



# BOSE L1 PRO16 PORTABLE LINE ARRAY SYSTEM Instruction Manual

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PROFESSIONAL  
PRELIMINARY TECHNICAL DATA  
L1 PRO16  
PORTABLE LINE ARRAY SYSTEM



(Grilles removed)

**L1 Mix App**

Mobile device not included  
and not to scale

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## Product Overview

A balance of power and portability, the L1 Pro16 portable line array is a streamlined system with high output and an 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; a 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 combos XLR-1/4" phantom-powered inputs, 1/4" and 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 from your phone, 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	LI P1010

System Type	Self-powered line array with integrated bass module and onboard three-channel digital mixer
Frequency Response (-3 dB)	42 Hz to 10 kHz
Frequency Range (-10 dB)	31 Hz to 18 kHz
Nominal Vertical Coverage Pattern	0V30°
Vertical <b>Beam</b> Type	i-shape
Nominal Horizontal Coverage Pattern	180°
Calculated Maximum SPL 8 I m. c ontinuous'	1M dB
Calculated Maximum SPL 8 I m. p eak'	124 dB
Crossover	200 Hz
<b>Transducers</b>	
Low Frequency	1 • RaceTrack low-frequency driver 10" x 18"
Low-Frequency Voice Coil Size	
High/mid <b>Frequency</b>	<b>IC</b> • Articulated drivers
High / mid-Frequency Voice Coil Size	4C
<i>Driver</i> Protection	Dynamic Limiting
AMP/ICS011	
<b>Type</b>	Two-channel Class D
Low-Frequency Amp Channel	1000 W
High / Mid Frequency <b>Amp</b> Channel	250 W
Cooling	Convection cooling
<b>Onboard I/Os</b>	
Channels	Three
Channel 1 & 2 input. Audio Type	Combination XLR or 1/4" TRS connector (mic/instrument line)
Channel 1 & 2 input. input Impedance	10 kΩ (XLR); 20 kΩ (TRS)
Channel 1 & 2 input. Trim	0 dB, 12 dB, 24 dB, 30 dB, and 45 dB analog gain steps automatically selected and compensated by DSP
Channel 1 & 2 input. Channel Gain	-100 dB to +45 dB (XLR); -115 dB to +40 dB (TRS); from input to driver, controlled by the volume knob
Channel 1 & 2 input Max Input Signal	+10 dBu (XLR); +24 dBu (TRS)

Channel 3 Input Audio Type	Sr TRS (stereo-summed. line). W TRS (lineX Etketoorit audio streaming)
Channel 3 Input input impedance	40 KO (3.5 min): 200 KO (TRS)
Channel 3 Input. Channel Gain	-105dB to 450 dB (3.5 mm): -115 dB to +40d8 (TRSy. from input to driver. controlled by the volume knob)
Channel 3 Input: Max Input Signal	+m) dsu (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 74S/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 <b>Power</b>	Channel 111 2
LED Indicators	Standby. Channel Parameters. SignaVCkcp. Mute. Phantom Power. ToneM atch. <i>Bluetooth</i> LED. System EQ

<b>AC Power</b>	
AC Power Input	100-240 VAC ( $\pm 20\%$ , 50/60 Hz)
Input: Electrical Type	DEC
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; 8.1A at 230 V
<b>Physical</b>	
Color	Black
Enclosures Material	Power stand: High-Impact polypropylene
	Extension & Array: High-impact ABS
Grille Material	Powder-coated perforated steel
Product Dimensions (H x W x D)	2011 x 355 x 456 mm (79.2 x 14.0 x 18 in)
Shipping Dimensions (H x W x D)	1118 x 460 x 650 mm (44.02 x 18.11 x 25.59 in)
Net Weight*	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
<b>Product Part Numbers</b>	
840920-1100	LI PRO16 PORTABLE LINE ARRAY,120V, US
840920-2100	LI PRO16 PORTABLE LINE ARRAY,230V, EU
840920-3100	LI PRO16 PORTABLE LINE ARRAY,100V, JP
840920-4100	LI PRO16 PORTABLE LINE ARRAY,230V, UK
840920-5100	LI PRO16 PORTABLE LINE ARRAY,230V, AU
840920-5130	LI PRO16 PORTABLE LINE ARRAY,230V, INDIA
856992-0110	PREMIUM ROLLER BAG, L1 PRO16, BLACK
856993-0110	COVER, SUBWOOFER, L1 PRO16, BLACK
845116-0010	TONEMATCH CABLE ASSY KIT 18FT

