

Panaray® 402® Series II loudspeaker

BOSE

Key Features

- **Articulated Array® design** provides wide 120° x 60° coverage to deliver voice and music reproduction over a broad dispersion area
- **Four Bose® 4.5" (114 mm)** full-range drivers for unsurpassed natural sound quality. Elimination of tweeters and crossover provides lifelike vocal and instrument reinforcement
- **Frequency range down to 70 Hz** allows full-range speech and light music reinforcement. For extended bass and higher output levels, use with Bose MB4, MB12, or MB24 modular bass loudspeakers
- **Slim, aesthetic styling.** Rugged enclosure with metal grille
- **Weather-resistant design** for indoor and outdoor applications
- **Full complement of brackets** and stands available
- **Requires** active equalization for best performance



TECHNICAL DATA SHEET

Product Overview

The Bose® Panaray® 402 Series II is a full-range loudspeaker designed for either permanent installations or portable sound reinforcement. It is appropriate for both indoor and outdoor applications. Its Articulated Array® design provides a wide 120° x 60° pattern to effectively cover many smaller venues with a single loudspeaker.

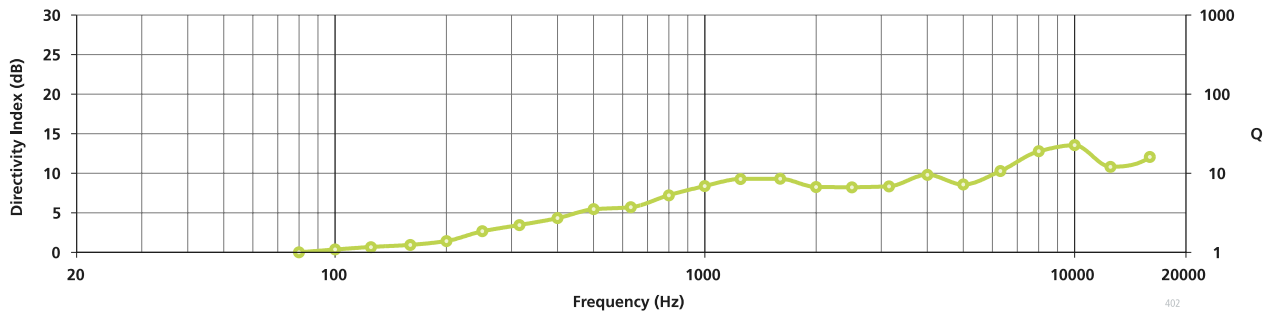
Technical Specifications

System Performance	
Frequency Response (+/-3 dB) ¹	90 Hz - 17 kHz
Frequency Range (-10 dB) ¹	70 Hz - 20 kHz
Nominal Dispersion	120° H x 60° V
Loudspeaker EQ	Required
Overload Protection	Lamps (2)
Long-Term Power Handling ²	120 W (480 W peak)
Sensitivity (SPL / 1 W @ 1 m) ³	89 dB SPL
Maximum SPL @ 1 m ⁴	115 dB SPL (121 dB SPL peak)
Nominal Impedance	8 Ω
Transducers	
Driver Complement	Four (4) 4.5" (114 mm) full-range environmental drivers
Physical	
Enclosure	Mica-reinforced structural foam, textured
Grille	Powder-coated steel grille
Environmental	Outdoor per IEC 529 IP55
Connectors	Two (2) parallel-wired NL4 Neutrik® Speakon® connectors
Suspension / Mounting	Four (4) M8 x 1.25 inserts (2 back, 2 bottom)
Dimensions	23.3" H x 8.2" W x 8.0" D (592 mm x 208 mm x 202 mm)
Net Weight	15 lb (7.0 kg)
Shipping Weight	21 lb (9.6 kg)
Product Code	
Black	040168
White	040169

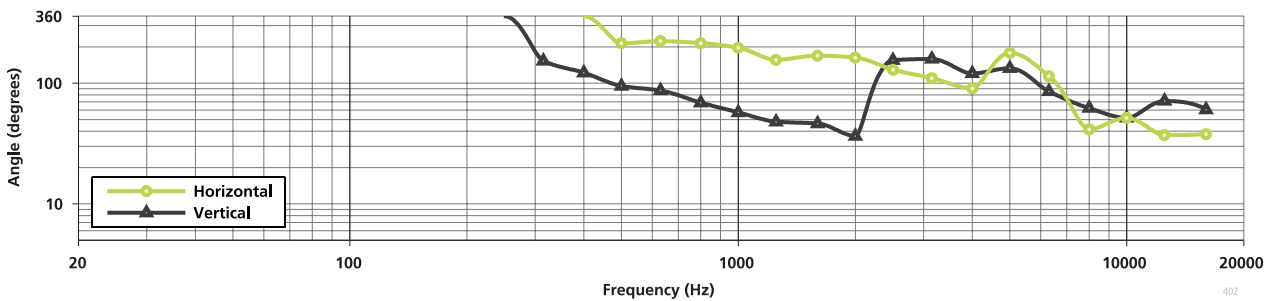
Footnotes:

- 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.

