

L1[®] Model I

portable line array system



Key Features

- **High-performing**, powered, portable two-way loudspeaker system with a 160° H x 0° V nominal dispersion designed for the production and reproduction of live music, music playback, speeches and A/V sound reproduction
- **Spatial Dispersion™** loudspeaker technology produces wide, uniform sound coverage throughout the entire listening area—even off to the extreme sides
- **Consistent** front-to-back coverage, 24 drivers mounted in a vertical line array design produce a loss of only 3 dB in sound pressure level per doubling in distance
- **Integrated ToneMatch®** presets for popular vocal microphones and instruments
- **Integrated** 4-channel mixer with wired remote control
- **Lightweight**, interlocking components for easy transport
- **Expandable** bass design supports the use of multiple B1 bass modules



TECHNICAL DATA SHEET

Product Overview

The L1 Model I is our versatile original L1 system for an audience of up to 500, delivering exceptional sound reproduction and four integrated inputs that accommodate microphones, instruments and mp3 players. It features two channels of ToneMatch® signal processing circuitry designed to optimize select instruments and microphones.

Technical Specifications

System Performance	
System Type	Self powered, two-way
Frequency Response (+/-3 dB) ¹	40 Hz - 12 kHz
Frequency Range (-10 dB) ¹	32 Hz - 14 kHz
Nominal Dispersion	160° H x 0° V
Maximum SPL @ 1 m ²	115 dB SPL (121 dB SPL peak)
Crossover Frequency	200 Hz (24 dB / octave)
Amplification	
System Power Rating	500 W
Low-Frequency Amplifier	250 W
High Frequency Amplifier	250 W
Distortion at Rated Power	0.1 % Max (30 Hz - 15 kHz)
System Limiter	Dynamic limiter
Overload Protection	AC power fuse - T15AH / 250 V
Power Indicator	Green LED: system on, Red LED: fault
Transducers	
Driver Compliment	Cylindrical Radiator® loudspeakers: Twenty-four (24) 2.25" (57 mm) HF drivers B1 bass module: Two (2) 5.25" (133 mm) LF drivers (8 Ω)
Channel	
Channel 1 & Channel 2	
Signal Indicators	Signal/clip LED: Green= signal present, Red=clip
ToneMatch Presets	Selectable setting from 00 to 99
Trim	42 dB of range
Input	Balanced XLR / 1/4" TRS combo jack with XLR loop through
Insert	TRS line input
Channel Gain (1/4" input)	-Infinity to +28 dB
Channel Gain (XLR input)	-Infinity to +48 dB
Maximum Input Signal	+10 dBV (Mic) +18 dBV (Line)
Input Impedance	2.2 kΩ (Balanced) 909 kΩ (unbalanced)
Phantom Power Switch	+24 VDC
Line Out	Balanced XLR
Channel 3 & Channel 4	
Line In	Unbalanced 1/4" TS jack
Level Controls	20 dB available gain (+2.6 dB at 12:00)

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Additional Connections	
Bass Module out (for B1 only)	NL4 connector (all pins wired, two for audio, two for auto sensing). Bass output signal for driving one or two B1 bass modules. (1 B1 bass module = 8 Ω) (2 B1 bass modules = 4 Ω)
Bass Line Output	Post-DSP bass signal output. Accepts a 1/4" TRS cable. Supplies low frequency signal for connecting a PackLite® power amplifier or powered sub woofer.
Data In	Digital input for software update only
Data Out	S/PDIF digital output @ 44.1 kHz (CH1 + CH2 Sum)
Remote	7-pin din connector for RC1
AC Mains	IEC connector

Remote	
Controls (available on the R1 Remote)	Master volume Channel volume (CH1 + CH2) Treble: +/- 10 dB high-pass filter @ 10 kHz (CH1 + CH2) Mid: +/- 10 dB band-pass filter @ 1 kHz (CH1 + CH2) Bass: +/- 10 dB low-pass filter @ 40 Hz (CH1 + CH2)

