

Vision Series

■ The PA180SW high-efficiency subwoofer is the ideal bass-frequency extension to complement the VISION series two-way loudspeakers.

■ The low-frequency transducer is a high-power 18" woofer with a 4" voice coil. Using horn-reflex loading to the transducer, the subwoofer design ensures an efficient acoustic response down to 40Hz.

■ The subwoofer system includes a high-level crossover network that features markedly lower (than conventional) inductance values in series with the woofer. We call this innovation LICC (Low Impedance Compensated Crossover). The benefit is delay reduction, reduced phase shift and superior transient response. The high-pass crossover section is connected to terminals on the input plate to facilitate easy interface with VISION Series two-way loudspeaker systems. The crossover is easily bypassed for bi-amp or tri-amp operation via an installer-accessible changeover block. Back panel indicators display the current system setting.

■ The Mackie Industrial PA180SW is a part of the VISION family of loudspeaker products including full-range, cost-effective, two-way loudspeakers and complementary subwoofer cabinets. The two-way enclosures have a trapezoidal footprint for easy array configuration. All enclosures are constructed using 19mm void-free, birch plywood and finished with a scratch-resistant black coating. Transducer components are protected from the environment by a heavy gauge metal grille. The VISION products are eminently suited for fixed installation, ready for suspension via built-in M10 inserts with metal reinforcement and forged shoulder eyebolt hardware.

■ This Mackie Industrial product is covered by an exclusive, one-time, NO FAULT repair policy in addition to a five year limited warranty.

High Efficiency Subwoofer Speaker System



Features

- 18" high-efficiency 4" voice-coil woofer
- Horn reflex loaded woofer
- Switchable internal passive crossover network
- Rectangular box enclosure with protective metal grille
- 19mm birch plywood construction
- Nine suspension points (M10) and standard eyebolt hardware
- Integrated hand-carry locations
- Exclusive Mackie Industrial — one-time, NO FAULT repair policy
- Five year limited warranty

- Low Frequency Enhancement
- Music Enhancement
- Special Effects Reinforcement
- Entertainment Systems
- Live Music Reinforcement
- Large Speech Systems

PA180SW High Efficiency Subwoofer Speaker System

Specifications

System

Freq. Range (-10dB):	40Hz-180Hz
Freq. Response (-3dB):	50Hz-160Hz
System Sensitivity ¹ :	100dB, 1W @ 1m
Rated Maximum SPL:	133dB, @ 1m
Nominal Impedance:	8Ω
Input Power Rating:	500W AES; 2000W Peak
Recommended Amplifier ² :	750W
LF Protection:	Dynamic
Crossover:	120Hz, 12dB/Octave

Transducer

Low-Frequency:	18" (460mm) woofer with 4" (100mm) coil
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Physical

Enclosure:	Rectangular, 19mm multilayered birch
Rigging Inserts:	9 points; accepts M10 threaded hardware, 3 eyebolts provided
Color:	Black, scratch resistant paint
Grille:	Custom perforated steel grille with open-cell poly fiber backing
Input Connectors:	Speakon® NL4
Dimensions (HxWxD):	23.50" x 31.34" x 23.74" (596mm x 796mm x 603mm)
Net Weight:	114lb. (52kg)

