

Panaray® 502® A loudspeaker

BOSE®

Key Features

- **Articulated Array® design** provides wide 120° x 70° pattern optimized for smooth band to band coverage
- **Five Bose® 4.5" (114 mm)** full-range drivers for unsurpassed natural sound quality. Elimination of tweeters and crossover provides lifelike vocal and instrument reinforcement
- **Mid/high configuration** allows bass management and design flexibility. Use with the Panaray 502® B loudspeaker, or the MB4, MB12 or MB24 modular base loudspeakers for full-range reinforcement
- **Sleek, elegant design** for architectural compatibility. Modular components for system design flexibility
- **Full line** of Bose-designed accessories for easy installation
- **Requires** active equalization for best performance



TECHNICAL DATA SHEET

Product Overview

The Bose® Panaray® 502 A is a mid/high-frequency loudspeaker designed for indoor permanent installations that require a small form factor for aesthetic and audience sight line considerations. Its Articulated Array® design provides a wide 120° x 70° pattern to effectively cover many smaller venues with a single loudspeaker.

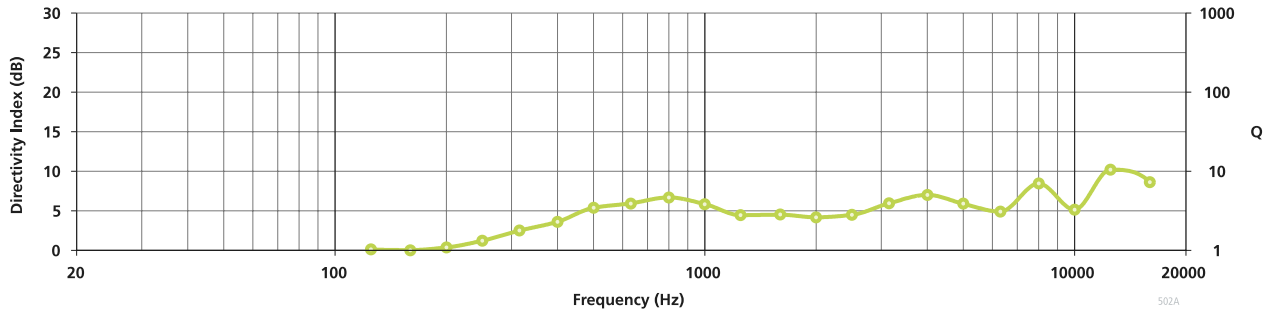
Technical Specifications

System Performance	
Frequency Response (+/-3 dB) ¹	150 Hz - 17 kHz
Frequency Range (-10 dB) ¹	110 Hz - 20 kHz
Nominal Dispersion	120° H x 70° V
Loudspeaker EQ	Required
Overload Protection	4-ampere AGC 4 (Buss) or 3AG (Littlefuse)
Long-Term Power Handling ²	150 W (600 W peak)
Sensitivity (SPL / 1 W @ 1 m) ³	90 dB SPL
Maximum SPL @ 1 m ⁴	112 dB SPL (118 dB SPL peak)
Nominal Impedance	8 Ω
Transformer Taps (70/100 V)	CVT-5 70V/100V transformer available
Transducers	
Driver Compliment	Five (5) 4.5" (114 mm) helical voice coil drivers
Physical	
Enclosure	Mica-reinforced structural foam, textured
Grille	Powder-coated steel grille
Environmental	Indoor use only
Connectors	Two (2) parallel-wired NL4 Neutrik® Speakon® connectors Two (2) parallel-wired barrier strips
Suspension / Mounting	Four (4) 8 mm threaded inserts (back)
Dimensions	23.8" H x 5.8" W x 7.1" D (603 mm x 146 mm x 179 mm)
Net Weight	15 lb (6.8 kg)
Shipping Weight	18 lb (8.3 kg)
Product Code	
Grey	040170
White	040171

