

L1® Model 1S

portable line array system



Key Features

- **High-performing**, powered, portable two-way loudspeaker system with a 195° H x 10° V nominal dispersion designed for the production and reproduction of live music, music playback, speeches and A/V sound reproduction
- **12-driver articulated line array** produces wide, uniform sound coverage throughout the entire listening area—even off to the extreme sides
- **Consistent front-to-back coverage**, 12 drivers mounted in a vertical line array produce less drop off in sound pressure level per doubling in distance than a conventional point source
- **Retractable** folding leg mechanism for easy transport
- **Lightweight**, interlocking components
- **Expandable** bass design supports the use of multiple B1 bass modules or a single B2 module
- **Digital ethercon** port provides single-wire connectivity for the T1 ToneMatch audio engine



TECHNICAL DATA SHEET

Product Overview

Our L1 system offering a unique combination of performance and portability for an audience of up to 300. With a 12-speaker articulated line array providing 180 degrees of clear, even, sound, the system is also designed to work with the T1 ToneMatch® audio engine as well as a choice in bass modules. Easy to transport, and set up in minutes.

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	195° H x 10° V
Maximum SPL @ 1 m ²	112 dB SPL (118 dB SPL peak)
Crossover Frequency	200 Hz (24 dB / octave)
Amplification	
System Power Rating	375 W
Low-Frequency Amplifier	250 W
High-Frequency Amplifier	125 W
Distortion at Rated Power	0.1 % Max (30 Hz - 15 kHz)
System Limiter	Dynamic limiter
Overload Protection	Fuse/MOV/NTC/PTC
Power Indicator	Blue LED: system on, Red LED: fault
Transducers	
Driver Complement	Top array loudspeaker: Twelve (12) 2.25" (57 mm) HF drivers B1 bass module: Two (2) 5.25" (133 mm) LF drivers (8 Ω) B2 bass module: Two (2) 10" (254 mm) LF drivers (4 Ω)
Channel	
Signal Indicators	Analog signal/clip LED: Green: signal present, Yellow: -3 dB below clip, Red: clip (limiter active)
Trim	+14 dB @ max
Input	1/4" - TS unbalanced or TRS balanced
Channel Gain (1/4" input)	-50 dB to +28 dB (line)
Maximum Input Signal	+24 dBu (balanced)
Input Impedance	10 kΩ +/- 10 % (unbalanced)
Additional Connections	
Bass Module out (for B1 or B2 only)	NL4 connector (all pins wired, two for auto sensing). Bass output signal for driving up to two B1 bass modules (1 B1 bass module = 8 Ω) (2 B1 bass modules = 4 Ω) or one B2 bass module (4Ω)
ToneMatch Port	CAT5 Ethernet cable with RJ45 connection providing digital audio and power connection for the optional T1 ToneMatch audio engine
AC Mains	IEC connector

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Physical	
Enclosure	Power Stand: Polypropylene cover with cast aluminum legs and steel chassis base Loudspeaker array and bottom extension: Aluminum enclosure with ABS baffle
Grille	Powder-coated perforated steel
Dimensions	Assembled height: 79.4" (2018 mm)
Net Weight	Top array and bottom extension: 25 lb (11.3 kg) Power Stand: 23.7 lb (10.7 kg) B1 bass module: 26.6 lb (12.1 kg) B2 bass module: 45 lb (20.41 kg)
Shipping Weight	Top array and bottom extension: 32.25 lb (14.6 kg) Power Stand: 32 lb (14.5 kg) B1 bass module: 30 lb (13.6 kg) B2 bass module: 52.2 lb (23.67 kg)
Voltages	
USA/Canada	100-120 V 50 / 60 Hz 500 W
Europe	220-240 V 50 / 60 Hz 500 W

Footnotes:

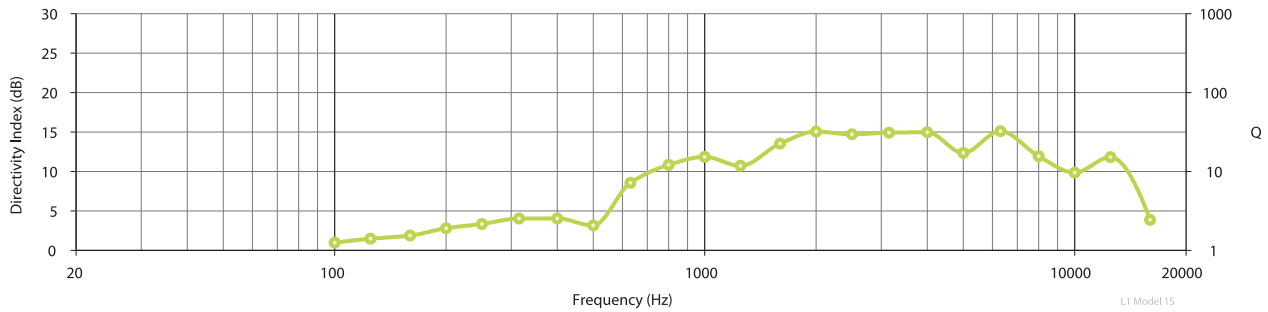
- 1 Frequency response and range measured on-axis with recommended active EQ in an anechoic environment.
- 2 Maximum SPL calculated from sensitivity and power handling specifications, exclusive of power compression.

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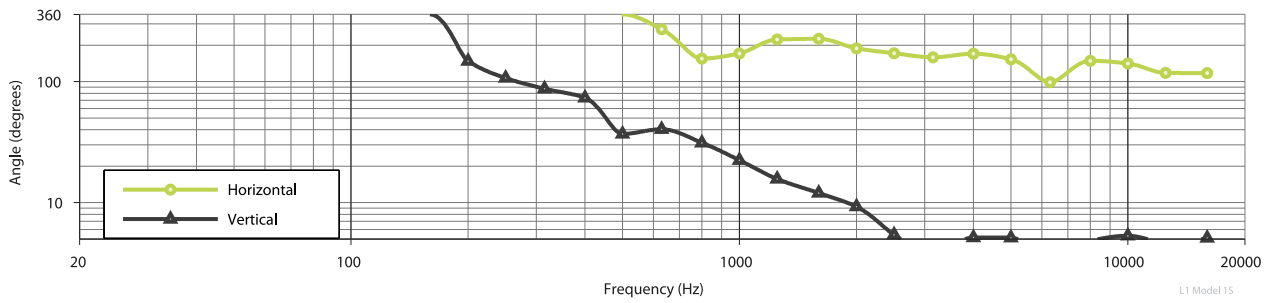
portable line array system



