SPECSHEET

9310

Two-Way Passive High Power Cinema Surround Loudspeaker

Key Features:

- 1” high frequency driver, 10” woofer
- 300-watt power rating (AES 2-hour)
- High frequency horn features JBL Image Control Technology and Wave Shaping Vane for precise pattern control
- Three separate horizontal mounting planes at 15º angles for specific positioning to improve coverage
- Input terminals on top of cabinet for easy access
- Lightweight, rigid molded enclosure
- Uniform asymmetric 60º vertical coverage and 110º horizontal coverage



Description:

Professional cinema has seen a dramatic evolution over the past few years – high definition content, digital projection and immersive audio. These amazing technologies have put new demands on cinema loudspeakers never before required. This is particularly true for the surrounds. Once a highly compressed ambience track, surround content today is equal to the screen channels in resolution and dynamics.

Most surrounds are basic loudspeakers, with modest output and simple coverage patterns. They were only used as a large distributed array along the theatre walls. Digital cinema and new audio formats require surrounds to operate in much smaller groupings and even singularly. This now requires surrounds to possess engineered coverage patterns and improved output dynamics. JBL undertook an extensive research effort to first analyze these new requirements and then design a completely new surround loudspeaker, from the ground up, for modern digital formats. The groundbreaking 9300 Series is the result. The horns developed specifically for the 9300 and 9310 have studio quality performance with pattern control tailored to multiplex theatre geometries. Using the latest advancements in acoustic engineering, the 9310 horns map a theatre more consistently and accurately than ever before possible. Integral to the design is a wave shaping vane, which distributes acoustic energy in proper proportion to the room. This technique provides a wavefront that is sculpted to the room geometry and provides very precise mapping capability. This shaping also allows the loudspeaker to orient to the wall naturally while directing the acoustic energy to the seats.

JBL engineers also found that a slight angle in the positioning of the surrounds makes a dramatic difference in how they present themselves to the audience. This is particularly true in stadium seating geometry where the surrounds slope downward with the seating, and yet the horizontal patterns in conventional surround loudspeakers do not. This creates ‘hot spots’ in the coverage for those rows just above each surround. By mounting the surrounds at a 15° angle toward the screen, the hot spots are eliminated, the overall coverage maps are dramatically improved and those seats in close proximity to a surround have a much improved experience. The 9300 and 9310 provide three mounting planes for easy installation in any geometry.

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Specifications:

System	
Frequency Range (-10 dB)	50 Hz – 25 kHz (2pi) 60 Hz – 25 kHz (4pi)
Frequency Range (±3 dB)	60 Hz – 20 kHz (2pi) 100 Hz – 20 kHz (4pi)
Coverage Pattern	110º × 60º asymmetric, >1 kHz
Input Power Handling (AES 100-Hour Rating)	200 W (38 V)
Input Power Handling (AES 2-Hour Rating)	300 W (49 V)
Free-Field (4pi) Sensitivity	96 dB SPL, 1 W @ 1m, ref 2.83 V
Half-Field (2pi) Sensitivity	99 dB SPL, 1 W @ 1m, ref 2.83 V
Calculated Maximum dB SPL	124 dB continuous, 130 dB peak
Rated Impedance	8 ohms
Minimum Impedance	7 ohms @ 200 Hz
Crossover Frequency	2600 Hz

Transducers	
Low Frequency	M110-8
High Frequency	2414H
Enclosure	
System Polarity	Woofer (IEC), HF (IEC)
System Protection	Network only
System Input Type	Banana
Enclosure Volume	1700 sq in
Dimensions (H x W x D)	55.88 cm x 40.64 cm x 27.94 cm (22 in x 16 in x 11 in)
Weight (each)	11.34 kg (25 lb)
Mounting Bracket Compatibility	JBL 2520

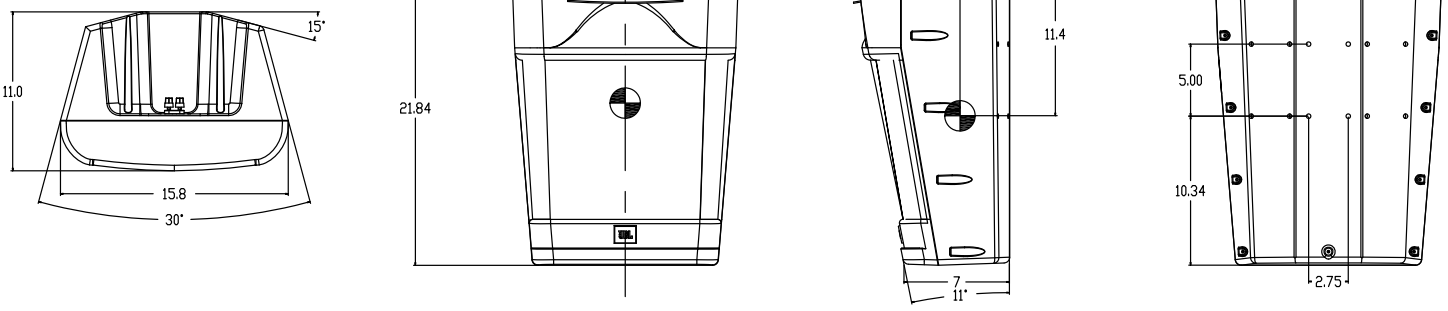
JBL continually engages in research related to product improvement. Some materials, production methods and design refinements are introduced into existing products without notice as a routine expression of that philosophy. For this reason, any current JBL product may differ in some respect from its published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

Amplifier Recommendations:

	Number of Surround Speakers/Channels	Amplifier
Good Solution	1	XLC 2500
	2-4	XLC 2800
Better Solution	1-3	DSI 2000
	4	DSI 4000
Best or Immersive Solution	1	DCi I300
	2	DCi I600
	3	DCi I1250
	4	DCi I1250

Dimensions:

Dimensions in inches



Note: specifications are subject to change without notice. 12/2018. © 2018 Harman International. www.jblpro.com