

JBL

AS2215-STD, AS2215-SP94, AS2215-SP64, AS2215-SP124, AS2215D-SP42

Two-Way Loudspeaker Systems with Single 15-inch Transducer

Architectural Series

Key Features:

- ▶ VGC™ (Vented Gap Cooling™) low-frequency transducer with 100 mm (4 in) diameter edgewound voice coil and SFG™ magnet structure.
- ▶ Large format compression driver with 49 mm (2 in) exit and pure titanium 100 mm (4 in) diaphragm.
- ▶ Compact, light-weight trapezoidal enclosures for accurate cluster design.
- ▶ Rugged black textured finish.
- ▶ Multiple attachment points for efficient mounting.
- ▶ Available in four horn configurations for job-specific applications.
- ▶ Options include: finish, color, input connections, and grilles.

The JBL Architectural Series is a family of modular loudspeaker systems designed for fixed installation in applications ranging from speech reinforcement to large scale music reinforcement. All models in the series can be "customized" to meet specific designer needs in details of finish, mounting, and wiring, resulting in economy and time saving in the field.



Components

All models in the AS2215 group have been designed with JBL's most rugged transducers. The 2226H 380 mm (15 in) low frequency transducer incorporates JBL's exclusive VGC™ (Vented Gap Cooling™) for efficient removal of heat from the voice coil. As a result of VGC, the 2226H carries a continuous power rating of 600 watts, with minimum power compression. Another JBL innovation, SFG™ (Symmetrical Field Geometry™), reduces second and third harmonic distortion to extremely low values, resulting in clean reproduction at the highest drive levels. JBL's continuing research in cone, surround, and suspension materials has made the 2226H an extremely smooth and predictable performer.

The 2446J compression driver used in the AS2215 incorporates two of JBL's important developments in high frequency reproduction. The pure titanium diaphragm is both light and strong; it incorporates a three dimensional embossed pattern which controls high frequency resonances and results in usable response to 18 kHz. The Coherent Wave™ phasing plug equalizes the effective path lengths from the diaphragm to the driver throat, resulting in more efficient collection of acoustical power at high frequencies.

Enclosure

The models in the AS2215 group are housed in a trapezoidal enclosure which facilitates arraying for a wide variety of coverage requirements. The single low frequency transducer in these systems is the JBL model 2226H 380 mm (15 in) featuring VGC™. The enclosure is made of rugged, high-grade birch plywood, and each joint is either dado or rabbet type. The enclosure is finished in textured black and has twelve internal corner mounted steel plate attachment points which accept only $\frac{3}{8}$ in forged shoulder steel eye bolts for maximum safety. The trapezoidal enclosure is tapered front-to-back at 15°, allowing adjacent enclosure splaying at 30°. The enclosure grille is made of black fire retardant, vermin-proof and fade resistant material. The grille cloth is removeable from its hardwood frame for replacement to match decor.

The AS2215 systems are all intended for biamplification and for this purpose come with a standard barrier strip input connector. The recommended crossover frequency range is 500 Hz to 1 kHz, and standard high frequency power response equalization is recommended.

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Options

The AS2215 models differ only in their high frequency sections, and this is indicated by model number suffix. The standard model (AS2215-STD) and the AS2215-SP94 use the 2380A Bi-Radial® horn with its nominal 90°-by-40° coverage. The remaining suffixes are: AS-2215-SP64 (2385A 60°-by-40° horn), AS-2215-SP124 (2382A 120°-by-40° horn) and AS2215D-SP42 (2386 40°-by-20° horn and extra-deep cabinet). All four horn options are in the Flat-Front™ Bi-Radial® group and provide accurate horizontal and vertical pattern control.

In addition to the four basic horn options, the AS2215 systems may also be tailored to specific applications in terms of finish, color, grille options, and input connections.

