

L1 PRO16

PORTABLE LINE ARRAY SYSTEM



Product Overview

A balance of power and portability, the L1 Pro16 portable line array is a streamlined system with high output and extended low frequency range. With a 16-driver articulated J-shape line array, the L1 Pro16 delivers 180-degree horizontal sound coverage, great for small-to-medium sized clubs, bars, and other venues. An integrated subwoofer with a RaceTrack driver delivers powerful bass without the bulk; a built-in multi-channel mixer offers EQ, reverb, and phantom power, plus *Bluetooth*® streaming and access to the full library of ToneMatch presets; and the intuitive L1 Mix app places wireless control in your hands from your smartphone. For DJs, singer-songwriters, and small ensembles, the L1 Pro16 gives you expanded bandwidth and supreme clarity — the power to sound your best and simply perform.

Key Features

Balance power and portability with the L1 Pro system optimized for both on-the-go simplicity and expanded bandwidth, ideal for small-to-medium sized clubs, bars, and other venues

Deliver premium full-range sound with consistent tonal balance for singer-songwriters, mobile DJs, small ensembles, and more

Maintain supreme vocal and instrument clarity with a J-shape extended-frequency line array featuring 16 articulated 2" neodymium drivers and wide 180-degree horizontal coverage

Bring more bass with less bulk with an integrated 10" × 18" high-excursion neodymium RaceTrack woofer; performance that rivals a conventional 15" woofer with a smaller footprint

Go from vehicle to venue easily with a modular three-piece system that's easier to pack, carry, and set up

Select between optimized system EQ presets for live music, recorded music, and more

Connect various audio sources easily via built-in mixer with two combo XLR- $\frac{1}{4}$ " phantom-powered inputs, $\frac{1}{4}$ " and $\frac{1}{8}$ " (3.5 mm) aux input, plus *Bluetooth*® streaming — and access system EQ and ToneMatch presets, volume, tone, and reverb via illuminated controls

Add in even more instruments and other audio sources via dedicated ToneMatch port; one cable provides both power and digital audio between the system and a Bose T4S or T8S mixer (optional)

Take wireless control with the L1 Mix app on your smartphone to adjust settings instantly, roam the room and fine-tune, and access the ToneMatch library of custom EQ presets

Stream high-quality *Bluetooth*® audio from compatible devices

Technical Specifications

System Performance	
Model Name	L1 Pro16
System Type	Self-powered line array with integrated bass module and onboard three-channel digital mixer
Frequency Response (-3 dB) ¹	42 Hz to 16 kHz
Frequency Range (-10 dB)	31 Hz to 18 kHz
Nominal Vertical Coverage Pattern	0°/30°
Vertical Beam Type	J-shape
Nominal Horizontal Coverage Pattern	180°
Calculated Maximum SPL @ 1 m, continuous ²	118 dB
Calculated Maximum SPL @ 1 m, peak ²	124 dB
Crossover	200 Hz
Transducers	
Low Frequency	1 × RaceTrack low-frequency driver 10" x 18"
Low Frequency Voice Coil Size	3"
High / Mid Frequency	16 × Articulated 2" drivers
High / Mid Frequency Voice Coil Size	¾"
Driver Protection	Dynamic limiting
Amplification	
Type	Two-channel, Class D
Low Frequency Amp Channel	1000 W
High / Mid Frequency Amp Channel	250 W
Cooling	Convection cooling
Onboard Mixer	
Channels	Three
Channel 1 & 2 Input: Audio Type	Combination XLR or ¼" TRS connector (mic/instrument/line)
Channel 1 & 2 Input: Input Impedance	10 KΩ (XLR); 2 MΩ (TRS)
Channel 1 & 2 Input: Trim	0 dB, 12 dB, 24 dB, 36 dB, and 45 dB analog gain steps automatically selected and compensated by DSP
Channel 1 & 2 Input: Channel Gain	-100 dB to +75 dB (XLR); -115 dB to +60 dB (TRS); from input to driver, controlled by volume knob
Channel 1 & 2 Input: Max Input Signal	+10 dBu (XLR); +24 dBu (TRS)
Channel 3 Input: Audio Type	⅛" TRS (stereo-summed, line), ¼" TRS (line), <i>Bluetooth</i> ® audio streaming
Channel 3 Input: Input Impedance	40 KΩ (3.5 mm); 200 KΩ (TRS)
Channel 3 Input: Channel Gain	-105 dB to +50 dB (3.5 mm); -115 dB to +40 dB (TRS); from input to driver, controlled by volume knob
Channel 3 Input: Max Input Signal	+11.7 dBu (3.5 mm); +24 dBu (TRS)
ToneMatch: Audio Type	RJ-45 connector for ToneMatch cable connection, providing digital audio and power connection for the optional T4S/T8S ToneMatch Mixer
Output: Audio Type	XLR connector, line level, full-frequency bandwidth
<i>Bluetooth</i> Enabled	Yes
<i>Bluetooth</i> Types	AAC or SBC for audio streaming, LE for system control
Channel Controls	3 digital rotary encoders
Phantom Power	Channel 1 & 2
LED Indicators	Standby, Channel Parameters, Signal/Clip, Mute, Phantom Power, ToneMatch, <i>Bluetooth</i> LED, System EQ

