

SRM450v2

The Mackie SRM450v2 is a full-range, portable, powered loudspeaker system providing high-output, ultra-wide dispersion and low-distortion performance in a compact, lightweight design. Two Fast Recovery™ amplifiers independently power a 12-inch neodymium woofer and a precision titanium compression driver. Mackie's sophisticated Active electronics provide phase correction, crossover, time correction, equalization and protection circuitry.

A heat-treated titanium compression driver with multi-cell aperture directs pristine highs through an exponential high-frequency waveguide, allowing for ultra-wide dispersion. This allows the SRM450v2 to deliver clear, smooth sound to audience members up to 45° off axis.

The 12-inch neodymium woofer provides a greater magnetic field with far less material, making the woofer extremely lightweight without sacrificing performance. The 3-inch voice coil allows the driver to run cooler, delivering consistent performance even after long hours of use.

Mackie-designed Active electronics provide equalization, crossover, time alignment, and phase correction to enhance sonic performance. Protective circuitry includes over-excursion protection, low-line voltage shut-down, thermal protection, level dependent low-frequency roll-off and independent LF and HF limiters.

The SRM450v2 features a number of dedicated controls including a mic/line switch, a single microphone and line input level control, and a contour switch for low-level sound reinforcement applications. There is also a timed turnoff feature that turns off the amplifiers if the signal drops below -45 dBu for three minutes.

The center of gravity, handle locations, handle design, position of fly-points and ease of use have been ergonomically designed. There is also an integrated pole mount cup and a weather-resistant steel grille. The asymmetrical trapezoidal cabinet has been designed to provide an ideal floor monitoring position.

The cabinet is constructed of high-pressure injected polypropylene. The enclosure features ample amounts of reinforcement ribbing and structural strengthening resulting in a strong, super-rigid design providing ideal acoustical characteristics.

APPLICATIONS

Small to mid-size club/band PA systems, houses of worship, DJs, vocal/band monitor wedges, gymnasiums, banquet halls, conference rooms and many, many more.



FEATURES:

- 2-way bi-amplified, optimized powered loudspeaker system
- 300W RMS Class-D, Fast Recovery™ LF amp / 100W RMS HF amp
- 12" neodymium long-throw low-frequency transducer with 3" voice coil and servo feedback control
- High-output precision titanium compression driver
- Ultra-wide, smooth dispersion via multi-cell horn aperture and HF waveguide
- Mackie Active electronic time alignment, phase correction and EQ for studio quality sound
- Built-in phase-accurate 24 dB Linkwitz-Riley electronic crossover
- Mic/line input and pass-thru connector
- Lightweight for ultimate portability (40 lb / 18.1 kg)
- Asymmetrical trapezoidal cabinet for floor monitor positioning
- Stand / Pole-mountable
- Flyable via ten M10 rigging points using the optional eyebolt kit

SRM450v2 SPECIFICATIONS

Acoustic Performance

Frequency Response (-3 dB)	55 Hz - 18 kHz
Frequency Range (-10 dB)	45 Hz - 20 kHz
Directivity Factor; Q (DI)	9.95 (9.98), averaged 2 kHz to 10 kHz
Max SPL long-term	124 dB @ 1 m
Max SPL peak	127 dB @ 1 m
Crossover Point	Linkwitz-Riley, 24 dB/octave @ 1600 Hz

Input / Output

Input / Thru Type	Balanced Differential
Input Impedance	20 kΩ
Input Protection	RFI and level protected

Sensitivity

Line	+4 dBu (center detent)
Mic	-36 dBu
Maximum Input Level	+22 dBu
Low-Cut Frequency	75 Hz, Second-order filter
Acoustic Contour Equalization (Peaking)	+3 dB @ 100 Hz, +3 dB @ 12 kHz

Low-Frequency Power Amplifier

Rated Power	300 watts rms*
Rated THD	< 0.1%
Cooling	Convection Extrusion
Design	Class D, Parametric Servo Feedback

High-Frequency Power Amplifier

Rated Power	100 watts rms*
Rated THD	< 0.1%
Cooling	Convection Extrusion
Design	Conventional Class AB

*Rated power is continuous rms wattage into transducer's rated impedance @ 5kHz for the HF amplifier and @ 500Hz for the LF amplifier.