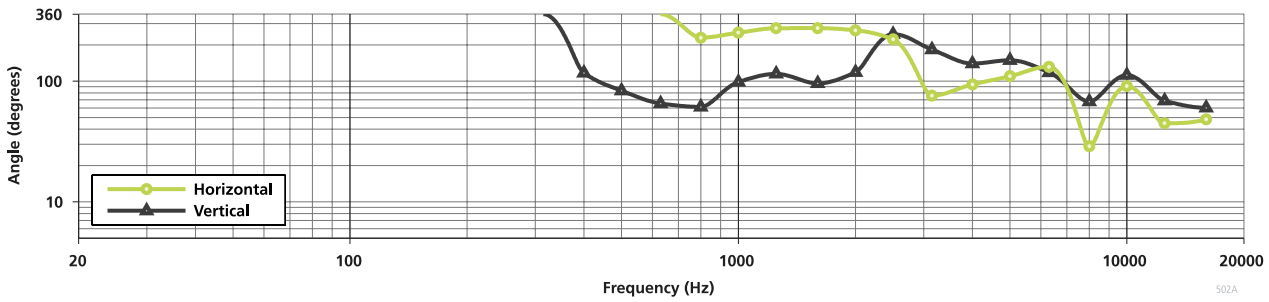
Footnotes:

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

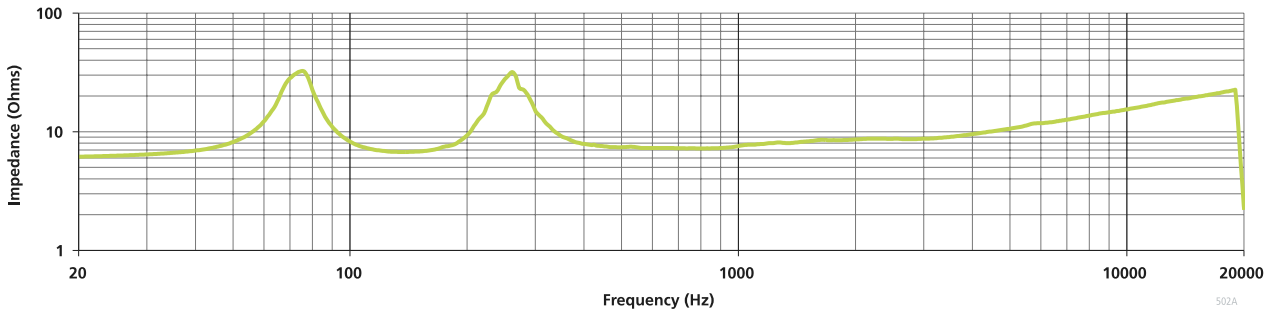
Directivity Index and Q



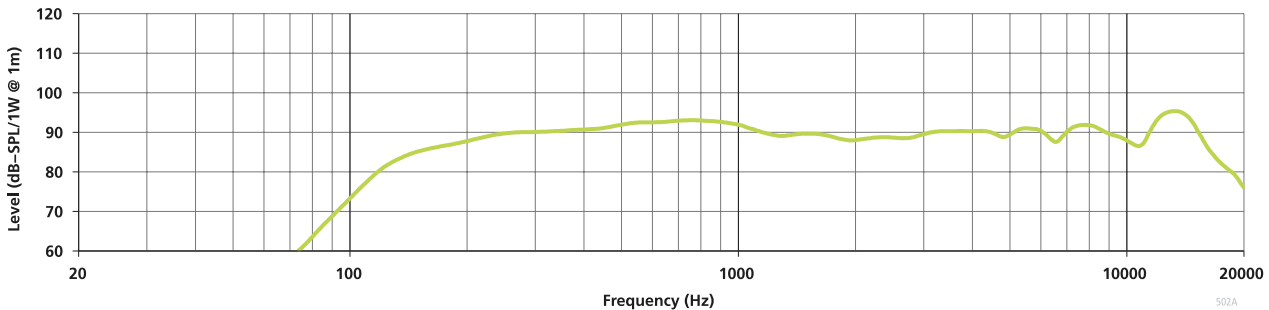
Beamwidth



Impedance



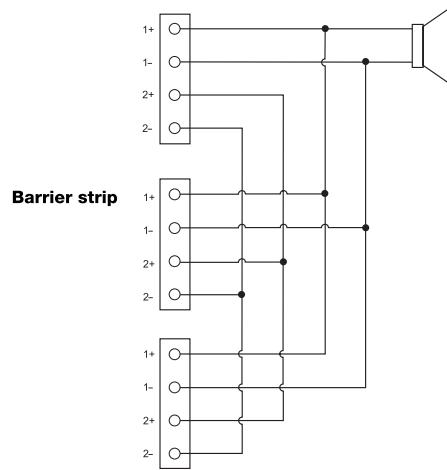
On-Axis Response



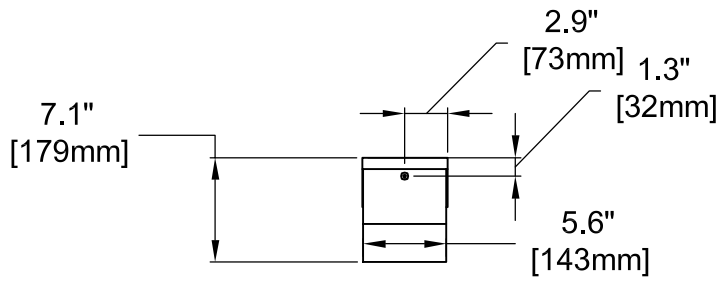
Panaray® 502® A loudspeaker



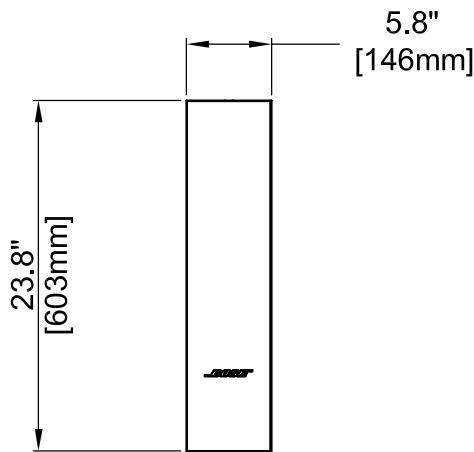
Wiring Diagram



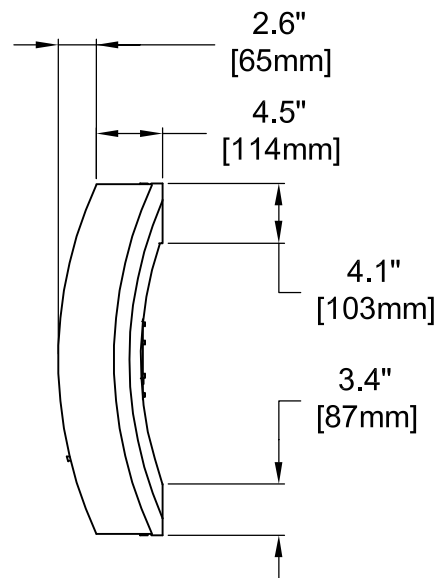
Mechanical Diagrams



Top View



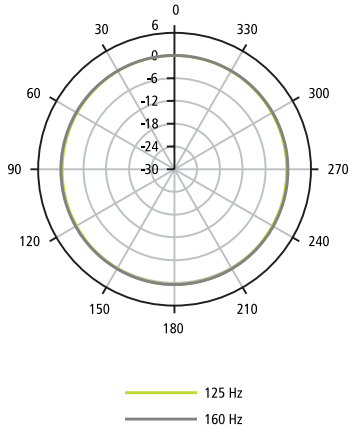
Front View



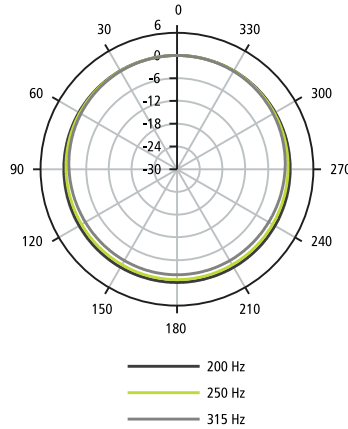
Right View

Horizontal Plots

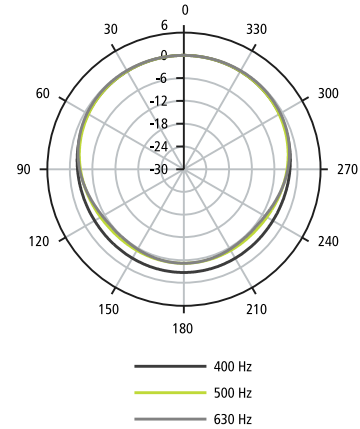
125 Hz Octave Band



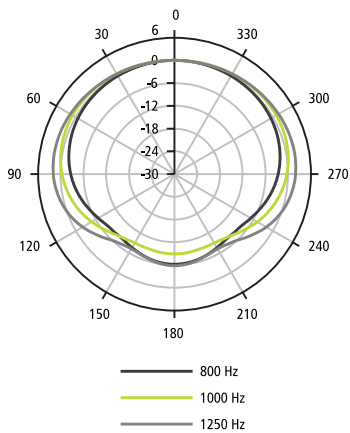
250 Hz Octave Band



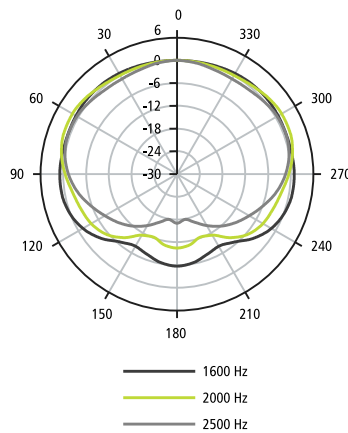
500 Hz Octave Band



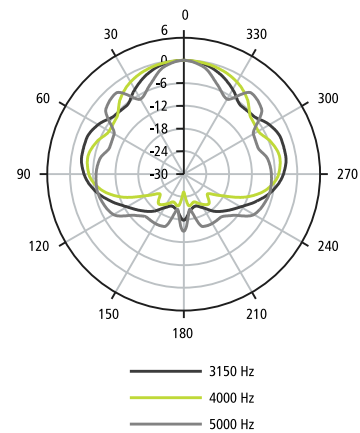
1000 Hz Octave Band



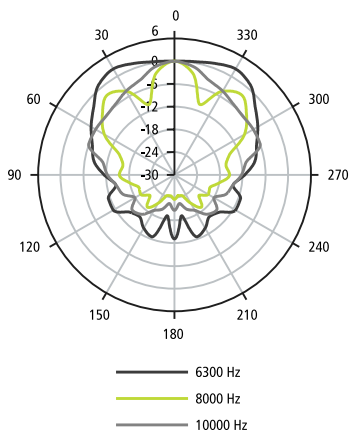