Technical Specifications

AC Power	
AC Power Input	100–240 VAC (±20%, 50/60 Hz)
Input: Electrical Type	IEC
Initial turn on inrush current	15.7 A at 120 V; 28.4 A at 230 V
Inrush current after AC mains interruption of 5 s	2.4 A at 120 V; 8.1 A at 230 V
Physical	
Color	Black
Enclosures Material	Power stand: High-impact polypropylene
	Extension & Array: High-impact ABS
Grille Material	Powder-coated perforated steel
Product Dimensions (H × W × D)	2011 × 355 × 456 mm (79.2 × 14.0 × 18 in)
Shipping Dimensions (H × W × D)	1118 × 460 × 650 mm (44.02 × 18.11 × 25.59 in)
Net Weight ³	23.0 kg (50.6 lbs)
Shipping Weight	28.4 kg (62.6 lbs)
Included Accessories	Carry bag for arrays, IEC power cord
Optional Accessories	L1 Pro16 System Bag, L1 Pro16 Slip Cover
Warranty Period	2 years
Product Part Numbers	
840920-1100	L1 PRO16 PORTABLE LINE ARRAY,120V,US
840920-2100	L1 PRO16 PORTABLE LINE ARRAY,230V,EU
840920-3100	L1 PRO16 PORTABLE LINE ARRAY,100V,JP
840920-4100	L1 PRO16 PORTABLE LINE ARRAY,230V,UK
840920-5100	L1 PRO16 PORTABLE LINE ARRAY,230V,AU
840920-5130	L1 PRO16 PORTABLE LINE ARRAY,230V,INDIA
856992-0110	PREMIUM ROLLER BAG,L1 PRO16,BLACK
856993-0110	COVER,SUB WOOFER,L1 PRO16,BLACK
845116-0010	TONEMATCH CABLE ASSY KIT 18FT