Low-Frequency Transducer

Diameter	12 in / 305 mm
Voice Coil Diameter	3 in / 76 mm
Magnet Material	Neodymium

High-Frequency Transducer

Diaphragm Diameter	1.75 in / 44 mm
Diaphragm Material	Heat treated titanium

Horn Design

Type	Conical and Exponential
Mouth Size	12 in / 305 mm (W) x 7 in / 178 mm (H)
Throat Diameter	1 in / 25 mm
Horizontal Coverage	90° (1 kHz - 20 kHz)
Vertical Coverage	45° (2.8 kHz - 20 kHz)

Line Input Power

US, JP	100 - 120 VAC, 50 - 60 Hz
EU, UK, AU, CN	200 - 240 VAC, 50 - 60 Hz
AC Connector	3-pin IEC 250 VAC
Power Consumption	300 watts

Control System Function

Electronic Crossover, Phase Alignment, Equalization, Parametric EQ

Safety Features

Over-Excursion Protection	Second-Order High-Pass Filter
Thermal Protection	Amplifier shutdown, auto-reset
Low-Line Voltage Shut Down	60% Nominal line
Driver Protection	Independent LF and HF compressors
Low-Freq Roll-Off	Dynamic, signal-level dependent

Construction Features

Basic Design	Asymmetrical Trapezoidal
Enclosure Alignment	Sixth-Order
Material	Polypropylene
Finish	Black, textured finish
Handles	One on each side, one on top
Grille	Perforated metal with weather-resistant coating
Display LEDs	Signal Present, Peak, Power ON, and Thermal
Operating Temperature	-10°C - 45°C 14°F - 113°F

Physical Properties (packaged product)

Height	26.5 in / 673 mm
Width	16.8 in / 427 mm
Depth	15.5 in / 394 mm
Shipping Weight	46.0 lb / 20.9 kg

Physical Properties (product)

Height	26.1 in / 663 mm
Width	16.0 in / 406 mm
Depth	14.8 in / 376 mm
Net Weight	40.0 lb / 18.1 kg

Mounting Methods

Floor mount, pole mount, or fly via 10 integrated M10 threaded inserts (two each located on each side, top, bottom and rear of enclosure)

