

Xi-1082

X-Array Install™

Two-Way, Full-Range, Sound-Reinforcement System

- 8-inch two-way
- 90° x 40° horn coverage
- 175-watts long term power capacity
- Ring-Mode Decoupling (RMD™)
- Full-range with internal passive crossover
- DH3 1-inch-exit compression driver with titanium diaphragm
- Low-profile for low ceiling or under balconies

Description

Introducing a family of advanced sound reinforcement products for everyone who desires the sound quality of Electro-Voice's X-Array™ touring systems. X-Array Install™ is the ideal choice for small-to-medium array configurations and fixed installations of any size.

Inspired by the most demanded features of EV's acclaimed X-Array™ touring systems, the X-Array Install™ series incorporates a potent combination of very high output, medium- to long-throw "cells," and Ring-Mode Decoupling (RMD™).

RMD™

Ring-Mode Decoupling is the same advanced technology built into the X-Array™ touring series. RMD™ produces substantially improved tonal character and fidelity whether operated at low or extremely high sound pressure levels. RMD™ attacks time domain "ringing modes" at their sources. Mechanical solutions resolve mechanical issues, acoustical solutions address acoustical modes found in all sound reinforcement systems. The combination of each RMD™ technique provides improved tonal character and fidelity at increasing drive levels. The result is

clear, even sound quality with vastly improved intelligibility.

Magnetics

Mid-bass and high-frequency drivers in X-Array Install™ products use ferrite magnetics instead of the neodymium magnetics used in X-Array™ touring systems. While neodymium drivers provide unmatched output capabilities, the advanced RMD™ technology used in X-Array Install™ produces world class sound reinforcement at very high levels.

Applications

The Xi-1082 loudspeaker system is ideal for any professional touring or installation application requiring accurate, high-level, sound reinforcement. Because of the unique performance capabilities featured in this system, the X-Array Install™ Xi-1082 offers extremely wide-range music reproduction as well as accurate vocal coverage and maximized intelligibility. It's single 8-inch woofer avoids the mid-bane interference nulls of the dual spaced woofers in "traditional" under balcony systems.

Power Handling Test

Electro-Voice components and systems are manufactured to exacting standards to en-

sure reliability in continuous use in arduous real-life conditions. Besides utilizing industry-standard power tests, extreme in-house power tests which push the performance boundaries of the loudspeakers are also performed for an extra measure of reliability. The Xi-1082 systems are rated per ANSI/EIA RS-426-A Loudspeaker Power Rating, Full Range Test, which uses a shaped-random-noise signal to simulate typical music to test the mechanical and thermal capabilities of the loudspeakers. Specifically, the Xi-1082 passes the ANSI/EIA RS-426-A power test with the following test parameters:

$P_{E(MAX)}$:	175 watts
Test Voltages:	34.2 volts rms
	68.3 volts peak
$R_{SR}(1.15 R_E)$:	6.67 ohms

Suspending the Xi-1082

The Xi-1082 is fitted with several threaded inserts and can be suspended as follows:

1. Two 3/8-16 threaded inserts are located on each side of the enclosure to allow the use of the Mb1082 mounting bracket. The Mb1082 is a universal U-bracket designed to allow the suspension of the Xi-1082 at any angle and orientation from

X-Array Install™ Xi-1082 Loudspeaker System

the wall or ceiling. Full instructions are included with the Mb1082.

2. OmniMount Series 100 support system. Four 5/16-18 threaded inserts are located in the rear panel to allow use of the OmniMount Series 100 support system. Full instructions can be obtained from:
OmniMount Systems, Inc.
1501 W. 17th St.
Tempe, AZ 85281
Tel: 602/829-8000
Fax: 602/756-900.

WARNING: It is the responsibility of the installer to ensure that the mounting surface has sufficient rigidity to support the Xi-1082 and that the mounting bracket is correctly fitted to the surface and to the Xi-1082. Suspending an object is potentially dangerous and should only be attempted by individuals who have a thorough knowledge of the techniques and regulations of rigging objects overhead. It is the responsibility of the installer to ensure the Xi-1082 is safely installed in accordance with applicable regulations. If the Xi-1082 is suspended, Electro-Voice strongly recommends that the system be inspected at least once a year. If any sign of weakness or damage is detected, remedial action should be taken immediately.

