

# Electro-Voice EJ1-X Above Screen Passive Two Way Speaker System Instruction Manual

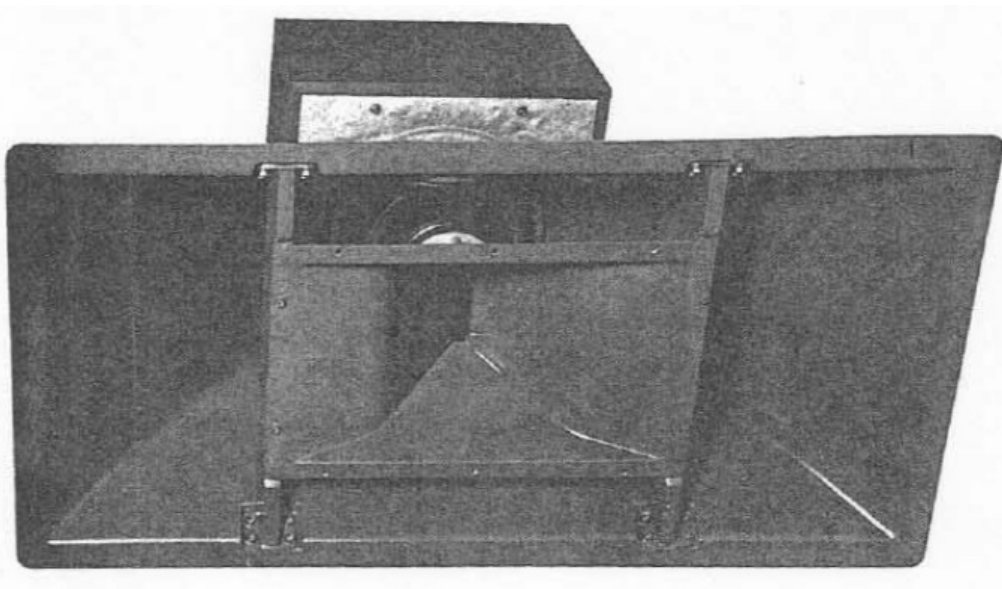
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**Electro-Voice®**

**Electro-Voice EJ1-X Above Screen Passive Two Way Speaker System**



## **Description and Applications**

The Electro-Voice EJ1-X above-screen speaker system is a two-way passive factory-assembled cinema system that consists of two coaxially mounted horns. The low/mid horn is loaded with a DL12X mid-bass woofer enclosed within a 1.0 ft' sealed chamber. The high-frequency section features a DHA compression driver mounted to a HP940 constant-directivity horn. Crossover is accomplished by using the XEQ-EJ1X crossover. The enclosure is constructed of 16-mm (5/8-in.) medium-density fiberboard (MDF) covered in a black vinyl which can be painted to complement any interior. The horns are constructed from polyester resin and glassfiber laminate and finished with a dark-grey gelcoat. System suspension shall be achieved through the use of the EJ1-Mb bracket. The EJ1-Mb bracket provides four hanging points for adjustability and ensures a safe installation. The intended use of the EJ1-X is within medium-to-large movie theatres when an above-screen sound system can provide superior fidelity.

## **Connections**

The connections are made via a terminal block on the XEQ-EJ1X crossover.

## **Sensitivity**

Sensitivity was measured with a 1-watt input (2.83 volts into an 8-ohm load) from a distance of 1 meter, and resulted in a high-frequency output of 110 dB and a low-frequency output of 103 dB.

## **Power Handling**

Electro-Voice determines the long-term and short-term power handling based upon the standard provided by the EIA (specifically, ANSI/EIA RS-426-A 1980). The EJ1-X high frequency section passes this EIA specification with a long-term power-handling capacity of 50 watts and a short-term power-handling capacity of 300 watts; the low-frequency section passes with a long-term power-handling capacity of 300 watts, and a short-term power-handling capacity of 1,200 watts.

## **Recommended Crossover Points**

The EJ1-X is designed to be crossed over a 500 Hz using the XEQ-EJ1X crossover.