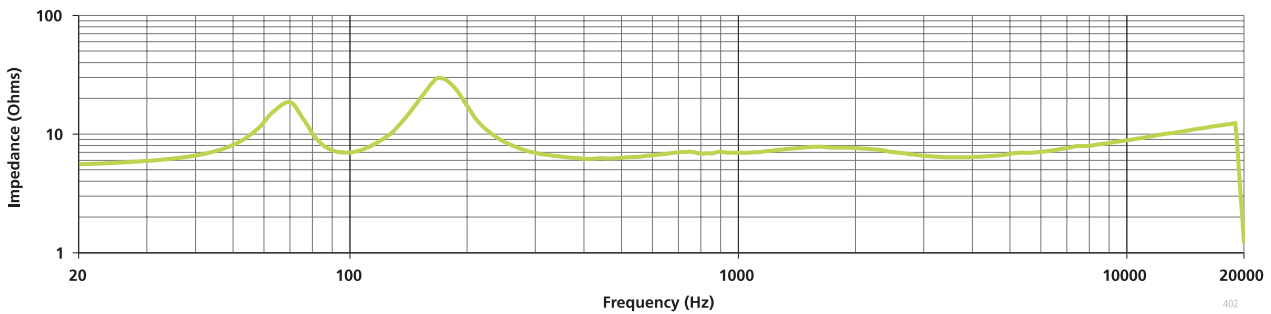
Directivity Index and Q



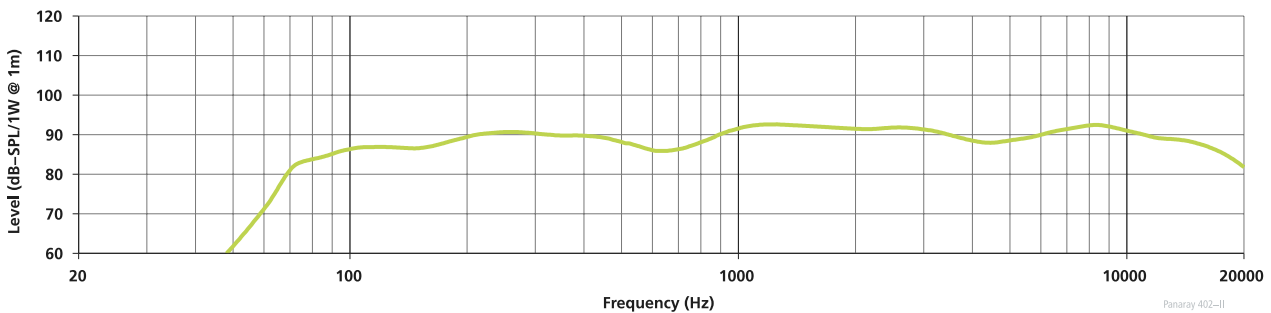
Beamwidth



Impedance



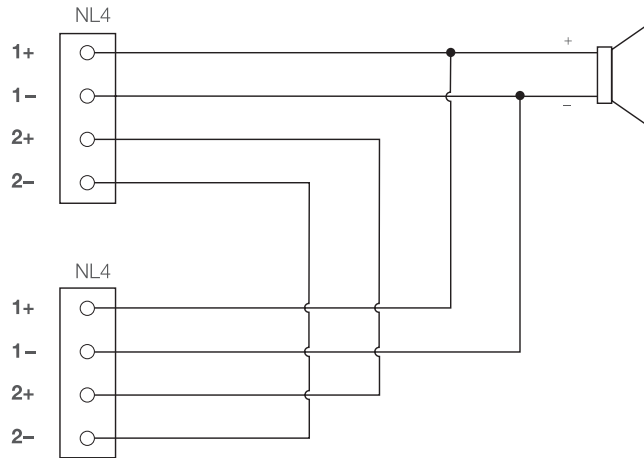
On-Axis Response



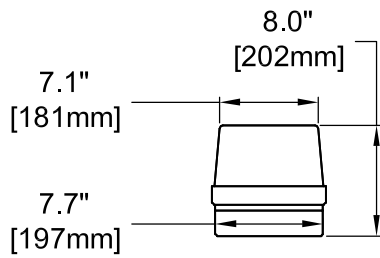
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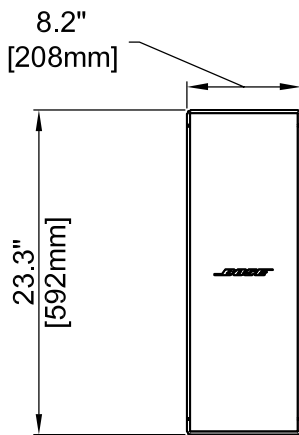
Wiring Diagram



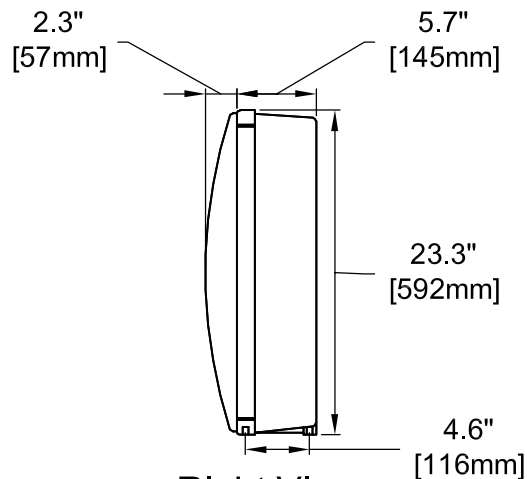
Mechanical Diagrams



