

# EON510 Portable Self-Powered 10", Two-Way, Bass-Reflex Design

## Professional Series

### Applications:

- ▶ Live sound reinforcement, speech and vocals, music playback in entertainment, A/V, and institutional venues – especially when ease of use and portability are important factors.
- ▶ Amplification, mixing, and monitoring for electronic musical instruments.
- ▶ Everywhere you need to be heard.

### Features:

- ▶ 280 watt High-Performance Powered Speaker System
- ▶ Ultra Light Weight and Extremely Compact
- ▶ Soft touch top grip for easy handling.
- ▶ 10" Differential Drive® low-frequency driver with neodymium magnet for low-distortion and light weight
- ▶ 1" throat diameter next generation JBL neodymium compression driver
- ▶ Efficient Class-D digital amplifier technology
- ▶ Built-in 3 Channel Mixer
- ▶ 100° H x 60° V asymmetrical waveguide for uniform audience coverage
- ▶ Line level and direct microphone input capability
- ▶ Selectable Pre-engineered EQ settings
- ▶ Unique Mix/Loop signal flow function for extended system application
- ▶ Easy “daisy-chain” connections for extending the system
- ▶ Integrated M10 suspension points for easy rigging
- ▶ Multi angle enclosure for main or monitor applications
- ▶ Integrated 36 mm pole mount socket with stabilizing securing screw
- ▶ Highly designed composite enclosures for durability, lightweight, and acoustic performance

The EON510 is a 10-inch, two-way, powered, portable speaker system. Capable of reproducing full bandwidth sound at high levels it offers the additional utility of a 3 channel built-in mixer. The EON510 is comprised of a 254 mm (10 in) Differential Drive® woofer, a 25.4 mm (1 in) neodymium high frequency compression driver coupled to a 100° H by 60° V waveguide. Both components are driven by the discrete channels of a 280 watt Class-D integrated power amplifier. The input section contains all cross-over functions, protection, and mixer functionality.

The mixer offers XLR or ¼-inch TRS phone jack compatibility. Selectable input sensitivities allow a broad range of devices to be properly matched. A unique mix/loop signal flow router provides opportunities for daisy chaining or gigging with the built-in mixer only. Pre-engineered system EQs allow for matching the settings to the actual source material. In the “cut” position maximum level can be achieved for speech reproduction by reducing need to reinforce the lower frequencies. This is also a typical setting when using the system as a floor monitor, reducing low frequency build-up which occurs naturally when placed on a floor. The “flat” setting is ideal for live music and the “boost” for reproducing low level pre-recorded music, delivering extra low and high frequency energy. The signal present and limit lights indicate performance status. An additional switch is provided to defeat the illuminated logo in theatre applications.



In addition to acoustic performance the EON510 features a top handle grip with non-slip rubber over-molding, ultra light weight, and balanced ergonomics. The new generation of EON products offers true portability and ease of handling. Four standard M10 rigging points and integrated pole mount socket increase the system's utility. The extremely rugged copolymer enclosure has been designed for main and 45° monitor orientation in the left and right hand configuration. A full screen-backed steel grille offers additional protection for both the woofer and compression driver components.

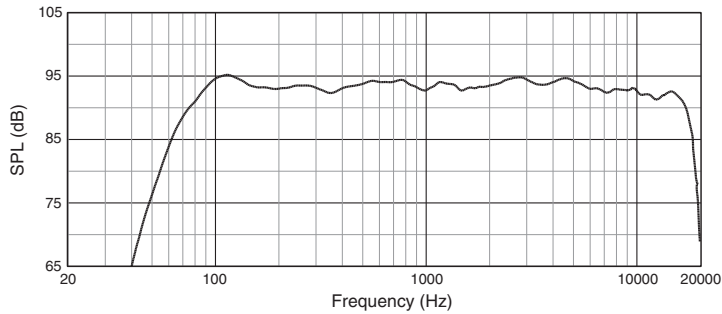
### Specifications:

System Type:	Self powered 10", two-way, bass-reflex design
Frequency Range (-10 dB):	58 Hz - 18.5 kHz (EQ in 'Flat' position)
Frequency Response (±3 dB):	70 Hz - 17 kHz (EQ in 'Flat' position)
Coverage Pattern:	100° H x 60° V nominal
Directivity Index (DI):	9 dB
Directivity Factor (Q):	8
Crossover Frequency:	1.8 kHz
System Power Rating:	280 W continuous, 560 W peak
LF Power amp:	220 W continuous at driver impedance
HF Power amp:	60 W continuous at driver impedance
Distortion:	Less than 0.1% at rated power
Maximum SPL:	121 dB
Signal indicators:	Limit: Red LED indicates input overload condition Signal: Green LED indicates signal present Mic/Line: Red LED indicator
Input Gain (input 3):	Mic position: -Infinity to +40 dB Line position: -Infinity to +4 dB (+20 dBu Max signal input)
Input Gain (input 1 & 2):	-Infinity to +4 dB (+20 dBu Max signal input)
Input Impedance:	64 K Ohms (balanced), 32 K Ohms (unbalanced)
Boost EQ:	LF +3 dB Shelving Filter @ 150 Hz HF +2.5 dB Shelving Filter @ 4 kHz
Low Cut Filter:	Preset high pass @ 120 Hz
LF Driver:	1 x JBL 261F 254 mm (10 in) Differential Drive® integrated woofer with dual 1.5" voice coils.
HF Driver:	1 x JBL 2414H-1 25.4 mm (1 in) neodymium compression driver
Input 3 connector:	Balanced XLR / ¼ inch TRS combo jack with XLR loop through,
Input 1 & 2 connector:	¼ inch TRS jack
Output (Loop/Mix switch):	Balanced male XLR, +20 dBu (peak) o/p level in MIX position
XLR Pin Assignments:	Pin 2 (+), Pin 3 (-), Pin 1 (GND)
Limiting/Protection:	Dynamic Limiter
Enclosure:	PP impact copolymer, multi-purpose main & monitor orientation.
Handles:	One on top with rubber grip
Suspension / Mounting:	36 mm pole socket with stabilizing screw, 3 x M10 suspension points, 1 x M10 pull-back point
Grille:	Powder coated perforated steel with acoustically transparent black screen backing.
AC input:	120 – 240 V, 50/60 Hz
Dimensions (H x W x D):	490 mm x 313 mm x 262 mm (19.3 in x 12.3 in x 10.3 in)
Net Weight:	7.7 kg (17 lb)

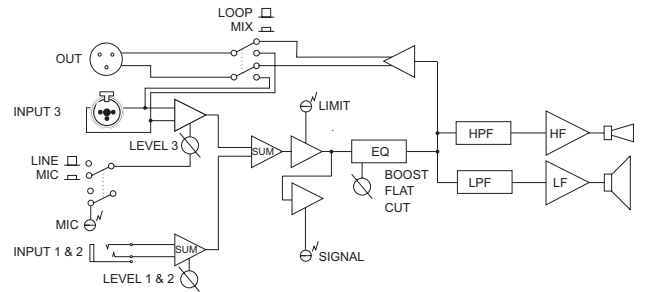
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# ▶ EON510 Portable Self-Powered 15", Two-Way, Bass-Reflex Design

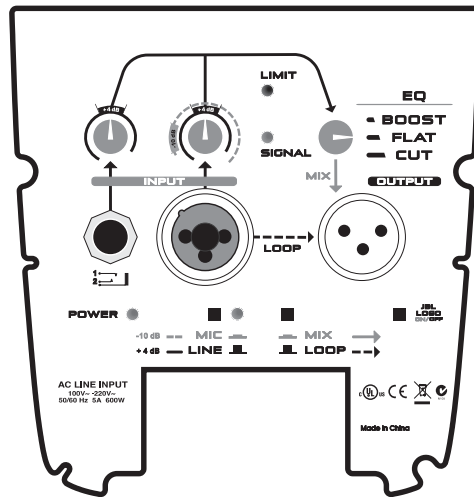
## On Axis Frequency Response



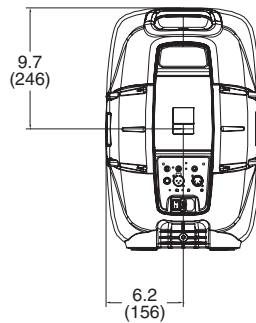
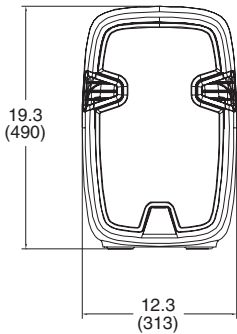
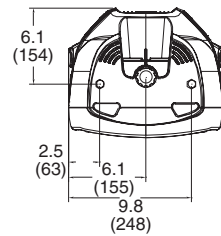
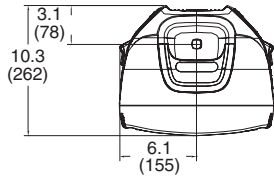
## Block Diagram



## Input Panel



## Dimensions



Dimensions in inches (mm)



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