Architects' And Engineers' Specifications

The loudspeaker system shall be a two-way, vented type, consisting of a 203-mm (8.0 in.) direct-radiating driver with a compression driver with a 25.4-mm (1.0 in.) exit mounted on a 90° x 40° constant-directivity horn. Power handling shall be 175 watts of pink noise with a 6-dB crest factor for eight hours (as per ANSI/EIA RS-426-A 1980 standard). Frequency response shall be smooth and usable at high SPL levels from 50 Hz to 20 kHz with pressure sensitivity of 91 dB for 1 watt at 1 meter. Impedance shall be 8 ohms nominal, 6 ohms minimum. The system shall have a distribution pattern with 90° nominal horizontally from 3 kHz to 16 kHz and 40° nominal vertically from 3 kHz to 20 kHz. The loudspeaker enclosure shall be constructed of 18-mm thick plywood, trapezoidal in shape, internally lined with sound-absorbing material. The finish of the enclosure

shall be textured black. A black metal removable grille with foam backing shall be provided. The loudspeaker enclosure dimensions shall be 488-mm (19.23 in.) high, 235-mm (9.25 in.) wide (front), 150-mm (5.9 in.) wide (back) and 285-mm (11.23 in.) deep. The loudspeaker system shall weigh 13.3 kg (31 lb).

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 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.

Electro-Voice Accessories are guaranteed against malfunction due to defects in materials or workmanship for a period of one (1) year from the date of original purchase. Additional details are included in the Uniform Limited Warranty statement.

Electro-Voice Flying Hardware (including enclosure-mounted hardware and rigging accessories) is guaranteed against malfunction due to defects in materials or workmanship for a period of one (1) year from the date of original purchase. Additional details are included in the Uniform Limited Warranty statement.

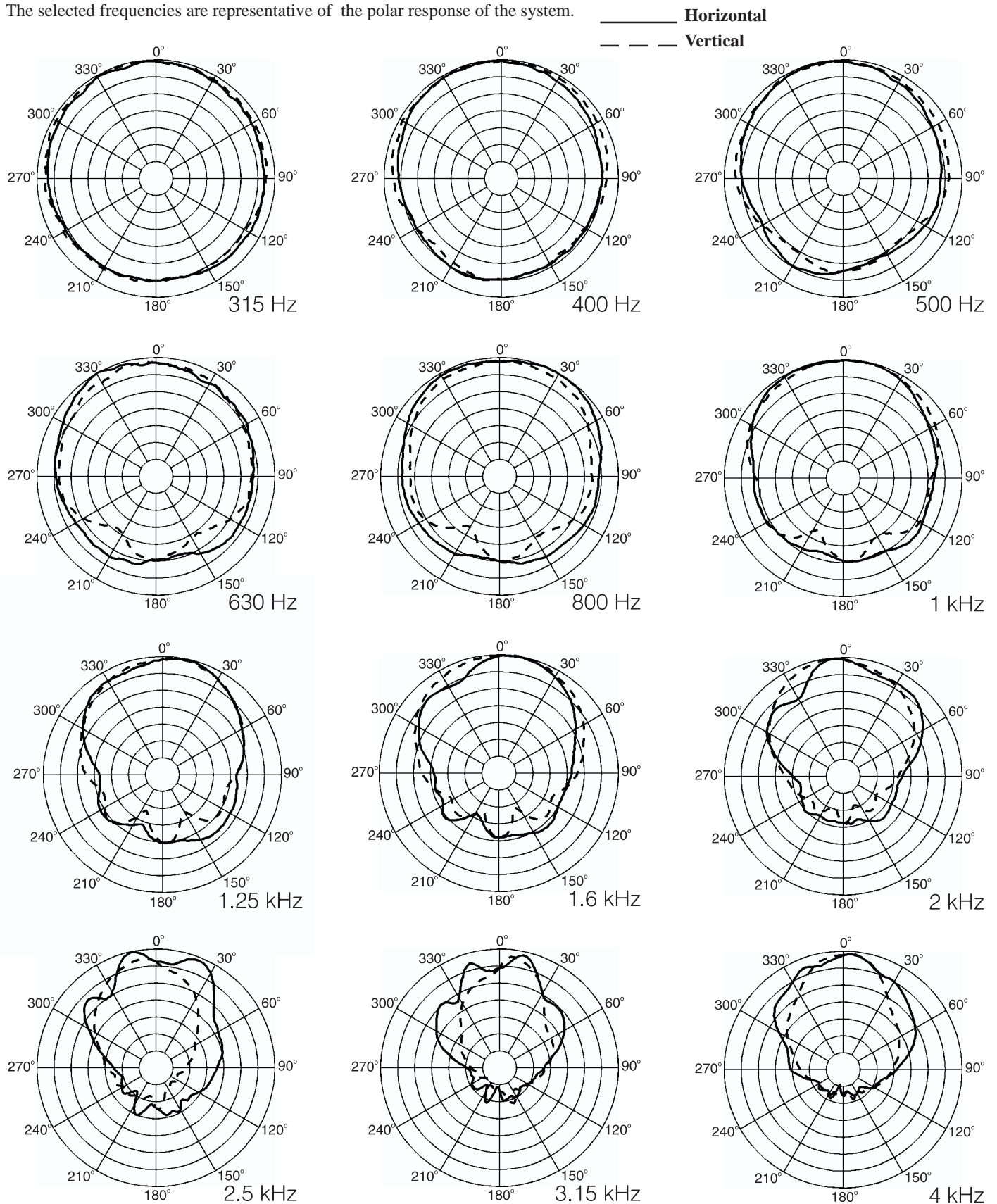
For warranty repair, service information, or a listing of the repair facilities nearest you, contact the service repair department at: 616/695-6831 or 800/685-2606.

