

LT 4402[®] WR

high-output mid/high loudspeaker



Key Features

- **40° x 40°** coverage for long-throw applications in stadiums and arenas (the only large-format waveguide currently available with 40° x 40° pattern)
- **Mid/high-frequency** loudspeaker designed for use in arrays with separate LF augmentation (Bose[®] MB12 or MB24 bass arrays) or voice-only applications
- **Bose V2 midrange manifold** sums output of 2 x 4.5" (114 mm) extended-range cone drivers for lower breakup distortion and improved transient response. Provides a smoother, more natural vocal range compared to single 8" to 12" woofers. The LT 4402 WR loudspeaker utilizes two Bose V2 midrange manifolds
- **Bose coherent zone waveguide** provides effective 40° x 40° pattern control to approximately 1 kHz. Minimizes loudspeaker overlap in arrays to reduce comb-filter interference and improve intelligibility



TECHNICAL DATA SHEET

Product Overview

The Bose[®] LT 4402[®] WR is a high-output, mid/high-frequency loudspeaker designed for use with other LT loudspeakers to form Coherent Zone arrays in medium to large permanent installations requiring precise coverage and high intelligibility. The large-format waveguide and narrow 40° x 40° pattern provide a cost-effective alternative to multiple-cabinet line arrays for long-throw applications in many stadiums and arenas.

Technical Specifications

System Performance			
Frequency Response (+/-3 dB) ¹	180 Hz - 16 kHz		
Frequency Range (-10 dB) ¹	150 Hz - 18 kHz		
Nominal Dispersion	40° H x 40° V		
Sensitivity (SPL / 1 W @ 1 m) ²	108 dB SPL		
Maximum SPL @ 1 m ³	129 dB SPL (135 dB SPL peak)		
Crossover Type	Passive, Bi-Amp, Switchable		
Crossover Frequency	1.6 kHz		
Recommended High-Pass Filter	150 Hz with 4th order filter (24 dB / octave)		
Loudspeaker EQ	Required		
	Passive	Bi-Amp	High
Long-Term Power Handling ⁴	140 W (560 W peak)	140 W (560 W peak)	75 W (300 W peak)
Nominal Impedance	8 Ω	8 Ω	8 Ω
Transducers			
Driver Complement	HF: 3" (76 mm) voice coil compression driver MF: Two (2) Bose V2 midrange manifolds, each with 2 x 4.5" (114 mm) cone drivers		
Physical			
Enclosure	Exterior-grade Baltic birch plywood, 11-ply, 15 mm		
Finish	Two part spray polyurethane coating, black		
Grille	16-gauge perforated stainless steel grille with powder-coated finish and backed with an open-cell foam		
Environmental	Outdoor per IEC 529 IPX5 ⁵		
Connectors	Two (2) parallel-wired NL4 Neutrik [®] Speakon [®] connectors		
Suspension / Mounting	Sixteen (16) points SAE 3/8" - 16 threaded inserts (4 each: top, bottom, sides), stainless steel		
Dimensions	34.0" H x 18.5" W x 27.3" D (864 mm x 471 mm x 693 mm)		
Net Weight	112 lb (50.6 kg)		
Shipping Weight	142 lb (64.5 kg)		
Product Code			
Black	323110-0110		

Footnotes:

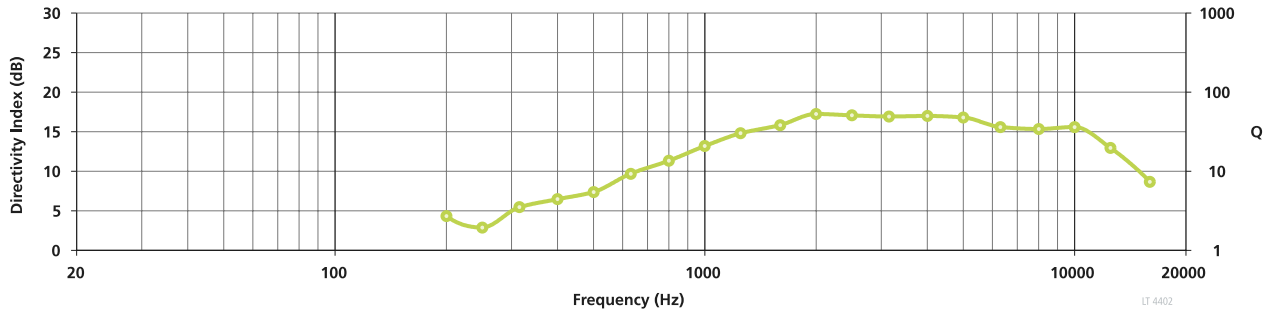
- 1 Frequency response and range measured on-axis with recommended active EQ in an anechoic environment.
- 2 Sensitivity measured in free field (no boundary-loading gain) with recommended active EQ, referenced to 1W/1m.
- 3 Maximum SPL calculated from sensitivity and power handling specifications, exclusive of power compression.
- 4 Power handling tested using pink noise filtered to meet IEC 268-5, 6 dB crest factor, 100 hours, with recommended EQ.
- 5 LT WR Loudspeaker must be mounted vertically for outdoor installations. Horizontal position (rotated 90 degrees) for indoor installations only.

