

EVI-15

Full-Range Loudspeaker

- Ground-breaking advance in single-box utility
- New small-format Vari Intense®⁶ horn
- 1-inch exit titanium compression driver
- 15-inch cast-frame woofer
- 1,000-watt peak, 250-watt long-term power capacity
- Terminal strip inputs for secure lead connections
- Compact, lightweight, refinishable, easy-to-install enclosure
- Available in white or black finish
- Three-point hanging system with optional U-bracket

Description

The Electro-Voice EVI-15 full-range loudspeaker is a factory assembled system featuring a small-format Vari Intense® horn and a 15-inch direct radiator in a vented enclosure. The EVI-15 is intended to be used as a stand-alone full-range system, but may also be used as the mid-bass/high-frequency component in most multi-way loudspeaker systems.

The EVI-15 consists of a proprietary cast-frame 381-mm (15-in.) high-power, long-excursion low-frequency driver mounted within a vented chamber of 3.4 cubic feet, optimally tuned to provide unequalized low-frequency response to below 50 Hz. The high-frequency complement consists of a 25.4-mm (1.0-in.) exit compression driver utilizing a new small-format Vari Intense® horn. Vari Intense® is a revolutionary patented⁶ technology that throws a 6-to 10-dB hotter signal to the back of the room. This compensates for the drop in SPL over the longer distance to the back of the room (25 feet for the short throw and about 70 feet for the long throw in a typical room). This single horn replaces a short-throw/long-throw horn combination, reducing the material and labor costs of an installation. Electrical connections to the system are

made by large screw terminals able to accept up to 12-gauge wire, mounted to an input panel on the back of the enclosure. The system is provided with a 2,000-Hz passive crossover featuring self-setting tweeter protection and asymmetric acoustic slopes with passive lobe steering for uniform coverage throughout the crossover region. The enclosure is constructed from 19-mm (0.75-in.) thick, thoroughly braced 7-ply birch plywood lined with sound-absorbent glass wool. Five 3/8-16 shoulder-bolt hanging points are provided for safe suspension of the EVI-15. There are two hanging options recommended. The optional U-Bracket hanging kit, MB-EVI15 is available for use with the 3/8-16 T-nut locations on the side of the enclosure along with a single pull-up strap located on the lower back of the enclosure. The second option is available using the two T-nut locations on the front top of the enclosure as well as the pull-up location on the lower back of the enclosure. The EBK-1 kit of three forged shoulder eyebolts is available if structurally rated 3/8-16 eyebolts are not locally available. The system may then be hung individually or in an array. **Please read the included Applications Guide for more information on mounting methods and installation tac-**

tics. The system may be ordered in a textured black or white paint which can be painted to complement any interior. The grille is constructed from a sturdy 16-gauge medium-gloss black or white powder-coated steel and may be painted or covered with cloth to match the enclosure.

The EVI-15 full-range Vari Intense® loudspeaker is the ideal system whenever high-output full-frequency-range material must be reproduced in churches, gymnasiums, auditoriums, hotels and civic centers.

Architects' and Engineers'

Specifications

The loudspeaker system shall be of the full-range type consisting of a single 381-mm (15-in.) cast-frame high-power woofer in a vented enclosure and a 25.4 mm (1-in.) exit compression driver loaded with a small-format Vari Intense® horn. The loudspeaker system shall meet the following performance criteria. Power handling shall be 250 watts of pink noise with a 6-dB crest factor for eight hours, band limited from 50 Hz to 20 kHz.³ Frequency response shall be smooth and uniformly usable from 50 Hz to 20 kHz. Pressure sensitivity shall be 100 dB SPL when measured at one meter on axis with one watt of band-limited pink noise from

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50 Hz to 20 kHz. The enclosure shall be constructed of 19-mm (0.75-in.) 7-ply birch plywood and shall be heavily braced and lined with sound-absorbent glass wool. The system shall include five 3/8-16 mounting points to accommodate either a three-point rigging system or an optional U-bracket with pull-up point. The finish of the enclosure shall be textured black or white and a removable black or white metal grille shall be provided. The dimensions of the enclosure shall be 584 mm (23.0 in.) high by 429 mm (16.9 in.) wide by 766 mm (30.2 in.) deep. The loudspeaker system shall weigh 23 kg (50 lb).

