

ElectroVoice®

a MARK IV company

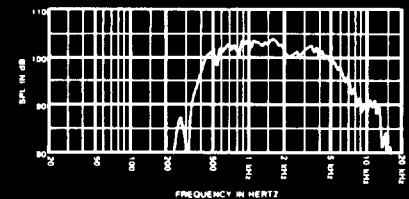


FIGURE 1
Axial Frequency Response 1 Watt/1 Meter
Curved on HR9040A Horn

Model DH2012 High-Frequency Driver

SPECIFICATIONS

The following specifications are in accordance with or exceed the "AES Draft Recommended Practice for Specification of Loudspeaker Components used in Professional Sound Reinforcement Systems - 1983."

Power Frequency Response:
400-16,000 Hz (essentially flat
400-5,000 Hz with 12-dB-per-octave
rolloff to 16,000 Hz, rapid rolloff beyond)

Nominal Impedance:
8 ohms

**Minimum Impedance, on HR Series Horns
above 500 Hz:**
6 ohms at 5,000 Hz

Nominal dc Resistance:
4.5 ohms

**Long-Term Average Power Capacity on
HR Horns, Indicated Bands of Pink Noise,
8-Ohm Impedance Assumed,**

24 Hours, 10-dB Crest Factor:
40 watts (500-20,000 Hz)

2 Hours, 6-dB Crest Factor:
50 watts (500-20,000 Hz)
70 watts (1,000-20,000 Hz)

**Nominal Efficiency, 1,000-5,000 Hz
Pink Noise, 8-Ohm Impedance Assumed:**
25%

**Maximum Long-Term Acoustic Power
Output (24 hours):**
10 watts

**Recommended Minimum Crossover
Frequency:**
500 Hz

**Sound Pressure Level at 1 Meter,
1 Watt Input Averaged from 500-5,000 Hz:†**

115 dB, HR4020A horn
113 dB, HR6040A horn
111 dB, HR9040A horn
114 dB, HR40 horn
112 dB, HR60 horn
110 dB, HR90 horn
108 dB, HR120 horn

Voice-Coil Diameter:
7.6 cm (3.0 in.)

Voice-Coil Construction:
Rectangular, edge-wound aluminum
wire on an aluminum form integrally a
part of the diaphragm dome

Diaphragm Construction:
Aluminum dome with geometrically
optimized polyimide surround

Electrical Connection:
The DH2012 is fitted with a pair of
screw terminals identified as T1 and T2.
A positive electrical signal applied to
the T1 (+) terminal will displace the
diaphragm away from the listener, thus
producing a negative acoustic pressure.

Mechanical Connection:
Bolt-on
(4 equally spaced holes on a 3.5-in.
diameter circle, ¼"-20 threads, bolts
supplied with HR series horns)

Dimensions (see Figure 2):
19 cm (7.5 in.) overall diameter
7.1 cm (2.8 in.) overall depth

Net Weight:
6.72 kg (14.8 lb)

Shipping Weight:
7.13 kg (15.7 lb)

DESCRIPTION

The Electro-Voice DH2012 is a high-performance high-frequency driver capable of unprecedentedly high acoustic power output over a wide frequency range.

This performance results from careful engineering and design, involving expert choices of materials and advanced driver architecture which are most ideally suited for efficient presentation of high-quality musical and communication program material.

Features of the DH2012 include:

- 1) A unique integral diaphragm and coil form which provides a high stiffness-to-weight ratio for extended response as well as efficient heat dissipation for excellent power handling. Advanced metal forming technology developed at EV allows manufacture of this difficult geometry from high-strength aluminum alloy only 0.002-inch thick.
- 2) A polyimide diaphragm suspension geometrically optimized for extended fracture-free excursion and excellent control of high-frequency breakup.
- 3) A precision, lightweight drive coil made from pure aluminum rectangular wire which gives the DH2012 high magnetic motor strength and maximum efficiency. Proprietary high-temperature winding and electrical bonding technologies assure excellent coil reliability and performance.
- 4) A phase-plug design giving optimum upper-octave response.