Optional finishes include a fiberglass covering for increased structural and surface durability, neutral paint which more easily facilitates repainting, and bare wood (premium Finnish birch) which can be stained to meet architectural requirements. Loudspeakers can also be ordered without attachment points.

For continued field support and future recognition of the loudspeaker's configuration, once an option (alternate finish, input connector, horn, etc.) is incorporated into an Architectural Series product, the system is no longer a standard ("STD" suffix) model, but becomes a special ("SP" suffix) model. The list of available options is continually growing. Contact JBL Professional for current Option Code offerings, availability and pricing.

Architects and Engineers Specifications:

The loudspeaker system shall consist of a 380 mm (15 in) low frequency transducer and a high frequency horn with uniform coverage above 1 kHz. The frame of the low frequency transducer shall be made of cast aluminum to avoid warping, and the magnetic assembly shall use a ferrite magnet and an aluminum flux stabilizing ring to reduce distortion. The nominal cone diameter shall be 380 mm (15 in), and the voice coil shall be 100 mm (4 in) in diameter and made of edge-wound aluminum ribbon wire. The low frequency transducer shall be capable of handling 600 watts input power and have an axial sensitivity no less than 97 dB (1 W at 1 m). Power compression in the low frequency transducer shall not exceed 3.9 dB at power input of 600 watts.

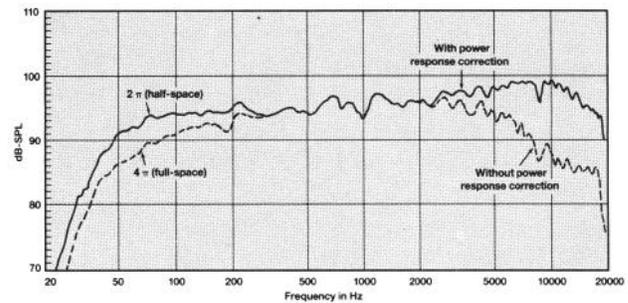
The high frequency section shall be driven by a compression driver capable of 150 watts power input above 1 kHz. The voice coil shall be no less than 100 mm (4 in) in diameter, constructed of edgewound aluminum ribbon wire, and shall operate in a magnetic gap of no less than 1.9 tesla flux density.

The enclosure shall be of trapezoidal shape with front-to-back tapering of 15° per side. The enclosure shall be constructed of high-grade birch plywood, finished with water-resistant paint, and provided with no less than twelve attachment points. Outer dimensions of the enclosure shall not exceed 826 mm H x 603 mm W x 572 mm D (32½ in x 23¾ in x 22½ in).

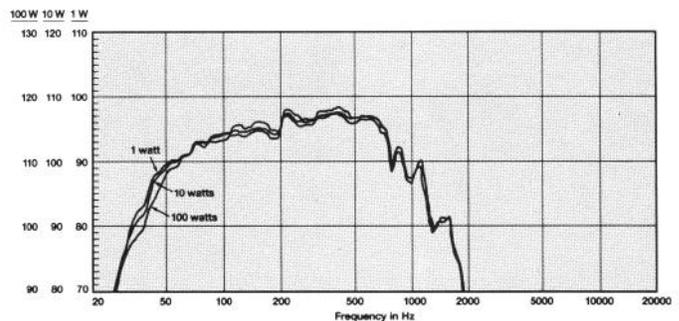
Electrically, the system shall be configured for bi-amplification, with input terminals to accommodate this. There shall be an internal dc blocking capacitor to protect the high frequency driver.

The system shall be the JBL model AS2215 with the appropriate high frequency horn and other pertinent system options. 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.

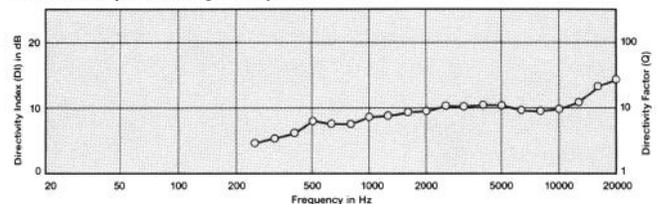
Frequency response, AS-2215-STD, using JBL 5235 dividing network at 800 Hz (18 dB/octave). LF section, 2.83 volts.



