DH1Amt
DH1Amt-16

High-Frequency Reproducers

General Product Description

The Electro-Voice® DH1Amt is a world-class, high-frequency compression driver configured to be used in pairs with the MTA-22 high-frequency summation system.

This performance results from careful engineering and design, involving expert choices of material and advanced driver architecture which are ideally suited for efficient presentation of high-quality musical and communication program material. Features of the DH1Amt include:

1. A unique, geometrically-optimized diaphragm consisting of a one-piece dome and suspension fabricated from titanium. Advanced metal forming and processing technology developed by EV engineers allows this high elongation diaphragm design to be formed from .0015-inch thick material.

   The combination of diaphragm geometry and material choice gives the DH1Amt diaphragm an ideal combination of superb high-frequency response and resistance to fatigue from stress.

2. A magnetic drive system which provides unsurpassed amplifier-to-diaphragm coupling. This gives the DH1Amt unusual bandwidth extension, high efficiency and a musical depth and transient clarity not normally associated with compression drivers. The drive system consists of the following advanced features:

   a) An optimized and balanced magnetic circuit which provides a flux density of 2.1 Tesla (21 kilogauss). This represents the highest flux density currently available.

   b) A precision, lightweight voice-coil made from pure aluminum rectangular wire, which gives the DH1Amt high motor strength and maximum efficiency.

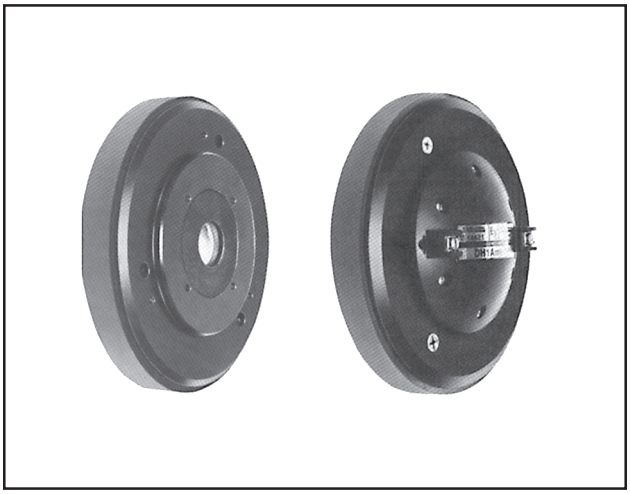
      Proprietary high-temperature winding and electrical bonding technologies assure excellent coil reliability and performance

   c) EV-exclusive PROTEF™ (Patent no. 4547632) voice-coil protection, a Teflon®-based coating, applied to the top plate. Occasionally, violent power peaks of several seconds in duration may expand a normal driver's voice coil into contact with the top plate, causing deterioration. With the PROTEF™ coating, added protection is provided; the coating lubricates any rubbing contact and provides direct electrical insulation between the coil and the steel top plate. This feature is unique for compression drivers and is a result of Electro-Voice's exclusive "Total Thermal Engineering" approach to loudspeaker design.

3. A phase-plug design giving optimum upper-octave response.

4. Screw-type input terminals, which are an EV exclusive. They provide an unusually positive electrical connection. Each terminal will easily accept a pair of 12-gauge wires, and any smaller size. These special terminals were designed using the results of an extensive field survey of consultants and sound-system installers.

5. An integral diaphragm assembly and protective cap which is an EV-exclusive design. This allows for a single operation for diaphragm removal and acts as an effective out-of-driver diaphragm protection.



Recommended Horns

The following Electro-Voice horns are recommended for use with the DH1A: HPS64, HP85, HP99, HP99P.

Architects' and Engineers' Specifications

The loudspeakers shall be of the compression-driver type consisting of a titanium diaphragm joined to an edge-wound aluminum ribbon voice coil on a polyimide form.

The nominal impedances shall be 8 ohms (DH1Amt) and 16 ohms (DH1Amt-16).

The loudspeakers exhibit essentially flat power response from 500 to 5,000 Hz, with a smoothly rolled-off response from 5,000 to 20,000 Hz. Their efficiency shall not be less than 25%. Their sensitivity, when mounted on an EV HP4020 horn, shall be 115 dB (1 W/1 m) with a 500 to 5,000 Hz pink-noise signal applied.

The loudspeakers shall be capable of handling a 50 watt, 500 to 20,000 Hz pink-noise signal with a 6-d8 crest factor (200 watts peak) for a period of 24 hours. In addition, they shall be capable of handling a 75 watt, 1,000 to 20,000 Hz pink-noise signal, with 6-dB crest factor, for a period of two hours.

The loudspeakers shall have a diameter of 22.5 cm (8.88 in.) and a depth of 14.0 cm (5.50 in.). They shall have a 1.4 inch throat opening, with four ¼-20 threaded bolt holes on a 3.5 inch diameter circle for mounting. They shall weigh no more than 10.6 kg (23.3 lbs).

The loudspeakers shall be the Electro-Voice model DH1Amt and model DH1Amt-16 compression drivers.

