

JBL

2142H 300 mm (12 in) Coaxial Transducer

Professional Series

Key Features:

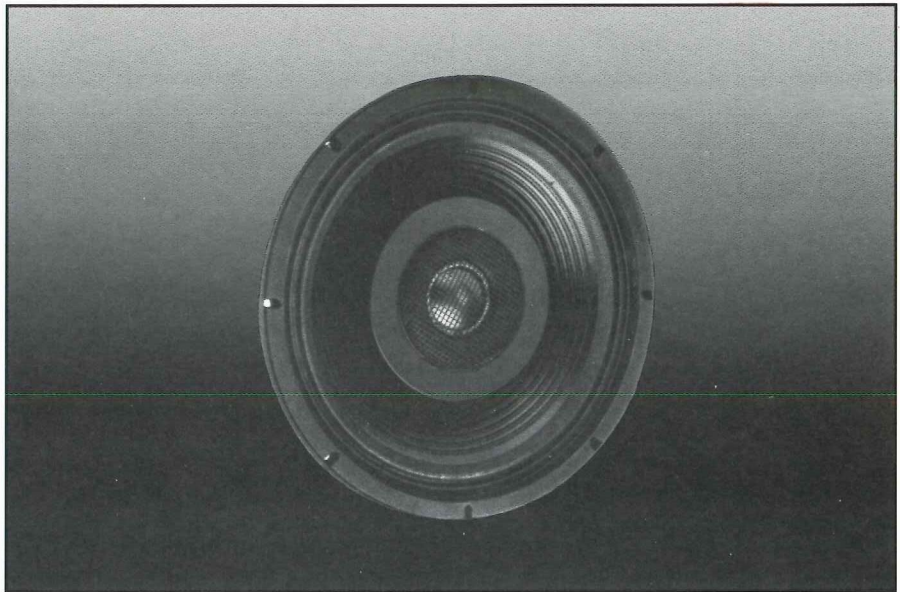
- ▶ New 44 mm (1.75 in) Pure Titanium Dome High Frequency Transducer
- ▶ Frequency Range (– 10 dB): 60 Hz – 22 kHz
- ▶ Sensitivity: 97 dB SPL 1 W, 1 m (3.3 ft)
- ▶ Power Capacity: 90 W IEC Pink Noise
- ▶ Bi-Amplifier Terminals
- ▶ Integral Transformer Mounting Bracket

The JBL 2142H Coaxial Transducer represents the results of JBL's intensive research into the performance and applications of coaxial transducers intended for engineered sound applications. To achieve maximum power handling while maintaining wide bandwidth and consistent dispersion in several critical HF octave bands, JBL engineers developed a new size and configuration 44 mm (1.75 in) high-frequency transducer, incorporating a pure titanium dome with JBL's patented "diamond surround" for control over secondary resonances.

The low frequency driver combines a rugged die-cast frame with a specially designed cone and 51 mm (2 in) voice-coil motor structure that operates in tandem with the HF element to sustain smooth system response and stable dispersion through the crossover region.

An integral transformer mounting bracket, built-in provisions for quick bi-amplifier hookups, and a special snap-off network access cover are all designed to reduce contractor fabrication time in the shop and installer placement time at the site.

In response to consultant and contractor requests, the JBL 2142H was designed to perform well in the most commonly-specified utility metal enclosure and baffle combinations, despite the generally detrimental acoustical properties of those enclosures. Custom-build boxes will usually result in better performance characteristics than those published here.