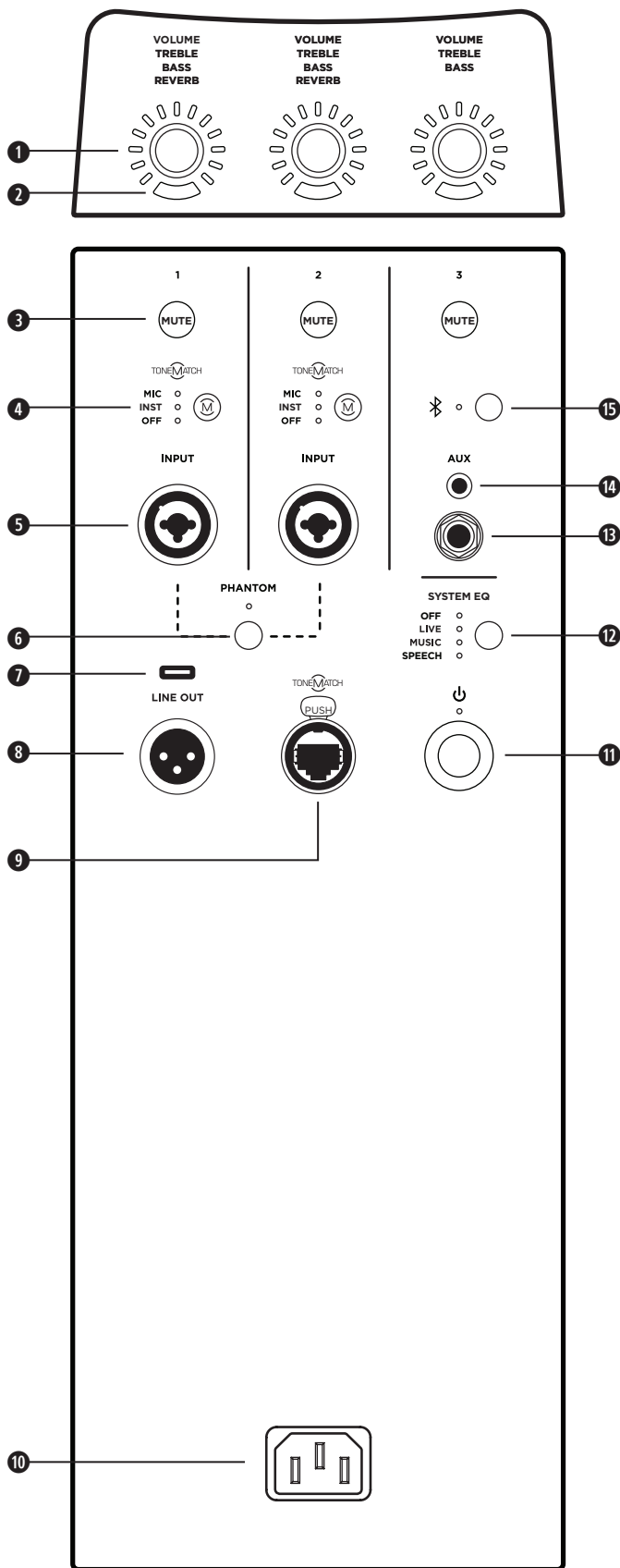
Footnotes

(1) Frequency response and range measured on-axis in anechoic environment with recommended bandpass and EQ.

(2) Maximum SPL calculated using sensitivity and power ratings, exclusive of power compression.