2000 Hz Octave Band



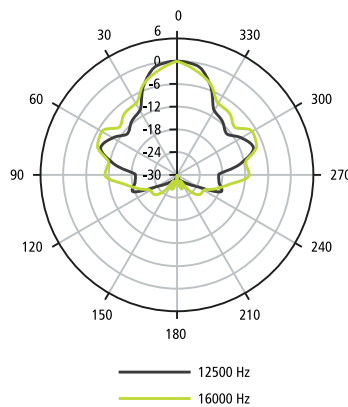
4000 Hz Octave Band



8000 Hz Octave Band



16000 Hz Octave Band

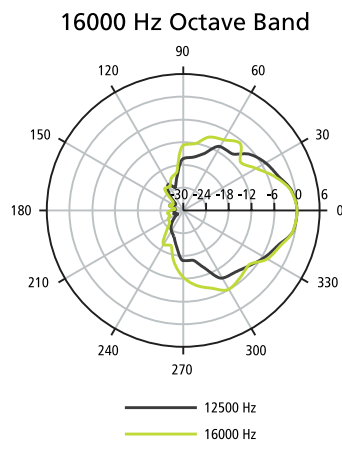
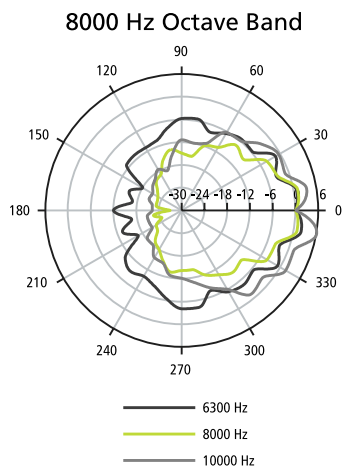
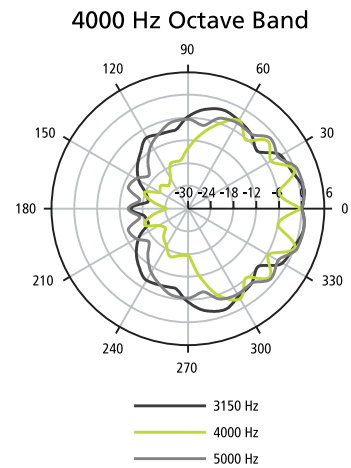
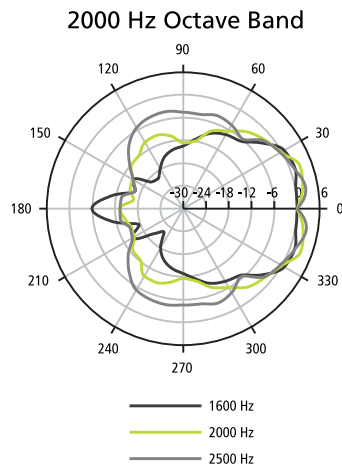
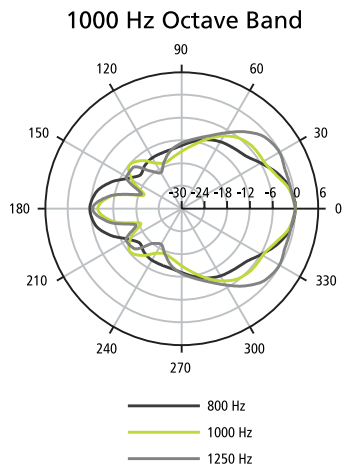
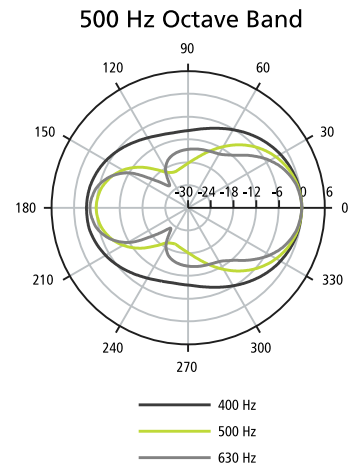
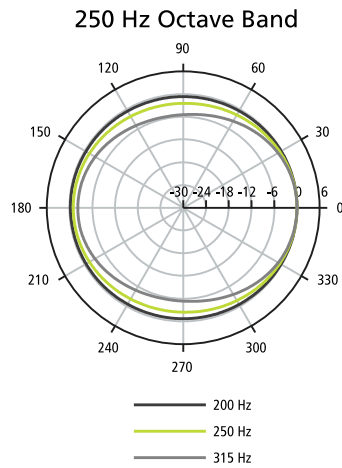
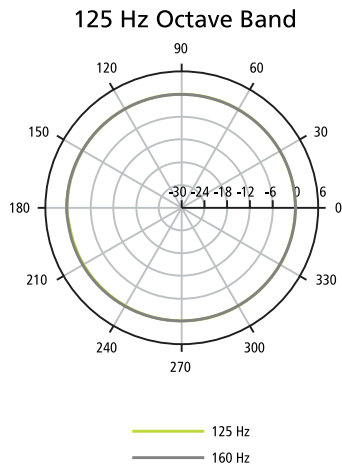


502A

Panaray® 502® A loudspeaker



Vertical Plots



502A

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Architects' and Engineers' Specifications

The mid-to-high-frequency device shall be a multiple-driver system with matched active equalization as follows:

The transducer complement shall consist of five (5) high-sensitivity drivers of 4.5 inches (114 mm) diameter, mounted vertically on a single baffle assembly such that directional characteristics are optimized for smooth response.

The input connector, located on the rear of the array enclosure, shall consist of two parallel-wired NL4 Neutrik® Speakon® connectors and two parallel-wired barrier strips.

The array enclosure shall be composed of copolymer materials, with outer dimensions of 23.8" x 5.8" x 7.1" (603 mm x 146 mm x 179 mm); its weight shall be 15 lb (6.8 kg).

The array maximum continuous acoustic output shall be 112 dB SPL from 150 Hz to 17 kHz, with measurements referenced to full-bandwidth pink-noise input at 1 meter at the array's rated power. Its power-handling capacity shall be 150 watts continuous referenced to IEC noise for 100 hours. The nominal horizontal beamwidth shall be 120 degrees. The nominal vertical beamwidth shall be 70 degrees.

The loudspeaker shall be the Bose® Panaray® 502® A loudspeaker.