The loudspeaker system shall be the Electro-Voice EVI-15 black or EVI-15 white.

Uniform Limited Warranty Statement

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 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.

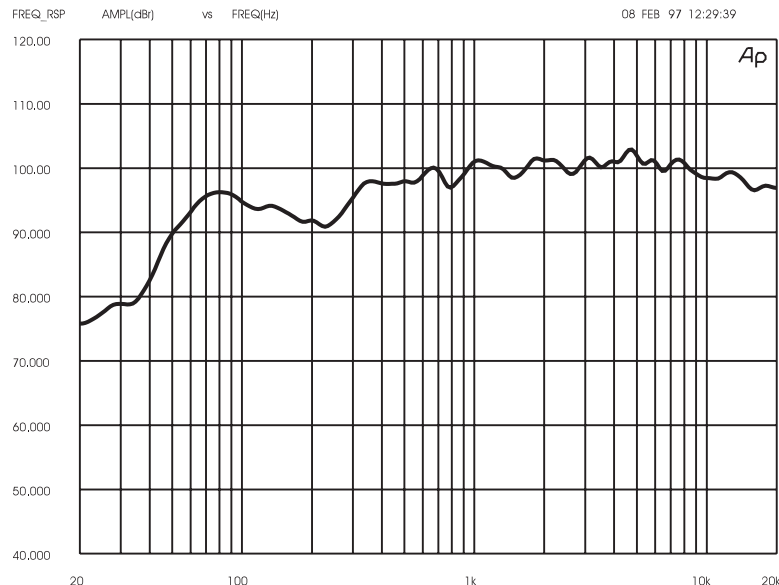
Electro-Voice Speakers and Speaker Systems are guaranteed against malfunction due to defects in materials or workmanship for a period of five (5) years from the date of original purchase. The Limited Warranty does not apply to burned voice coils or malfunctions such as cone and/or coil damage resulting 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.

