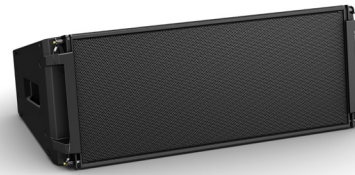


ShowMatch SM20

DeltaQ array loudspeaker



Product Overview

Bose Professional ShowMatch DeltaQ SM20 full-range array modules provide 20° nominal vertical coverage with included field-changeable waveguides offering choice of 70° or 100° horizontal coverage and optional accessory 120° waveguides. Replace single waveguide panel to form horizontal asymmetrical patterns. The 2-way module requires external power amplifiers (2- channels) and DSP to provide full-range response from 59 – 18,000 Hz with peak array output up to 145 dB.

Key Features

- **DeltaQ technology** – defines the next-generation in loudspeaker array design with selectable coverage patterns that more precisely direct sound to audience areas for improved sound quality and vocal clarity with fewer boxes versus line arrays.
- **Replaceable waveguides** – ships with 100° waveguides installed with 70° panels included to allow coverage change. Largest-in-class size provides better coverage and vocal clarity. Change single panel for asymmetrical patterns. Optional 120° waveguides for SM20.
- **Compact, portable enclosure** – Versatile design allows both fixed install and portable applications, from small clubs and houses of worship to the largest performing arts centers and AV productions.
- **Tour-sound output level** – 4x Bose Professional EMB2S compression drivers, improved with more HF output, and 2x 8-inch neodymium high-power woofers allow peak array output up to 145 dB SPL.
- **3-point “quick pin” rigging** – Fast, easy setup with up to 24 full-range modules and 10:1 design factor.
- **Removable side guards** – provide rigging guard and hand holds for portable applications. Easily removed for permanent installs to reduce width and improve sight lines .

Technical Specifications

SINGLE MODULE PERFORMANCE				
Frequency Response (+ / -3 dB) (1)	69 – 16,000 Hz			
Frequency Range (-10 dB)	59 – 18,000 Hz			
Recommended High-Pass Protection Filter	70 Hz with minimum 12-dB / octave filter			
Nominal Coverage Pattern	100° H x 20° V (includes waveguides for 70° H x 20° V)			
Recommended Crossover	750 Hz (acoustic; requires active, 2-way crossover in DSP)			
	Bose Professional extended-lifecycle test ⁽⁴⁾		AES transducer test ⁽⁵⁾	
	Low Frequency	High Frequency	Low Frequency	High Frequency
Power Handling, long-term continuous	450 W	100 W	600 W	125 W
Power Handling, peak	1800 W	400 W	2400 W	500 W
Sensitivity (SPL/1W @ 1 m) (2)	94 dB	105 dB	94 dB	105 dB
Calculated Maximum SPL @ 1 m (3)	121 dB	125 dB	122 dB	126 dB
Calculated Maximum SPL @ 1 m, peak	127 dB	131 dB	128 dB	132 dB

TRANSDUCERS	
Low Frequency	2 x Bose Professional SM8 neodymium 8-inch woofers (3-inch voice coil)
High Frequency	4 x Bose Professional EMB2S extended-HF neodymium compression driver (2-inch voice coil)
Nominal Impedance	8 ohms + 6 ohms (LF/HF)

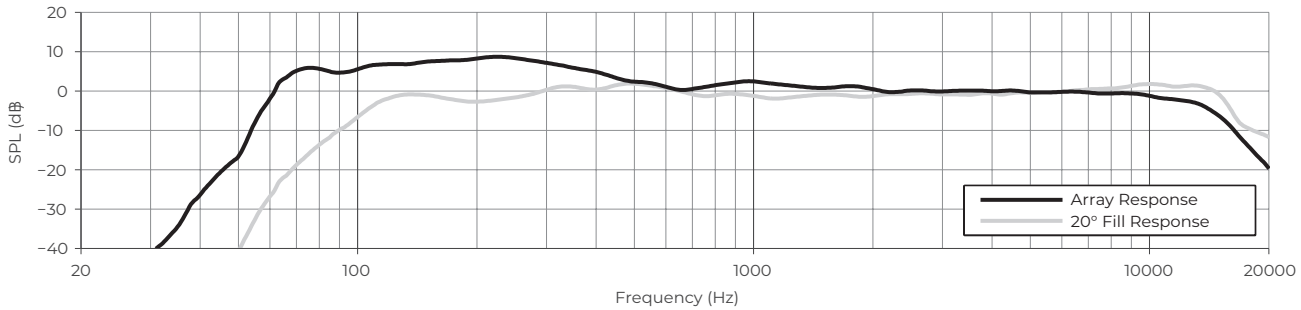
PHYSICAL	
Enclosure Material	Baltic birch plywood
Finish	Two-part spray polyurethane coating, black
Grill	16-gauge (1.5 mm) perforated steel, powder-coated finish, black
Environmental	IPx4
Connectors	2 x Neutrik® NL4 wired parallel
Suspension / Mounting	integrated 3-point quick-pin rigging
Dimensions (H x W x D)	11.9" x 31.2" x 18.1" (303 x 793 x 461 mm) / W: 29.8" (757 mm) side guards removed
Net Weight	64.0 lbs (29.0 kg)
Shipping Weight	75 lbs (34.0 kg)
Accessories	rigging frames, pullback bar, waveguides, ground stack bracket, short quick pins