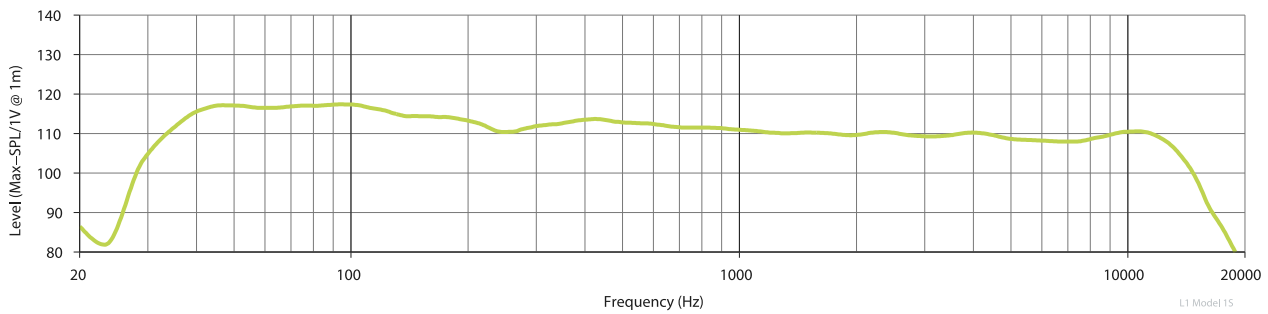
Directivity Index and Q



Beamwidth



On-Axis Response



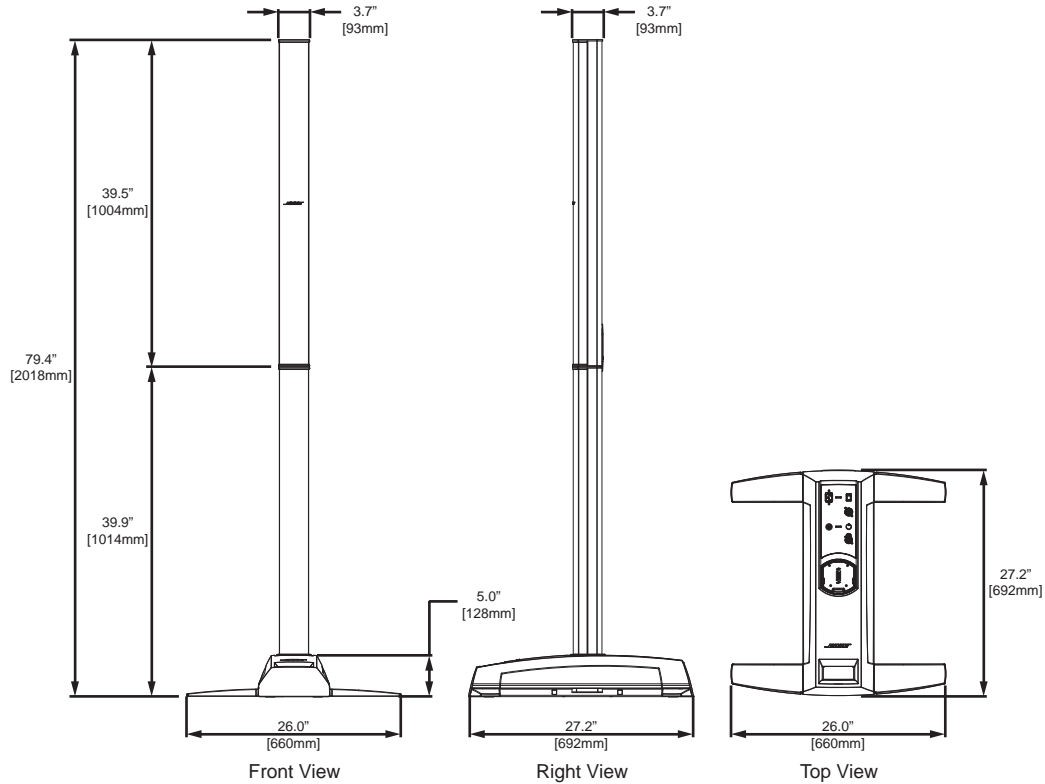
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Mechanical Diagrams

L1 Model 1S



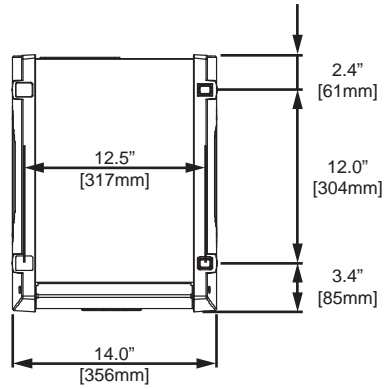
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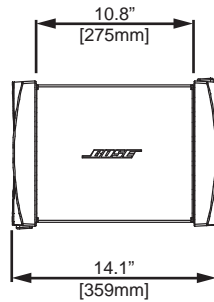
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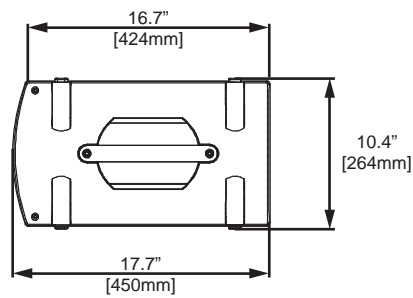
B1 bass module