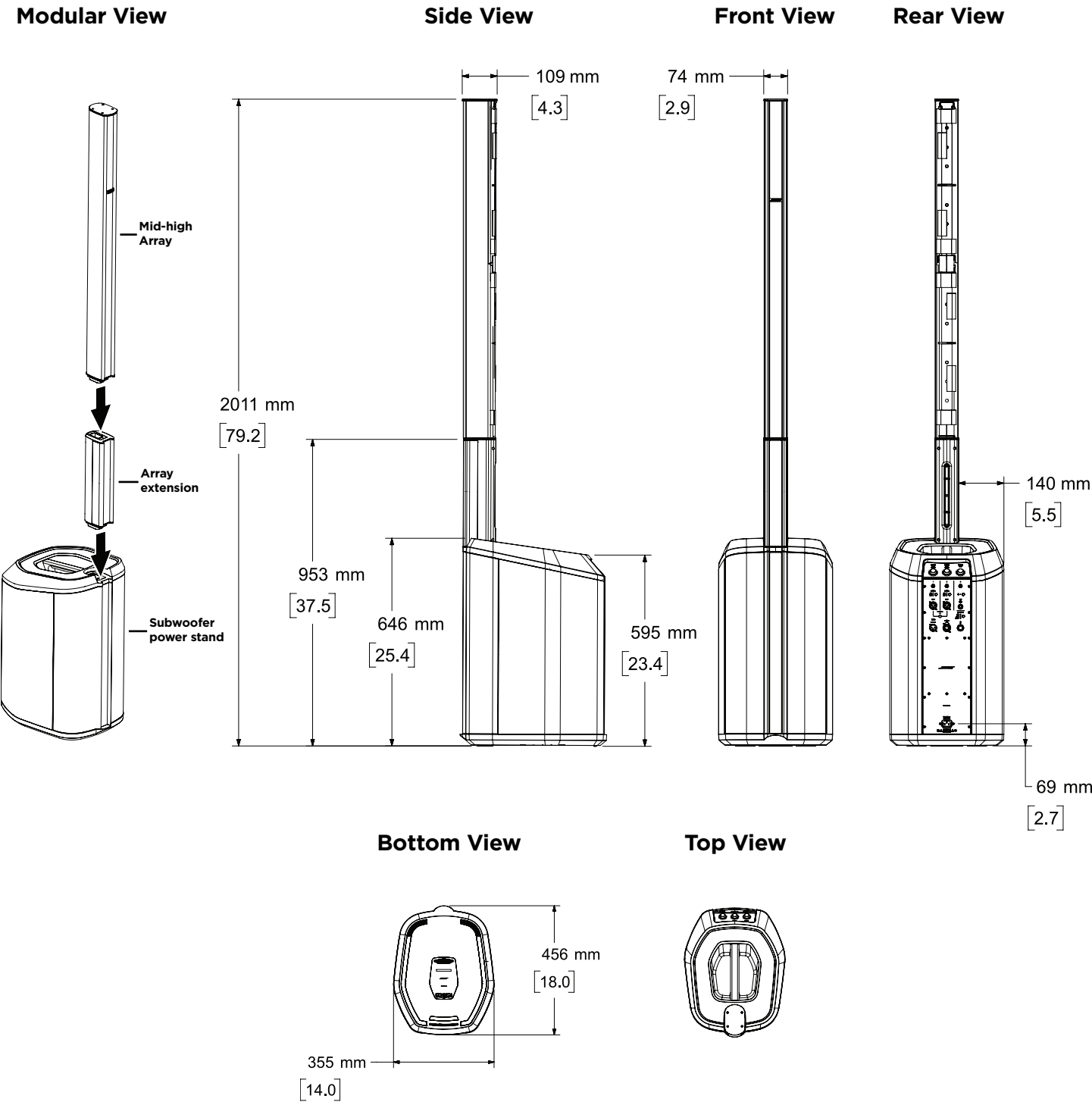
(3) Net weight excludes carry bag and power cord.