Specifications:

The following specifications are in accordance with or exceed the AES Recommended Practice for Specification of Loudspeaker Components Used in Professional Audio and Sound Reinforcement (AES2-1984; ANSI 54.26-1984).

Power Frequency Response:

500-20,000 Hz (essentially flat 500-5,000Hz with 6-dB-per-octave roll off to 20,000 Hz, rapid roll off beyond)

Nominal Impedance:

DH1Amt: ..... 8 ohms
DH1Amt-16: ..... 16 ohms

Minimum Impedance, on HP Series Horns Above 500 Hz:

DH1Amt: ..... 7 ohms at 6,000 Hz
DH1Amt-16: ..... 14 ohms at 6,000 Hz

DC Resistance:

DH1Amt: ..... 4.5 ohms
DH1Amt-16: ..... 10.5 ohms

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

24 Hours, 6-dB Crest Factor: ..... 50 watts (500-20,000 Hz)
2 Hours, 6-dB Crest Factor: ..... 75 watts (1000-10,000 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 Hz to 5,000 Hz:[1]

114 dB, HP420 horn
112 dB, HP640 horn
110 dB, HP940 horn
108 dB, HP1240 horn

Throat Diameter: ..... 3.56 cm (1.4 in.)

Voice Coil Diameter: ..... 7.62 cm (3.00 in.)

Voice Coil Construction:

Rectangular edge-wound pure aluminum wire on a high-temperature polyimide form.

Diaphragm Construction:

Integral all-titanium construction consisting of spherical diaphragm dome and geometrically optimized suspension; a low fatigue, high temperature, long-duration-cure engineering polymer bonds the coil form to the diaphragm.

Electrical Connection:

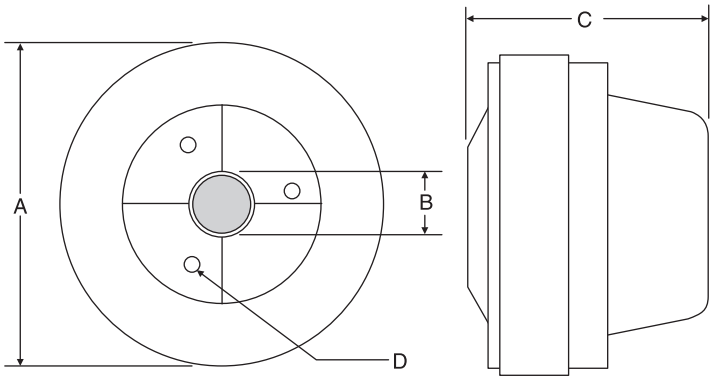
Screw terminals, each of which will accept a pair of 12-gauge wires and any smaller size.

Polarity:

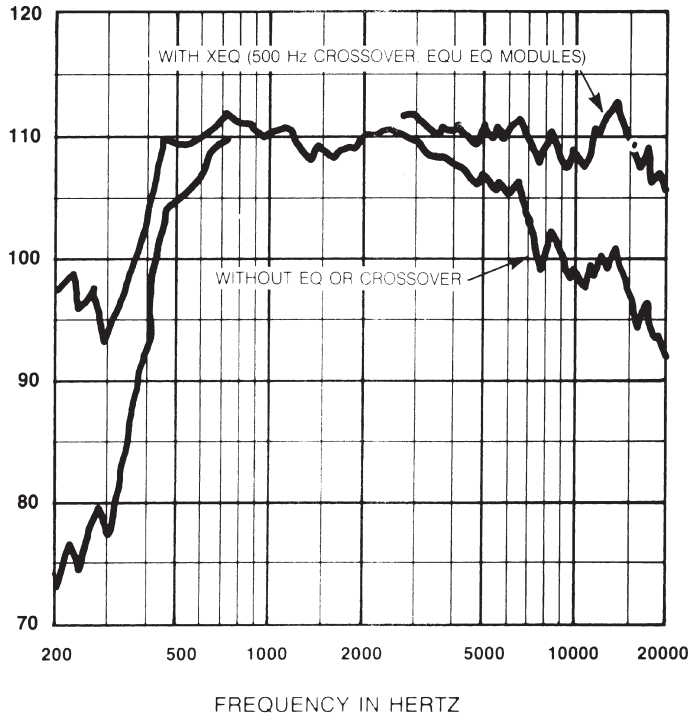
A positive voltage applied to the positive (+) terminal produces a positive acoustic pressure in the throat.

Net Weight: ..... 10.6 kg (23.3 lb)

[1] Measured axis in the far field with 1 watt input of band-limited pink-noise from 500-5,000 Hz end calculated to 1 m or equivalent by Inverse square law.



Dimensions: (in)	
A	8.38
B	1.3
C	2.75
D	1/4 - 10



Axial Frequency Response with and without Equalization, 1 Watt/1 Meter, HP9040 Horn

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Electro-Voice®

U.S.A. and Canada only.
For customer orders, contact the Customer Service department at 800/392-3497 Fax: 800/955-6831
For warranty repair or service information, contact the Service Repair department at 800/685-2606
For technical assistance, contact Technical Support at 866/78AUDIO
Please refer to the Engineering Data Sheet for warranty information.
Specifications subject to change without notice.