

# Panaray® 310M

## multi-position floor monitor



### Key Features

- **Three-in-one cabinet design** provides smooth response and even coverage for multiple floor-monitor applications:
  - 45° position (individual mix)  
Horizontal: 60°; Vertical: 120°
  - 40° position (group mix – shallow stage)  
Horizontal: 120°; Vertical: 60°
  - 60° position (group mix – deep stage)  
Horizontal: 120°; Vertical: 60°
- **Proprietary Articulated Array®** speaker configuration with three 2.25" (57 mm) mid-high frequency drivers combined with a single 5.25" (133 mm) woofer
- **Internal passive crossover** network does not require active equalization
- **Recessed NL4 connectors** allow for easy cable concealment, which reduces clutter on stage
- **Rear bumper** prevents unwanted movement



TECHNICAL DATA SHEET

### Product Overview

The Bose® Panaray 310M multi-position floor monitor is a high-performance compact solution that delivers multiple coverage options for a variety of professional applications.

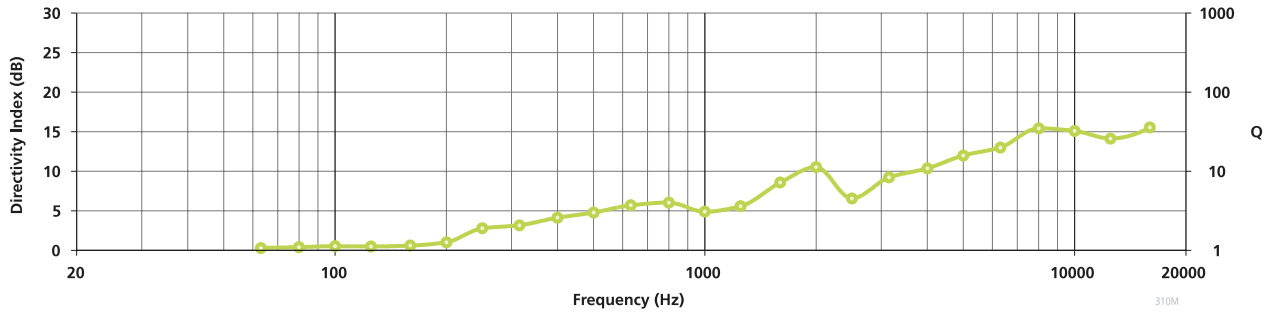
### Technical Specifications

System Performance																															
Frequency Response (+/-3 dB) <sup>1</sup>	70 Hz - 16 kHz																														
Frequency Range (-10 dB) <sup>1</sup>	55 Hz - 19 kHz																														
	<table border="1"> <thead> <tr> <th>45° position</th> <th>60° position</th> <th>40° position</th> </tr> <tr> <th>Individual Mix</th> <th>Group Mix - Deep Stage</th> <th>Group Mix - Shallow Stage</th> </tr> </thead> <tbody> <tr> <td>Nominal Dispersion</td> <td>60° H x 120° V</td> <td>120° H x 60° V</td> </tr> <tr> <td>Recommended High-Pass Filter</td> <td>60 Hz high-pass filter</td> <td></td> </tr> <tr> <td>Loudspeaker EQ</td> <td>Recommended</td> <td></td> </tr> <tr> <td>Long-Term Power Handling<sup>2</sup></td> <td>100 W (400 W peak)</td> <td></td> </tr> <tr> <td>Sensitivity (SPL / 1 W @ 1 m)<sup>3</sup></td> <td>91 dB SPL</td> <td></td> </tr> <tr> <td>Maximum SPL @ 1 m<sup>4</sup></td> <td>111 dB SPL (117 dB SPL peak)</td> <td></td> </tr> <tr> <td>Nominal Impedance</td> <td>8 Ω</td> <td></td> </tr> <tr> <td>Internal Crossover Frequency</td> <td>250 Hz</td> <td></td> </tr> </tbody> </table>	45° position	60° position	40° position	Individual Mix	Group Mix - Deep Stage	Group Mix - Shallow Stage	Nominal Dispersion	60° H x 120° V	120° H x 60° V	Recommended High-Pass Filter	60 Hz high-pass filter		Loudspeaker EQ	Recommended		Long-Term Power Handling <sup>2</sup>	100 W (400 W peak)		Sensitivity (SPL / 1 W @ 1 m) <sup>3</sup>	91 dB SPL		Maximum SPL @ 1 m <sup>4</sup>	111 dB SPL (117 dB SPL peak)		Nominal Impedance	8 Ω		Internal Crossover Frequency	250 Hz	
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Transducers																															
Driver Compliment	5.25" (133 mm) driver Three (3) 2.25" (57 mm) drivers																														
Physical																															
Enclosure	Molded textured polyethylene material																														
Grille	Powder-coated steel grille																														
Environmental	Indoor use only																														
Connectors	Two (2) parallel-wired NL4 Neutrik® Speakon® connectors																														
Dimensions	12.5" H x 14.2" W x 8.3" D (318 mm x 361 mm x 211 mm)																														
Net Weight	14 lb (6 kg)																														
Shipping Weight	20 lb (9 kg)																														
Product Code																															
Black	039919																														