Options

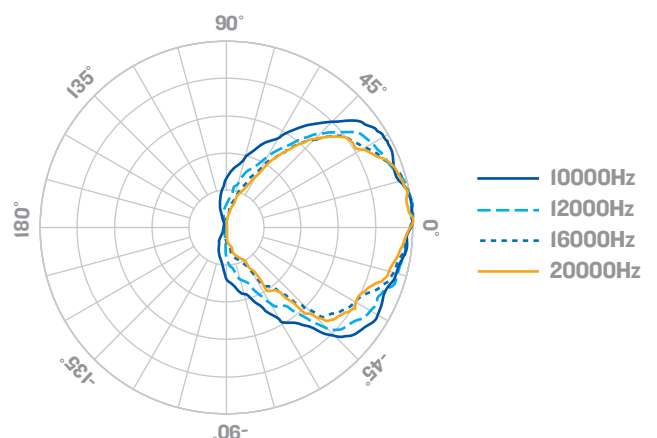
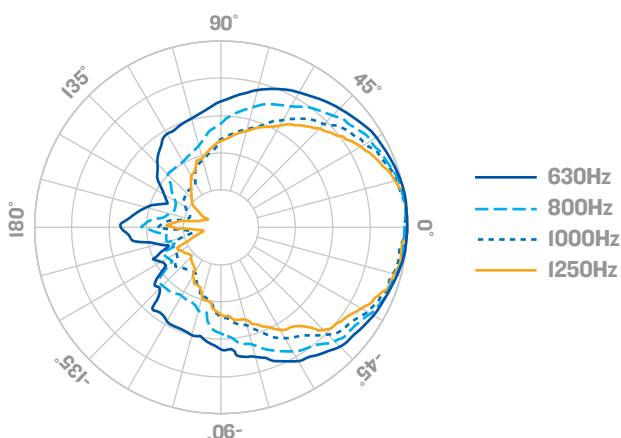
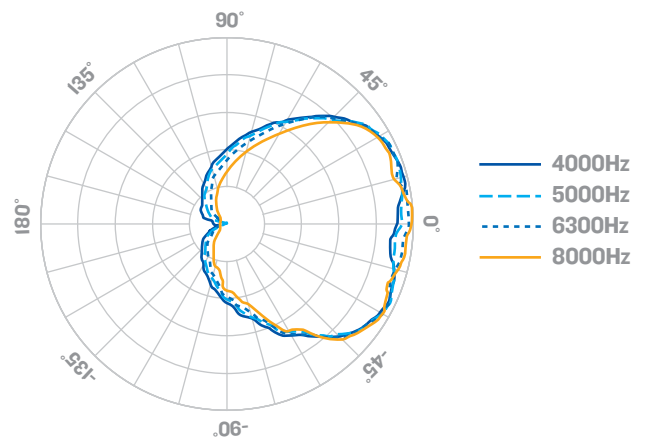
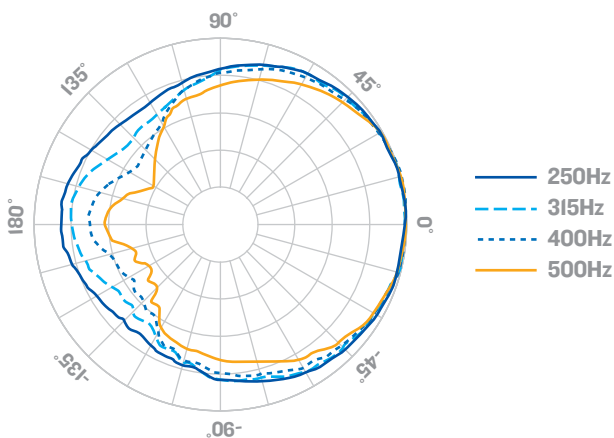
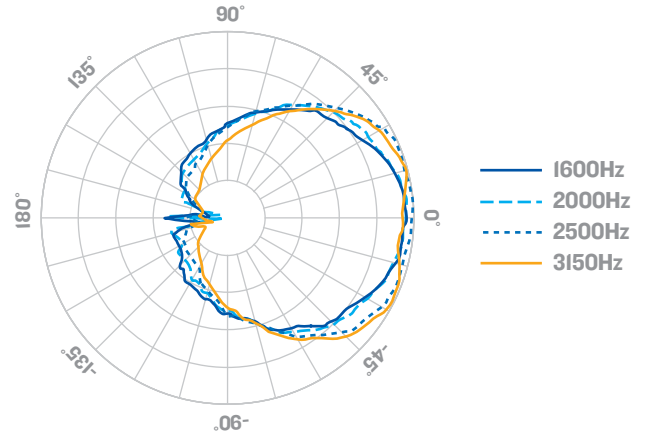
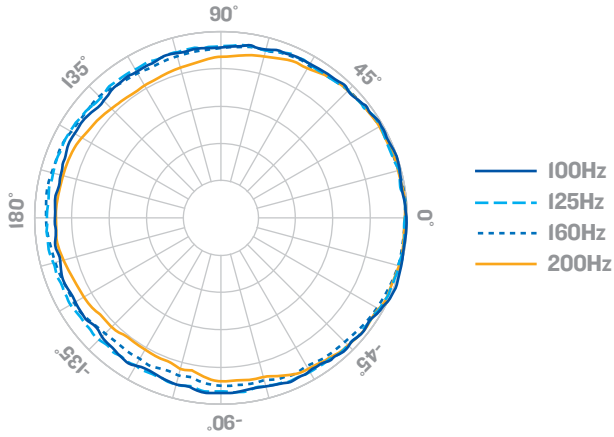
PA-A1 Forged Shoulder Eyebolt Kit	P/N 0031943
SPM200 Loudspeaker Pole Mount	P/N 2035170-01