LT 4402[®] WR

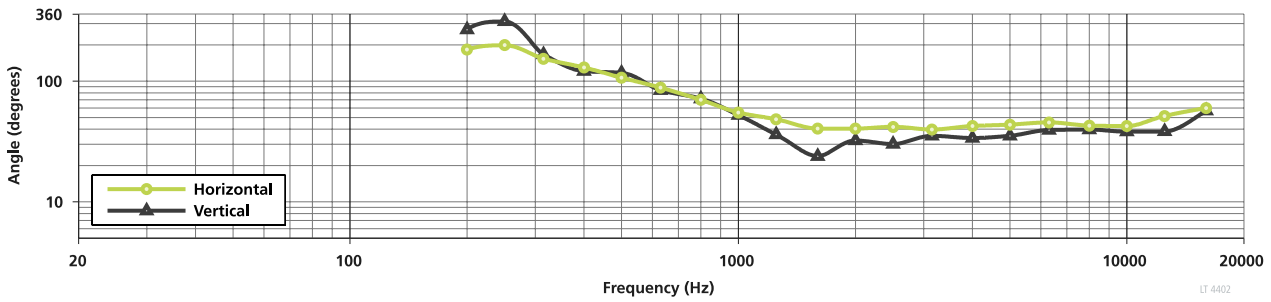
high-output mid/high loudspeaker



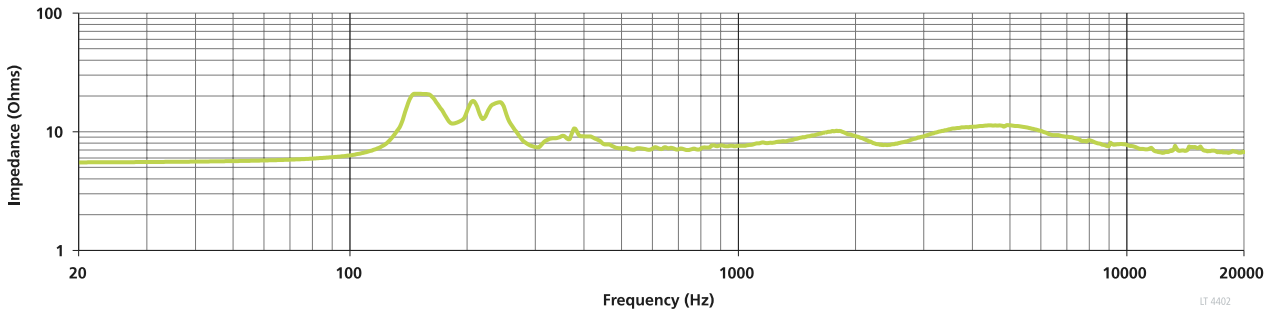
Directivity Index and Q



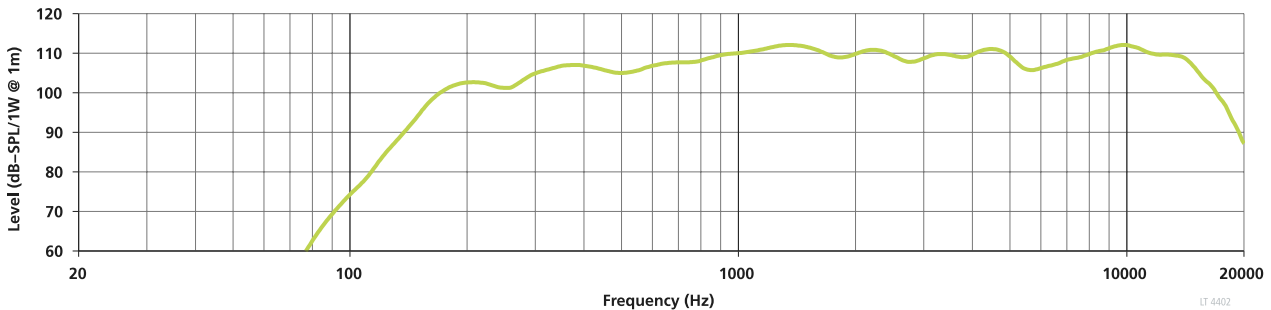
Beamwidth



Impedance



On-Axis Response



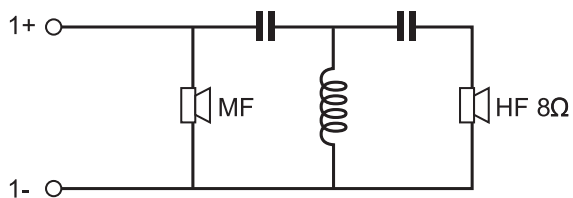
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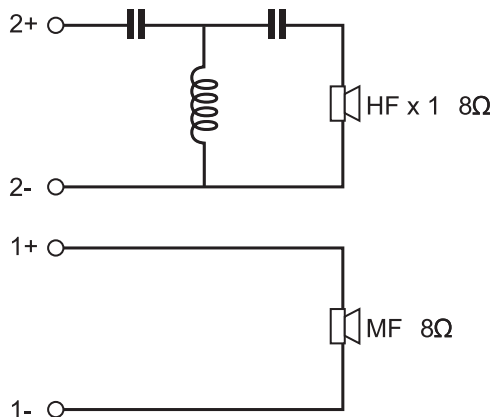