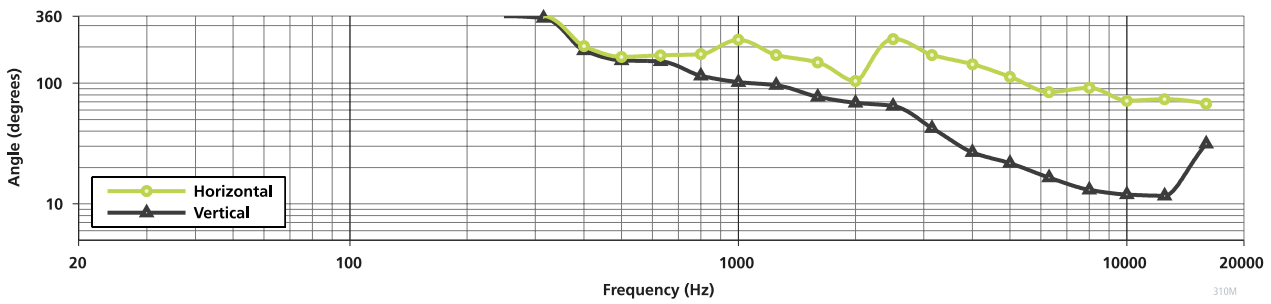
#### Footnotes:

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

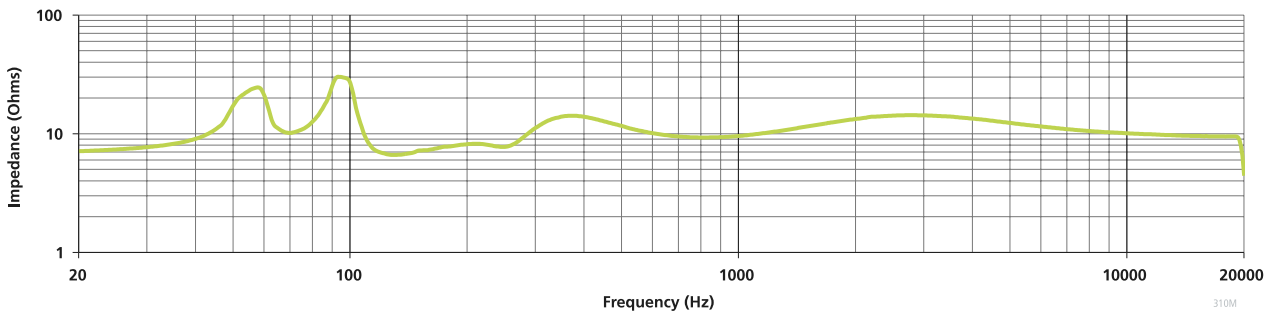
## Directivity Index and Q



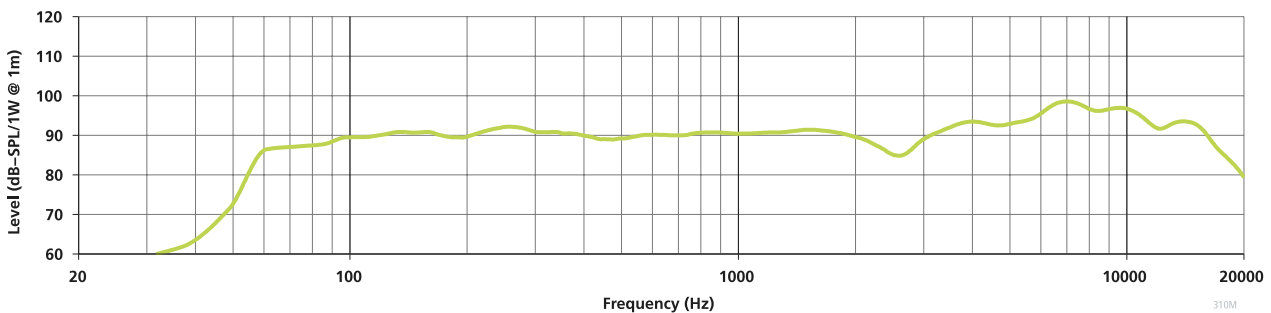
## Beamwidth



## Impedance



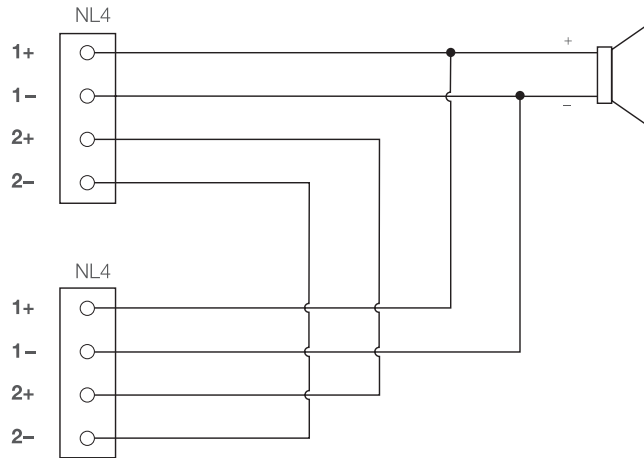
## On-Axis Response



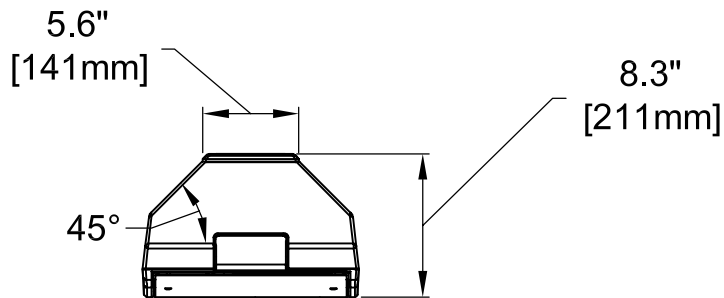
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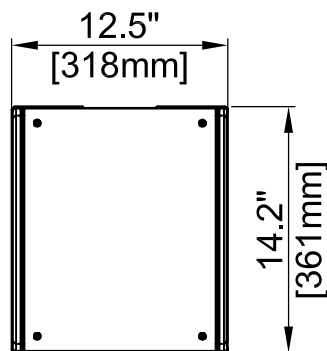
## Wiring Diagram