† Measured on axis in the far field with 1 watt input of band-limited pink noise from 500-5,000 Hz and calculated to 1 meter equivalent by inverse square law

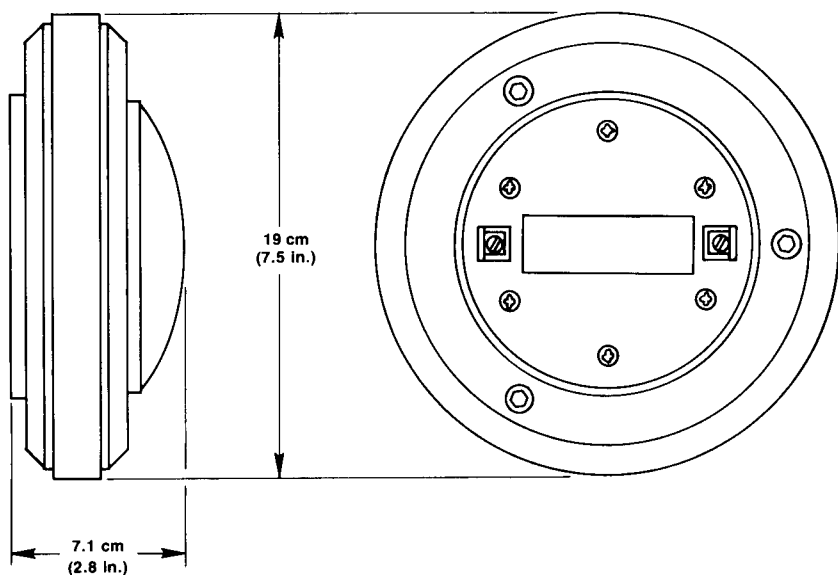


FIGURE 2
Dimensions

RECOMMENDED HORNS

The following Electro-Voice horns are recommended for use with the DH2012: HR4020A, HR6040A, HR9040A, HR40, HR60, HR90 and HR120.

CROSSOVER AND EQUALIZATION

As with all horn-driver combinations that combine high overall efficiency with constant directivity, the DH2012 and HR-series horns provide "raw" or unequalized frequency response that rolls off above 3,000 Hz or so, at about 6 dB per octave. Figure 3 shows the DH2012 on an HR9040A horn, with and without equalization. The equalization has been provided by an Electro-Voice XEQ-2 crossover/equalizer equipped with the EQK equalization module. While the equalization of a constant-directivity horn/driver combination can be achieved with a conventional one-third-octave equalizer, the use of the XEQ-2 active crossover/equalizer with the appropriate accessory EQ module is recommended. This way, the broad-band equalization required by the horn/driver combination is supplied by the crossover/equalizer network, and the one-third-octave equalizer can be devoted to correcting the more subtle room- and array-related response anomalies. The following EQ modules are available for the DH2012:

Module	Horn(s)
EQG	HR90
EQH	HR120; SM120A
EQJ	HR40; HR60
EQK	HR4020A; HR9040A
EQL	HR6040A

Refer to the XEQ-2 engineering data sheet for more information on XEQ-2 performance and application.

For passively crossed over systems, the XEQ804 and XEQ808 crossover/equalizers are available.

FIELD REPLACEMENT

In case of voice-coil or diaphragm failure, the diaphragm cover sub-assembly on the rear of the driver can be field replaced by the removal of six cover screws. A replacement kit with instructions may be ordered under Electro-Voice Part No. 81015XX from the Electro-Voice Service Department in Buchanan, Michigan. If desired, the complete driver may be returned for service.