Figure 1—EVI-15 Frequency Response



EVI-15 Full-Range Loudspeaker

Figure 2—EVI-15 Impedance

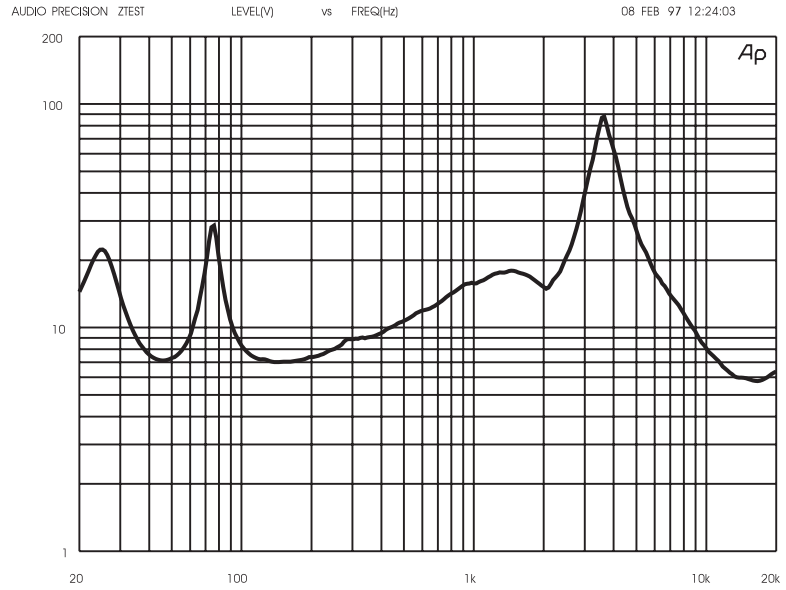


Figure 3—EVI-15 Distortion 1% power

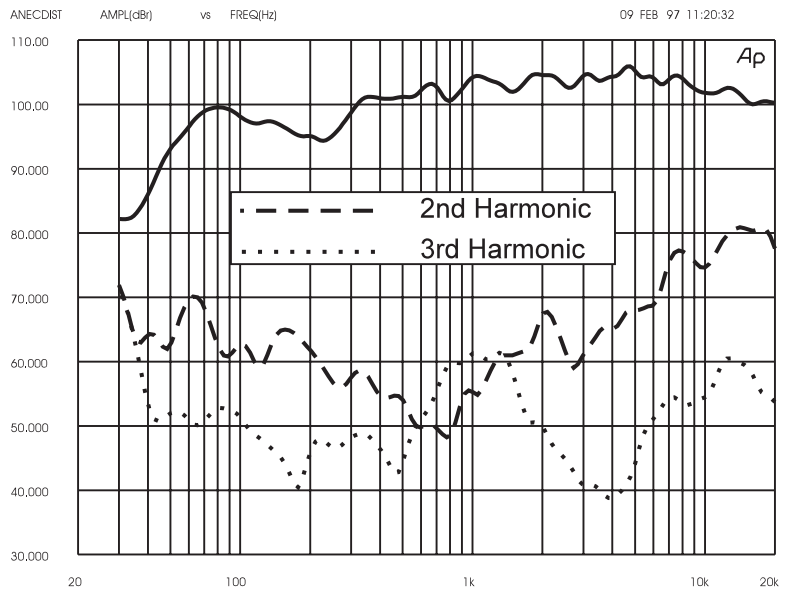
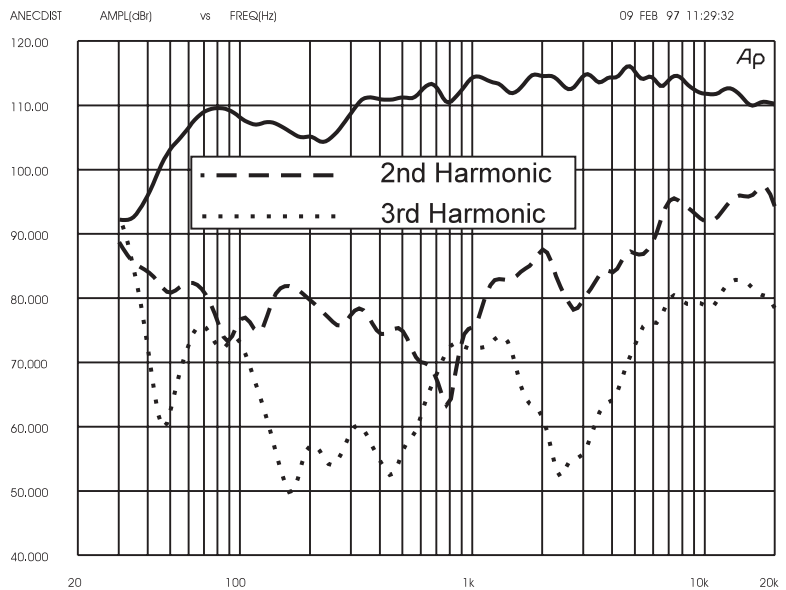


Figure 4—EVI-15 Distortion 10% power

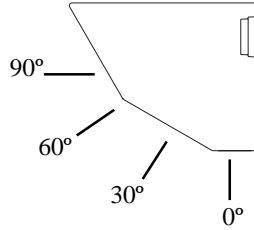


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Figure 5—EVI-15 Polar Response