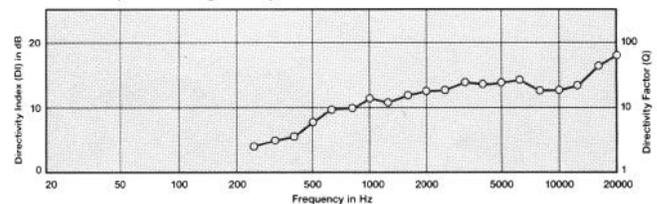
Power compression, LF section of AS-2215 at 1 watt, 10 watts, and 100 watts (Ground plane measurements).



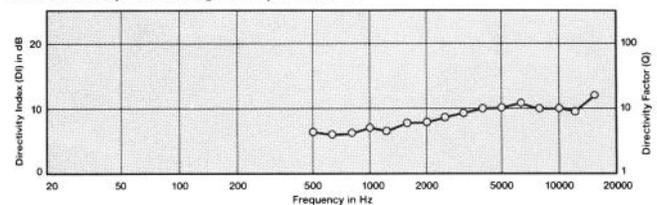
Directivity vs Frequency, 2380A.



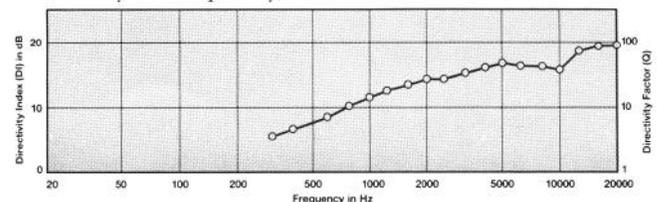
Directivity vs Frequency, 2385A.



Directivity vs Frequency, 2382A.

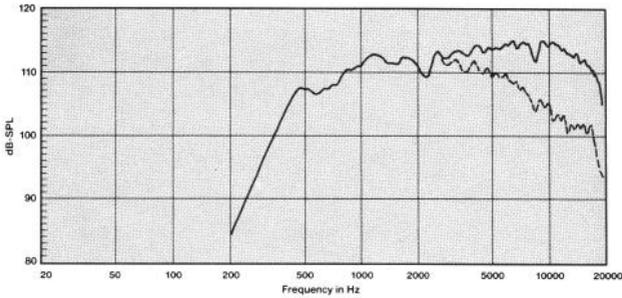


Directivity vs Frequency, 2386.

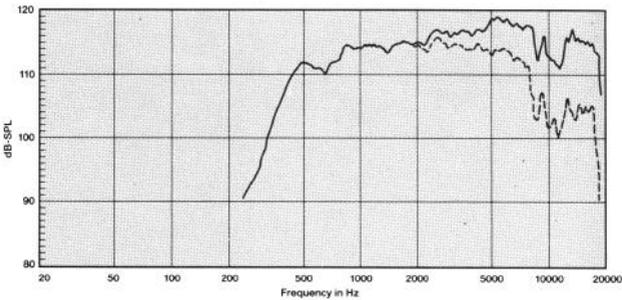


Speaker Systems with Single 15-inch Transducer

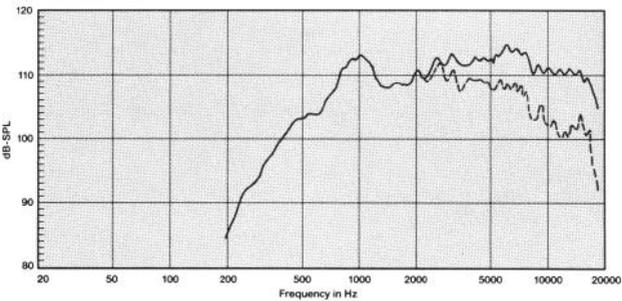
On-axis response, JBL 2380A, 1 W @ 1 m, dashed curve.
With power response correction, solid curve.



