

# Panaray® MA12

## mid/high modular line array



### Key Features

- **Twelve 2.25" (64 mm) drivers** mounted in a vertical line array deliver wide horizontal coverage with narrow vertical pattern control
- **Modular design** allows stacking of multiple enclosures in a line array configuration to provide increased vertical pattern control which improves "throw" distance and reduces unwanted floor/ceiling reflections
- **145° horizontal x 20° nominal coverage** for a single module. Vertical coverage varies with number of modules stacked in line array configuration
- **Mid/high configuration** allows bass management and design flexibility. Use with Bose MB4, MB12, or MB24 modular bass loudspeakers for full-range reinforcement
- **Optional brackets** allow easy installation of single-, double- or triple-stack line array modules



TECHNICAL DATA SHEET

### Product Overview

The Bose® Panaray® MA12 is a mid/high-frequency modular line array loudspeaker designed to provide outstanding vocal intelligibility in acoustically demanding spaces. The slim column enclosure blends with almost any décor.

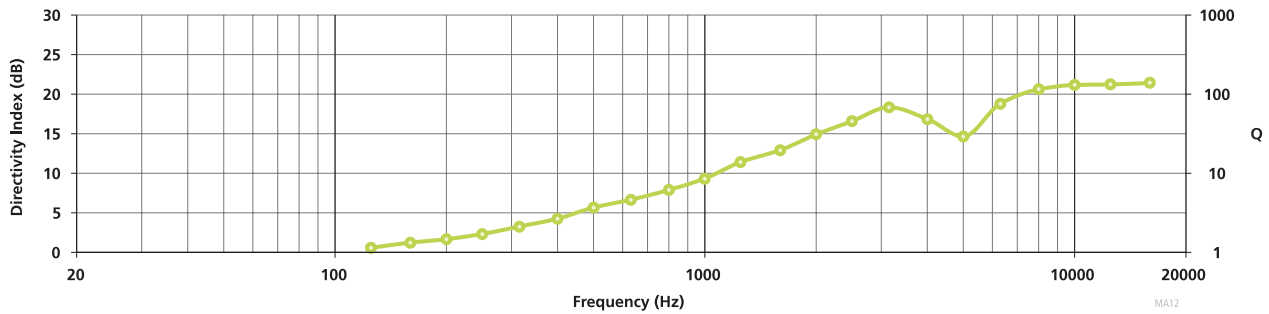
### Technical Specifications

System Performance	
Frequency Response (+/-3 dB) <sup>1</sup>	155 Hz - 12 kHz
Frequency Range (-10 dB) <sup>1</sup>	100 Hz - 16 kHz
Nominal Dispersion <sup>2</sup>	145° H x 20° V
Recommended High-Pass Filter	125 Hz
Loudspeaker EQ	Required
Overload Protection	PTC / Lamp
Long-Term Power Handling <sup>3</sup>	300 W (1200 W peak)
Sensitivity (SPL / 1 W @ 1 m) <sup>4</sup>	88 dB SPL
Maximum SPL @ 1 m <sup>5</sup>	113 dB SPL (119 dB SPL peak)
Nominal Impedance	8 Ω
Transformer Taps (70/100 V)	CVT-MA12 transformer available
Transducers	
Driver Complement	Twelve (12) 2.25" (57 mm) mid/high-frequency drivers
Physical	
Enclosure	Extruded-aluminum sidewalls with steel top and bottom endcaps, all powder coated
Grille	Powder-coated steel grille
Environmental	Indoor use only
Connectors	Two (2) parallel-wired NL4 Neutrik® Speakon® connectors One (1) two-conductor barrier strip
Suspension / Mounting	Four (4) x M6 threaded inserts (back)
Dimensions	38.8" H x 4.2" W x 5.0" D (984 mm x 105 mm x 128 mm)
Net Weight	19 lb (8.5 kg)
Shipping Weight	21 lb (9.4 kg)
Product Code	
Black	040189
White	040188