## **Architects' and Engineers' Specifications**

The loudspeaker system shall be a two-way active all horn-loaded coaxial loudspeaker system. The system shall

be comprised of a 12-inch low/mid-frequency loudspeaker with a coaxially mounted 2.0-inch compression driver and 90° x 40° constant-directivity horn. Crossover is achieved using the XEQ-EJ1X crossover. The loudspeaker system shall meet the following performance criteria. Power handling, 300 watts of pink noise with 6-dB crest factor, band limited from 200-1,500 Hz (12-inch driver) and 50 watts of pink noise with a 6-dB crest factor, band limited from 500-20,000 Hz. Pressure sensitivity, 103-dB SPL when measured at one meter on axis with one watt of band-limited pink noise from 200-1,000 Hz (low/mid section). Pressure sensitivity, 110-dB SPL one meter on axis with one watt of band-limited pink noise from 200-20,000 Hz (high section). Nominal impedance, 8.0 ohms. The enclosure shall be of the sealed type, constructed of 16-mm (5/8-in.) medium-density fiberboard (MDF) lined with sound-absorbent wool. The horns are constructed from dark-grey polyester resin with a fiberglass core. Four hanging points are provided for safe installation with the use of the optional EJ1-Mb bracket. It is the responsibility of the installer to ensure the integrity of the mounting surface and suspension cabling. The dimensions shall be 584 mm (23.0 in.) high by 1,194 mm (47.0 in.) by 724 mm (28.5 in.) deep at the center. The loudspeaker shall weigh 60.1 kg (132.5 lb). The loudspeaker system shall be the Electro-Voice EJ1-X.

## **Uniform Limited Warranty**

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 statements) 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 statements) 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 EVI Audio Service or any of its authorized service representatives.

### **Obtaining Warranty Service:**

To obtain warranty service, a customer must deliver the product, prepaid, to EVI Audio 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 EVI Audio 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.

### **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.

For warranty repair, service information, or a listing of the repair facilities nearest you, contact the service repair department at: 616/695-6831 or 800/685-2606.

### **For technical assistance:**

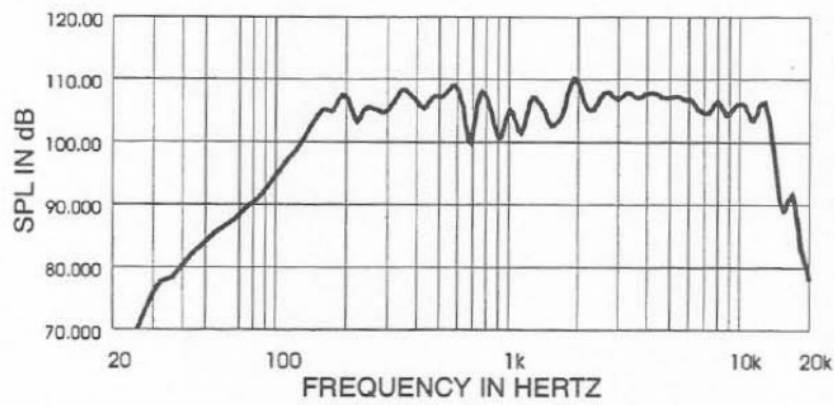
Contact Technical Support at 800/234-6831 or 616/695-6831, M-F, 8:00 a.m. to 5:00 p.m. Eastern Standard time. Specifications subject to change without notice.