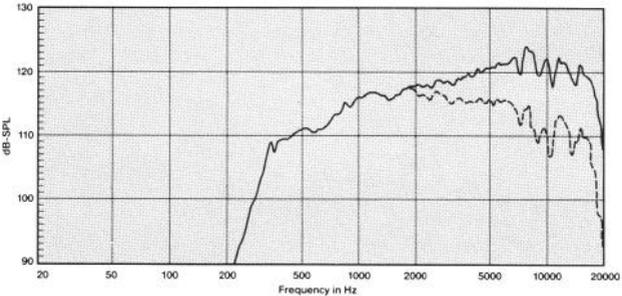
On-axis response, JBL 2385A, 1 W @ 1 m, dashed curved.
With power response correction, solid curve.



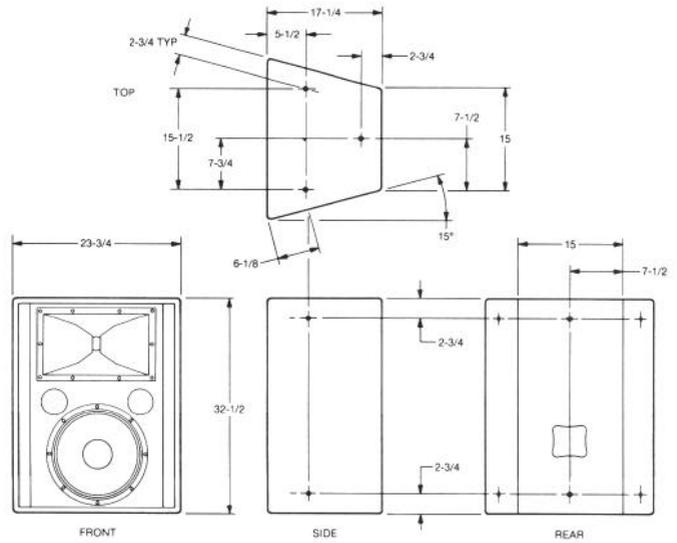
On-axis response, JBL 2382A, 1 W @ 1 m, dashed curved.
With power response correction, solid curve.



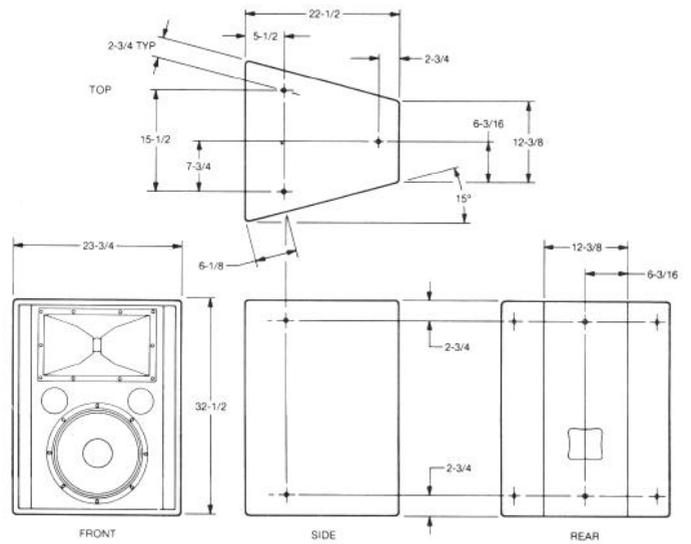
On-axis response, JBL 2386, 1 W @ 1 m, dashed curved.
With power response correction, solid curve.



