

# 2155H 380 mm (15 in) Coaxial Transducer

Professional Series

## Key Features:

- ▶ 44 mm (1.75 in) Pure Titanium Diaphragm HF Compression Driver
- ▶ Flat-Front Bi-Radial® HF Horn
- ▶ Sensitivity: 102 dB SPL 1 W, 1 m (3.3 ft)
- ▶ Power Capacity: 150 W IEC Pink Noise
- ▶ Integral Transformer Mounting Bracket



The JBL 2155H Coaxial Transducer represents the results of JBL's intensive research into the performance and applications of compression-driver coaxial transducers intended for engineered sound applications. To achieve high acoustical power output capability while maintaining smooth response, wide bandwidth and consistent dispersion in several critical HF octave bands, JBL engineers used advanced CAD techniques to apply low-distortion Bi-Radial® horn architecture to a coaxial system, and then combined the new horn with JBL's 2416H High-Frequency Compression Driver.

The 2416H incorporates a pure titanium diaphragm with JBL's patented diamond surround for control over secondary resonances, extended frequency response, and greatly reduced mechanical fatigue. A copper shorting ring on the pole piece controls high-frequency impedance and further improves high-frequency response.

The low frequency driver combines a rugged die-cast frame with a specially designed cone and 76 mm (3 in) edge-wound aluminum ribbon voice-coil motor structure. An integral transformer mounting bracket is pre-attached to the LF transducer frame and also allows quick access to the crossover network.

## Specifications:

SYSTEM:	
Frequency Range ( - 10 dB):	60 Hz - 17 kHz
Power Rating <sup>1</sup> :	150 W continuous pink noise
Sensitivity <sup>2</sup> :	102 dB, 1 W (2.83 V), 1 m (3.3 ft)
Nominal Impedance:	8 ohms
Crossover Frequency:	1.2 kHz
LOW FREQUENCY TRANSDUCER:	
Nominal Diameter:	380 mm (15 in)
Voice Coil Diameter:	76 mm (3 in)
Magnet Weight:	1.45 kg (3.2 lb)
Sensitivity <sup>3</sup> :	101 dB, 1 W (2.83 V), 1 m (3.3 ft)
HF COMPRESSION DRIVER/HORN:	
Nominal Diameter:	44 mm (1.75 in)
Voice Coil Diameter:	44 mm (1.75 in)
Magnet Weight:	1.39 kg (3.1 lb)
Sensitivity <sup>4</sup> :	110 dB, 1 W (2.83 V), 1 m (3.3 ft)
Dispersion Angles:	90° Nominal
GENERAL:	
Polarity:	Positive voltage to (+) terminal on network input gives forward L.F. cone motion
Input Terminations:	Female crimp-on and wire nuts supplied
Transformer Mounting:	Integral mounting plate on LF frame
Recommended Enclosure Volume:	133 l(4.7 cu ft)
System Net Weight:	10 kg (22 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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In response to consultant and contractor requests, the JBL 2152H 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.

### THIELE/SMALL PARAMETERS:

F: 53 Hz

R: 4.2 ohms

$Q_{ts}$ : 0.47

$Q_{ms}$ : 4.47

$Q_{es}$ : 0.53

$V_a$ : 164 l (5.8 ft<sup>3</sup>)

$S_D$ : 0.089 m<sup>2</sup> (138 in<sup>2</sup>)

$X_{max}$ : 2.5 mm (0.1 in)

$V_D$ : 223 cm<sup>3</sup> (13.5 in<sup>3</sup>)