Physical	
Enclosure	Power Stand: Polypropylene Cylindrical Radiator: Aluminum enclosure with ABS baffle
Grille	Powder-coated perforated steel
Dimensions	Assembled height: 81.6" (2074 mm)
Net Weight	Power Stand: 36.5 lb (16.7 kg) Cylindrical Radiators (pair): 33.9 lb (14.8 kg) B1 bass module: 26.6 lb (12.1 kg)
Shipping Weight	Power Stand: 56 lb (25.4 kg) Cylindrical Radiators (pair): 43 lb (19.5 kg) B1 bass module: 30 lb (13.6 kg)

Voltages	
USA/Canada	100-120 V 50 / 60 Hz 1000 W
Europe	220-240 V 50 / 60 Hz 1000 W
Japan	100 V 50 / 60 Hz 1000 W

Footnotes:

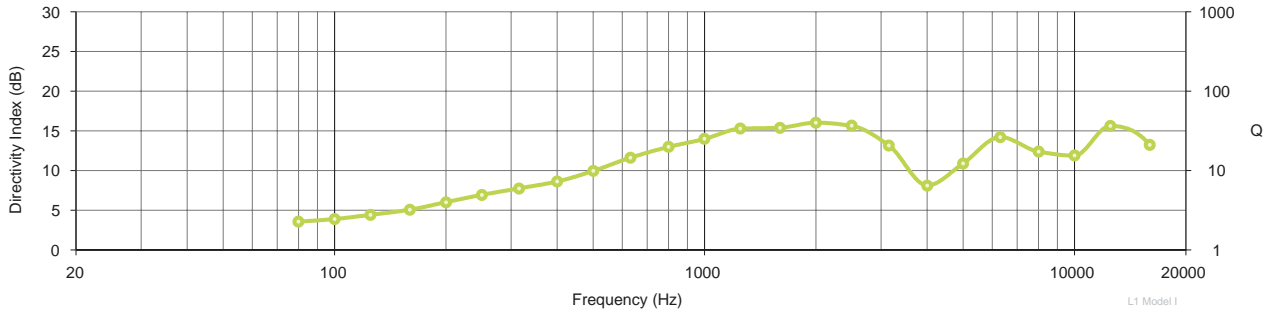
- 1 Frequency response and range measured on-axis with recommended active EQ in an anechoic environment.
- 2 Maximum SPL calculated from sensitivity and power handling specifications, exclusive of power compression.

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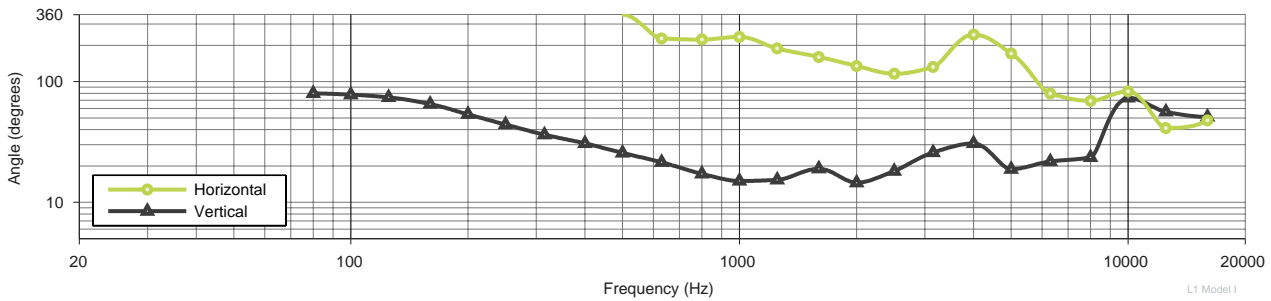
portable line array system



