

JBL

AS4738ANW, AS4738ANW-SP, AS4738ANW-WR

Three-Way Loudspeaker Systems With 10 in Midrange and 18 in Woofer

Architectural Series

Key Features:

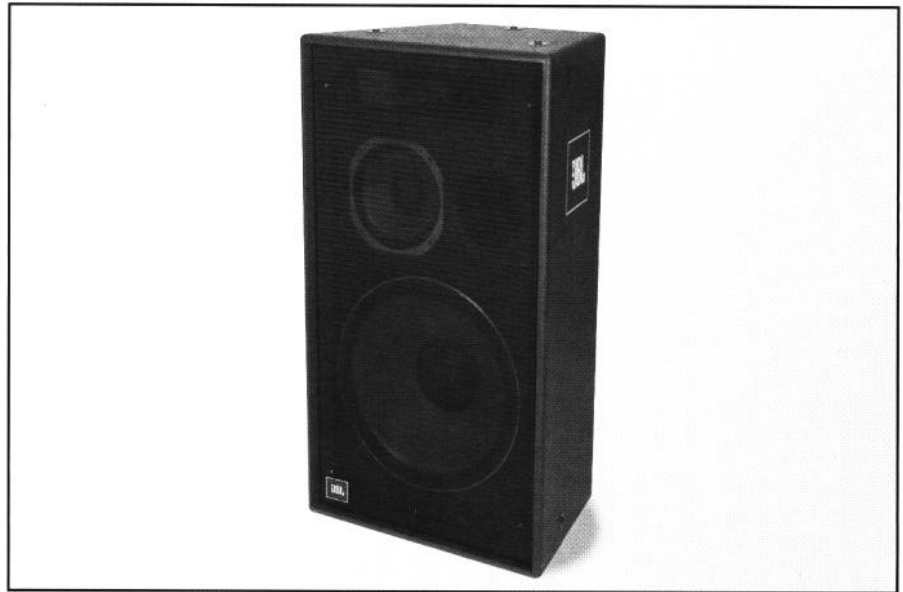
- ▶ VGC™ (Vented Gap Cooling™) low frequency transducer with 100 mm (4 in) diameter edgewound voice coil and SFG™ magnet structure.
- ▶ Compact, trapezoidal enclosures for accurate cluster design.
- ▶ Rugged black textured finish.
- ▶ Multiple attachment points for efficient mounting.
- ▶ Options include: finish and grilles.

The JBL Architectural Series is a family of modular loudspeaker systems designed for fixed installation 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 input wiring, resulting in economy and time saving in the field.

The model AS4738ANW is a three-way system that provides exceptionally uniform high frequency response and is intended primarily for music and speech applications where the loudspeaker will be placed close to the audience. The use of a cone midrange transducer and small format 90° x 40° Bi-Radial® horn provide a beneficial tradeoff where the greater output capability of a compression driver midrange is not needed.

Components

The AS4738ANW has been designed with two of JBL's most rugged cone transducers, the 2241G and the 2123H. The 2241G 460 mm (18 in) low frequency transducer incorporates JBL's exclusive VGC™ (Vented Gap Cooling) for efficient removal of heat from the voice coil resulting in 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 levels, resulting in clean reproduction at the highest drive levels.



The 2123H 250 mm (10 in) midrange cone transducer has been optimized for response over the frequency range from 200 Hz to 2800 Hz and provides an excellent midrange match between JBL's powerful low frequency transducers and small format compression driver high frequency devices. The 2123H carries a continuous power rating of 250 watts.

High frequency response is provided by the 2371 90° x 40° Flat-Front Bi-Radial® horn coupled to the 2417H high frequency driver. The driver carries a continuous power rating of 80 watts.

Enclosure

The model AS4738ANW is a trapezoidal enclosure which facilitates arraying for a wide variety of coverage requirements. 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 3/8 inch 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 and vermin and fade resistant material. The grille cloth is removable from its hardwood frame for replacement to match decor.

The AS4738ANW system can be used either full-range or biamplified, using an internal crossover network which uses both Neutrik® or 1/4 inch phone jack input connectors.