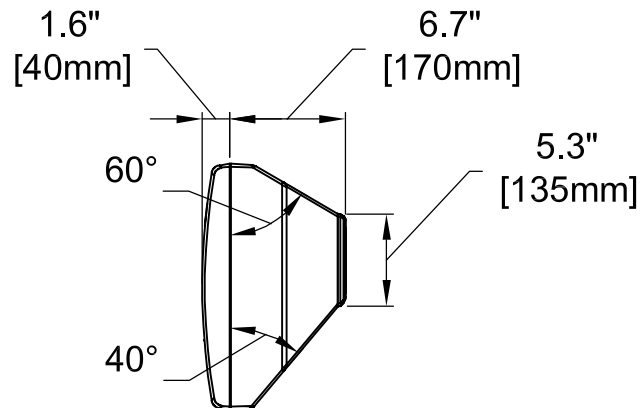
## Mechanical Diagrams



Top View



Front View



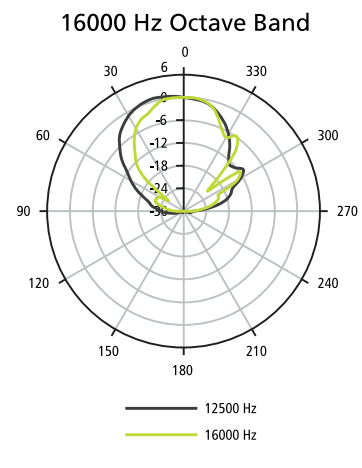
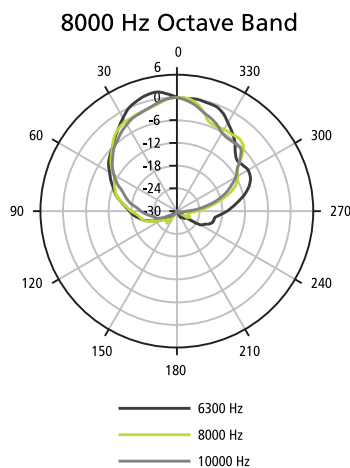
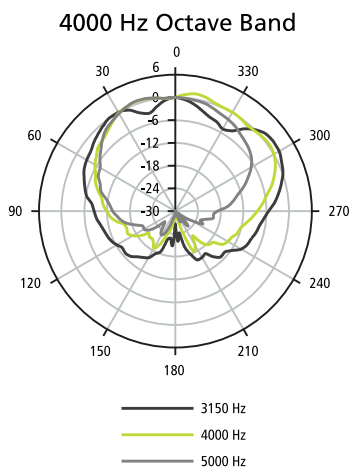
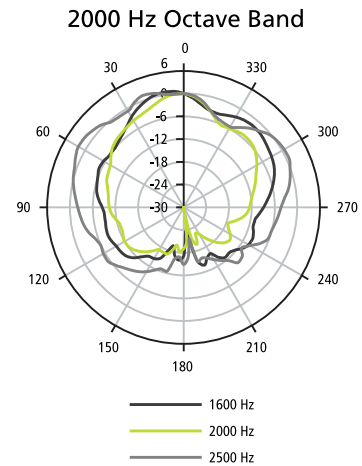
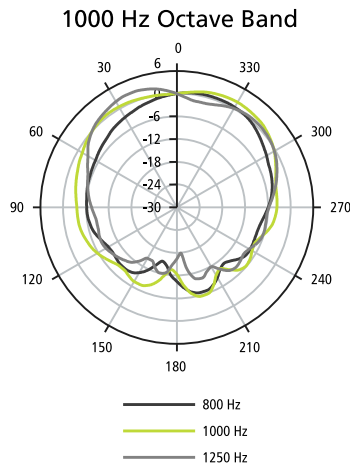
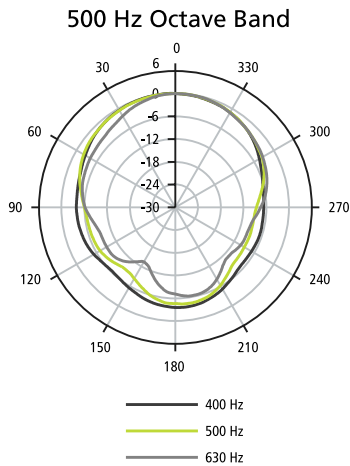
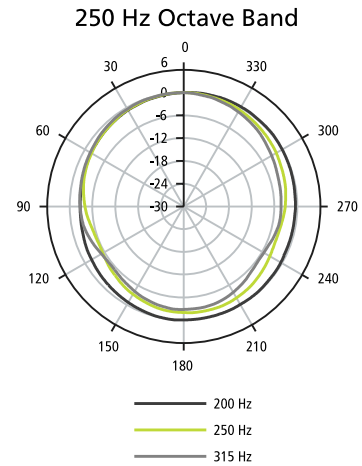
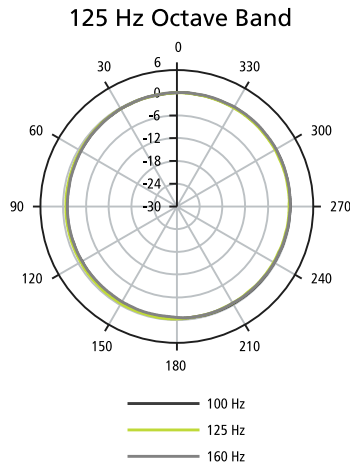
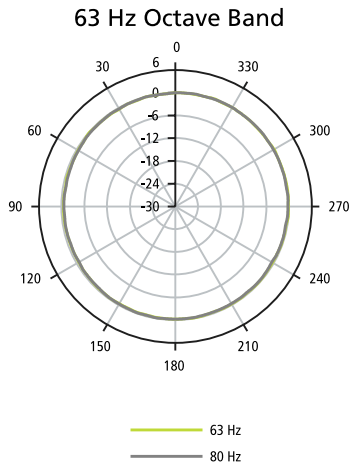
Side View