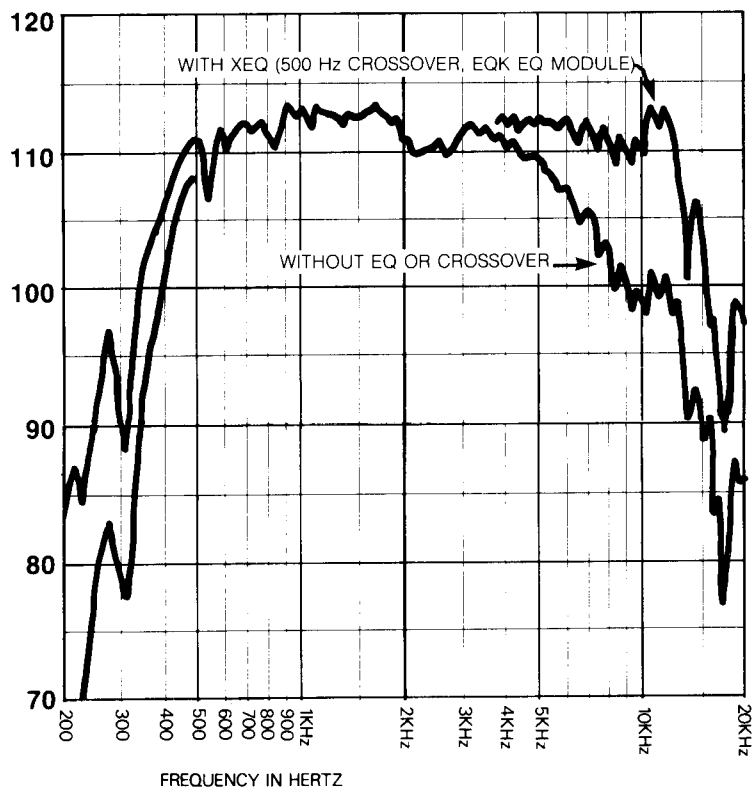


FIGURE 3
Axial Frequency Response with and without Equalization, 1 Watt/1 Meter, HR9040A Horn