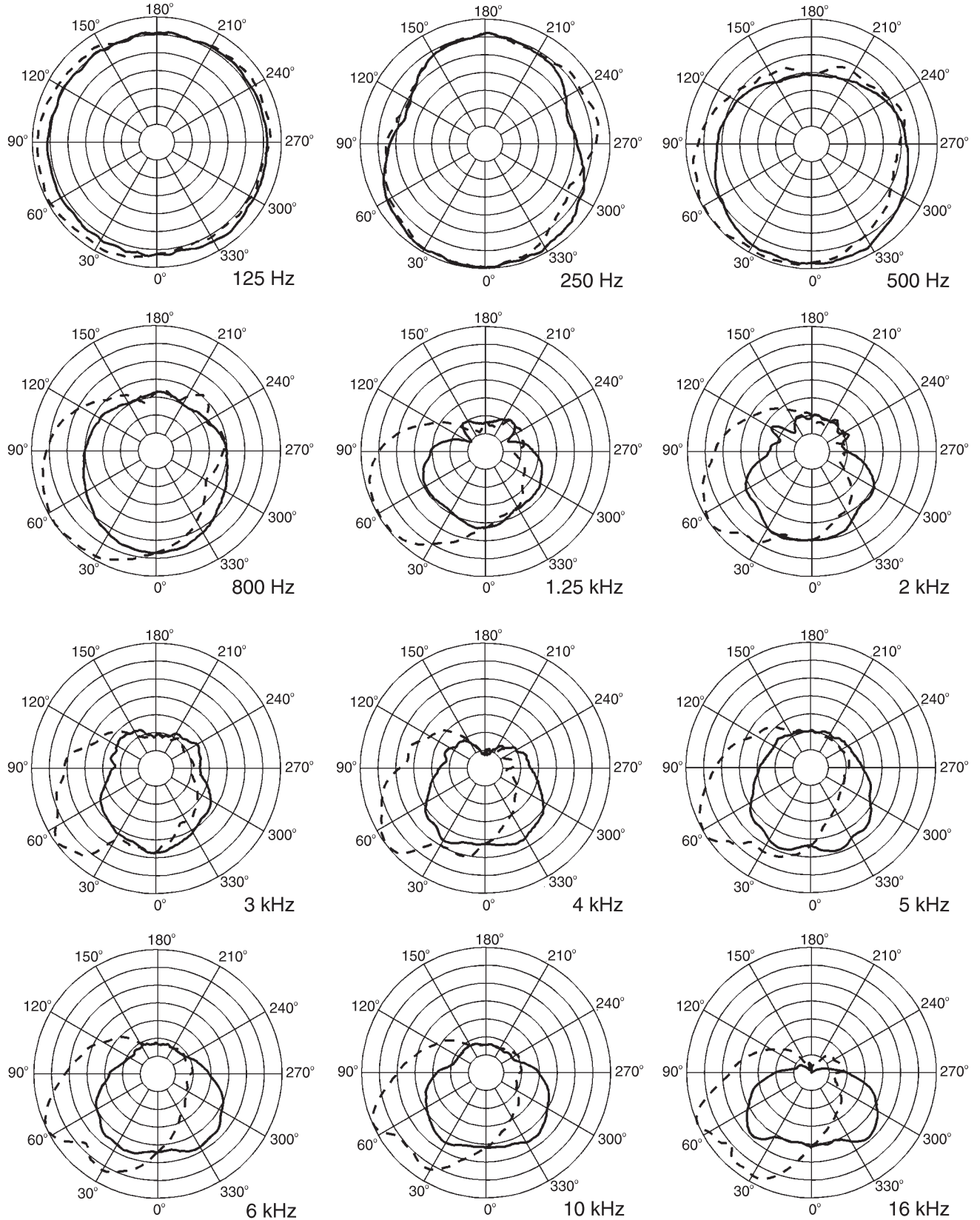
Scale: 5 dB/division

— Horizontal
 - - - Vertical



This system side view provides a means of orientation for the vertical polar data. Horizontal data (short throw) is presented conventionally. Please reference the Applications Guide for more information on interpreting the polar data.