Top View



Front View

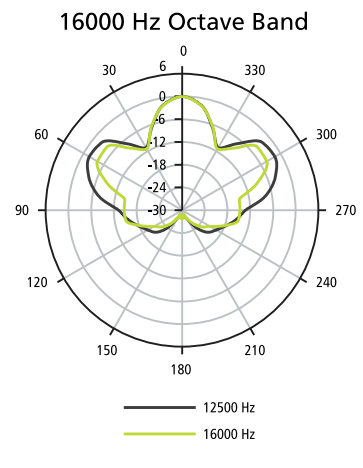
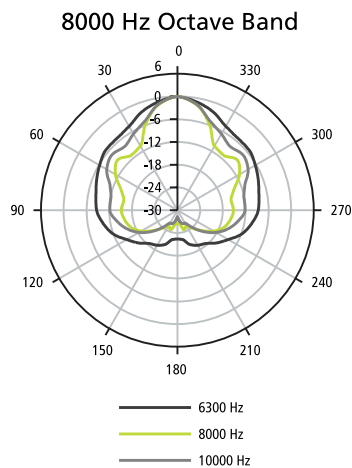
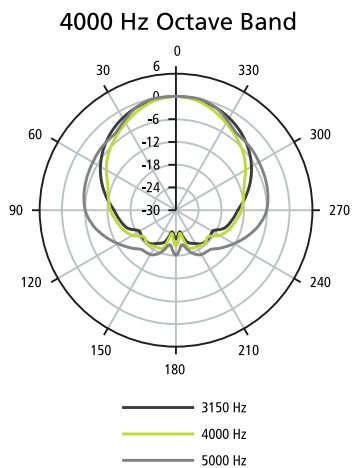
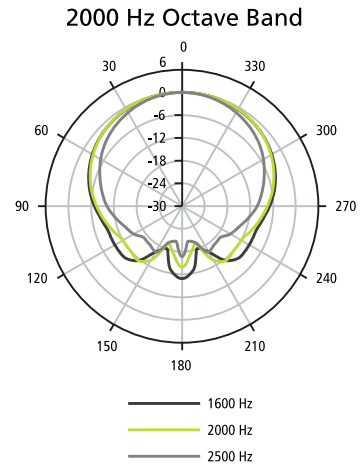
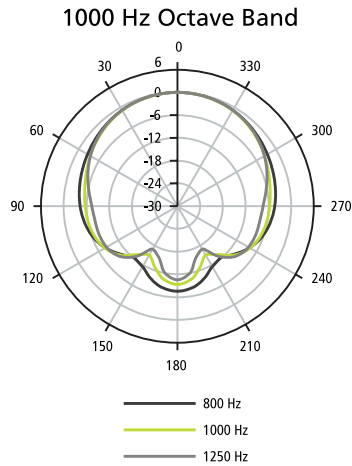
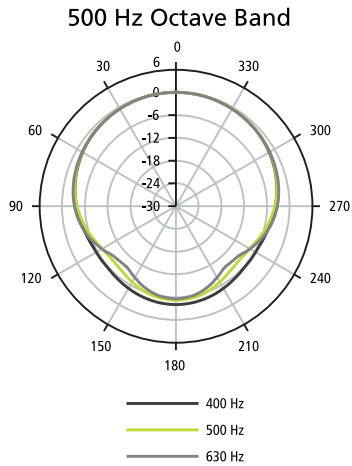
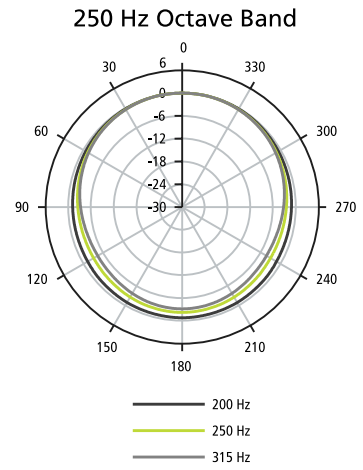
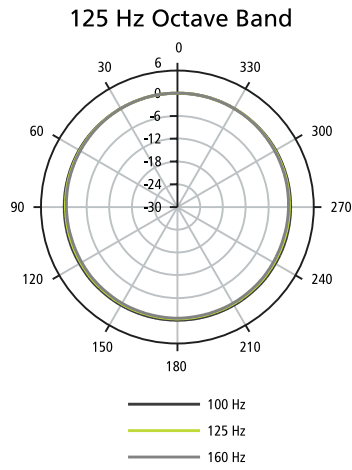
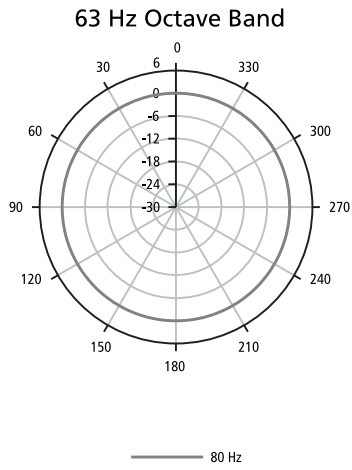