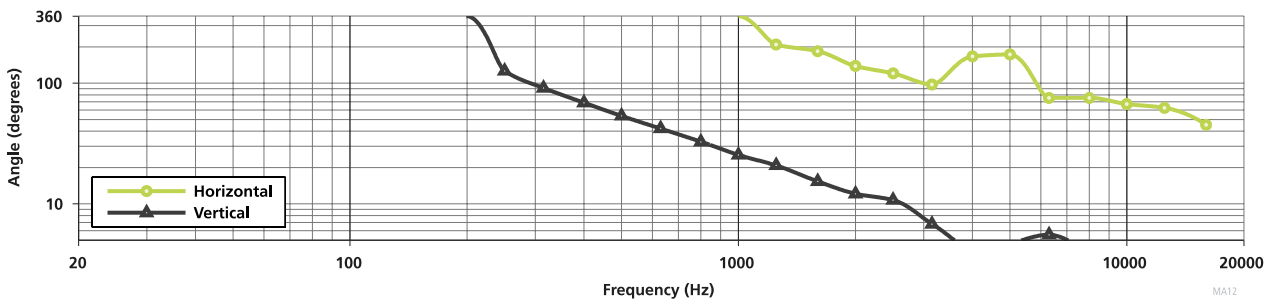
**Footnotes:**

- 1 Frequency response and range measured on-axis with recommended active EQ in an anechoic environment.
- 2 Vertical coverage varies by number of modules vertically arrayed and distance from line-source boundary. Use Modeler® software for the best prediction.
- 3 Power handling tested using pink noise filtered to meet IEC 268-5, 6 dB crest factor, 100 hours, with recommended EQ.
- 4 Sensitivity measured in free field (no boundary-loading gain) with recommended active EQ, referenced to 1W/1m.
- 5 Maximum SPL calculated from sensitivity and power handling specifications, exclusive of power compression.