TECHNICAL DATA

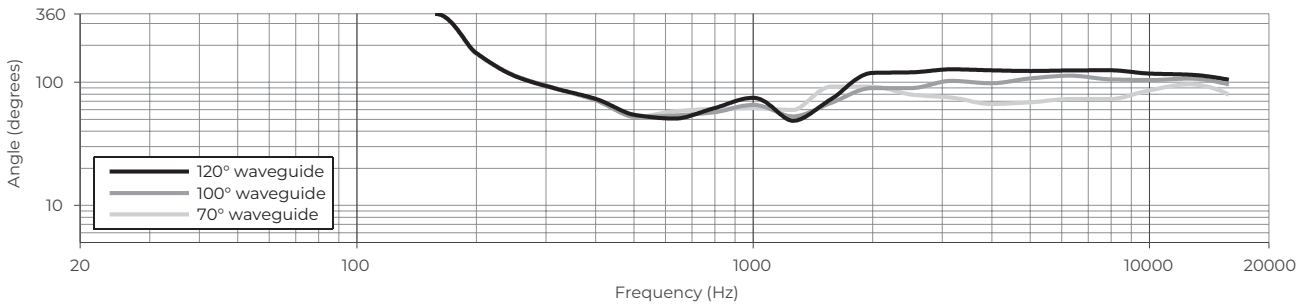
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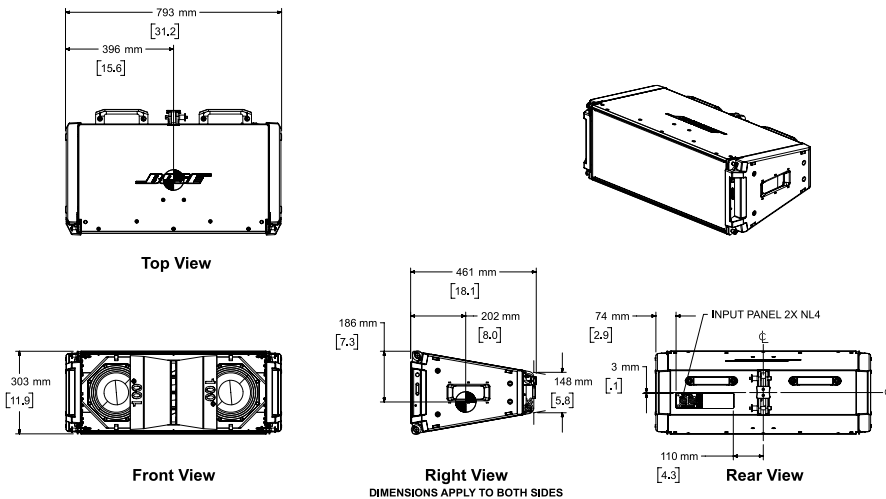
Frequency Response



Beamwidth (Horizontal -6 dB)



Dimensions



Footnotes

- (1) Frequency response and range measured on-axis in an anechoic environment, with recommended bandpass and EQ.
- (2) Sensitivity measured with indicated boundary conditions, recommended bandpass and EQ, referenced to 1W/m.
- (3) Maximum SPL calculated from sensitivity and power handling specifications, exclusive of power compression.
- (4) Bose Professional extended-lifecycle test using pink noise filtered to IEC268-5, 6-dB crest factor, 500-hour, full-power duration.
- (5) AES standard component power handling test: pink noise 60-18000 Hz bandpass, 6-dB crest factor, 2-hour duration.

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