

MB12 / MB12 WR modular bass loudspeaker



Key Features

- **Low-frequency** reinforcement for Bose® LT arrays and other subwoofer applications that require 40 - 280 Hz bass response
- **Front-loaded tapered transmission** line design provides peak-free extended low-frequency response, and reduces port turbulence distortion
- **1 x 12" (305 mm)** high-excursion woofer with 4" (102 mm) voice-coil and 400 W long-term power rating provides high SPL with fast transient response
- **Compact enclosure** optimized for bass-array applications when cardioid or other directional-bass configurations are required for reverberant spaces



TECHNICAL DATA SHEET

Product Overview

The MB12 and MB12 WR low-frequency loudspeakers are designed to provide bass augmentation for Bose LT arrays and other subwoofer applications. The compact 1 x 12" (305 mm) configuration allows minimal-height arrays when used with LT mid/high loudspeakers. Bose Modeler® tools and optional rigging hardware make directional bass arrays easy to design and install using MB12 loudspeakers.

Technical Specifications

System Performance		
Frequency Response (+/-3 dB) ¹	40 Hz - 280 Hz	
Frequency Range (-10 dB) ¹	36 Hz - 290 Hz	
Nominal Dispersion	Omni-directional below 200 Hz	
Sensitivity (SPL / 1 W @ 1 m) ²	91 dB SPL	
Maximum SPL @ 1 m ³	117 dB SPL (123 dB SPL peak)	
Crossover Frequency	none (external DSP crossover required)	
Recommended High-Pass Filter	30 Hz(24 dB / octave)	
Loudspeaker EQ	Required	
Long-Term Power Handling ⁴	400 W (1600 W peak)	
Nominal Impedance	8 Ω	
Transducers		
Driver Compliment	LF: 12" (305 mm) woofer with 4" (102 mm) voice-coil	
Physical		
	MB12	MB12 WR
Enclosure	Baltic birch plywood, 13-ply, 18 mm	Exterior grade Baltic birch plywood, 13-ply, 18 mm
Finish	Polyurethane-based textured paint, black or white	Two part spray polyurethane coating, black
Grille	16-gauge perforated steel grille with powder-coated finish	16-gauge perforated stainless steel grille with powder-coated finish and backed with an open-cell foam
Environmental	Indoor use only	Outdoor per IEC 529 IPX5
Connectors	Two (2) parallel-wired NL4 Neutrik® Speakon® connectors	Two (2) parallel-wired NL4 Neutrik® Speakon® connectors
Suspension / Mounting	Sixteen (16) points SAE 3/8" - 16 threaded inserts (4 each, top, bottom and sides), steel	Sixteen (16) points SAE 3/8" - 16 threaded inserts (4 each, top, bottom and sides), stainless steel
Dimensions	14.7" H x 20.0" W x 25.4" D (374 mm x 508 mm x 646 mm)	14.7" H x 20.0" W x 25.4" D (374 mm x 508 mm x 646 mm)
Net Weight	78 lb (35.4 kg)	78 lb (35.4 kg)
Shipping Weight	92 lb (41.6 kg)	92 lb (41.6 kg)
Product Code		
Black	040173	323114-0110
White	040174	N/A

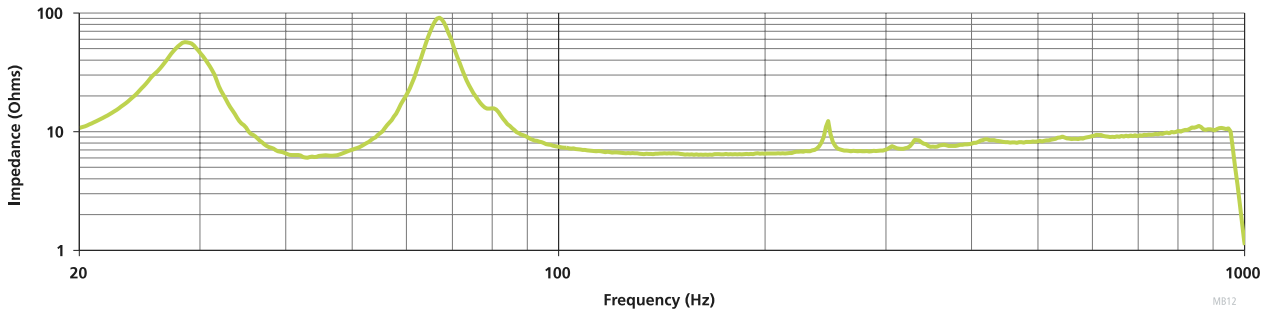
Footnotes:

- ¹ Frequency response and range measured on-axis with recommended active EQ in an anechoic environment.
- ² Sensitivity measured in free field (no boundary-loading gain) with recommended active EQ, referenced to 1W/1m.
- ³ Maximum SPL calculated from sensitivity and power handling specifications, exclusive of power compression.
- ⁴ Power handling tested using pink noise filtered to meet IEC 268-5, 6 dB crest factor, 100 hours, with recommended EQ.