Options

The AS4738ANW-SP system may be tailored to specific applications in terms of finish, and grille options. Optional finishes include a fiberglass covering for increased structural and surface durability, neutral white paint which more easily facilitates repainting, and bare wood (premium Finnish birch) which can be stained to meet architectural requirements. Loudspeakers may also be ordered without attachment points.

Also available is the AS4738ANW-WR, in Weather Resistance. Weather Resistant models are suitable for permanent installation outdoors, and include a comprehensive package consisting of a light gray fiberglass finish, stainless steel suspension hardware, and a 3-layer rain resistant grille.

► AS4738ANW, AS4738ANW-SP, AS4738ANW-WR

Three-Way Loudspeaker Systems With 10 in Midrange and 18 in Woofer

Architects and Engineers Specifications:

The Loudspeaker shall consist of a 460 mm (18 in) low frequency transducer, a 250 mm (10 in) midrange transducer, and a high frequency horn with 90° x 40° 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 460 mm (18 in), and the voice coil shall be 100 mm (4 in) in diameter and made of edgewound aluminum ribbon wire. The low frequency transducer shall be capable of handling 600 watts input power and have an axial sensitivity no less than 98 dB (1 W, 1 m). Power compression in the low frequency transducer shall not exceed 3.9 dB at a total input power of 1200 watts (600 per transducer).

Midrange response shall be provided by a cone transducer with nominal cone diameter of 250 mm (10 in) and a copper voice coil with a diameter of 76 mm (3 in). The midrange transducer shall be capable of power input of 250 watts.

The high frequency section shall be driven by a compression driver capable of 80 watts power input above 2.8 kHz. The voice coil shall be no less than 47 mm (1-3/4 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 black textured paint, and provided with no less than twelve attachment points. Overall dimensions shall not exceed 1061 mm H x 615 mm W x 438 mm D (41-3/4 x 24-3/16 x 17-1/4 inch). The system shall be configured for full range or biamplified us, with 4-pin Neutrik® and 1/4 inch connectors included.

The system shall be the JBL model AS4738ANW with 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.

Specifications

SYSTEM	
Frequency Range (-10dB):	30 Hz to 20 kHz
Sensitivity ¹ :	98 dB SPL, 1 W @ 1m (3.3 ft)
Power Rating ² :	600 watts Continuous Pink Noise
Nominal Impedance:	4 ohms
Passive Crossover Frequency:	600 Hz; 2.8 kHz (Switchable to Biamp Operation)
LOW FREQUENCY SECTION 2241G	
Nominal Diameter:	460 mm (18 in)
Input Power Rating:	600 Watts, Continuous Pink Noise
Sensitivity:	98 dB, 1 W @ 1 m (3.3 ft)
Voice Coil:	100 mm (4 in) edgewound aluminum ribbon
MID FREQUENCY SECTION 2123H	
Input Power Rating:	250 Watts Continuous Program
Sensitivity:	101 dB, 1 W @ 1 m (3.3 ft)
Voice Coil:	76 mm (3 in) Copper Wire
HIGH FREQUENCY SECTION 2417H	
Throat Diameter:	25 mm (1 in)
Input Power Rating:	80 W Continuous Program
Nominal Impedance:	8 ohms
Sensitivity:	110 dB, 1 W @ 1 m (3.3 ft)
Diaphragm:	0.05 mm (0.002 in) pure titanium
Coverage:	90° Horizontal x 40° Vertical
ENCLOSURE	
Shape:	Trapezoidal, 15° taper per side
Material:	High grade birch plywood
Attachment:	12 points: accepts 3/8 in - 24 TPI x 1-1/2 in forged shoulder steel eyebolts or optional truss modules
Finish:	Black Textured Paint
Grille Material:	Black, fire retardant cloth on hardwood frame
Input Connectors:	4 Pin Neutrik® and 1/4 in phone jacks
Dimensions (H x W x D):	1061 mm x 615 mm x 438 mm (41-3/4 x 24-3/16 x 17-1/4 inch)
Net Weight:	57 kg (126 lbs)
Shipping Weight:	63 kg (140 lbs)

¹Full Range Systems: Averaged from 500Hz to 2.5kHz

²Rating based upon test signal of IEC filtered random noise (50Hz-5kHz) with a crest factor (peak-to-average ratio) of 6dB, two hours duration.

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 specification.



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