Wiring Diagram

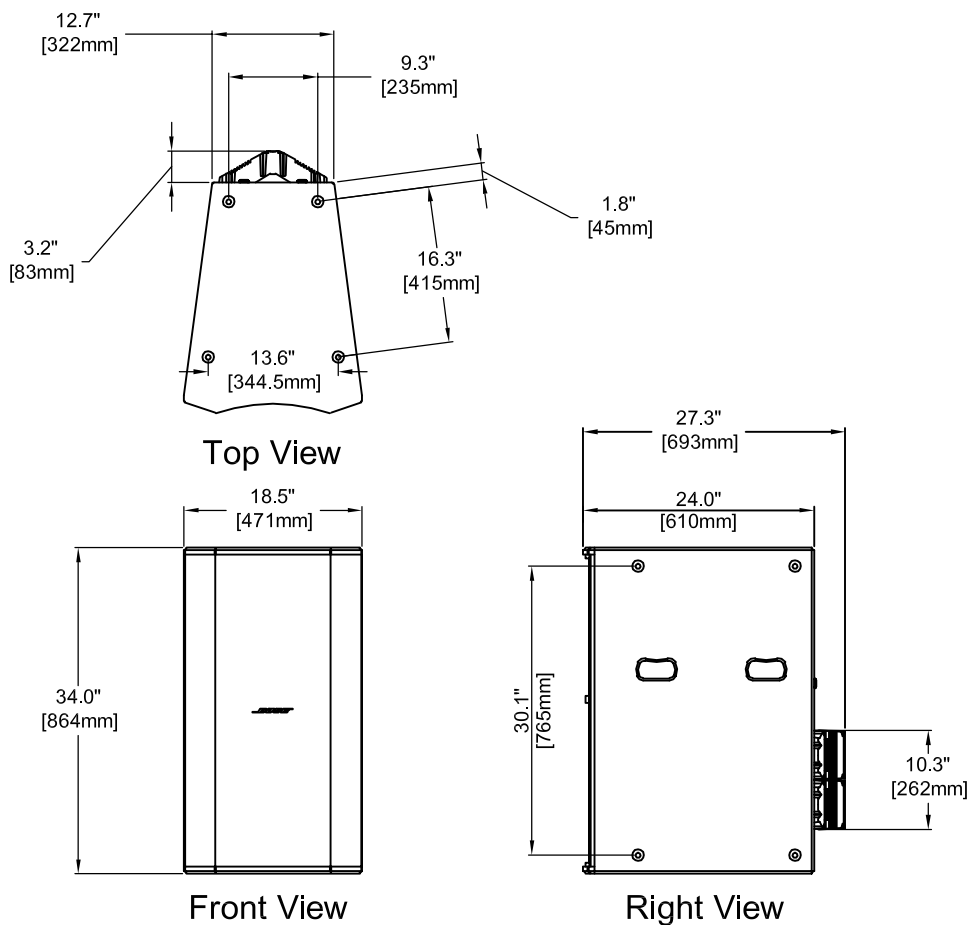
Passive



Biamped



Mechanical Diagrams



LT 4402[®] WR

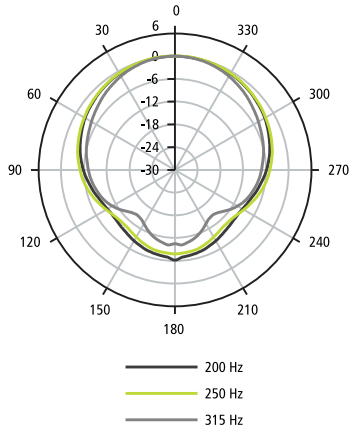
high-output mid/high loudspeaker



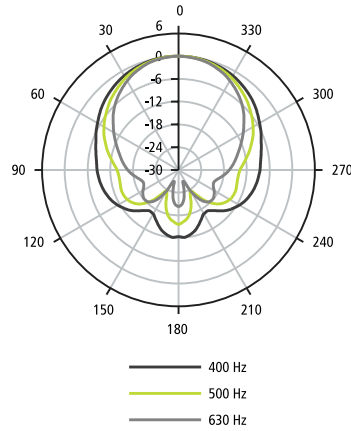
Horizontal Plots

TECHNICAL DATA SHEET

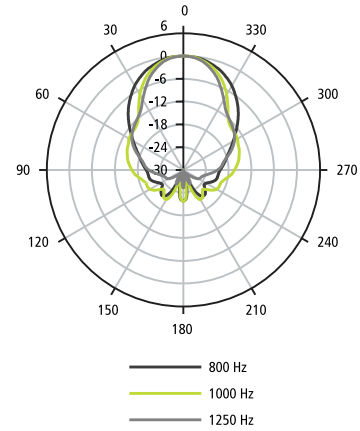
250 Hz Octave Band



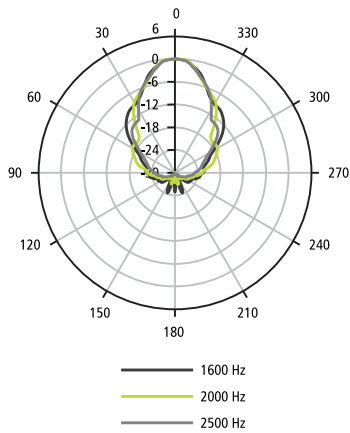