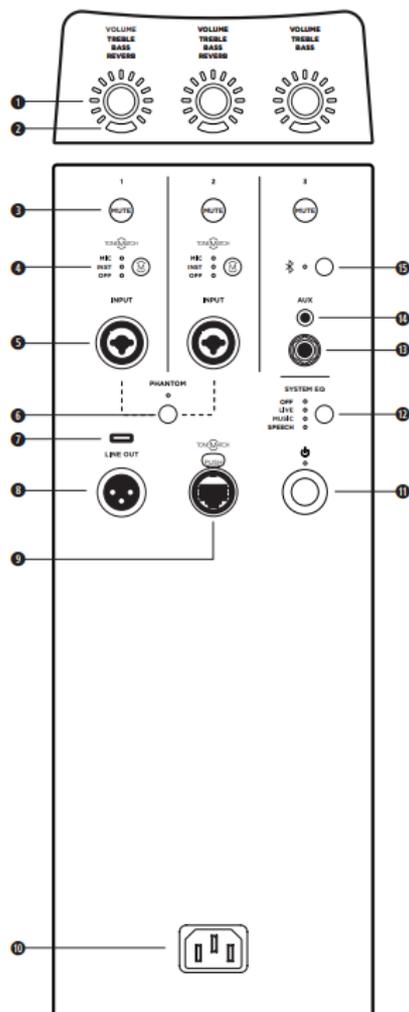
### Footnotes

(1) Frequency response and range measured on-axis in an 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.