## **Specifications**

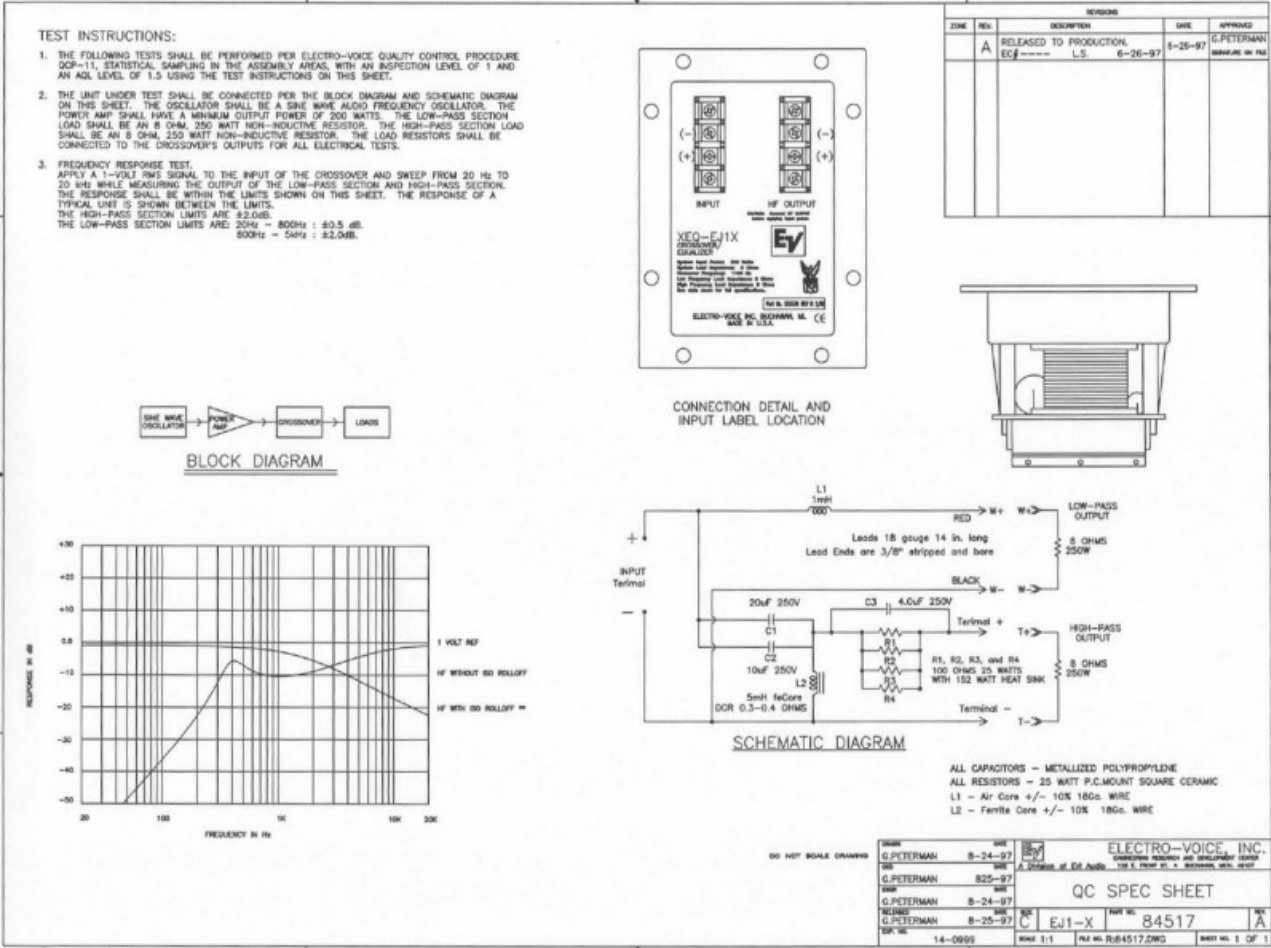
- **Frequency Response (1 watt at 1 meter on axis, swept one-third-octave pink noise, anechoic environment; see Figure 1):** 160-20,000 Hz
- **Low-Frequency 3-B-Down Point:** 160 Hz
- **Long-Term Average Power Handling Capacity per ANSI/EIA RS-426-A 1980 (see Power Handling section),**
  - **LF:** 300 watts
  - **HF:** 50 watts
- **Sensitivity (SPL at 1 meter, 1 watt (2.83 volts) input, anechoic environment, band-limited pink-noise signal),**
  - **LF:** 103 dB
  - **HF:** 110 dB
- **Dispersion Angle included by 6-dB-Down Points on Polar Responses, Indicated One-Third-Octave Bands of Pink Noise,**
  - **500-20,000 Hz Horizontal:** 90° (+20°, -10°)
  - **1,200-20,000 Hz Vertical:** 40° (+20°, -10°)
- **Directivity Factor R, (Q), Median over Indicated Range, 1,250-20,000 Hz:** 11.8
- **Directivity Index Di (10 log R,) 1,250-20,000 Hz:** 10.7 dB
- **Transducer Complement,**
  - **High Frequency:** DH1A, 2-inch exit driver mounted to a HP940 constant-directivity horn
  - **Low Frequency:** DL12X, 12-inch woofer mounted to a special 90° x 40° horn
- **Impedance, HF/LF,**
  - **Nominal:** 8 ohms
  - **Minimum:** 6-7 ohms
  - **Input Connectors:** Screw terminals (#10) on input panel barrier strip
  - **Enclosure Materials and Finish:** 16-mm (0.62-in.) medium-density fiberboard (MDF) covered with refinshable black vinyl
  - **Optional Accessories:** EJ1-Mb (577-3048) mounting bracket
- **Dimensions,**
  - **Low-Frequency Horn,**
    - **Height:** 584 mm (23.0 in.)
    - **Width:** 1,194 mm (47.0 in.)
    - **Depth:** 427 mm (16.8 in.)
  - **Mid-Bass Enclosure,**
    - **Height:** 445 mm (17.5 in.)
    - **Width:** 445 mm (17.5 in.)
    - **Depth:** 300 mm (11.8 in.)
  - **Overall System,**
    - **Height:** 584 mm (23.0 in.)
    - **Width:** 1,194 mm (47.0 in.)
    - **Depth:** 724 mm (28.5 in.)
  - **Net Weight:** 59.96 kg (132.3 lb)
  - **Shipping Weight:** 69.94 kg (154.2 lb)