Ordering Information

SRM450v2 12"2-way Compact SR Loudspeaker, US	P/N 2033799-00
SRM450v2 12"2-way Compact SR Loudspeaker, EU	P/N 2033799-01
SRM450v2 12"2-way Compact SR Loudspeaker, JP	P/N 2033799-02
SRM450v2 12"2-way Compact SR Loudspeaker, UK	P/N 2033799-03
SRM450v2 12"2-way Compact SR Loudspeaker, AU	P/N 2033799-04
SRM450v2 12"2-way Compact SR Loudspeaker, CN	P/N 2033799-05

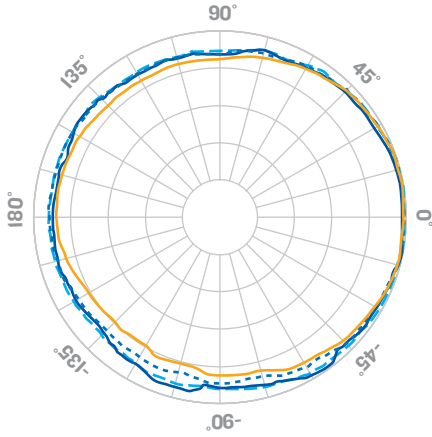
SRM450v2 HORIZONTAL POLARS

Gridlines: 6 dB axial / 15 degrees radial

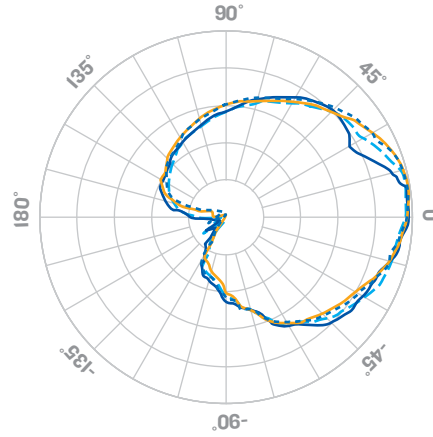


SRM450v2 VERTICAL POLARS

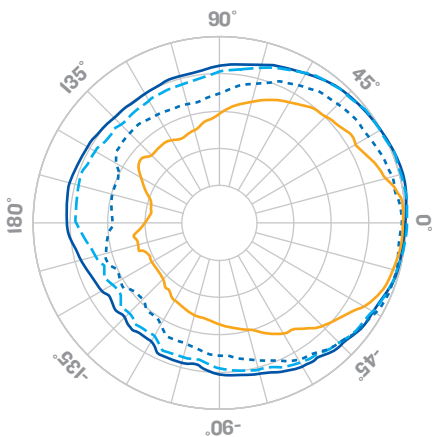
Gridlines: 6 dB axial / 15 degrees radial