Connections and Controls



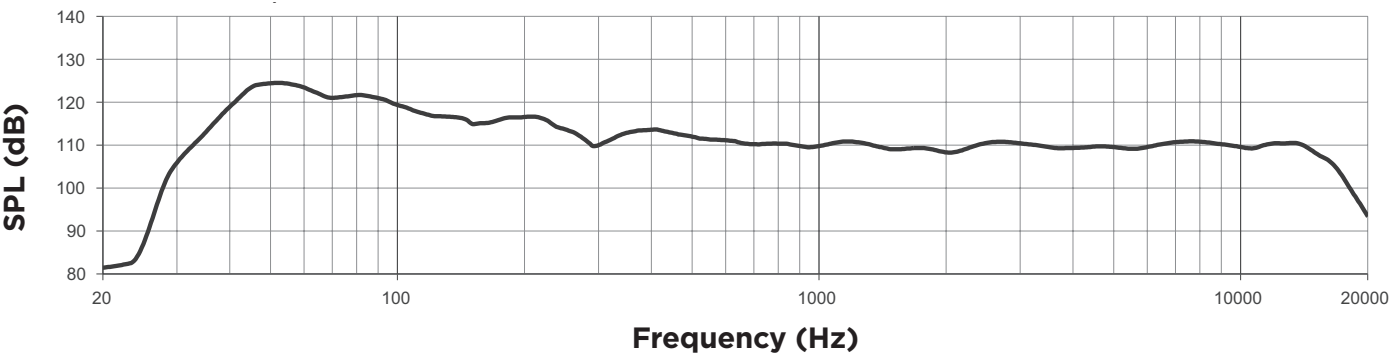
- ❶ **Channel Parameter Control:** Adjust the level of volume, treble, bass, or reverb for your desired channel. Press the control to switch between parameters; rotate the control to adjust the level of your selected parameter.
- ❷ **Signal/Clip Indicator:** The LED will illuminate green when a signal is present and will illuminate red when the signal is clipping or the system is entering limiting. Reduce the channel or signal volume to prevent signal clipping or limiting.
- ❸ **Channel Mute:** Mute the output of an individual channel. Press the button to mute the channel. While muted, the button will illuminate white.
- ❹ **Channel ToneMatch Button:** Select the ToneMatch preset for an individual channel. Use **MIC** for microphones and use **INST** for acoustic guitar. The corresponding LED will illuminate white while selected.
- ❺ **Channel Input:** Analog input for connecting microphone (XLR), instrument (TS unbalanced), or line level (TRS balanced) cables.
- ❻ **Phantom Power:** Press the button to apply 48-volt power to channels 1 and 2. The LED will illuminate white while phantom power is applied.
- ❼ **USB Port:** USB-C connector for Bose service use. **Note:** This port is not compatible with Thunderbolt 3 cables.
- ❽ **XLR Line Output:** Use an XLR cable to connect the line-level output to a Sub1/Sub2 or another bass module.
- ❾ **ToneMatch Port:** Connect your L1 Pro to a T4S or T8S ToneMatch mixer via a ToneMatch cable.
- ⚠ **CAUTION:** Do not connect to a computer or phone network.
- ❿ **Power Input:** IEC power cord connection.
- ⓫ **Standby Button:** Press the button to power on the L1 Pro. The LED will illuminate white while the system is on.
- ⓬ **System EQ:** Press the button to scroll through and select a master EQ suitable for the use case. The corresponding LED will illuminate white while selected.
- ⓭ **TRS Line Input:** Use a 6.4-millimeter (¼-inch) TRS cable to connect line-level audio sources.
- ⓮ **Aux Line Input:** Use a 3.5-millimeter (⅛-inch) TRS cable to connect line-level audio sources.
- ⓯ **Bluetooth® Pair Button:** Set up pairing with Bluetooth capable devices. The LED will flash blue while the L1 Pro is discoverable and illuminate solid white when a device is paired for streaming.