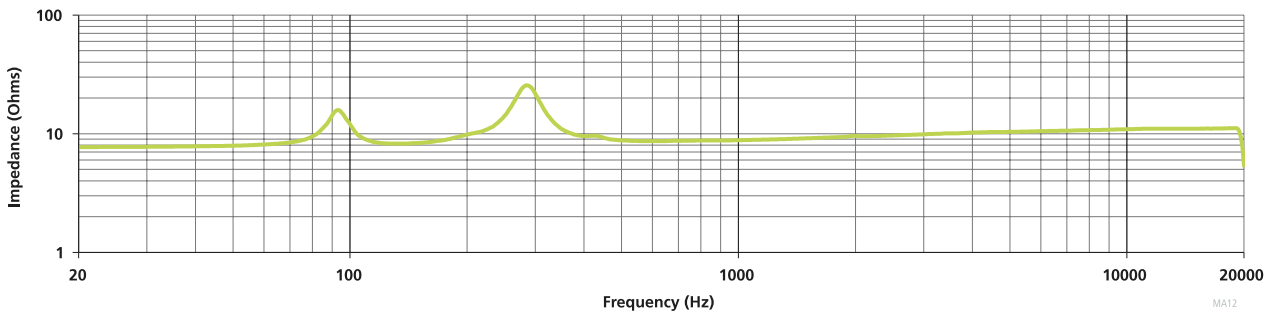
### Directivity Index and Q



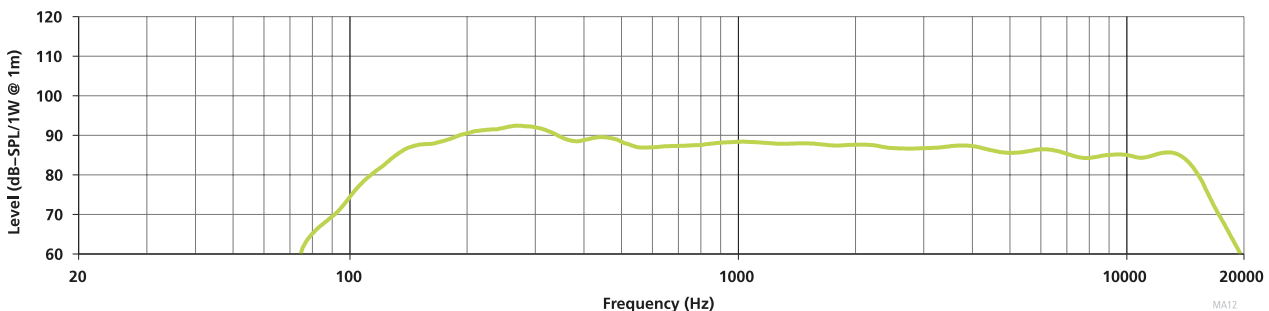
### Beamwidth



### Impedance



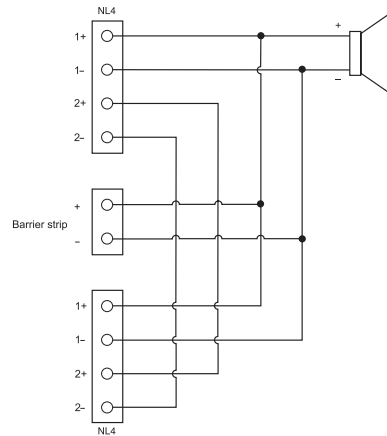
### On-Axis Response



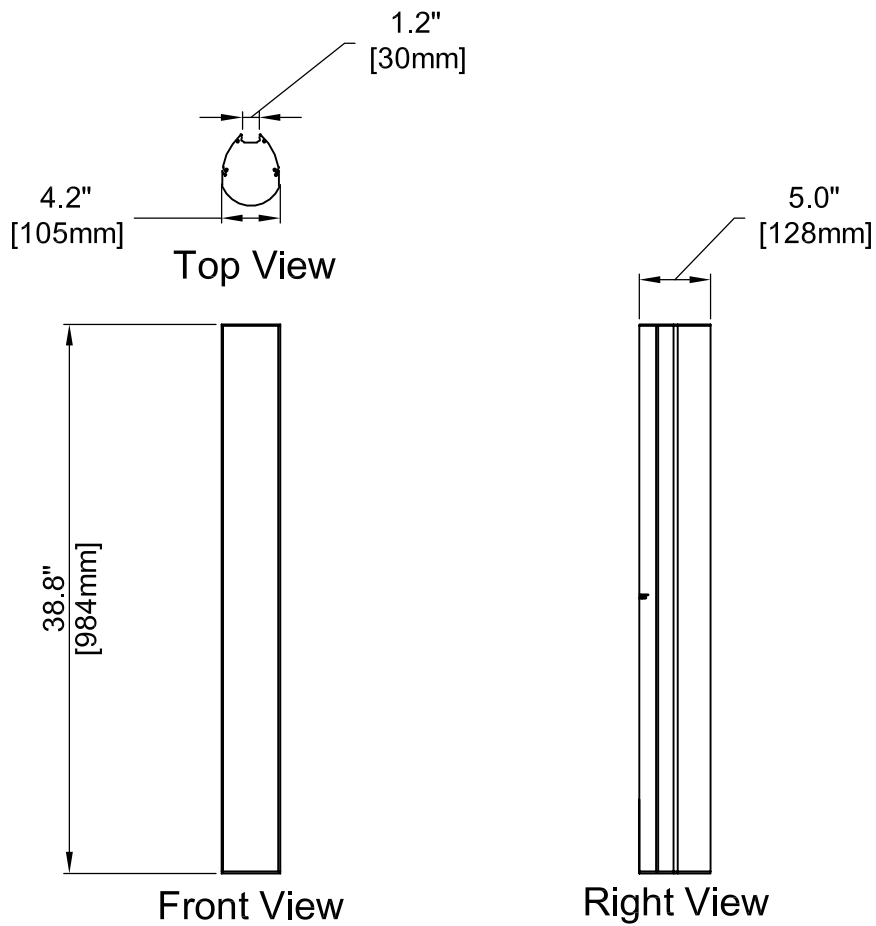
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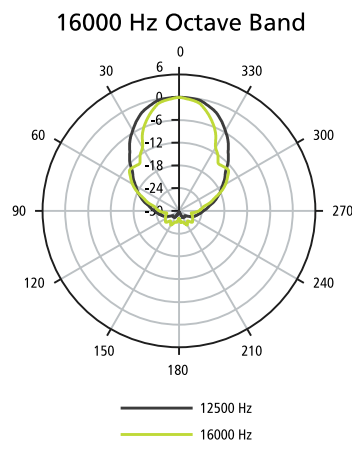