For technical assistance, call: 800/234-6831. Specifications subject to change without notice.

X-Array Install™ Xi-1082 Loudspeaker System

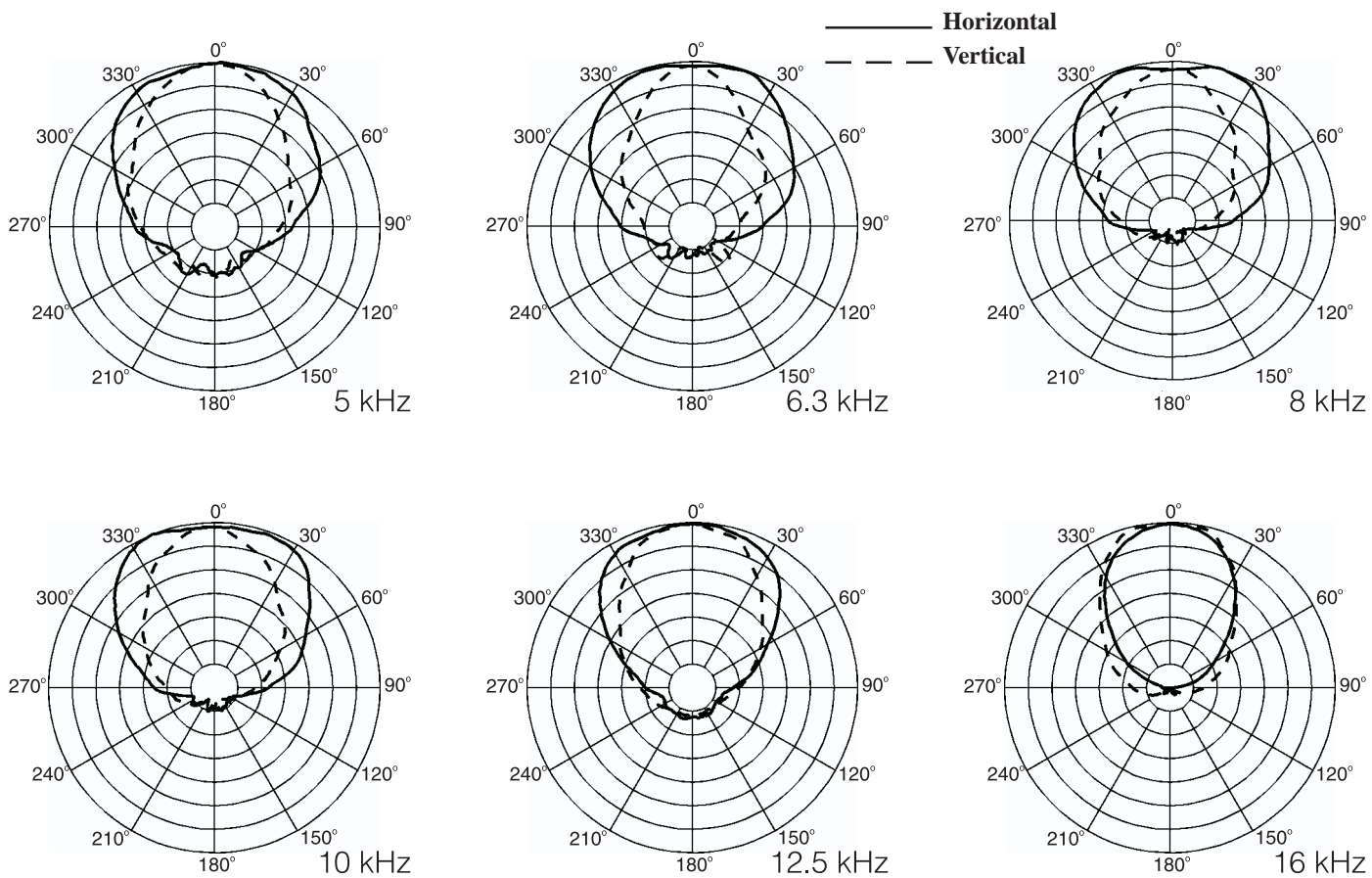
Figure 1— Polar Response

The directional response of the system was measured in an anechoic environment at a distance of 6.1 m (22 feet) using 1/3-octave-filtered pink noise with a full spherical measurement system. The polar response of the loudspeaker system at selected 1/3-octave frequencies is shown. The selected frequencies are representative of the polar response of the system.



X-Array Install™ Xi-1082 Loudspeaker System

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Figure 2— Axial Frequency Response
(anechoic environment, 1 watt at 1 meter)

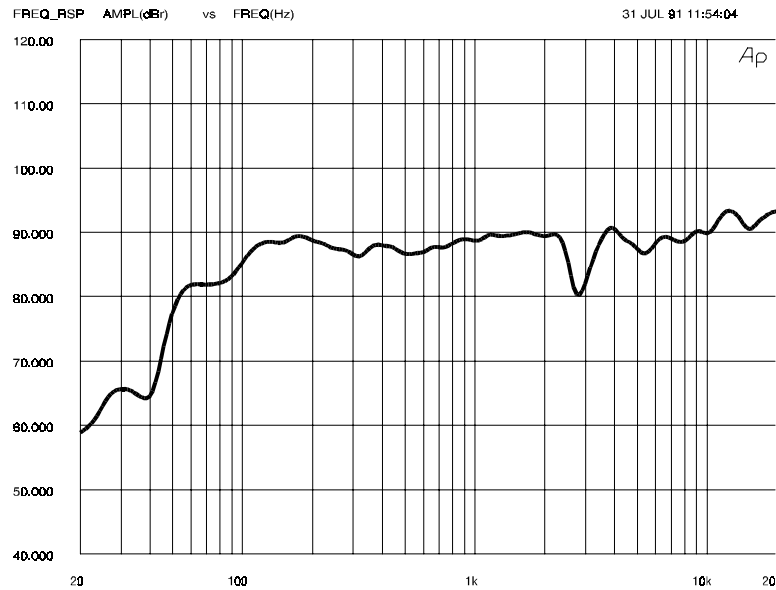


Figure 3— Beamwidth vs. Frequency
(anechoic environment)