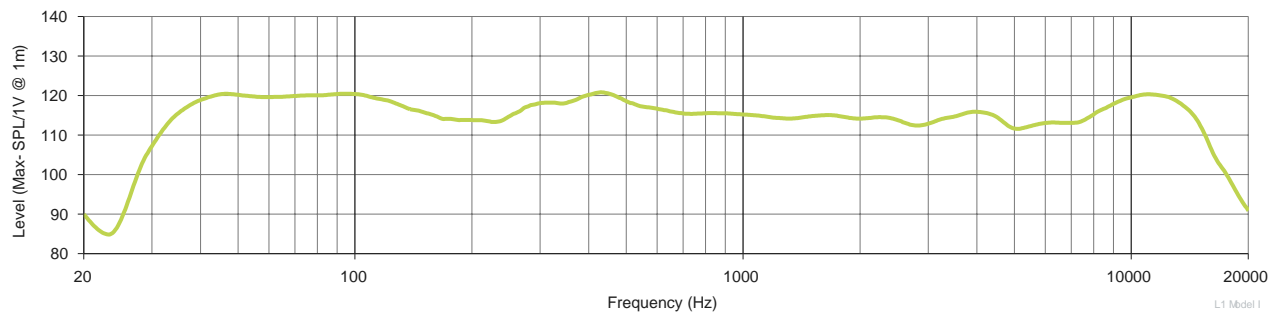
Directivity Index and Q



Beamwidth



On-Axis Response

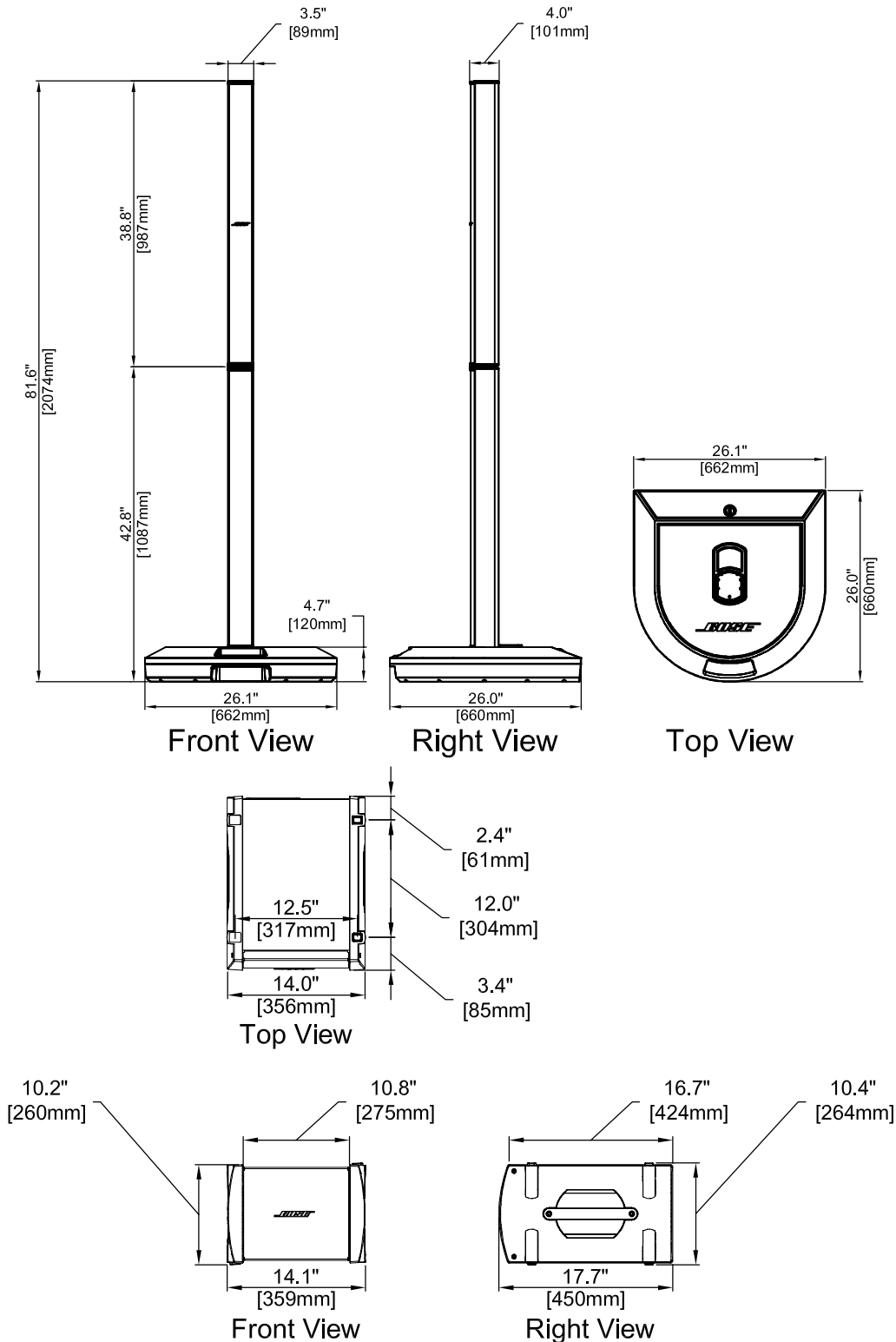


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Mechanical Diagrams

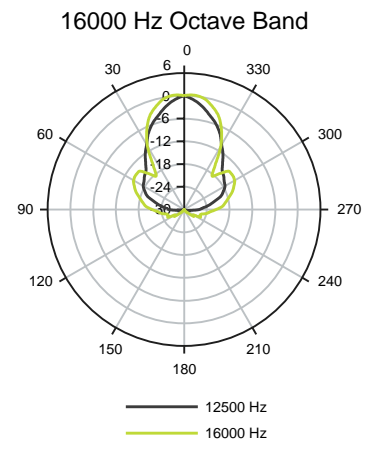
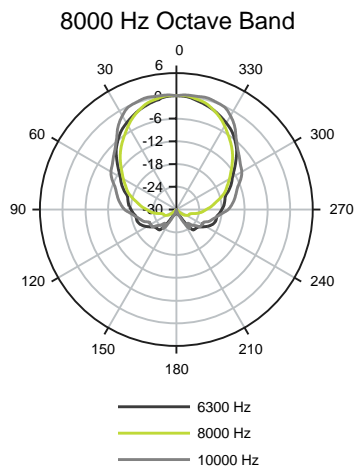