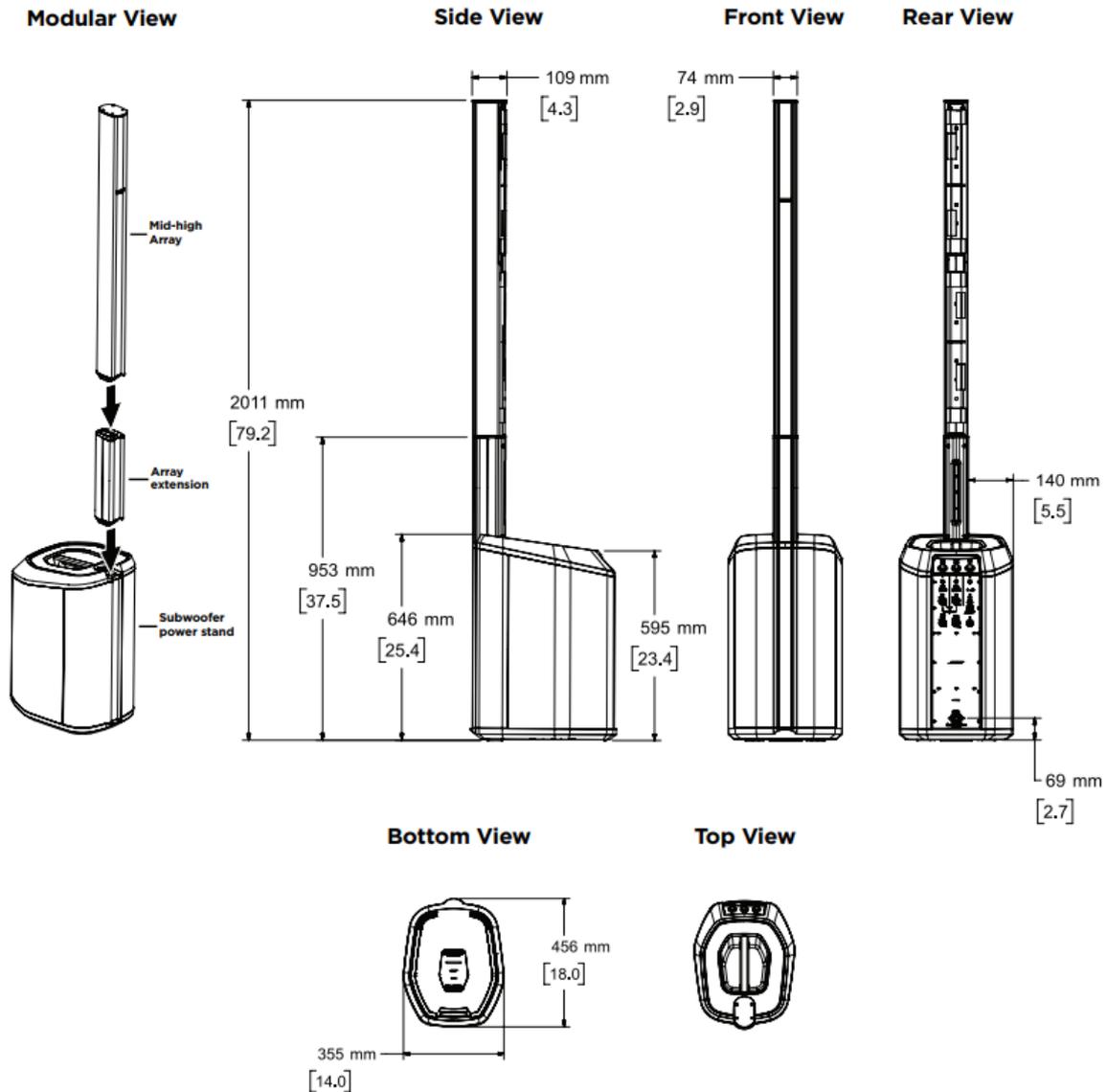
## Connections and Controls



- 1. 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.
- 2. 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.
- 3. Channel Mute:** Mute the output of an individual channel. Press the button to mute the channel. While muted, the button will illuminate white.
- 4. 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.
- 5. Channel Input:** Analog input for connecting microphone (XLR), instrument (TS unbalanced), or line-level (TRS balanced) cables.
- 6. Phantom Power:** Press the button to apply 48volt power to channels 1 and 2. The LED will illuminate white while phantom power is applied.
- 7. USB Port:** USB-C connector for Bose service use.  
Note: This port is not compatible with Thunderbolt 3 cables.
- 8. XLR Line Output:** Use an XLR cable to connect the line-level output to a Sub1/Sub2 or another bass module.
- 9. 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.
- 10. Power Input:** IEC power cord connection.

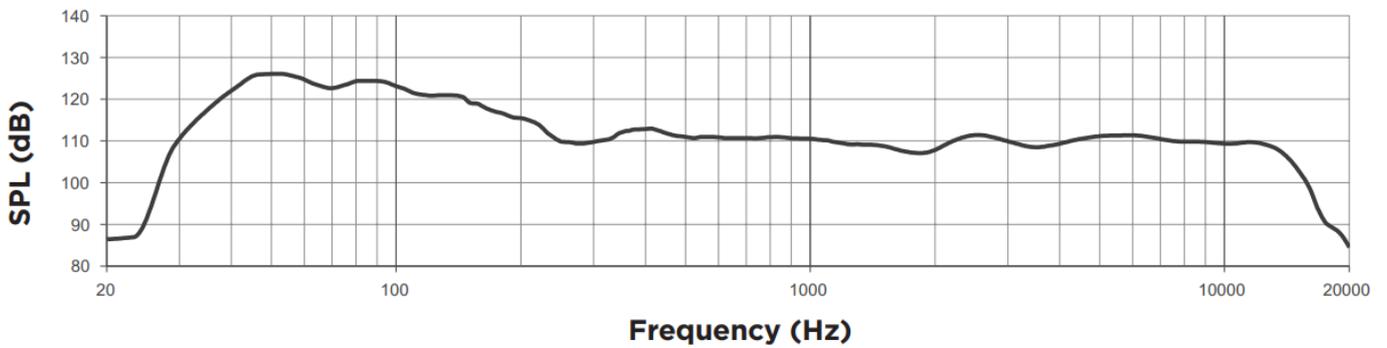
11. **Standby Button:** Press the button to power on the L1 Pro. The LED will illuminate white while the system is on.
12. **System EQ:** Press the button to scroll through and select a master EQ suitable for the use case. The corresponding LED will illuminate white while selected.
13. **TRS Line Input:** Use a 6.4-millimeter (1/4-inch) TRS cable to connect line-level audio sources.
14. **Aux Line Input:** Use a 3.5-millimeter (1/8-inch) TRS cable to connect line-level audio sources.
15. **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