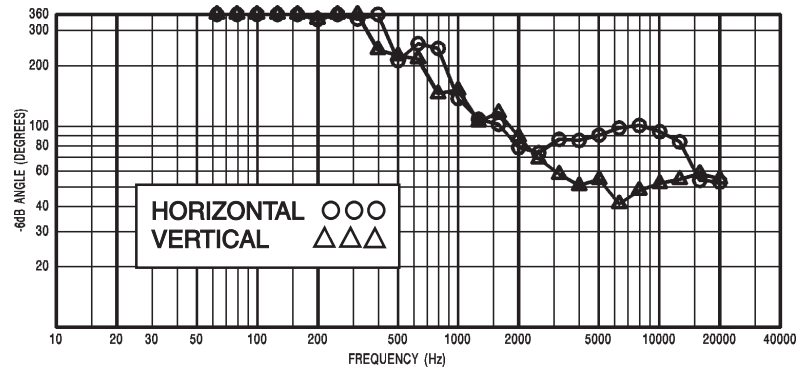
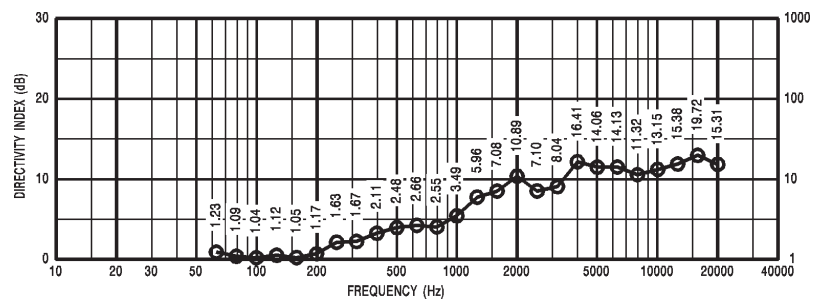


Figure 4— Directivity
(the directivity index, D_i , and directivity factor, $R_0(Q)$, of the system were measured with a full spherical measurement system as described for the "Polar Response.")



X-Array Install™ Xi-1082 Loudspeaker System

Figure 5— Distortion

Distortion for the system was measured on axis in the farfield in an anechoic environment