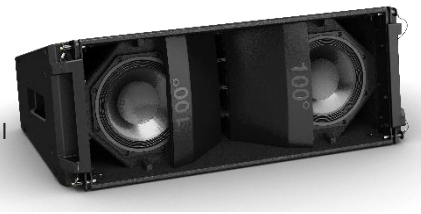
ShowMatch™ SM20

DeltaQ™ array loudspeaker

PROFESSIONAL

PRELIMINARY TECHNICAL DATA SHEET

Key Features



- **DeltaQ™ technology** is the next-generation line-array design that allows "Q" (directivity) to vary with each module in the array for more consistent coverage over wide frequency range, reduced array weight and cost, and outstanding vocal clarity
- **Changeable waveguides** – includes both 70° and 100° waveguides to adjust horizontal coverage. Largest-in-class size provides superior coverage control 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 EMB2S compression drivers, improved with more HF output, and 2x 8-inch neodymium high-power woofers allow 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 safety factor.
- **Removable side rigging-guard/handles** – provides rigging guard and hand holds for portable applications. Easily removed for permanent installs for reduced width and cleaner visual appearance.

Product Overview

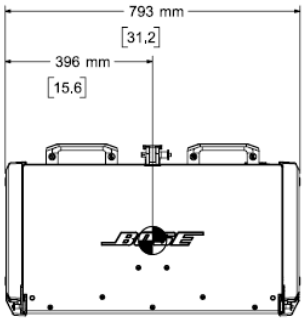
Bose ShowMatch™ DeltaQ™ array loudspeakers maximize versatility with field-changeable waveguides in compact, lightweight enclosures featuring removable side caps that optimize both installation and portable applications. Available in 5°, 10°, and 20° vertical coverage, ShowMatch modules can form DeltaQ arrays, constant curvature, or traditional J-array configurations to maximize versatility for a wide range of audience areas and budgets. Matching subwoofer and rigging accessories available.

Technical Specifications

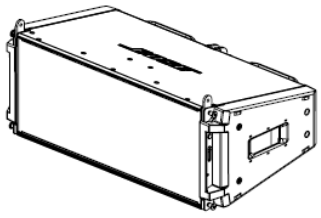
Single Module Performance				
Frequency Response (+ / -3 dB) [1]	70 – 16,000 Hz			
Frequency Range (-10 dB)	60 – 16,000 Hz			
Recommended High-Pass Protection Filter	70 Hz with minimum 12-dB / octave filter			
Nominal Coverage Pattern	100° H x 20° V (includes waveguides for 70° H x 20° V)			
Recommended Crossover	800 Hz (acoustic; requires active, 2-way crossover in DSP)			
	Bose 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	104 dB	94 dB	104 dB
Calculated Maximum SPL @ 1 m [3]	121 dB	124 dB	122 dB	125 dB
Calculated Maximum SPL @ 1 m, peak	127 dB	130 dB	128 dB	131 dB
Transducers				
Low Frequency	2 x Bose SM8 neodymium 8-inch woofers (3-inch voice coil)			
High Frequency	4 x Bose 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" x31.2" x18.1" (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			

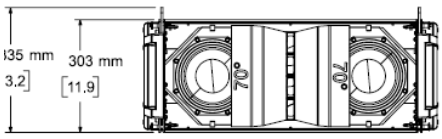
PRELIMINARY TECHNICAL DATA SHEET

Mechanical Diagrams

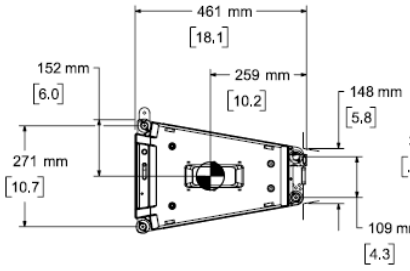


Top View



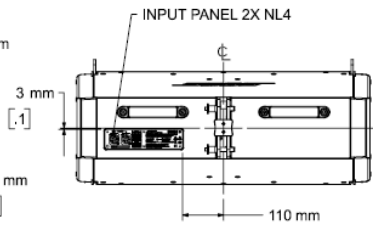


Front View

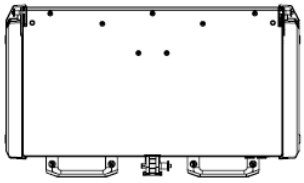


Right View

DIMENSIONS APPLY TO BOTH SIDES

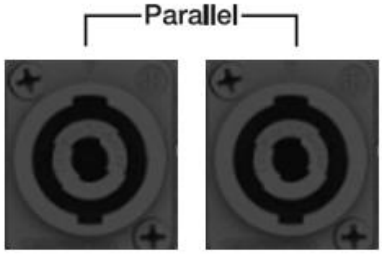


Rear View



NOTES:
1. SYMBOL INDICATES CENTER OF GRAVITY
2. WEIGHT APPROX. 29,0 kg [64,0 lbs]
3. SYMBOL INDICATES QUICK PIN CONNECTION LOCATIONS
4. DIMENSIONS ARE IN MILIMETERS OVER INCHES

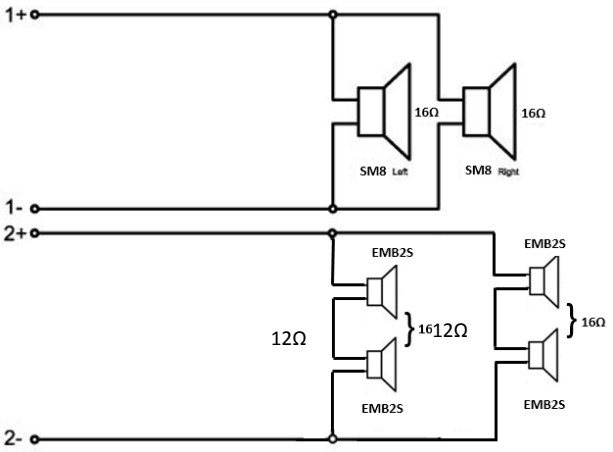
Input Panel with Wiring Diagram



Bi-Amp	
LF +	1+
LF -	1-
HF +	2+
HF -	2-

Power Handling
LF: 450W HF: 100W

Impedance
LF: 8Ω HF: 6Ω



Footnotes

(1) Frequency response and range measured on-axis in an anechoic environment, with recommended bandpass filter.
(2) Sensitivity measured with indicated boundary conditions with recommended bandpass filter, referenced to 1W/m.
(3) Maximum SPL calculated from sensitivity and power handling specifications, exclusive of power compression.
(4) Bose extended-lifecycle test using pink noise filtered to meet IEC268-5, 6-dB crest factor, 500-hour, full-power duration.
(5) AES standard component power handling test: pink noise 80-16000 Hz bandpass, 6-dB crest factor, 2-hour duration.

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