beyma
PROFESSIONAL LOUDSPEAKERS

WL-4

LINE ARRAY DRIVER

KEY FEATURES

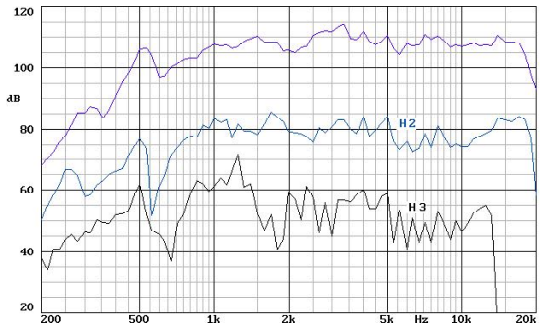
- Wave guide fulfilling requirements for Line Array applications.
- 4'' x 0.5'' rectangular exit
- Neodymium magnetic circuit for high efficiency.
- Effective acoustical coupling up to 18 kHz.
- True 105 dB sensitivity 1w @ 1m (averaged 1-7 kHz).
- Extended frequency range: 0.7 - 20 kHz.
- 1.75" voice coil for excellent power handling (40 w AES).



GENERAL DESCRIPTION

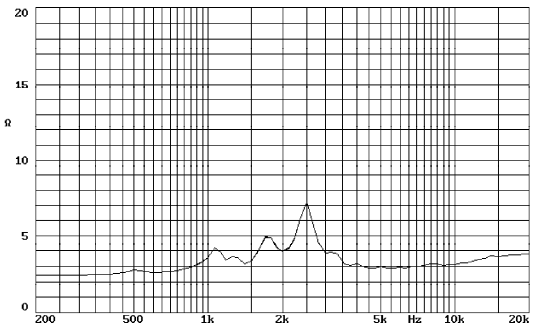
This combination of high power neodymium compression driver with wave guide gives a straightforward solution to build a Line Array System, solving the difficult problem of achieving an optimum coupling between adjacent high frequency transducers. Instead of using expensive and complicated wave-shaping devices, a simple but effective wave guide transforms the circular aperture of the compression driver into a rectangular surface, without excessive angle aperture to provide low curvature to the acoustic wavefront, arriving to fulfill the curvature requirement for optimal acoustic coupling between adjacent sources until 18 kHz. This is achieved with the minimum possible length for low distortion, but without being excessively short, which would cause strong high frequency interferences. This waveguide can be combined with loudspeakers of different diameters but it specially matches with 8'', 6" and 5" loudspeakers.

FREQUENCY RESPONSE AND DISTORTION CURVES

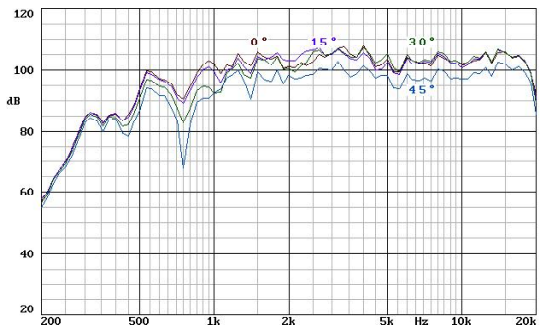


Note: on axis frequency response measured with two waveguides coupled to a 90º x 5º horn in anechoic chamber, 1w @ 1m.

FREE AIR IMPEDANCE CURVE

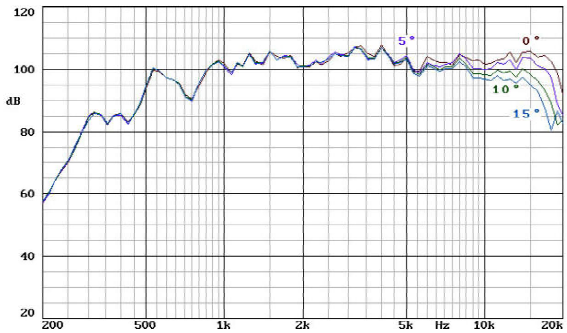


HORIZONTAL DISPERSION



Notes: dispersion measured with two waveguides coupled to a 90º x 5º horn in anechoic chamber, 1w @ 2m.
All angle measurements are from the axis (45º means ±45º)

VERTICAL DISPERSION



Notes: dispersion measured with two waveguides coupled to a 90º x 5º horn in anechoic chamber, 1w @ 2m.
All angle measurements are from the axis (45º means ±45º)

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TECHNICAL SPECIFICATIONS

Throat diameter	20.5 mm. 0.8 in.
Rated impedance	8 ohms.
Minimum impedance	5.5 ohms. @ 4.5 kHz
D.C. Resistance	4.5 ohms.
Power capacity *	40 w AES above 1.5 kHz
Program power	80 w above 1.5 kHz
Sensitivity **	105 dB 1 w @ 1m coupled to a 90º x 5º horn
Frequency range	0.7 - 20 kHz
Recommended crossover	1500 Hz or higher (12 dB/oct. min.)
Voice coil diameter	44.4 mm. 1.75 in.
Magnetic assembly weight	0.6 kg. 1.32 lb.
Flux density	1.8 T
BL factor	8 N/A

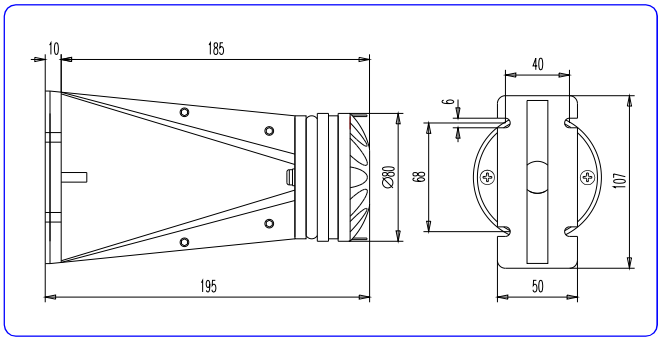
MOUNTING INFORMATION

Overall diameter	80 mm. 3.15 in.
Depth	195 mm. 7.68 in.
Mounting	Four 6 mm. diameter holes
Net weight (1 unit)	1.1 kg. 2.42 lb.
Shipping weight (2 units)	2.6 kg. 5.72 lb.

MATERIALS

- **Waveguide:** aluminium.
- **Driver diaphragm:** polyester.
- **Driver voice coil:** edgewound aluminium ribbon wire.
- **Driver voice coil former:** kapton.
- **Driver magnet:** neodymium.

DIMENSION DRAWINGS



Notes:

*The power capacity is determined according to AES2-1984 (r2003) standard.
Program power is defined as the transducer's ability to handle normal music program material.
**Sensitivity was measured at 1 m distance, on axis, with 1 w input, averaged in the range 1-7 kHz.

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