with an input signal that would result in a 10% power rating (17.5 watts). A frequency spectrum typical of close-miked rock music was employed. The sound-pressure level was normalized for an equivalent one-meter distance. Plots of second and third harmonic distortion are shown referenced to the fundamental.

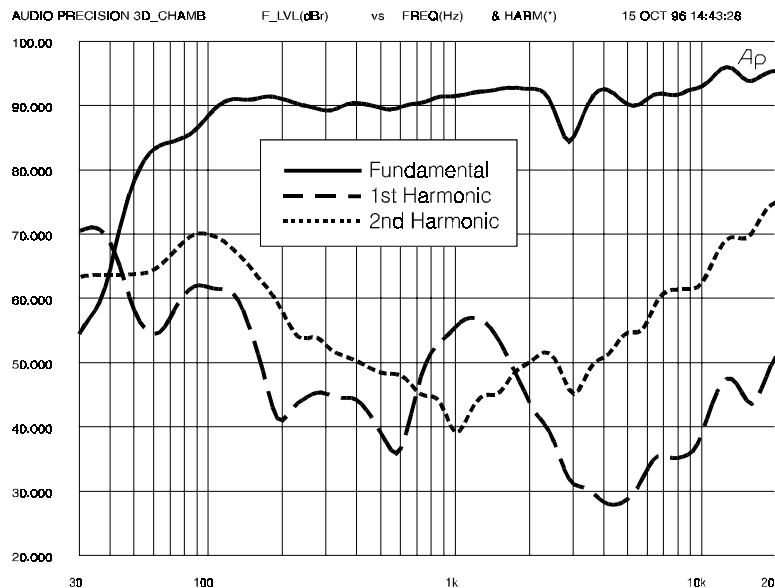
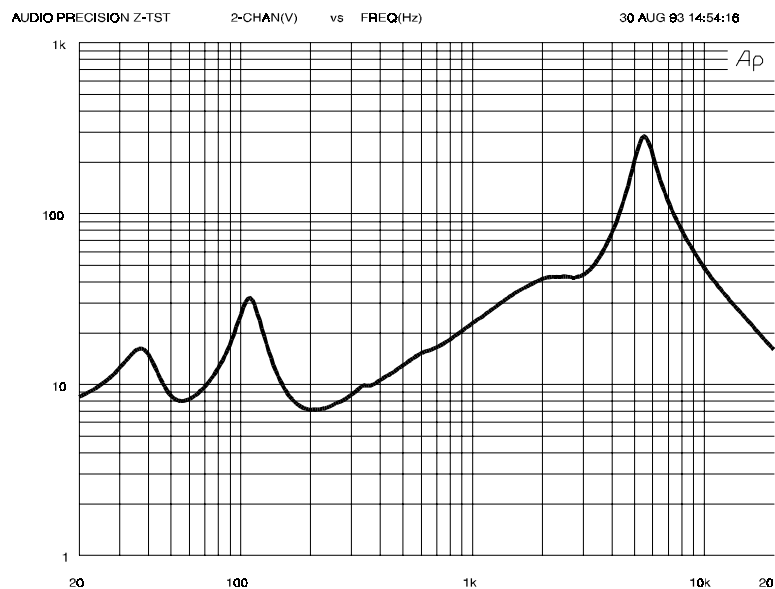
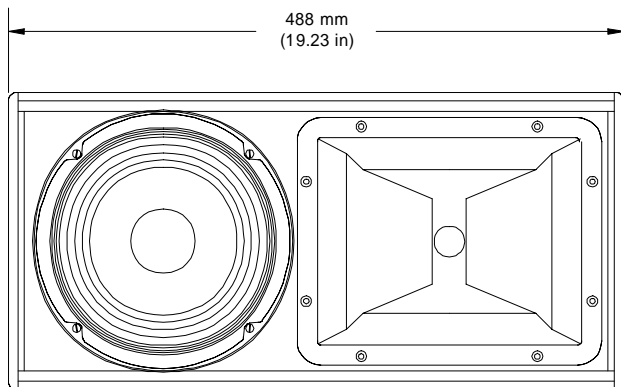


