

4646A Low Frequency System

Professional Series

Key Features:

- ▶ Usable Response to 50 Hz
- ▶ 96 dB Sensitivity, 1 W, 1 m
- ▶ 600 Watts Power Capacity
- ▶ Direct Radiator Ported Enclosure



The JBL 4646A low frequency system is designed for smaller reinforcement applications and as an individual module in cluster design. Power response is smooth, and axial response extends to 2000 Hz.

The system uses the 2206H 300 mm (12 in) patented Vented Gap Cooling™ transducer for high power handling and reduced power compression. The transducer features a 100 mm (4 in) voice coil operating in a large symmetrical field geometry (SFG) magnet structure to reduce a second harmonic distortion to inconsequential levels. Total linear excursion capability of the transducer is 14 mm (0.55 in), peak to peak.

The enclosure is constructed of dense stock. Net internal volume is 34 l (1.2 cu ft), and the enclosure is tuned to 60 Hz. Port area is large, ensuring minimum turbulence at full power input at low frequencies.

Specifications:

COMPONENTS:		1-JBL 4512 low frequency enclosure 1-JBL 2206H low frequency transducer (Note: Components may be ordered separately for field assembly.)
SYSTEM SPECIFICATIONS:		
Rated impedance:		8 ohms
Minimum impedance:		7 ohms
Input power rating:		600 watts, continuous pink noise
Axial sensitivity:		96 dB, 1 W, 1 m
Half-space reference efficiency:		1.7%
Maximum continuous acoustical power output (sine wave input):		2.6 watts
Maximum continuous SPL (sine wave input):		Half-space at 1 m (3.3 ft): 118 dB Half-space at 3 m (10 ft): 108 dB Half-space at 30 m (100 ft): 88 dB
Recommended crossover frequencies:		High-pass: 60 Hz, 12-dB/octave Low-pass: 800, or 1200 Hz, 12- or 18-dB/octave
System polarity:		Positive voltage to black terminal produces forward cone motion
Input connectors:		Color coded push terminals
Net system weight:		18 kg (40 lb)
ENCLOSURE SPECIFICATIONS:		
Materials and finish:		19 mm (¾ inch) particle board; matte black finish
Enclosure volume:		34 l (1.2 cu ft)
Vent tuning frequency:		60 Hz
Dimensions:		406 mm x 470 mm x 273 mm H x W x D (18¾ in x 16¼ in x 10¾ in)
Net weight:		16.4 kg (36 lb)

¹ AES pink noise.

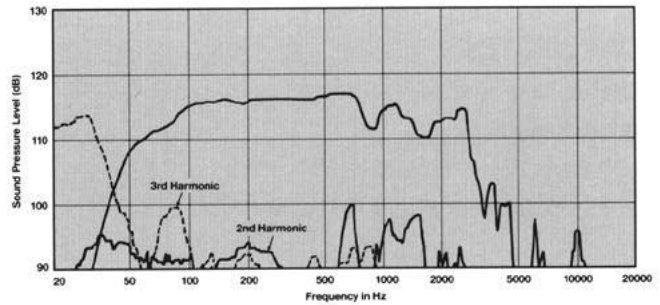
JBL continually engages in research related to product improvement. New materials, production methods, and design refinements are introduced into existing products without notice as a routine expression of that philosophy. For this reason, any current JBL product may differ in some respect from its published description, but will always equal or exceed the original design specifications unless otherwise stated.

▶ 4646A Low Frequency System

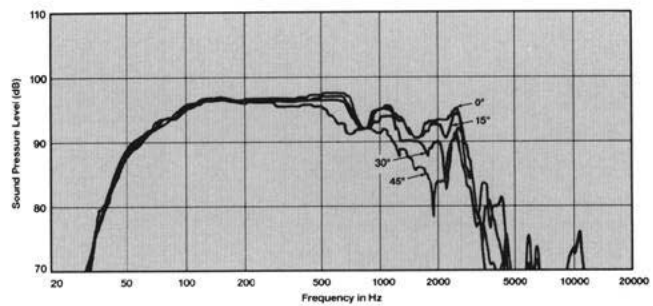
Architectural Specifications:

The low frequency system shall consist of one 305 mm (12 in) diameter transducer mounted in a direct radiator ported enclosure. The transducer shall be capable of 14 mm (0.55 in) linear excursion ($2X_{max}$) and shall be designed to produce a symmetrical magnetic field in the voice coil gap. In addition, a flux stabilizing ring encircling the pole piece shall act to reduce flux modulation. The transducer frame shall be of cast aluminum to resist deformation, and the voice coil shall be wound of copper ribbon 100 mm (4 in) in diameter. The enclosure shall be 34 l (1.2 cu ft) net internal volume, tuned to 60 Hz, and constructed of dense stock.

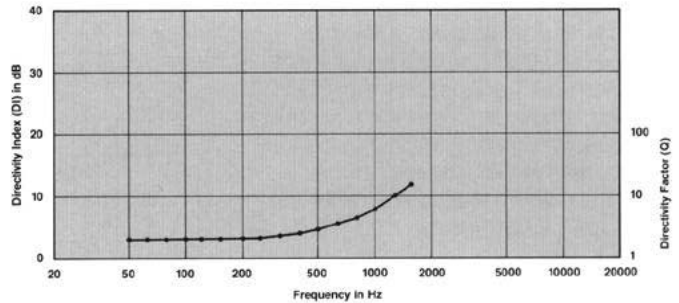
Performance specifications of a typical production unit shall be as follows: Under hemispherical free-field conditions, measured sensitivity (SPL at 1 m (3.3 ft) with 1 W swept input, 100-500 Hz) shall be at least 96 dB. The half-space reference efficiency shall be 1.7%. Usable low frequency response shall extend from 50 Hz (-10 dB) and be flat at 70 Hz (-3 dB). Nominal impedance shall be 8 ohms. Rated power capacity shall be at least 600 watts, normal program material. The system shall be the JBL Model 4646A. Other loudspeaker systems will be considered as equivalent provided that submitted data from a recognized independent test laboratory verify that the above performance specifications are met.



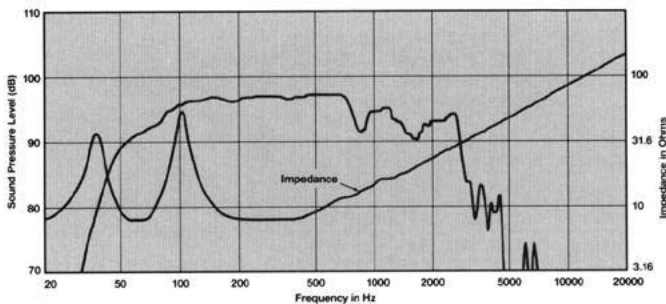
4646A system half-space (2π) response 100 watts at one meter on-axis; distortion raised 20 dB.



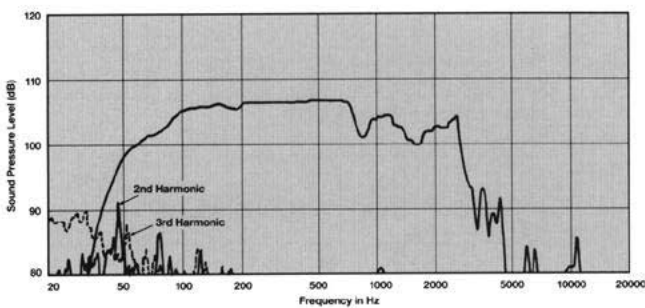
4646A system off-axis response (0, 15, 30 and 45 degrees); one watt at one meter



Directivity Index (DI) and Directivity Factor (Q), on-axis, half-space (2π).



4646A system half-space (27π) response, one watt at one meter on-axis; impedance.



4646A system half-space (27π) response, 10 watts at one meter on-axis; distortion raised 20 dB.



JBL Professional
8500 Balboa Boulevard, P.O. Box 2200
Northridge, California 91329 U.S.A.

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