuous Program:***
1,000 watts
High Frequency (per AES2-1984/ ANSI S4.26-1984):
60 watts

Dispersion, Horizontal and Vertical:
90°

Nominal Impedance, HF and LF:
8 ohms

Components:
Pre-assembled DH2As1 compression driver, HP99C horn, and a horn/driver-mounting bracket
TL15-1XS low-frequency system with EVX-150B woofer;

Finishes:
Matte black HF horn, black driver and mounting bracket, and black textured-painted LF system

Overall System Dimensions, Assembled (see Figure 1),
Height (approximate):
1,295 mm (51 in.)
Width:
680 mm (26.75 in.)
Depth:
254 mm (10 in.)

Net Weight (total):
HPK992 9.75 kg (21.5 lb)
TL15-1XS 40.8 kg (90.1 lb)

Shipping Weight (total):
HPK992 11.6 kg (26.5 lb)
TL15-1XS 46.3 kg (102 lb)

Shipping Carton Dimenions:
HPK992 12.75"L x 14.75"W x14.5"H
TL15-1XS 43"L x 12"W x 29"H

* THX is a registered trademark of Lucasfilm Ltd.
** Additional information is contained on the individual component engineering data sheets.

*** This rating facilitates competitive comparisons. Continuous program power is twice the two-hour sine-wave power capacity at minimum impedance.

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