Product Dimensions

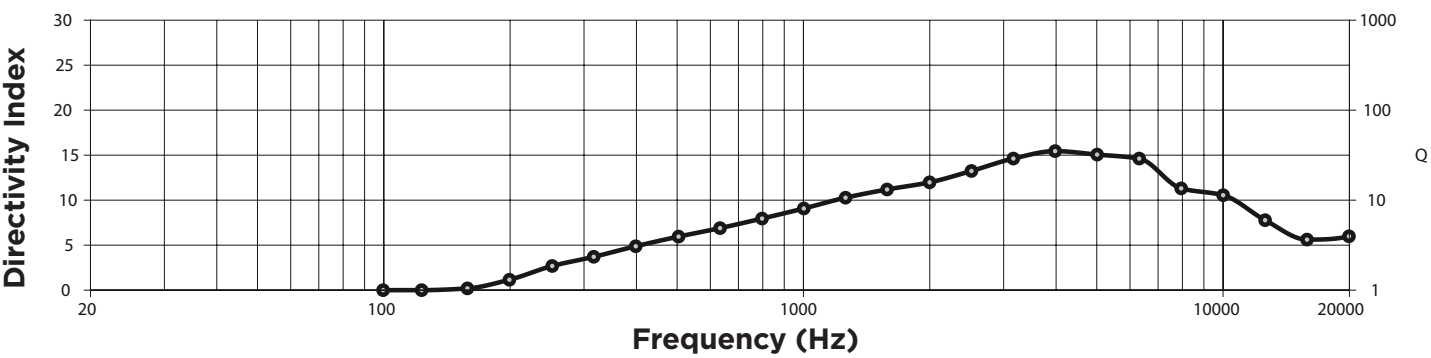


Performance

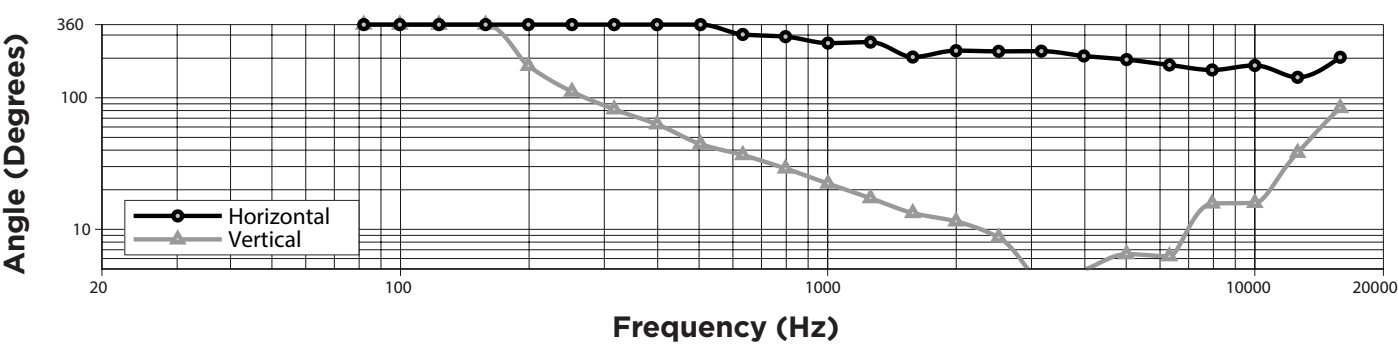
Frequency Response (On-Axis)



Directivity Index and Q



Beamwidth



Architect and Engineer Specification

The system shall be a multiple-driver, full-range portable loudspeaker system with internally-supplied power amplification and active equalization for multiple operating modes as follows:

The transducer complement shall consist of 16, 2" (51 mm) high-excursion cricket drivers mounted in a curved articulated array loudspeaker, coupled with an integral 10" x 18" (254 mm x 457 mm) RaceTrack low-frequency driver mounted in a ported bass enclosure. The loudspeaker array shall be wired in a series/parallel configuration.

The nominal horizontal beamwidth of the loudspeaker shall be 180° and the nominal vertical coverage shall be 0° to 30°. The system's power stand shall incorporate a ported venting system for the low-frequency driver. The power amplification for transducers shall be supplied by an integral, two-channel onboard amplifier providing 1000 W for low-frequency transducer and 250 W for mid-high array transducers.

The onboard digital mixer shall consist of three input channels. Channel 1 and 2 shall provide a combination XLR or ¼" TRS connector (mic/instrument/line) with treble, bass equalization, and reverb effects, and shall also provide selectable master output equalization with live, music, and speech presets. Phantom power (48 V) shall be available via a push button to enable and disable. Both channels shall provide selectable equalization presets for microphone and instruments. Channel 3 shall provide a ⅜" TRS (stereo-summed, line) connector, ¼" TRS (line) connector. The same channel shall provide *Bluetooth*® audio streaming using a high-definition AAC codec with a *Bluetooth* pairing button provided. All three channels shall have a dedicated channel mute button. The output connector of the onboard mixer shall consist of one XLR balanced line-level output connector. The onboard mixer shall provide a ToneMatch RJ-45 connector to receive digital audio and send power via ToneMatch cable for Bose T4S/T8S ToneMatch mixer.

The enclosure of the power stand shall be constructed of high-impact polypropylene. The extension and array shall be constructed of high-impact ABS. The system shall be capable of two operating modes; collapsed or extended operating mode by integrating height-extension module.

In collapsed mode, the system's outer dimensions shall be 67.0" H x 14.0" W x 18.0" D (1704 mm x 355 mm x 456 mm). In extended operating mode, the system's outer dimensions shall be 79.2" H x 14.0" W x 18.0" D (2011 mm x 355 mm x 456 mm). The system's net weight shall be 50.6 lbs (23.0 kg).

The loudspeaker shall be the Bose L1 Pro16 portable line array system.

Safety and Regulatory Compliance

The L1 Pro16 portable line array system complies with the following standards:

- UL/IEC/EN62368-1 Audio/Video, Information and Communication Technology Equipment
- Ecodesign Requirements for Energy Related Products Directive 2009/125/EC
- Radio Equipment Directive 2014/53/EU
- CAN ICES-3 (B)/NMB-3(B)
- FCC Part 15 Class B

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