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Figure 6—EVI-15 Beamwidth - Long Throw

○ - Horizontal
△ - Vertical

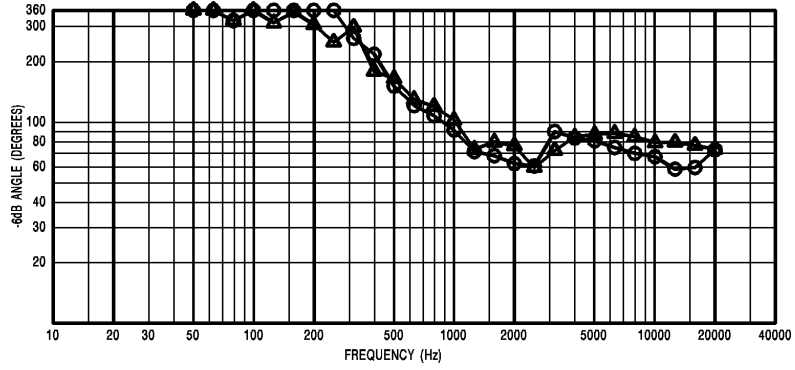


Figure 7—EVI-15 Beamwidth - Short Throw

○ - Horizontal
△ - Vertical

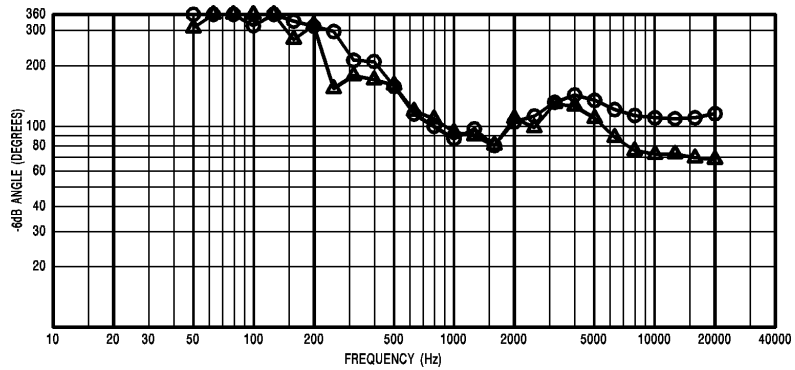


Figure 8—EVI-15 Directivity

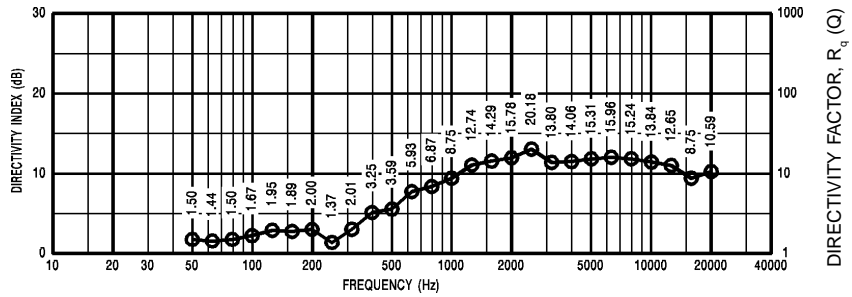
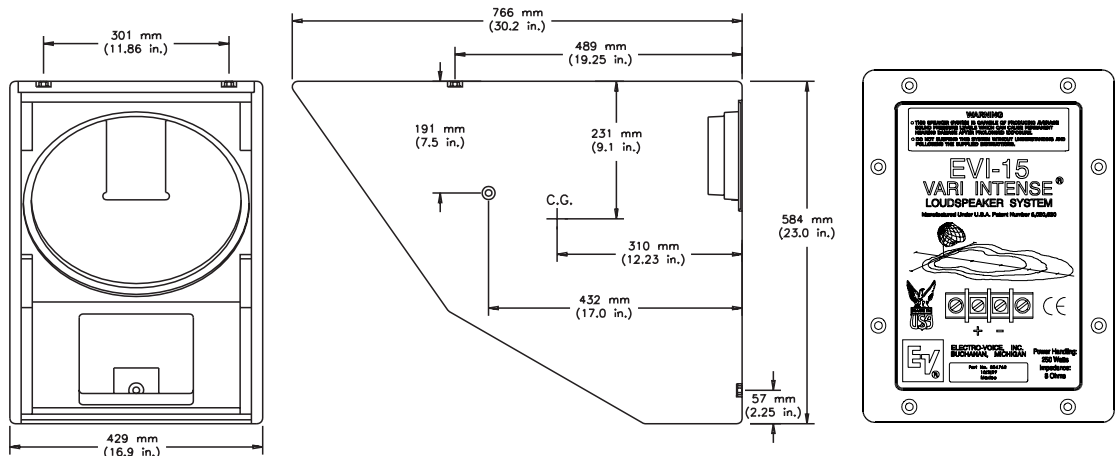