# Panaray® 310M

## multi-position floor monitor



### Horizontal Plots



310M

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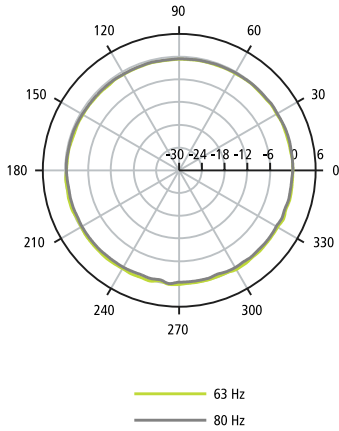
## multi-position floor monitor



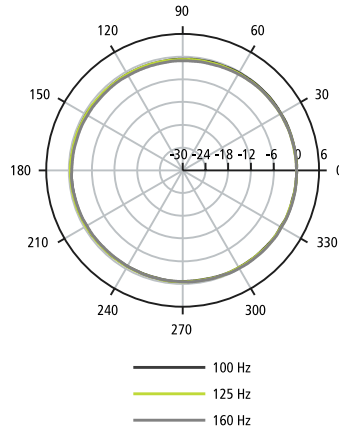
### Vertical Plots

TECHNICAL DATA SHEET

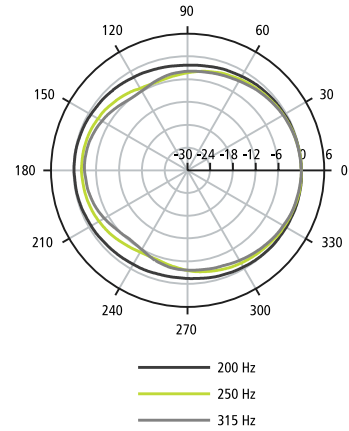
63 Hz Octave Band



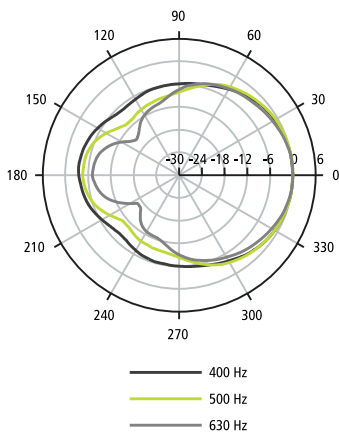
125 Hz Octave Band



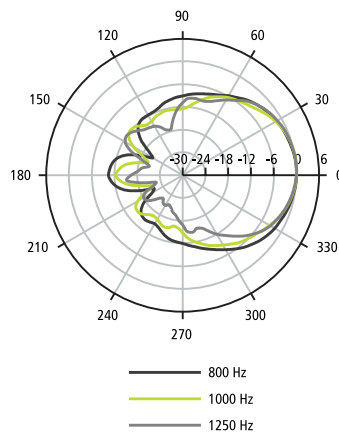
250 Hz Octave Band



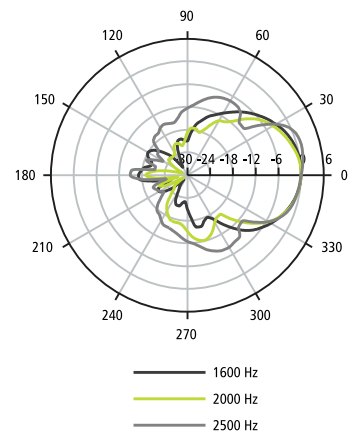
500 Hz Octave Band



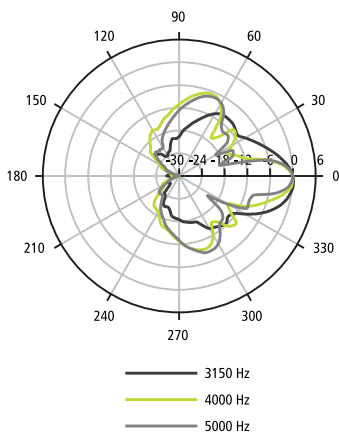
1000 Hz Octave Band



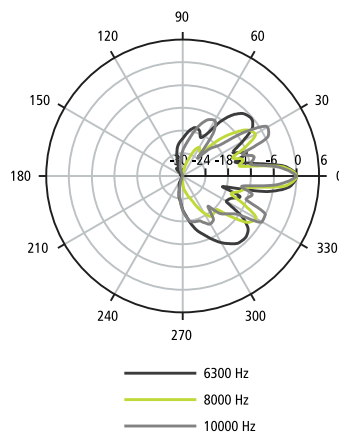
2000 Hz Octave Band



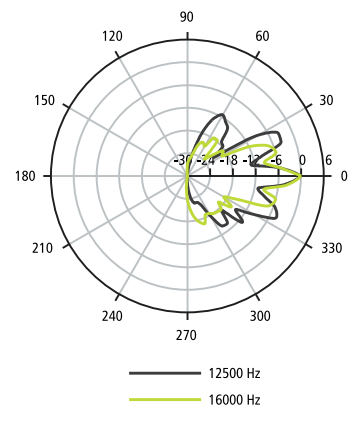
4000 Hz Octave Band



8000 Hz Octave Band



16000 Hz Octave Band



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### Architects' and Engineers' Specifications

The loudspeaker shall be a multiple-driver, full-range loudspeaker. The transducer complement shall consist of one low-frequency driver of 5.25" (133mm) diameter with three (3) 2.25" (57 mm) drivers in an Articulated Array® loudspeaker design. The loudspeaker shall have a cabinet design to enable the floor array to be used in three different floor positions.

The loudspeaker shall have a rated nominal impedance of 8 ohms. The loudspeaker system sensitivity shall be 91 dB SPL in the 70 Hz – 16 kHz frequency range with measurements referenced to 1 watt (2.85 V) pink noise input at 1 meter. The dispersion shall be 60° H by 120° V in the individual position, 120° H by 60° V in the group-near position and 120° H by 60° V in the group-far position. The power-handling capacity of the loudspeaker shall be 100 watts IEC band-limited from 70 Hz – 16 kHz.

The input connectors of the loudspeaker shall consist of two (2) parallel-wired NL4 Neutrik® Speakon® NL4 connectors. The enclosure of the loudspeaker shall be composed of linear, low-density polyethylene. Its outer dimensions shall be 12.5" x 14.2" x 8.3" (318 mm x 361 mm x 211 mm). Its weight shall be 14 lb (6 kg). The loudspeaker is packaged one per carton.

The loudspeaker shall be the Bose® Panaray® 310M multi-position floor monitor.