Preliminary Specifications:

SYSTEM:	
Frequency Range (– 10 dB):	60 Hz – 22 kHz
Power Rating ¹ :	90 W continuous pink noise
Sensitivity ² :	97 dB, 1 W (2.83 V), 1 m (3.3 ft)
Nominal Impedance:	8 ohms
Crossover Frequency:	2.7 kHz
LOW FREQUENCY TRANSDUCER:	
Nominal Diameter:	300 mm (12 in)
Voice Coil Diameter:	51 mm (2 in)
Magnet Weight:	1.1 kg (2.4 lb)
Sensitivity ³ :	93 dB, 1 W (2.83 V), 1 m (3.3 ft)
HIGH FREQUENCY DOME RADIATOR:	
Nominal Diameter:	50 mm (1.95 in)
Voice Coil Diameter:	44 mm (1.75 in)
Magnet Weight:	0.54 kg (1.2 lb)
Sensitivity ⁴ :	98 dB, 1 W (2.83 V), 1 m (3.3 ft)
Dispersion Angle ⁵ :	80° Nominal
GENERAL:	
Polarity:	Positive voltage to (+) terminal on network input gives forward L.F. cone motion
Input Terminations:	2 x 2 barrier strip with removable jumpers to permit bi-amplification
Transformer Mounting:	Integral mounting plate on LF frame
Recommended Enclosure Volume:	3 cu ft
System Net Weight:	5.5 kg (12 lb)

(1) Rating based on test signal of filtered random noise conforming to the international standard IEC 268-1 (pink noise with 12 dB per octave rolloff below 40 Hz and above 5000 Hz with a peak-to-average ratio of 6 dB), 2 hours duration.

(2) Averaged from 500 Hz to 2.5 kHz

(3) Averaged from 100 Hz to 500 Hz

(4) Averaged from 2 kHz to 10 kHz

(5) Included by – 6 dB down points, averaged between 1 kHz and 10 kHz

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THIELE/SMALL PARAMETERS:

F_s : 72 Hz

R_e : 5.2 ohms

Q_{ts} : 0.75

Q_{ms} : 4.2

Q_{es} : 0.92

V_{as} : 45 l (1.6 ft³)

S_D : 0.055 m² (85.25 in²)

X_{max} : 6.4 mm (0.25 in)

V_D : 352 cm³ (21.2 in³)

L_e : 0.85 mH

η_0 (Half space): 1.82%

P_e (Max): 100 W

MOUNTING INFORMATION:

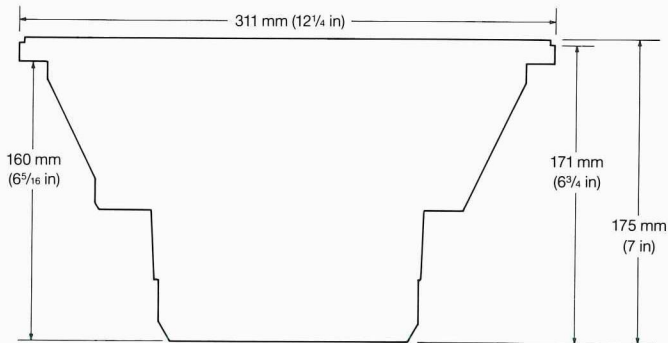
Overall Diameter: 311 mm (12³/₄ in)

Bolt Circle Diameter: 294 mm (11⁹/₁₆ in)

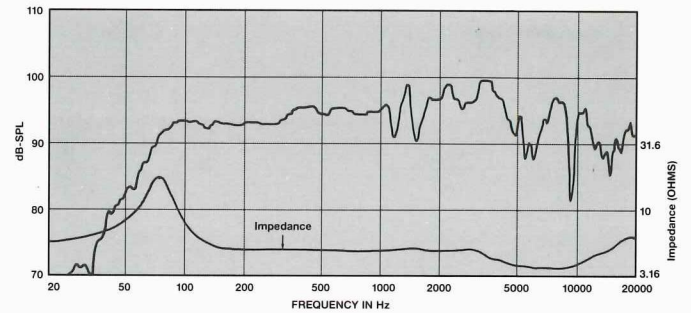
Baffle Cutout Diameter (rear mount): 280 mm (11¹/₁₆ in)

Baffle Cutout Diameter (front mount): 279 mm (11 in)

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.



Frequency Response, 1 W at 1 m; Impedance



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H A Harman International Company

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