

# MSA12X

## powered beam-steering array loudspeaker

### Product Overview

The Bose Professional MSA12X powered beam-steering array loudspeaker is specially engineered to excel in vocal intelligibility and musicality, even in acoustically challenging spaces. Twelve processed and amplified transducers create a precise vertical sound beam that covers the entire audience while reducing disruptive echoes that compromise clarity. The result: a consistent front-to-back sound without mechanical aiming or angling brackets.

The MSA12X goes beyond conventional loudspeakers with its dual-beam functionality, enabling the vertical sound beam to be split into two, providing simultaneous coverage for separate areas such as the main floor and a balcony. The articulated transducer configuration provides 160° horizontal coverage, delivering consistent tonality across the entire audience space, ensuring each listener enjoys the same sound experience.

The install-friendly modular design of the MSA12X allows easy stacking of up to three linked modules. Lengthening the array results in extended coverage, lower-frequency control, and improved dual-beam functionality—without custom ordering or oversized shipping boxes. The array's beam-steering capability also allows you to mount it at varying heights—not just ear-level like conventional column arrays. Plus, the Dante® network interface and ControlSpace ecosystem integration ensure seamless connectivity and system control.

Online instructions make the design and installation straightforward, ensuring a successful deployment. And with its price-to-performance value, the MSA12X is the clear choice for a wide range of installations.

For extended bass response, the Bose Professional MB210-WR subwoofer and a PowerShareX smart amplifier perfectly complement the MSA12X as a complete audio solution for speech, music, and live sound applications.



**Dante™**

### Key Features

**12 × 2.25-inch independently controlled and amplified transducers** with a frequency range from 75 Hz to 17 kHz create a vertical sound beam that is electronically steered for precision aiming to cover the entire audience while reducing disruptive echoes that compromise clarity—without mechanical aiming or angling brackets.

**Integrated DSP and 600 watts (12 × 50 W) of amplification** make the MSA12X a self-powered, self-processed loudspeaker solution without the requirement of a standalone amplifier or processor.

**The Dante® digital audio network interface** needs just one network cable connection for audio source and system control. Send digital audio to the MSA12X and use the same connection for ControlSpace network integration. Control, monitor, and recall beam presets via compatible ControlSpace processors and controllers. A line-level input also enables local analog source connection.

**Flexible, modular design** allows the simple creation of larger vertical arrays by stacking up to three modules without custom parts, ordering, or oversized shipping boxes. The larger array extends coverage, enhances lower-frequency control, and improves dual-beam functionality. Select a white or black finish, and paint them if needed.

**The articulated transducer configuration** provides 160° horizontal coverage, delivering consistent tonality across the entire audience, ensuring each listener enjoys the same sound experience.

**All brackets and interconnect cabling included**—no extra parts to order.

**An installer-friendly instructional webpage** provides a seamless step-by-step workflow for designing, configuring, and installing the MSA12X and associated software applications. Our best-in-class instructions eliminate guesswork and ensure a swift, efficient design and installation.

**Bose Professional Array Tool** is the first step in designing the MSA12X into the room. This simulation and analysis software tool allows you to precisely define room parameters, strategically position the MSA12X in the virtual space, and accurately predict its performance across a range of diverse environments. Synchronize the beam steering with ControlSpace Designer software to update the hardware, streamlining the design process.

**Bose Professional ControlSpace Designer** software integrates the calculations of the Bose Professional Array Tool into the MSA12X. Use this software to configure and design our ControlSpace-enabled processors, smart amplifiers, and loudspeakers with just one user interface. Use ControlSpace Designer software with MSA12X to program settings, recall beam presets, and monitor it in real time.

**Beam presets in a ControlSpace network** can be switched to instantly adapt sound coverage for half-rooms, full rooms, partitioned meeting rooms, or balconies. Designers can simply assign beam presets to user interfaces—such as wall controls or the ControlSpace Remote app—or assign presets to scheduled timer events.