Top View



Front View



Right View

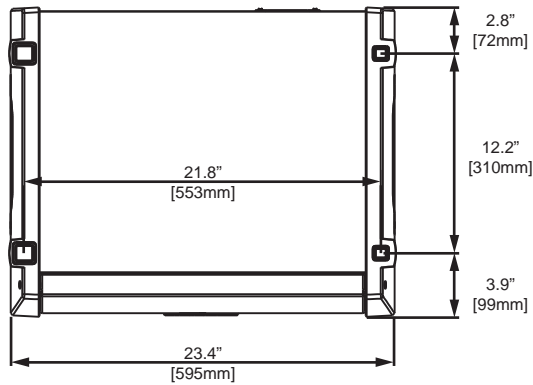
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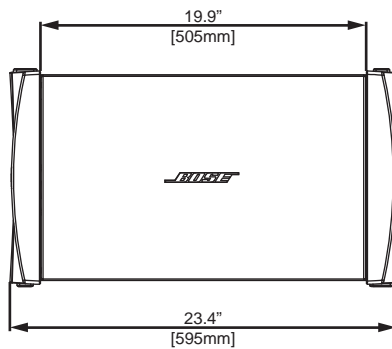
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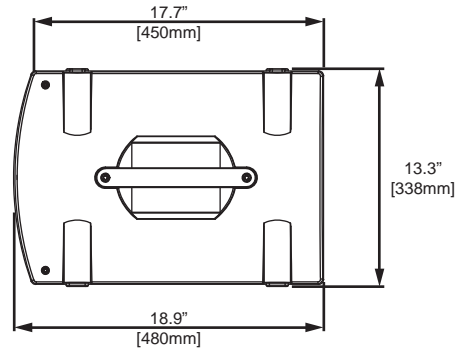
B2 bass module



Top View



Front View



Right View

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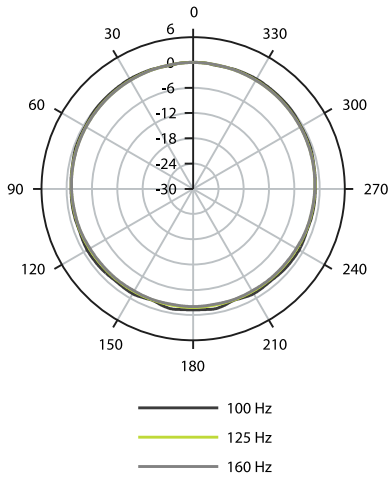
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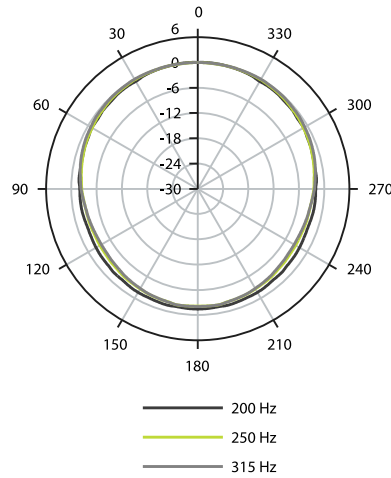