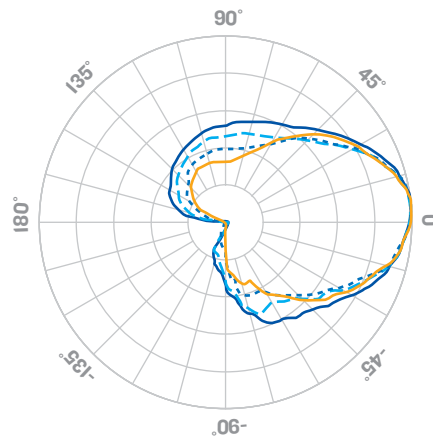
- 100Hz
- - - 125Hz
- ... 160Hz
- 200Hz



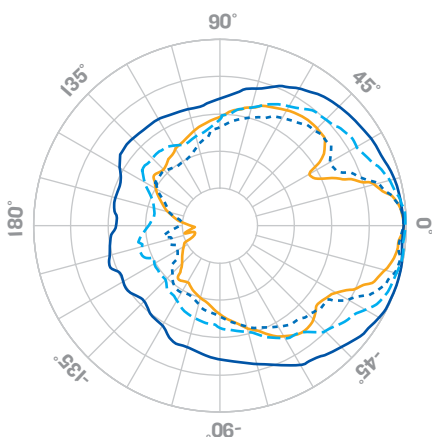
- 1600Hz
- - - 2000Hz
- ... 2500Hz
- 3150Hz