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## Technical Specifications

<b>SYSTEM PERFORMANCE (SINGLE MODULE)</b>			
Frequency Response (-3 dB) <sup>1</sup>	75 Hz – 17 kHz		
Frequency Range (-10 dB) <sup>1</sup>	58 Hz – 18 kHz		
Horizontal Dispersion <sup>2</sup>	160°		
Vertical Opening Angles	Software-adjustable: 1 module up to 30°. 2–3 modules up to 40° vertical.		
Vertical Beam-steering Angles	±20°		
Max SPL @ 1 m <sup>3</sup>	112 dB		
<b>MULTIPLE-MODULE PERFORMANCE</b>	<b>1 MODULE</b>	<b>2 MODULES</b>	<b>3 MODULES</b>
Max SPL <sup>3</sup> at 10 m (33 ft)	97 dB, continuous 103 dB, peak	100 dB, continuous 106 dB, peak	101 dB, continuous 107 dB, peak
Max SPL <sup>3</sup> at 20 m (66 ft)	91 dB, continuous 97 dB, peak	96 dB, continuous 102 dB, peak	97 dB, continuous 103 dB, peak
Max SPL <sup>3</sup> at 30 m (98 ft)	88 dB, continuous 94 dB, peak	94 dB, continuous 100 dB, peak	95 dB, continuous 101 dB, peak
Typical Usable Throw Distance <sup>4</sup>	10 m (33 ft)	25 m (82 ft)	35 m (115 ft)
Typical Usable Throw Range	1 m – 10 m (3 ft – 33 ft)	10 m – 25 m (33 ft – 82 ft)	25 m – 35 m (82 ft – 115 ft)
Low-frequency Beam Control Limit	500 Hz	250 Hz	160 Hz
Driver Complement, Full-range Cones	12 × 2.25 in (57 mm)	24 × 2.25 in (57 mm)	36 × 2.25 in (57 mm)
Amplifier Channels × Rated Power	12 × 50 W	24 × 50 W	36 × 50 W
Physical Array Height	1 m (39 in)	2 m (78 in)	3 m (117 in)
<b>AUDIO INPUTS</b>			
Analog Audio Input Connector	3-pin Euroblock connector <sup>5</sup>		
Analog Audio Maximum Input Level	0 dBu / +10 dBu / +24 dBu (pad engaged)		
Input Sensitivity	15 dBu		
Input Impedance	20 kΩ		
Digital Audio Inputs	Input: 2 channels of Dante® digital audio (RJ-45) Expansion: LVDS (RJ-50)		
Digital Output	Expansion: LVDS (RJ-50)		
<b>INTEGRATED DSP</b>			
DSP Platform/Network Support	Bose Professional ControlSpace		
A/D and D/A Converters	24-bit, 48 kHz		
Number of Beams Supported <sup>5</sup>	2 beams		
FIR Filter Support (Local MSA12X)	1024 tap @ 48 kHz		
User Presets (Local MSA12X)	10 presets		
Audio Latency	5.7 ms		
<b>ELECTRICAL (SINGLE MODULE)</b>			
AC Mains Voltage	Universal 85 VAC – 264 VAC, 50 Hz / 60 Hz		
AC Mains Connector	IEC60320-C14		
AC Power Consumption	120 VAC / 240 VAC, 25 W idle, 275 W max		

For additional specifications and application information, please visit [BoseProfessional.com](http://BoseProfessional.com). Specifications subject to change without notice. 09/2023