Horizontal Plots

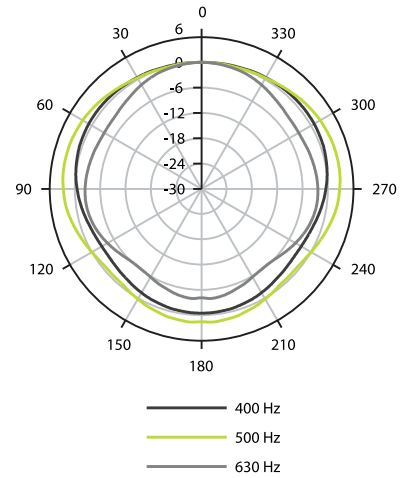
125 Hz Octave Band



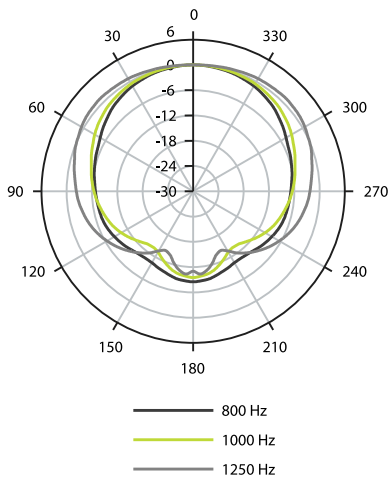
250 Hz Octave Band



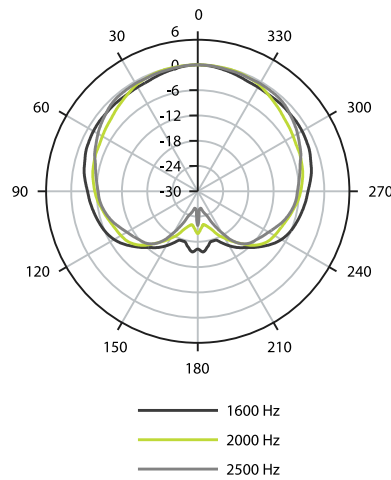
500 Hz Octave Band



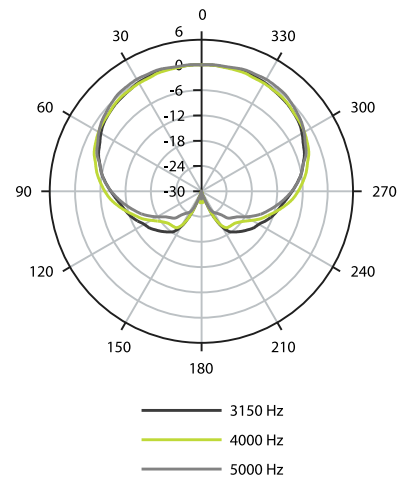
1000 Hz Octave Band



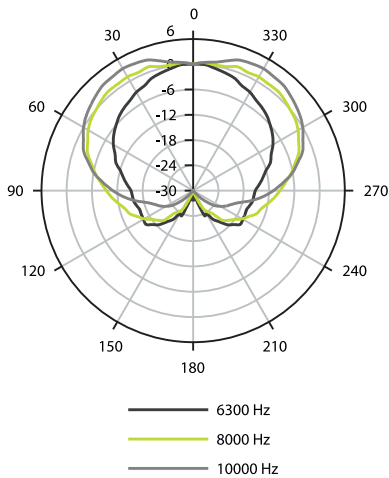
2000 Hz Octave Band



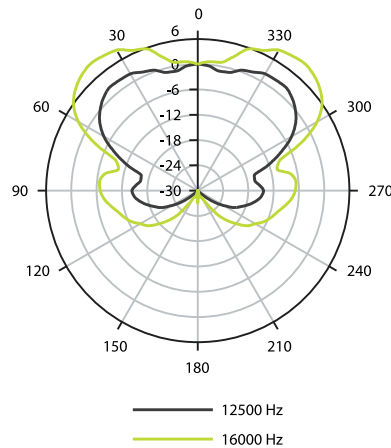
4000 Hz Octave Band



8000 Hz Octave Band



16000 Hz Octave Band



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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 twelve 2.25" (57 mm) high-excursion, high-frequency drivers mounted in an Articulated Array® loudspeaker design. The loudspeaker array shall be wired in a series/parallel configuration.

The low frequency section shall be two 5.25" (133 mm) high-excursion, low-frequency drivers mounted in a vented bass enclosure (B1 bass module). Or two 10" (254 mm) high-excursion, low-frequency drivers mounted in a vented bass enclosure (B2 bass module).

The nominal horizontal beamwidth of the loudspeaker shall be 195°, and the vertical coverage shall be 10°. The power amplification for transducers shall be supplied by the integrated power stand providing 375 W continuous pink noise, band-limited from 40 Hz to 12 kHz (±3 dB).

The input connectors of the power stand module shall consist of one ¼" TS unbalanced or TRS balanced receptacle and one digital ethercon (RJ-45) receptacle for coupling the T1 ToneMatch® audio engine. The system's output connectors shall provide one NL4 receptacle capable of distributing power for two low-frequency B1 bass modules or a single B2 bass module.

The enclosure of the top loudspeaker array and bottom extension shall be constructed of extruded aluminum. The system's power stand shall be constructed of polypropylene materials.

The total assembled system height shall be 79.4" (2017 mm).

The total assembled system weight with the B1 bass module shall be 76 lb (34.4 kg).

The total assembled system weight with the B2 bass module shall be 94 lb (42.6 kg).

The loudspeaker shall be the Bose® L1® Model 1S portable line array system.

Safety and Regulatory Compliance

The L1® Model 1S 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 service, 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 353923-1110
Power stand - 220V	PC 353924-4110
Power stand - 230V	PC 353924-5110
Top array and bottom extension	PC 353919-0110
B1 bass module	PC 351964-0010
B2 bass module	PC 353927-0110

Accessories

T1 ToneMatch™ audio engine	PC 042826
T1 ToneMatch™ audio engine power supply	PC 042533
T1 ToneMatch™ audio engine mic stand bracket	PC 042535