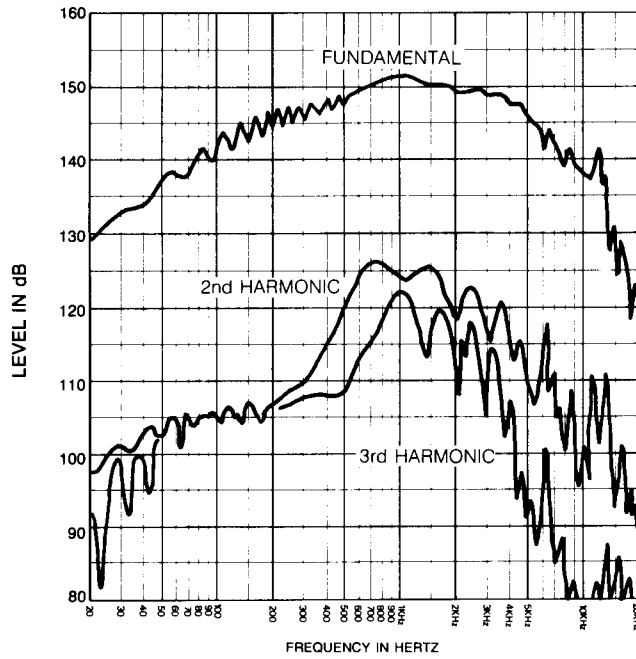


FIGURE 4
Distortion Response,
1-Inch Plane-Wave Tube, 4 Watts

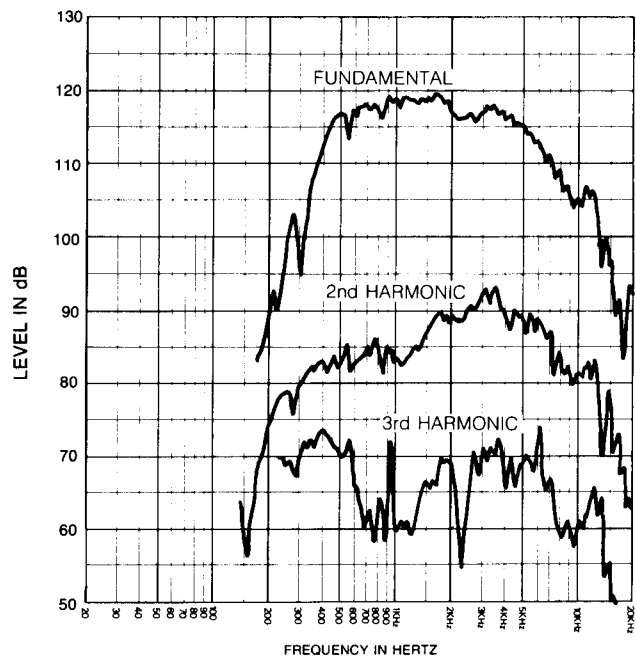


FIGURE 5
Distortion Response,
HR9040A Horn, 4 Watts/1 Meter

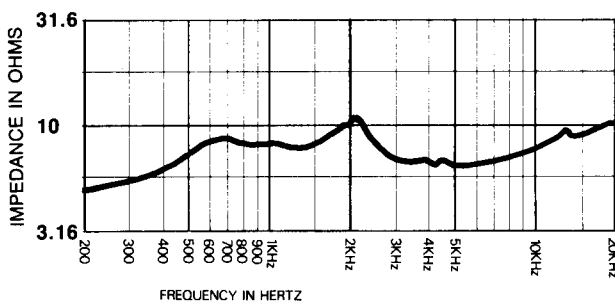


FIGURE 6
Impedance Response — 1-Inch Plane-Wave Tube

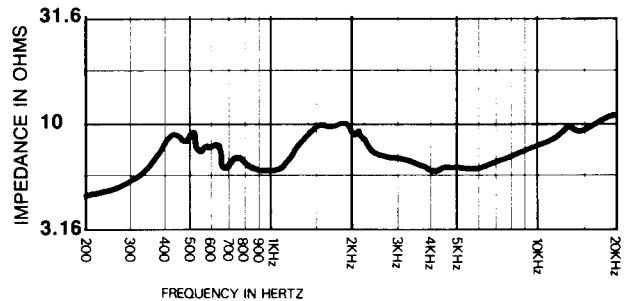


FIGURE 7
Impedance Response — HR9040A Horn

WARRANTY (Limited)

Electro-Voice Professional Sound Reinforcement Loudspeakers and Accessories are guaranteed for five years from date of original purchase against malfunction due to defects in workmanship and materials. If such malfunction occurs, unit will be repaired or replaced (at our option) without charge for materials or labor if delivered prepaid to the proper Electro-Voice service facility. Unit will be returned prepaid. Warranty does not cover finish or appearance items or malfunction due to abuse or operation at other than specified conditions. Repair by other than Electro-Voice or its authorized service agencies will void this guarantee.

For shipping address and instructions on return of Electro-Voice products for repair and locations of authorized service agencies, please write: Service Department, Electro-Voice, Inc., 600 Cecil Street, Buchanan, Michigan 49107 (Phone: 616/695-6831) or Electro-Voice West, 8234 Doe Avenue, Visalia, California 93277 (Phone: 209/625-1330,-1).

Electro-Voice also maintains complete facilities for non-warranty service.

Service and repair address for this product:
Electro-Voice, Inc., 600 Cecil St.,
Buchanan, Michigan 49107

Specifications subject to change without notice.



ELECTRO-VOICE, INC., 600 Cecil Street, Buchanan, Michigan 49107

MANUFACTURING PLANTS AT ■ BUCHANAN, MI ■ NEWPORT, TN ■ SEVIERVILLE, TN ■ OKLAHOMA CITY, OK ■ GANANOQUE, ONT.
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