Options

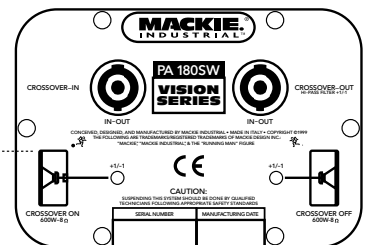
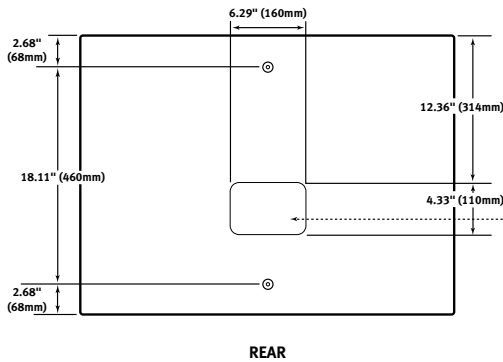
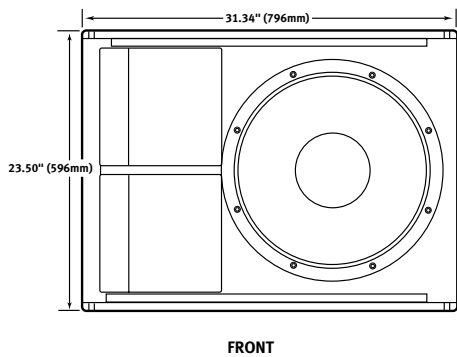
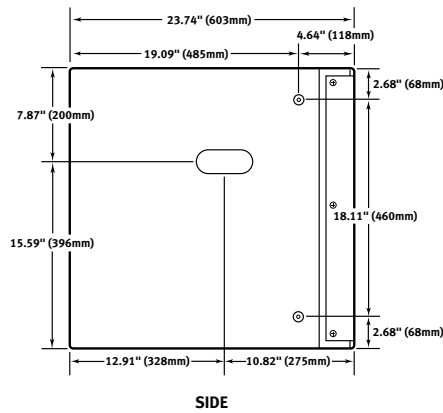
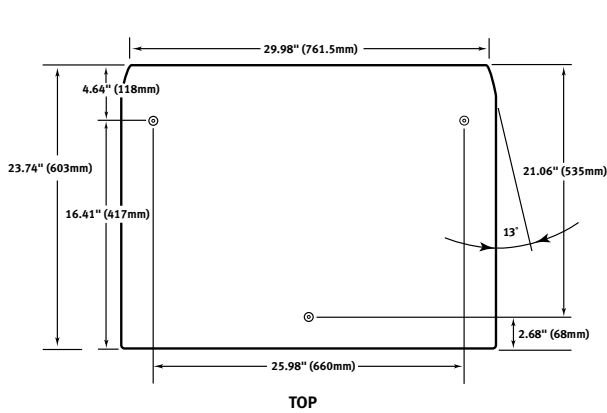
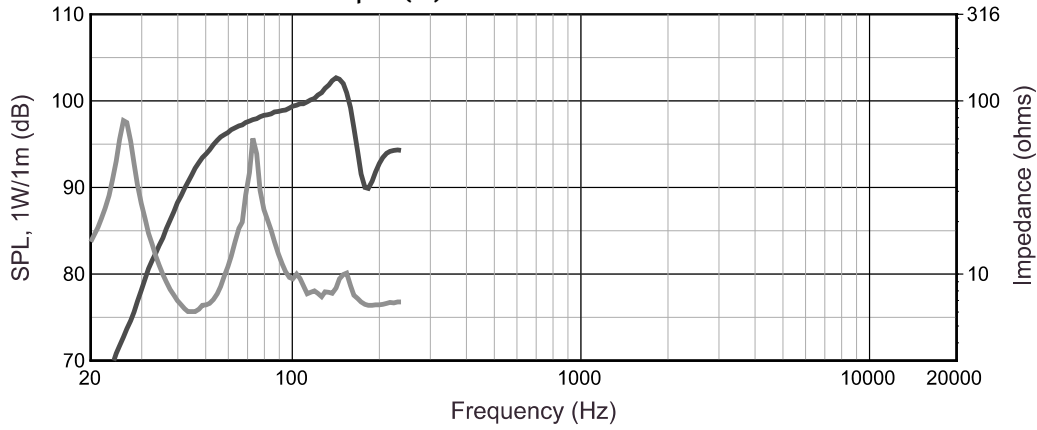
PA-A1	Forged shoulder M10 eyebolt hardware
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¹ Measured on axis in the far field with 1 watt (2.83V RMS, 8Ω) input and referenced to 1 meter distance using the inverse square law. Listed sound pressure represents an average from 50Hz to 150Hz.

² Recommended Amplifier is a power capability value that should be taken as a guide.

PA180SW High Efficiency Subwoofer Speaker System

Frequency response is measured on-axis at a distance referenced back to 1m at 1-watt drive. Shown as half-space (2π) environment.



PA180SW High Efficiency Subwoofer Speaker System

Architects' and Engineers' Specifications

The subwoofer loudspeaker system shall be self-contained and consist of the following components: (1) an 18-inch, low-frequency driver; (2) a low-pass filter; (3) a vented, horn loaded enclosure.

The low-frequency transducer shall be a cone type loudspeaker having a cone diameter of at least 18 inches (460mm). It shall have a voice coil of at least 4 inches (100mm) in diameter. It shall present a nominal impedance load of 8Ω. Sensitivity shall be at least 100dB when measured at 1m with an input of 1 Watt and have a power rating of at least 500 Watts (AES), 2000 Watts Peak.

The system shall be crossed over by an internal, high-level, passive network having a response of 12dB/octave. The nominal crossover frequency shall be 120Hz. The low-pass section of the network shall have minimum inductance in series with the low-frequency driver. The high-pass section of the network shall roll-off signals below 120Hz at 12dB/octave. This high-pass signal shall be made available to drive a full range loudspeaker system. A dynamic low-frequency protection circuit shall limit the current available to the driver. The crossover network shall present a constant 8Ω load impedance to the power amplifier. A jumper shall be provided to disconnect the crossover network from the driver to allow bi-amp operation. Connections to the loudspeaker shall be Speakon® NL4 connectors.

The enclosure shall be a vented horn-loaded design with an internal volume of at least 8.38 cu. ft. The vent shall be tuned to 35Hz. It shall be constructed using 0.75 inch (19mm), void-free birch plywood and finished with black, scratch-resistant paint. It shall be rectangular shaped. A full size, detachable, perforated steel grille, finished in black scratch-resistant paint and lined with foam damping material shall be provided. At least 12 reinforced threaded metal sockets (M10) for attaching mounting hardware, three eye bolts and two hand holds shall also be provided. The overall dimensions of the enclosure shall not exceed 23.5 x 31.34 x 23.74 inches (596mm x 796mm x 603mm).

The performance of the subwoofer loud-speaker system shall be as follows: long-term power handling, at least 500 Watts RMS; peak power handling, at least 2000 Watts; frequency response, 50Hz–160Hz at –3dB; maximum SPL, 133dB (anechoic–1m); sensitivity, 100dB SPL (1W/1m anechoic). The subwoofer loudspeaker system shall be a model PA180SW manufactured by Mackie Industrial.

Electronic files for this product available at:
www.mackieindustrial.com

This Specification Sheet


PA180SW.PDF



www.mackieindustrial.com

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