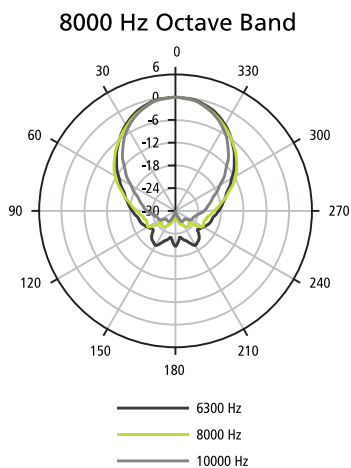
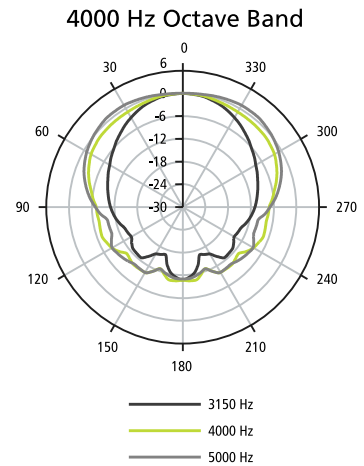
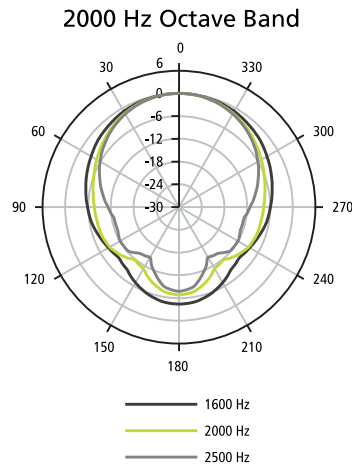
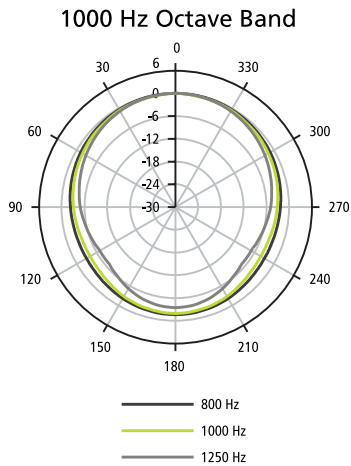
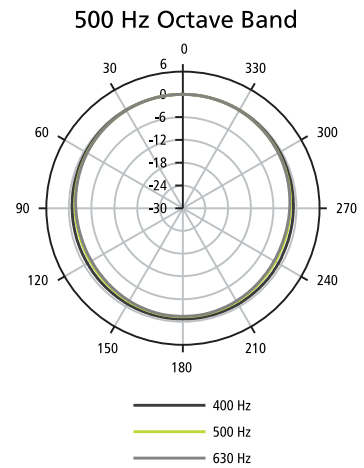
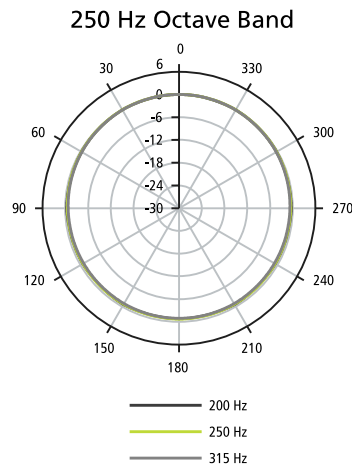
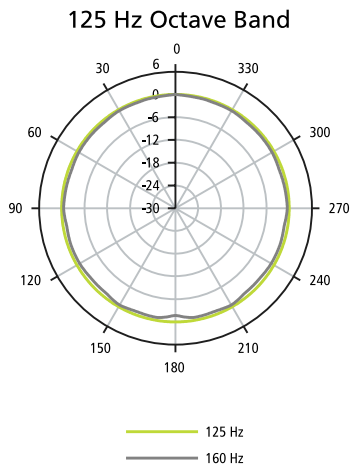
## Wiring Diagram