Figure 6— Impedance
(anechoic environment, log scale)



X-Array Install™ Xi-1082 Loudspeaker System

Figure 7 — Dimensions



Specifications

Axial Frequency Response (swept sine wave, 4 volts at 10 feet on axis, anechoic environment normalized for 1 watt/1 meter; see Figure 2):

50-20,000 Hz

Long-Term Average Power-Handling Capacity (per ANSI/EIA RS-426-A 1980; see Power-Handling Capacity section):

175 watts

Sensitivity (SPL at 1 m, 1 W into nominal impedance, anechoic environment, band-limited pink-noise signal, 100-15,000 Hz):

90 dB

Beamwidth (angle included by 6-dB-down points on polar responses, horizontal and vertical planes, indicated one-third-octave bands of pink noise; see Figures 1 and 3),

3,150-16,000 Hz,

Horizontal:

90° +10°/-16°

Vertical:

40° +18°/-0°

Directivity Factor, R_θ (Q), 2,000- to 20,000-Hz Median (see Figure 4):

13.2 (+6.5, -6.1)

Directivity Index, D_i , 2,000- to 20,000-Hz Median (see Figure 4):

11.2 dB (+1.8 dB, -2.7 dB)

Transducer Complement,

Low-Frequency:

8-inch woofer

High-Frequency:

DH3 Compression driver on

HP94 Horn

Box Tuning Frequency:

55 Hz

Crossover Frequency:

3,500 Hz

Crossover Slope:

12 dB

Impedance,

Nominal:

8 ohms

Minimum:

5.8 ohms

Input Connections:

Single barrier strip
with screw terminals

Enclosure Materials:

Plywood with removable grille

Finish:

Black textured paint

Grille:

Black powder-coated steel backed with foam

Suspension: See suspending the Xi-1082 section

Dimensions,

Height:

488 mm (19.23 in.)

Width:

235 mm (9.25 in.) (front)

150 mm (5.9 in.) (back)

Depth:

285 mm (11.23 in.)

Net Weight:

13.3 kg (28 lb)

Shipping Weight:

14.1 kg (31 lb)

Optional Accessories:

Mb1082 wall/ceiling mounting
bracket kit; OmniMount® Series 100
mounting hardware

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Electro-Voice®

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SPEAKERS - X-Array Install

Part Number 535278 — 9907