L: 0.48 mH

no (Half space): 4.4%

P (Max): 150 W

### MOUNTING INFORMATION:

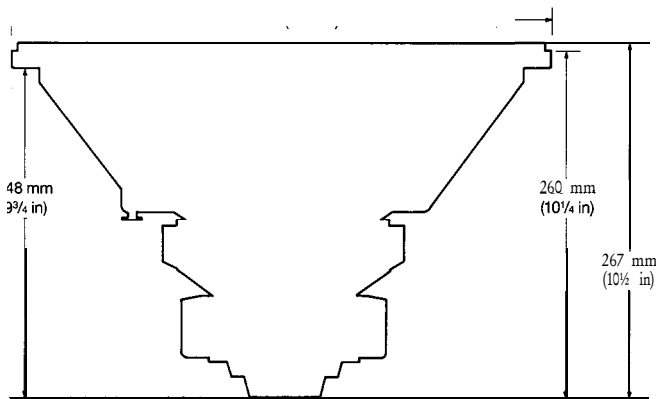
Overall Diameter: 391 mm (15 3/8 in)

Bolt Circle Diameter: 370 mm (14 9/16 in)

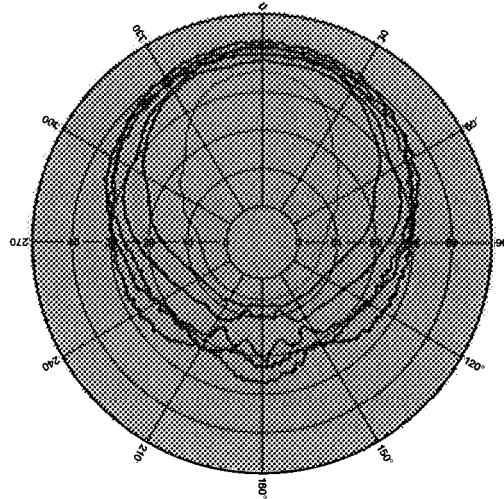
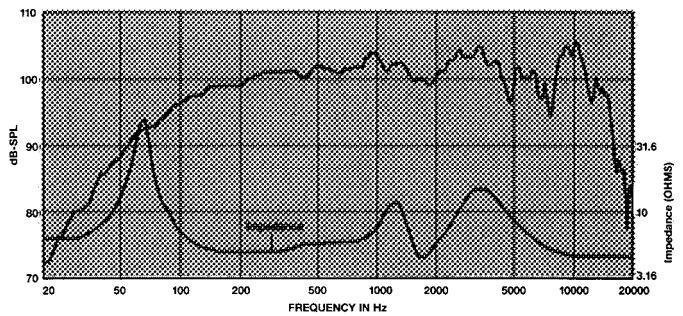
Baffle Cutout Diameter (rear mount): 343 mm (13 1/2 in)

Baffle Cutout Diameter (front mount): 356 mm (14 in)

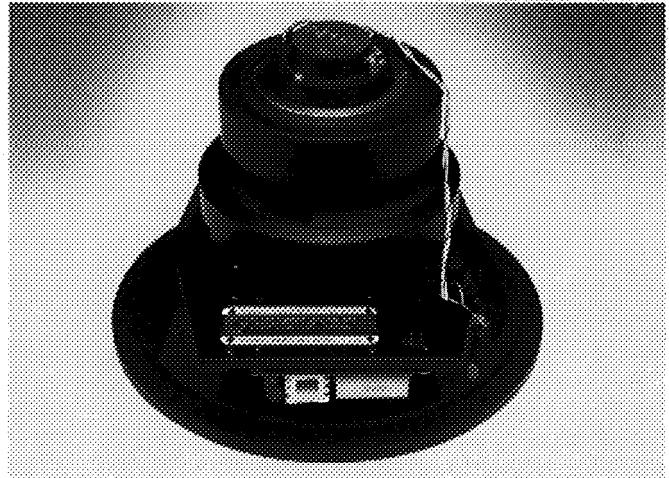
JBL continually engages in research related to product improvement. New materials, production methods, and design refinements are introduced into existing products without notice as a routine expression of that philosophy. For this reason, any current JBL product may differ in some respect from its published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



### Frequency Response, 1 W at 1 m; Impedance



Composite octave polar responses of the 2155H in both horizontal and vertical planes over the range of 500 Hz to 16 kHz (1 meter measurement distance in an anechoic chamber).



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