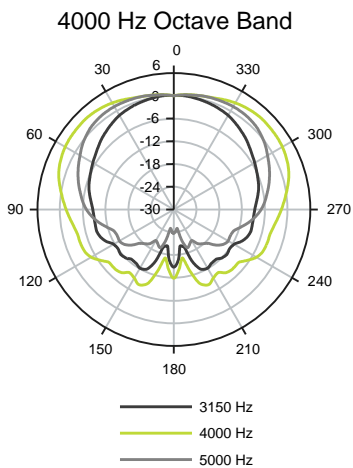
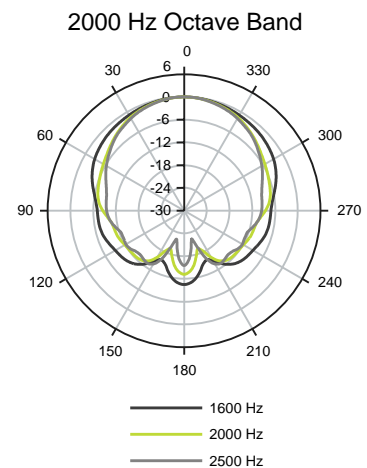
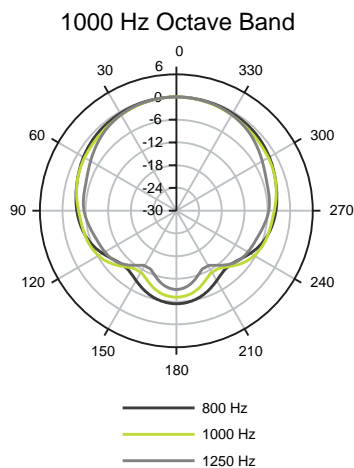
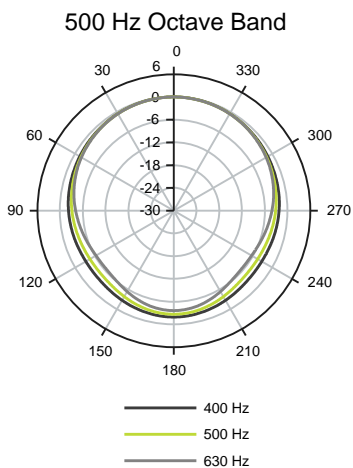
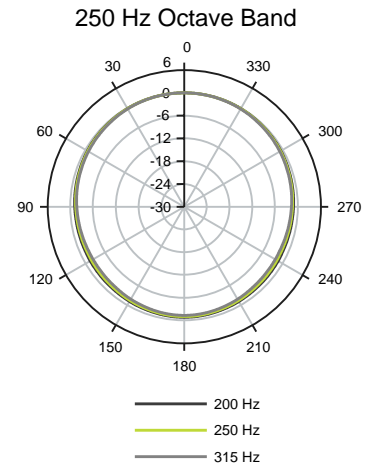
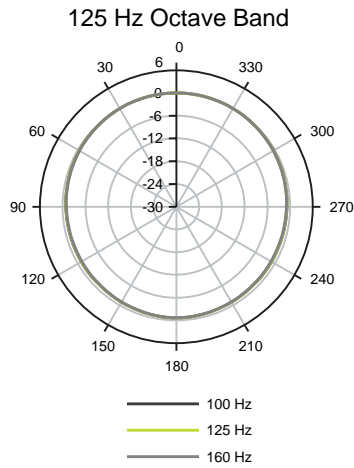
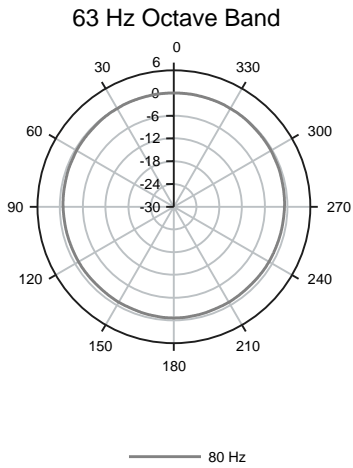