AS2215-STD, AS2215-SP94, AS2215-SP64,
AS2215-SP124



AS2215D-SP42



ALL DIMENSIONS ARE REF. ONLY
NOTE: DIMENSIONS ARE IN INCHES

▶ AS2215-STD, AS2215-SP94, AS2215-SP64, AS2215-SP124, AS2215D-SP42 Two-Way Loudspeaker Systems with Single 15-inch Transducer

Specifications:

SYSTEM:	
Frequency Range (−10 dB):	35 Hz to 18 kHz
Frequency Response (±3 dB):	40 Hz to 17 kHz
Sensitivity ¹ :	LF: 97 dB, 1 W @ 1 m; HF: See below
Power Rating ¹ :	LF: 600 W, HF: 150 W
Recommended Crossover:	High-pass: 30 Hz - 40 Hz (12 dB/oct) Low-pass: 500 Hz - 1 kHz (12 dB/oct min.)
LOW FREQUENCY SECTION:	
Model:	2226H
Diameter:	380 mm (15 in)
Input Power Rating ¹ :	600 watts continuous pink noise
Rated Impedance:	8 ohms
Minimum Impedance:	6 ohms
Sensitivity ¹ :	97 dB, 1 W at 1 m
Voice Coil:	100 mm (4 in) edgewound aluminum
Features:	VGC™ Cooling for high power handling and minimal power compression; SFG™ Geometry
HIGH FREQUENCY SECTION:	
Model:	2446J
Throat Diameter:	49 mm (2 in)
Input Power Rating ¹ :	100 W at 500 Hz; 150 W above 1 kHz continuous program
Nominal Impedance:	16 ohms
Sensitivity ¹ :	See below
Diaphragm:	0.05 mm (0.002 in) pure titanium
Voice Coil:	100 mm (4 in) edgewound aluminum
Feature:	Coherent Wave™ phasing plug
For additional component data, refer to component specification sheets	
ENCLOSURE:	
Shape:	Trapezoidal, 15° taper per side
Material:	High grade birch plywood
Attachment:	12 points, accepts 3/8 in – 24 x 1 1/2 in forged shoulder steel eye bolts
Attachment Load Rating:	114 kg (250 lb) capacity per attachment point (5:1 safety factor, straight pull)
Finish:	Black textured paint
Grille:	Black, fire retardant on hardwood frame
Connector:	Terminal (barrier) strip
Dimensions (HxWxD):	826 mm x 603 mm x 438 mm (32 1/2 in x 23 3/4 in x 17 1/4 in) Note: AS2215D-SP42 is 569 mm (22 1/2 in) deep

¹See individual driver specification sheets for rating methodology.

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.

SYSTEM SPECIFICATIONS FOR VARIOUS HORN OPTIONS.		
	AS2215-STD and AS2215-SP94	AS2215-SP64
HF Horn:	2380A (90° by 40°)	2385A (60° by 40°)
Sensitivity ¹ :	112 dB, 1 W @ 1 m	114 dB, 1 W @ 1 m
Directivity Index(DI):	10.3 (+1, −1.4)	12.8 (+2, −2)
Directivity Factor(Q):	10.7 (+1.3, −2.5)	19 (+6, −7)
Net Weight:	47.6 kg (105 lbs)	47.6 kg (105 lbs)
Shipping Weight:	54.4 kg (120 lbs)	54.4 kg (120 lbs)
	AS2215-SP124	AS2215D-SP42
HF Horn:	2382A (120° by 40°)	2386 (40° by 20°)
Sensitivity ¹ :	110 dB, 1 W @ 1 m	116 dB, 1 W @ 1 m
Directivity Index(DI):	9 (+3, −2)	16.5 (+2.7, −2.2)
Directivity Factor(Q):	7.9 (+7.9, −2.9)	44.9 (+38.2, −18.2)
Net Weight:	46.7 kg (103 lbs)	53.1 kg (117 lbs)
Shipping Weight:	53.5 kg (118 lbs)	60.8 kg (134 lbs)



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