500 Hz Octave Band



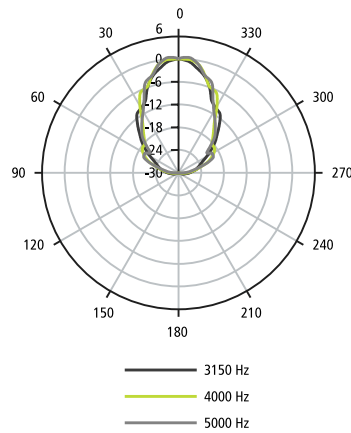
1000 Hz Octave Band



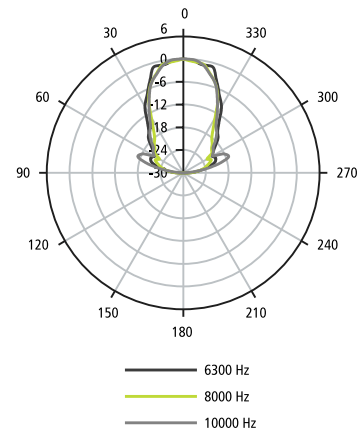
2000 Hz Octave Band



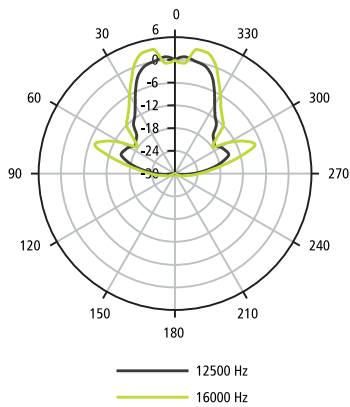
4000 Hz Octave Band



8000 Hz Octave Band



16000 Hz Octave Band



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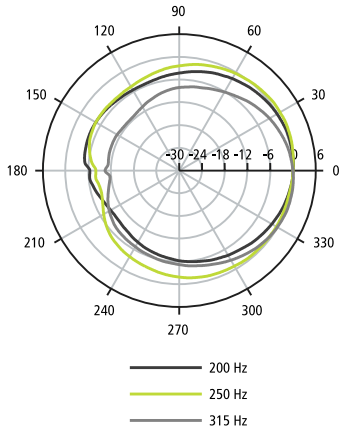
high-output mid/high loudspeaker