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Horizontal Plots



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Architects' and Engineers' Specifications

The system shall be a multiple-driver, full-range portable loudspeaker system with internally supplied power amplification, active equalization and external bass modules.

The transducer complement shall consist of twenty-four 2.25" (57 mm) high-excursion, high-frequency drivers mounted in a line array loudspeaker design coupled with two 5.25" (133 mm) high-excursion, low-frequency drivers mounted in a vented bass enclosure. The loudspeaker array shall be wired in a series/parallel configuration.

The nominal horizontal beamwidth of the loudspeaker shall be a narrow band of sound confined to the top and bottom of the array. The system's power stand shall incorporate a ported venting system for the low-frequency driver, tuned for 40 Hz. The power amplification for transducers shall be supplied by the integrated power stand providing 500 W continuous pink noise, band-limited from 40 Hz to 12 kHz (± 3 dB). The loudspeaker power stand shall serve as a support mechanism for the loudspeaker array.

Channels 1 and 2 shall each provide +24 V phantom power and shall be equipped with one balanced XLR / ¼" TRS combo jack with XLR loop through with assignable equalization presets, one ¼" balanced TRS insert, and one balanced XLR line output receptacle. The aforementioned channel volume and equalization attenuation control shall be accessible via hardwired remote control.

Channels 3 and 4 shall each provide an unbalanced ¼" TS receptacle with line-level attenuation control. The remote control master volume shall attenuate the overall levels of Channels 3 and 4.

The system output connectors shall provide one NL4 receptacle capable of distributing power for up to two low-frequency B1 bass modules and one ¼" TRS line-level receptacle for supplying signal to a PackLite® extended bass package.

The enclosure of the Cylindrical Radiator® loudspeaker shall be constructed of extruded aluminum. The system's power stand shall be constructed of polypropylene materials. The total assembled system height shall be 81.6" (2074 mm), while the total assembled system weight shall be 97 lb (44 kg).

The loudspeaker shall be the Bose® L1® Model I portable line array system.

Safety and Regulatory Compliance

The L1® Model I system complies with the following standards:

- UL/IEC/EN 60065 7th Edition Safety Standard for Audio and Video Equipment
- Ecodesign Directive 2005/32/EC

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. This product complies with the Canadian ICES-003 Class A specifications. This product conforms to the EMC Directive 289/336/EC Under standards: EN55103-1 & 2: 1997, Environment 2.

Product Codes

Power stand - 120V	PC 042829
Power stand - 220V	PC 042831
L1® model I Cylindrical Radiator® loudspeaker top and bottom	PC 042828
B1 bass module	PC 032494

Accessories

T1 ToneMatch™ audio engine	PC 042826
T1 ToneMatch™ audio engine power supply	PC 042533
T1 ToneMatch™ audio engine mic stand bracket	PC 042535
Packlite - 120 V	PC 039057
Packlite - 240 V	PC 039058