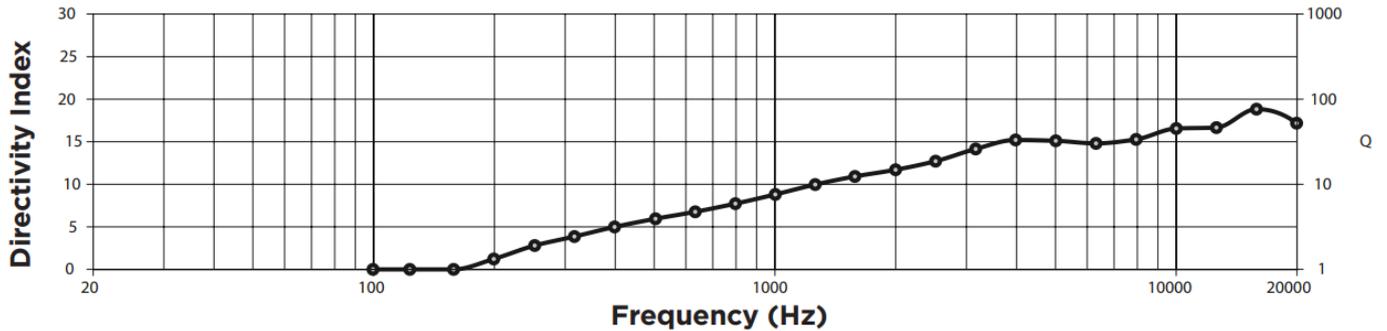


## Performance

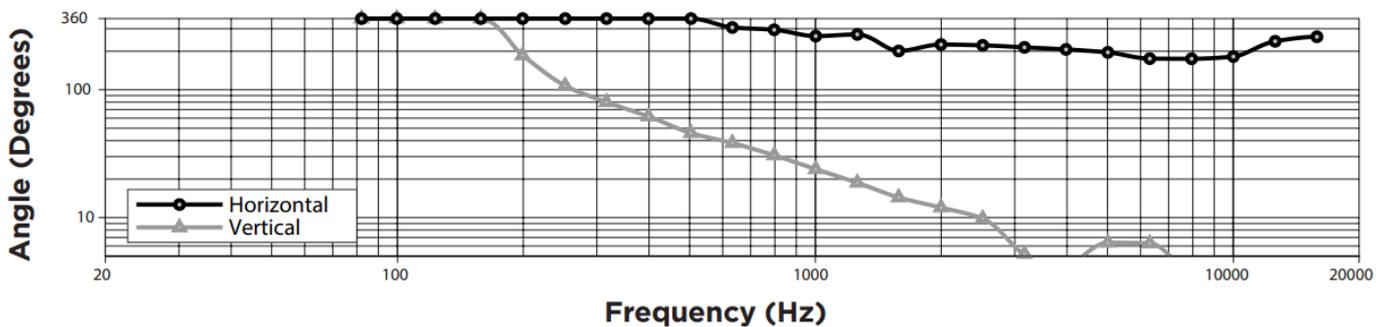
### Frequency Response (On-Axis)



## 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" × 18" (254 mm × 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 transducers 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 1/4" 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 microphones and instruments. Channel 3 shall provide a 1/8" TRS (stereo-summed, line) connector, 1/4" 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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For additional specifications and application information, please visit [PRO.BOSE.COM](https://www.bose.com).

Specifications are subject to change without notice. 6/2021

[PRO.BOSE.COM/L1](https://www.bose.com/L1)

## Documents / Resources

	<p><a href="#">BOSE L1 PRO16 PORTABLE LINE ARRAY SYSTEM</a> [pdf] Instruction Manual L1 PRO16, PORTABLE LINE ARRAY SYSTEM</p>
	<p><a href="#">BOSE L1 Pro16 Portable Line Array System</a> [pdf] User Guide L1 Pro8, L1 Pro16, L1 Pro16 Portable Line Array System, Portable Line Array System</p>

## References

- [Warranties | Bose](#)
- [Bose Professional](#)
- [L1 Pro Portable Line Array Systems | Bose Professional](#)
- [Contact Us](#)
- [Bose European Union Regulatory and Compliance Information](#)