## TECHNICAL DATA

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PHYSICAL	
Enclosure	Extruded aluminum sidewalls, steel end caps, all powder-coated Black (RAL 9005) or white (RAL 9010)
Grille	Powder-coated aluminum
Indicators and Controls	Power, limit, fault
Operating Temperature Range (Ambient)	0 °C to 40 °C (32 °F to 104 °F)
Cooling System	Passive cooling only, airflow bottom to top
Environmental	Indoor only
Suspension / Mounting	Integrated wall brackets; allows horizontal yaw up to 90° in either direction
Accessories, Included	(1) power cord (1) power interconnect cable (1) RJ-50 expansion cable (1) Euroblock connector (2) wall/loudspeaker-mount bracket sets (1) interconnect bracket (12) cable ties (1) logo (4) extra M6 flange nuts (8) M6 hex head bolts (1) yaw bracket
Dimensions (H × W × D)	984 mm × 106 mm × 206 mm (38.7 in × 4.2 in × 8.1 in)
Net Weight	14.5 kg (32.0 lb)
Shipping Weight	19.2 kg (42.3 lb)
PRODUCT CODES	
MSA12X, US, black	787856-1110 (MSA12X LDSPKR BLK 120V US)
MSA12X, US, white	787856-1210 (MSA12X LDSPKR WHT 120V US)
MSA12X, EU, black	787856-2110 (MSA12X LDSPKR BLK 230V EU)
MSA12X, EU, white	787856-2210 (MSA12X LDSPKR WHT 230V EU)
MSA12X, JP, black	787856-3110 (MSA12X LDSPKR BLK 100V JP)
MSA12X, JP, white	787856-3210 (MSA12X LDSPKR WHT 100V JP)
MSA12X, UK, black	787856-4110 (MSA12X LDSPKR BLK 230V UK)
MSA12X, UK, white	787856-4210 (MSA12X LDSPKR WHT 230V UK)
MSA12X, AU, black	787856-5110 (MSA12X LDSPKR BLK 230V AU)
MSA12X, AU, white	787856-5210 (MSA12X LDSPKR WHT 230V AU)

### Footnotes

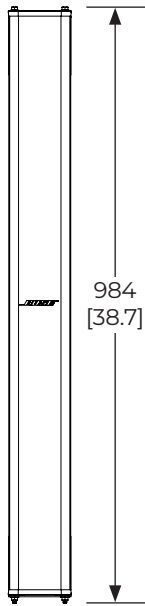
1. Frequency response and range measured at 1 m, on-axis with recommended active EQ in anechoic environment.
2. 1-4k average, -6 dB.
3. Max SPL calculated based on free-field sensitivity (no boundary-loading gain), exclusive of power compression, and without beam steering, spreading or smoothing functions applied.
4. Typical maximum usable throw distance includes considerations for reverberation and speech intelligibility.
5. Analog audio input is limited to 1 beam. 2 beam support requires Dante input.

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## Dimensions<sup>6</sup>

**Front View**

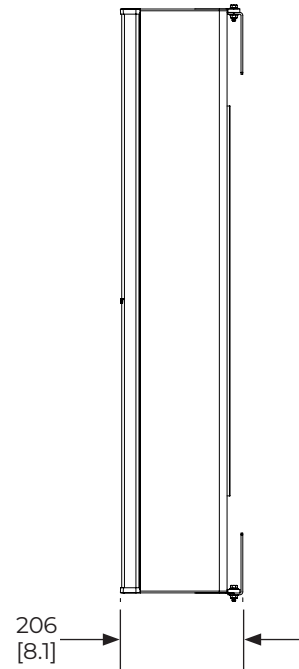


**Front View  
WITHOUT GRILLE**

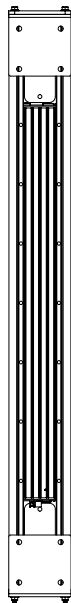


**Right View**

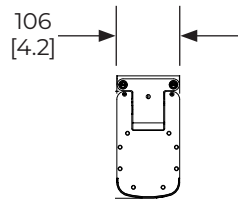
DIMENSIONS APPLY TO BOTH SIDES



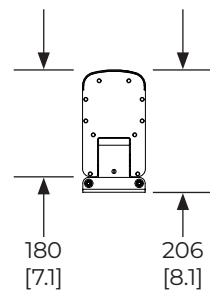
**Rear View**



**Top View**



**Bottom View**



6. Dimensions are shown in millimeters over inches.

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