Figure 9—EVI-15 Dimensions



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Specifications:

Versions Available:

- EVI-15 black
- EVI-15 white

System Type:

Direct-radiating vented-bass full-range loudspeaker system

Pressure Sensitivity:¹

100 dB SPL

Frequency Response (see Figure 1):²

50 Hz - 20 kHz

Power Handling:³

250 watts, long-term continuous
1,000 watts, peak power

Maximum Output:⁴

123 dB SPL, long-term continuous
128 dB SPL, peak power

Impedance (see Figure 2):

8.0 ohms nominal
5.9 ohms minimum (15.8 kHz)

Beamwidth,

Long Throw:

Horizontal, 1-20 kHz:

60° (+30°, -2°)

Vertical, 1-20 kHz:

70° (+30°-10°)

Short Throw:

Horizontal, 600 Hz-20 kHz:

110° (+25°, -25°)

Vertical, 600 Hz-20 kHz:

90° (+25°, -18°)

Directivity Factor, R_0 (Q), 1.2-20 kHz:

14.0 (+5.5, -4.0)

Directivity Index, D_i , 1.2-20 kHz

12.5 dB (+1.2 dB, -2.7 dB)

Components:

High-efficiency, high-power cast-frame 381-mm (15-inch) woofer with one 25.4-mm (1.0-inch) exit compression driver mounted to a small-format Vari Intense® horn

Input Terminals:

Large screw terminals

Replacement LF:

1815-0992

Replacement HF:

833-0990

Replacement Grille:

73574 black

73753 white

Enclosure:

Direct-radiating vented LF, built of 19-mm (0.75-inch), 7-ply birch plywood with appropriate bracing, lined with glass wool; five 3/8-16 shoulder bolt hanging points included

Dimensions:

584 mm (23.0 in.) high

429 mm (16.9 in.) wide

766 mm (30.2 in.) deep

Net Weight:

24.0 kg (53 lb)

Shipping Weight:

28.2 kg (62 lb)

Finish:

Black or white textured paint with black or white 16-gauge powder-coated grille

Accessories:

Electro-Voice MB-EVI15 U-Bracket suspension kit

Electro-Voice EBK-1 Eyebolt suspension kit

Notes on Measurement Conditions

1. Band-limited pink noise signal, one watt calculated using E^2/Z_{min} , 3.16-meter measurement distance referred to one meter.
2. On-axis, one watt calculated using E^2/Z_{min} , 3.16-meter measurement distance referred to one meter, low frequencies corrected for anechoic-chamber error.

3. This system rating is patterned after the ANSI/EIA RS-426-A method where the test signal is pink noise with a 6-dB crest factor over the bandwidth of the system, with power calculated using $E^2/R_e \times 1.15$, for 8 hours.
4. This measurement made under the same conditions as pressure sensitivity, and takes into account any power-compression effects due to nonlinearities in the system.

5. The distortion at any given frequency may be found by graphically taking the difference between the fundamental and harmonic, and adding the number of decibels which the harmonic has been raised on the graph and apply the formula: percent distortion = $100 \times 10^{(-\text{difference in dB}/20)}$
6. The use of Vari Intense® horns is protected by U.S. patent # 5,020,630.

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