## Mechanical Diagrams



### Horizontal Plots



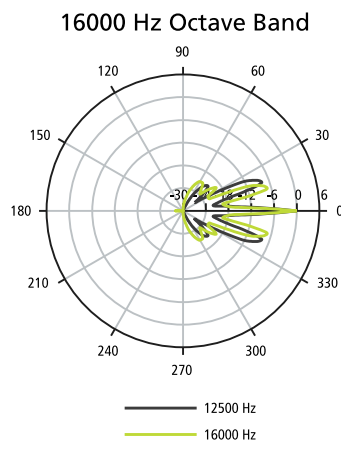
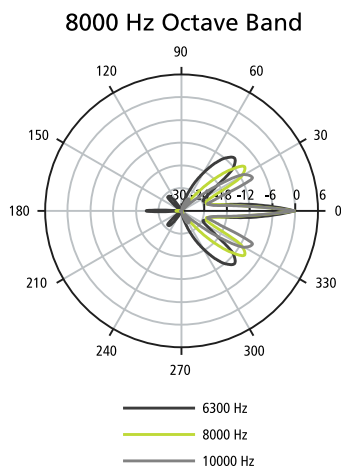
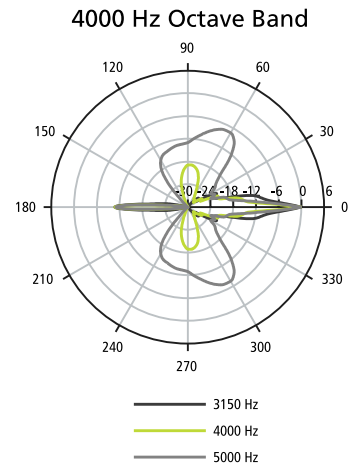
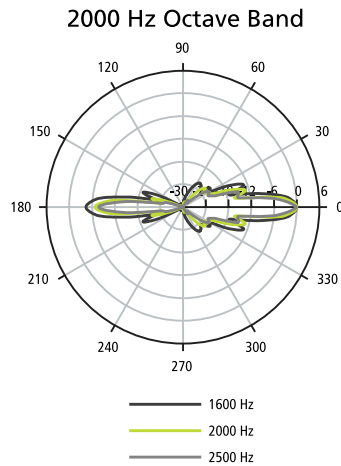
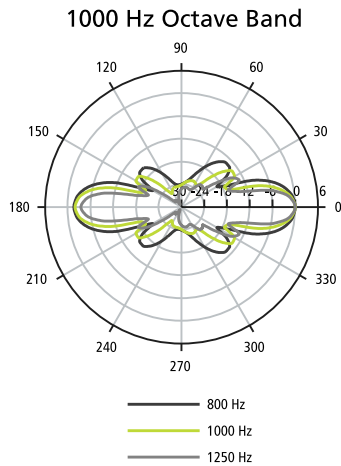
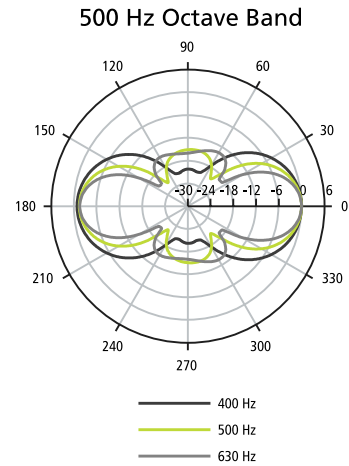
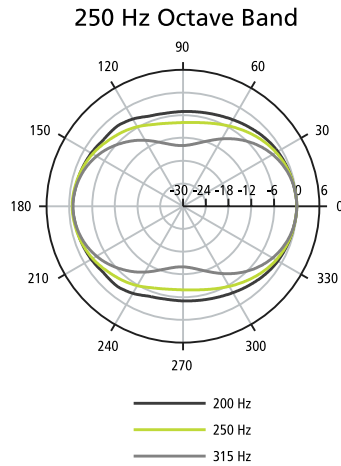
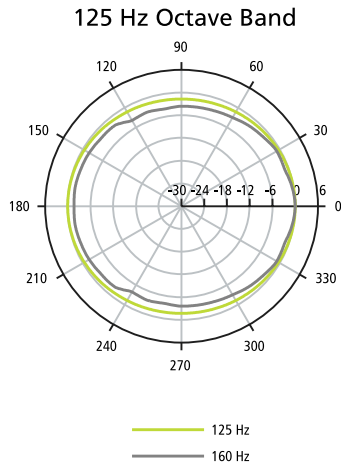
MA12

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### Vertical Plots



MA12

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### Architects' and Engineers' Specifications

The loudspeaker shall be a multiple driver system with matched active equalization as follows:

The transducer complement shall consist of twelve 2.25" (57 mm) mid/high-frequency drivers mounted in vertical line array. Each driver shall have a rated impedance of 6.2 ohms and wired in series/parallel, resulting in a composite nominal impedance of 8 ohms.

The nominal horizontal beamwidth of the loudspeaker shall be 145 degrees, and the vertical coverage is a band of constant height. The power handling capacity of the loudspeaker shall be 300 watts continuous pink noise, band-limited from 155 Hz to 12 kHz ( $\pm 3$  dB).

The loudspeaker shall be provided with a ducted vent system, tuned at 150 Hz. The input connector of the loudspeaker module shall consist of two parallel-wired NL4 Neutrik® Speakon® connectors and one (1) two-conductor barrier strip.

The enclosure of the MA12 loudspeaker module shall be extruded-aluminum sidewalls with steel top and bottom endcaps, all powder coated. Its outer dimensions shall be 38.8" x 4.2" x 5.0" (984 mm x 105 mm x 128 mm). Its weight shall be 19 lb (8.5 kg).

The loudspeaker shall be the Bose® Panaray® MA12 modular line array loudspeaker.