FREQUENCY CHART

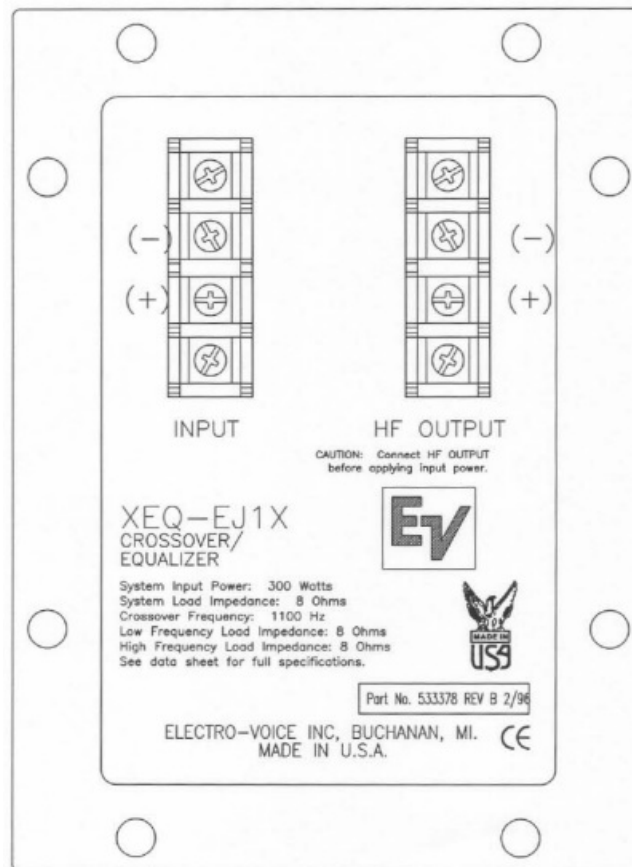
Figure 1—EJ1-X frequency response



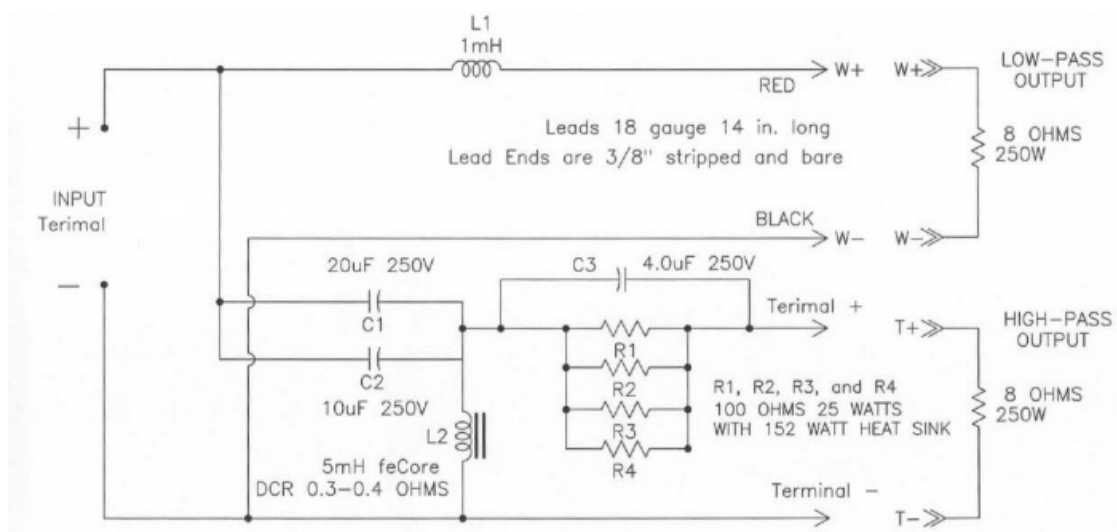
WIRING DIAGRAM



CONNECTION DETAIL AND INPUT LABEL LOCATION



## SCHEMATIC DIAGRAM



- **ALL CAPACITORS** – METALLIZED POLYPROPYLENE
- **ALL RESISTORS** – 25 WATT P.C.MOUNT SQUARE CERAMIC
- **L1** – Air Core +/- 10% 18Ga. WIRE
- **L2** – Ferrite Core +/- 10% 18Ga. WIRE



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EJ1-X Above Screen Passive Two Way Speaker System, EJ1-X, Above Screen Passive Two Way Speaker System, Passive Two Way Speaker System, Way Speaker System, Speaker System, System

## References

-  [Manual-Hub.com - Free PDF manuals!](#)
- [User Manual](#)

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