Right View

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Horizontal Plots

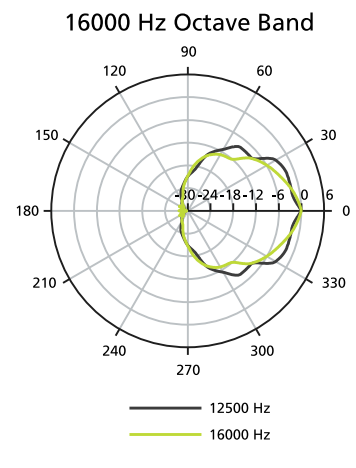
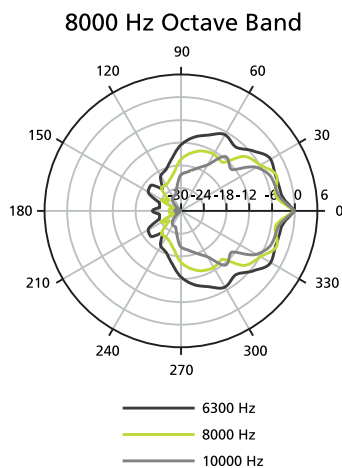
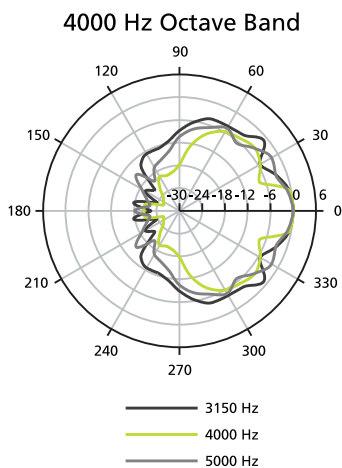
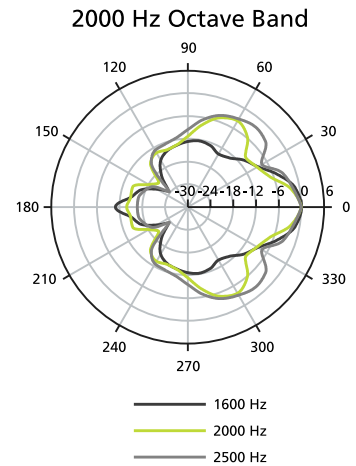
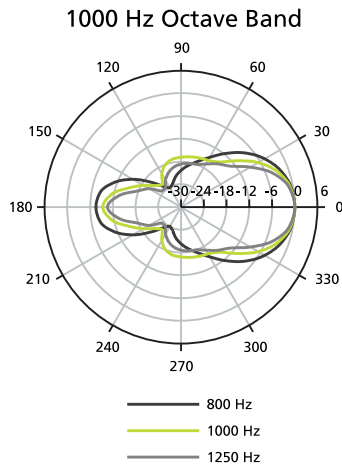
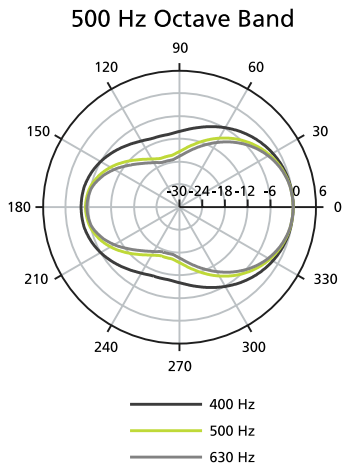
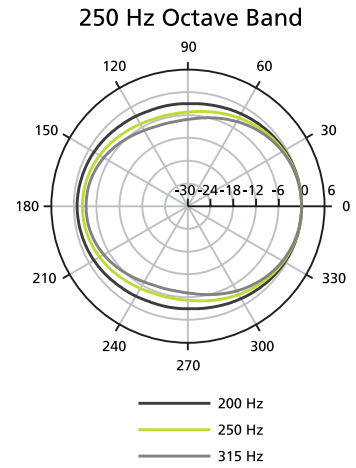
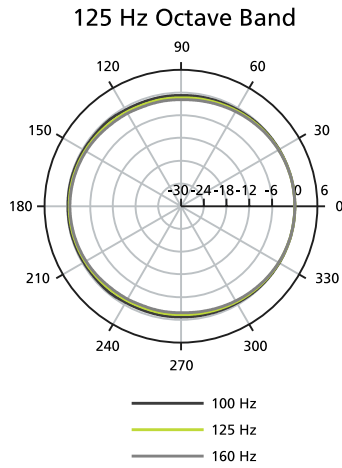
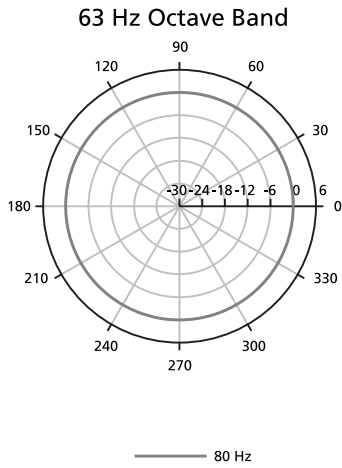


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Vertical Plots



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Architects' and Engineers' Specifications

The loudspeaker shall be a multiple driver, full-range system with matched active equalization as follows:

The transducer complement shall consist of four (4) full-range environmental drivers of 4.5" (114 mm) diameter, mounted vertically in a faceted baffle. Each driver shall have a rated impedance of 1.6 ohms and shall be wired in series, resulting in a composite speaker assembly nominal impedance of 8 ohms.

The system sensitivity shall be 99 dB SPL in the 300 Hz to 3 kHz range and 89 dB SPL in the 90 Hz to 17 kHz range with both measurements referenced to a 1 watt (2.83 V) pink noise input at 1 meter. The nominal horizontal beamwidth shall be 120 degrees, and the nominal vertical beamwidth shall be 60 degrees. The power handling capacity of the loudspeaker shall be 120 watts continuous pink noise, band-limited from 90 Hz to 17 kHz.

The loudspeaker shall be provided with a ducted vent system, tuned at 95 Hz. The input connectors of the 402 Series II loudspeaker shall consist of two (2) parallel-wired NL4 Neutrik® Speakon® connectors.

The enclosure of the 402 Series II loudspeaker shall be composed of mica-reinforced structural foam. Its outer dimensions shall be 23.3" x 8.2" x 8.0" (592 mm x 208 mm x 202 mm); its weight shall be 15 lb (7.0 kg).

The loudspeaker shall be the Bose® Panaray® 402® Series II loudspeaker.