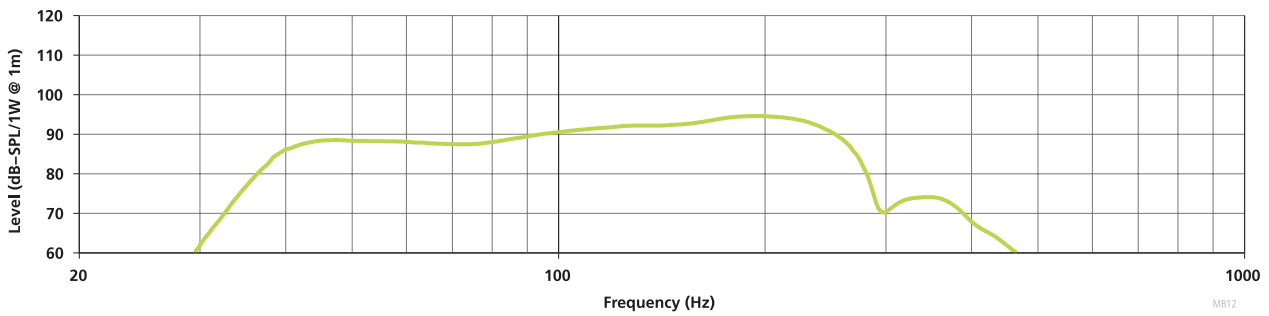
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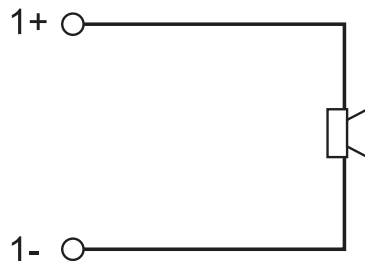
Impedance



On-Axis Response



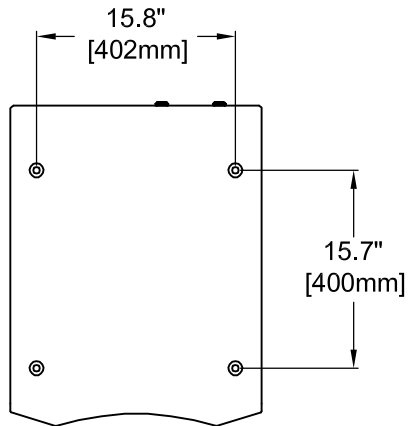
Wiring Diagram



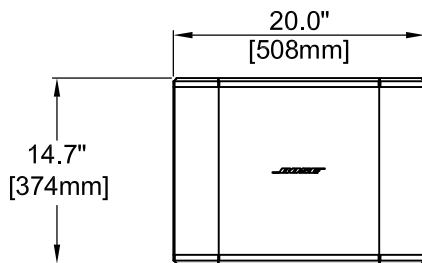
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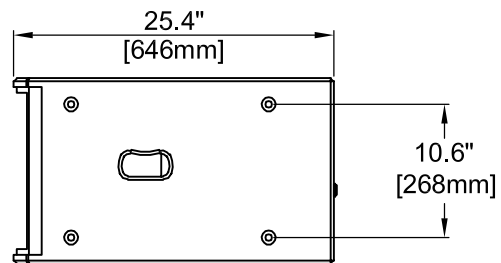
Mechanical Diagrams



Top View



Front View

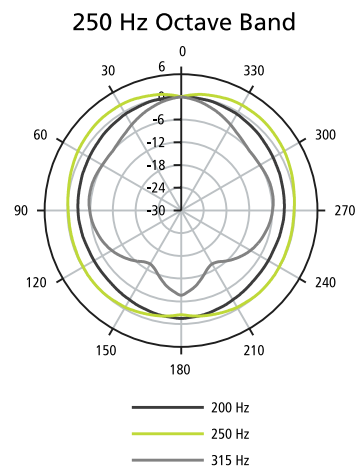
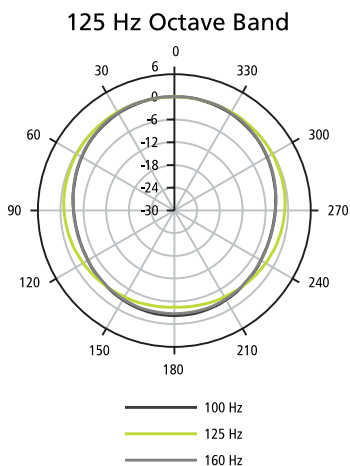
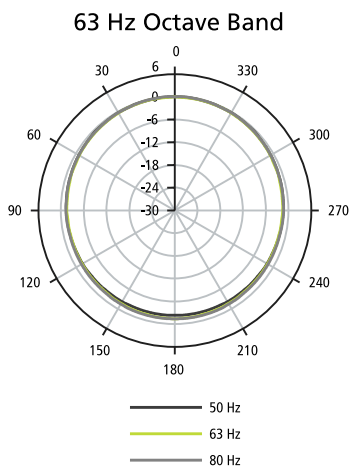