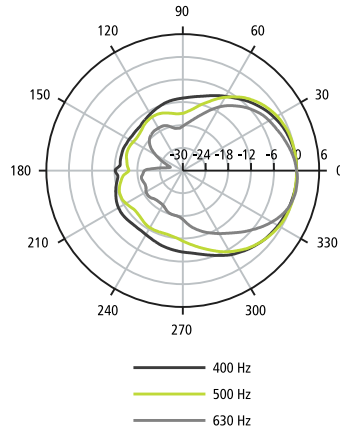
Vertical Plots

TECHNICAL DATA SHEET

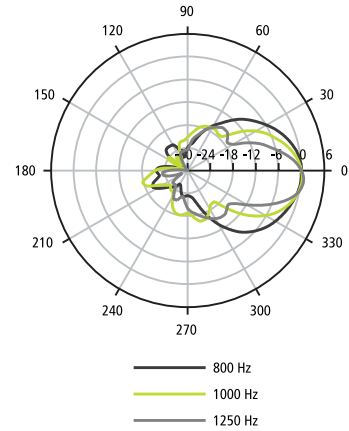
250 Hz Octave Band



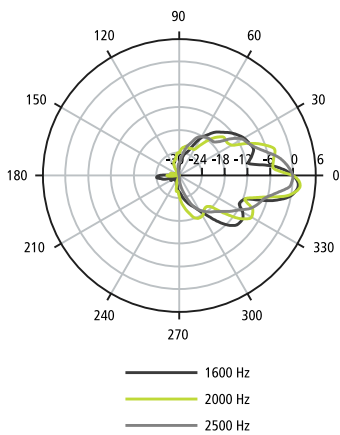
500 Hz Octave Band



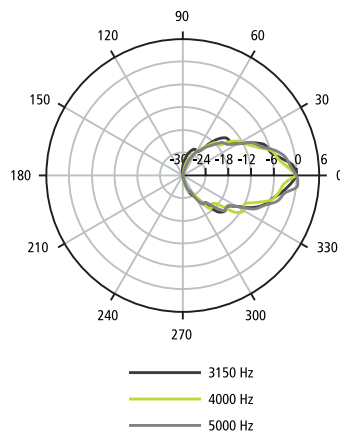
1000 Hz Octave Band



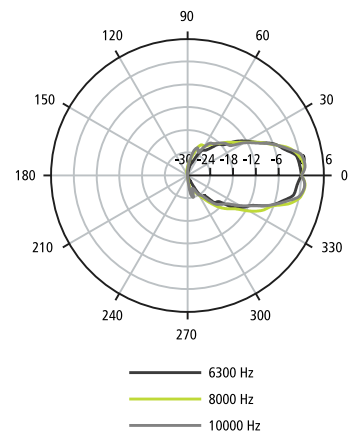
2000 Hz Octave Band



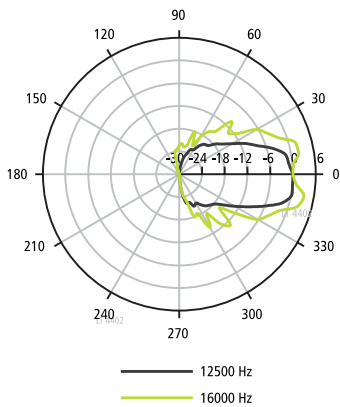
4000 Hz Octave Band



8000 Hz Octave Band



16000 Hz Octave Band



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Architects' and Engineers' Specifications

The 2-way, mid/high-frequency loudspeaker shall contain a 3" (76 mm) diaphragm compression driver and two (2) midrange manifolds, each summing two (2) 4.5" (114 mm) cone drivers in a heat-sink/acoustic summation assembly. The transducers will exit into a large-format waveguide with 40° x 40° nominal beamwidth and effective pattern control to approximately 1 kHz. An internal filter network with crossover of 1.6 kHz shall allow passive or bi-amp operation.

On-axis system frequency response shall be 180 Hz to 16 kHz (+/- 3 dB) with recommended crossover and active equalization. The system sensitivity shall be 108 dB SPL with 1 watt input and be capable of producing peak output of 135 dB SPL on axis at 1 meter. In passive mode, the system shall handle 140 watts of amplifier power (IEC 268-5 pink noise, 6 dB crest factor, for 100 hours) and have a nominal input impedance of 8 ohms. In bi-amp mode, the mid-frequency section shall handle 140 watts of amplifier power and have a nominal input impedance of 8 ohms, while the high-frequency section shall handle 75 watts of amplifier power and have a nominal input impedance of 8 ohms.

The trapezoidal enclosure shall be constructed of void-free, exterior-grade Baltic birch plywood with extensive internal bracing. The enclosure interior shall be treated with wood sealer and the exterior finished with a two-part spray polyurethane coating (Chemthane 7030 or equivalent) to resist weather elements and scuffing. The enclosure shall be covered by a 16-gauge perforated stainless steel grille with powder-coated finish and backed with an open-cell foam. The loudspeaker shall survive water incursion consistent with the IEC 529 IPX5 rating. The enclosure shall have sixteen (16) stainless steel threaded inserts (4 each: top, bottom, sides) that accept standard SAE 3/8"-16 rigging hardware. Inputs shall be two (2) NL4 Neutrik[®] Speakon[®] connectors. Loudspeaker dimensions shall be 34.0" x 18.5" x 27.3" (864 mm x 471 mm x 693 mm). Net weight shall be 112 lb (50.6 kg).

The 2-way, mid/high-frequency loudspeaker shall be the Bose[®] LT 4402[®] WR loudspeaker.