Right View

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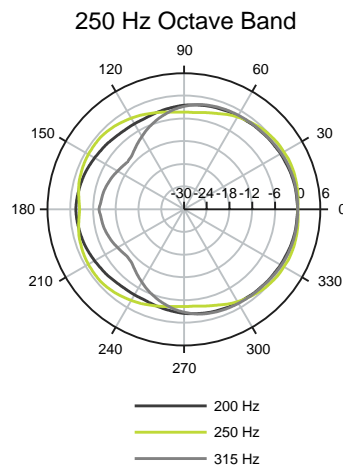
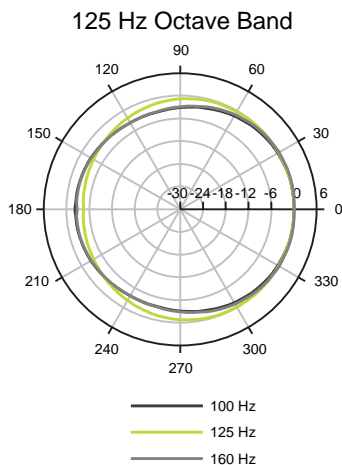
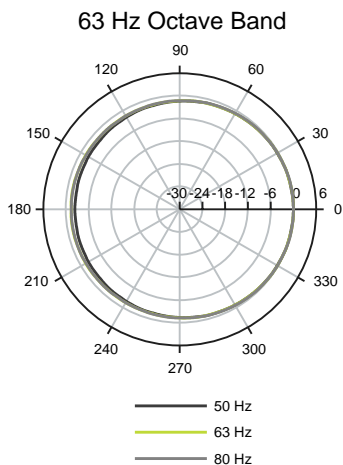


Horizontal Plots



MB12

Vertical Plots



MB12

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Architects' and Engineers' Specifications

The low-frequency loudspeaker shall contain a 12" (305 mm) woofer with 4" (102 mm) voice coil and high-excursion suspension. The enclosure shall utilize a front-loaded tapered transmission-line design to reduce resonant peaks in frequency response, while reducing port-turbulence distortion.

On-axis system frequency response shall be 40 Hz to 280 Hz (+/- 3 dB) with usable bass response (-10 dB) from 36 Hz to 290 Hz. The system sensitivity shall be 91 dB SPL with 1 watt input and be capable of producing peak output of 123 dB SPL on axis at 1 meter in free-space anechoic environments. For floor-boundary mounted installations, peak output will increase to approximately 129 dB SPL (due to boundary-loading acoustic gain). The loudspeaker shall handle 400 watts of amplifier power (IEC 268-5 pink noise, 6 dB crest factor, for 100 hours). Nominal input impedance shall be 8 ohms.

MB12 Only:

The enclosure shall be constructed of void-free, Baltic birch plywood with extensive internal bracing. The enclosure exterior shall be treated with a polyurethane-based paint that resists scuffing. The enclosure shall be covered by a 16-gauge perforated steel grille with powder-coated finish. The loudspeaker shall be rated for indoor use only. The enclosure shall have sixteen (16) steel threaded inserts (4 each: top, bottom, sides) that accept standard SAE 3/8"- 16 rigging hardware. Inputs shall be two (2) NL4 Neutrik® Speakon® connectors. Loudspeaker dimensions shall be 14.7" x 20.0" x 25.4" (374 mm x 508 mm x 646 mm). Net weight shall be 78 lb (35.4 kg).

The low-frequency loudspeaker shall be the Bose® MB12 modular bass loudspeaker.

MB12 WR Only:

The enclosure shall be constructed of void-free, exterior-grade Baltic birch plywood with extensive internal bracing. The enclosure interior shall be treated with wood sealer and the exterior finished with a two-part spray polyurethane coating (Chemthane 7030 or equivalent) to resist weather elements and scuffing. The enclosure shall be covered by a 16-gauge perforated stainless steel grille with powder-coated finish and backed with an open-cell foam. The loudspeaker shall survive water incursion consistent with the IEC 529 IPX5 rating. The enclosure shall have sixteen (16) stainless steel threaded inserts (4 each: top, bottom, sides) that accept standard SAE 3/8"-16 rigging hardware. Inputs shall be two (2) NL4 Neutrik® Speakon® connectors. Loudspeaker dimensions shall be 14.7" x 20.0" x 25.4" (374 mm x 508 mm x 646 mm). Net weight shall be 78 lb (35.4 kg).

The low-frequency loudspeaker shall be the Bose® MB12 WR modular bass loudspeaker.