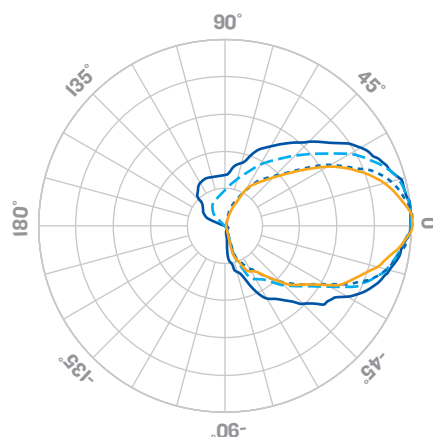
- 250Hz
- - - 315Hz
- ... 400Hz
- 500Hz



- 4000Hz
- - - 5000Hz
- ... 6300Hz
- 8000Hz

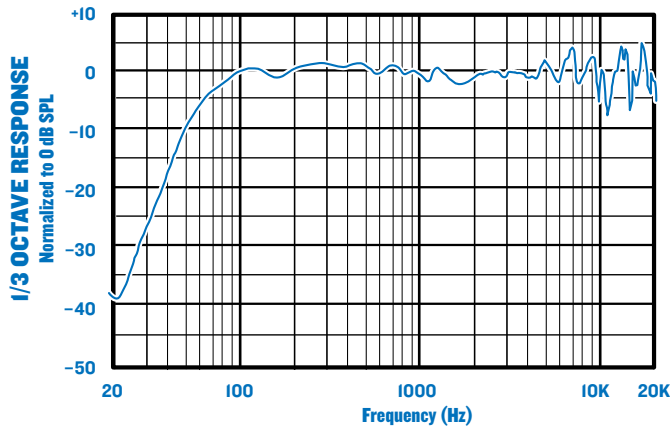


- 630Hz
- - - 800Hz
- ... 1000Hz
- 1250Hz

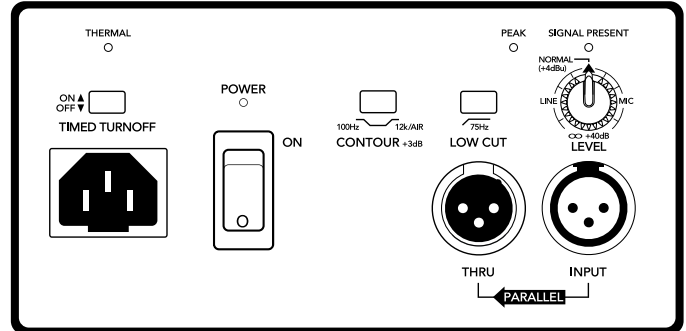


- 10000Hz
- - - 12000Hz
- ... 16000Hz
- 20000Hz

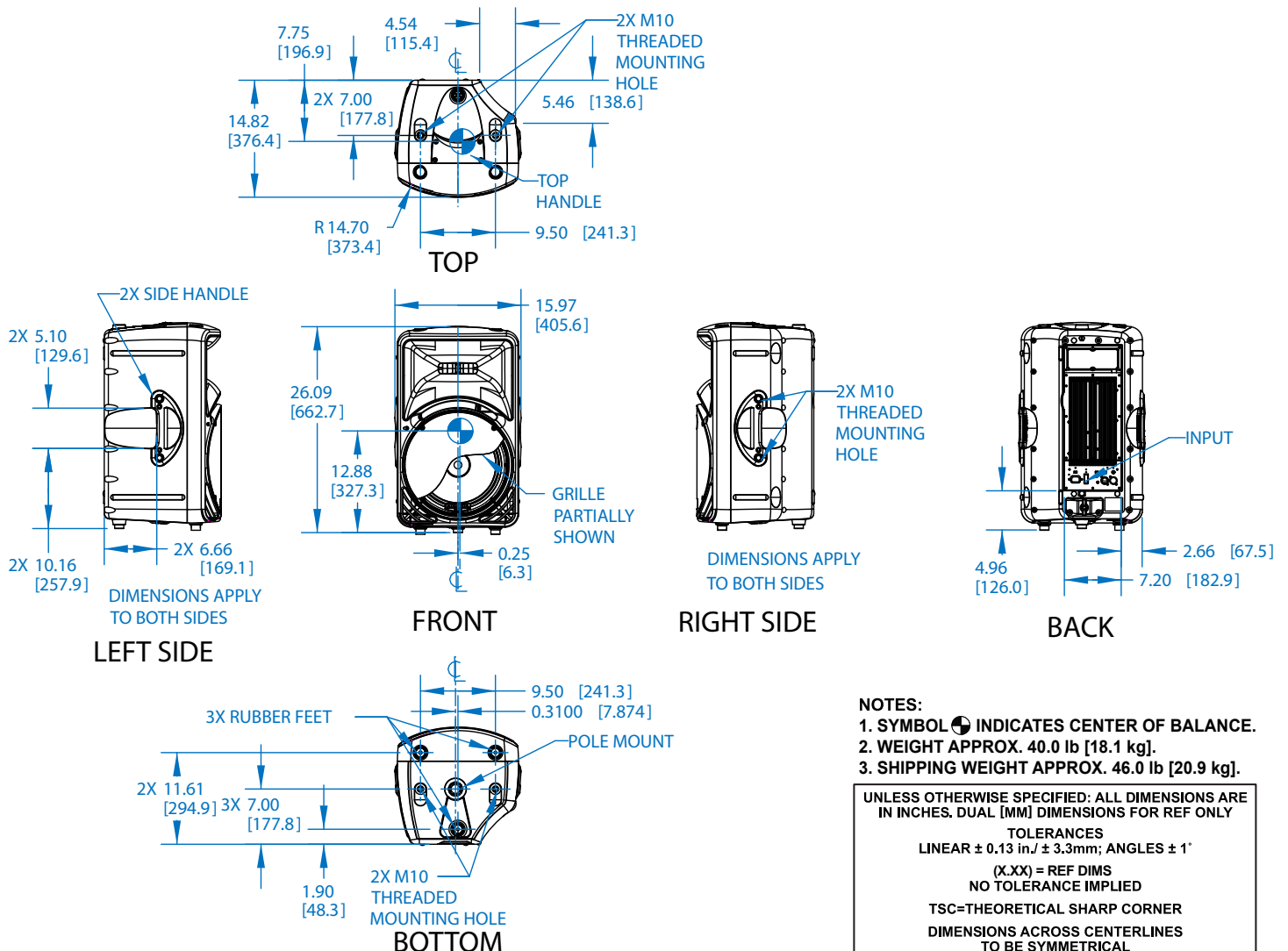
SRM450v2 FREQUENCY RESPONSE



SRM450v2 INPUT PANEL



SRM450v2 DIMENSIONS



NOTES:

1. SYMBOL INDICATES CENTER OF BALANCE.
2. WEIGHT APPROX. 40.0 lb [18.1 kg].
3. SHIPPING WEIGHT APPROX. 46.0 lb [20.9 kg].

UNLESS OTHERWISE SPECIFIED: ALL DIMENSIONS ARE IN INCHES. DUAL [MM] DIMENSIONS FOR REF ONLY

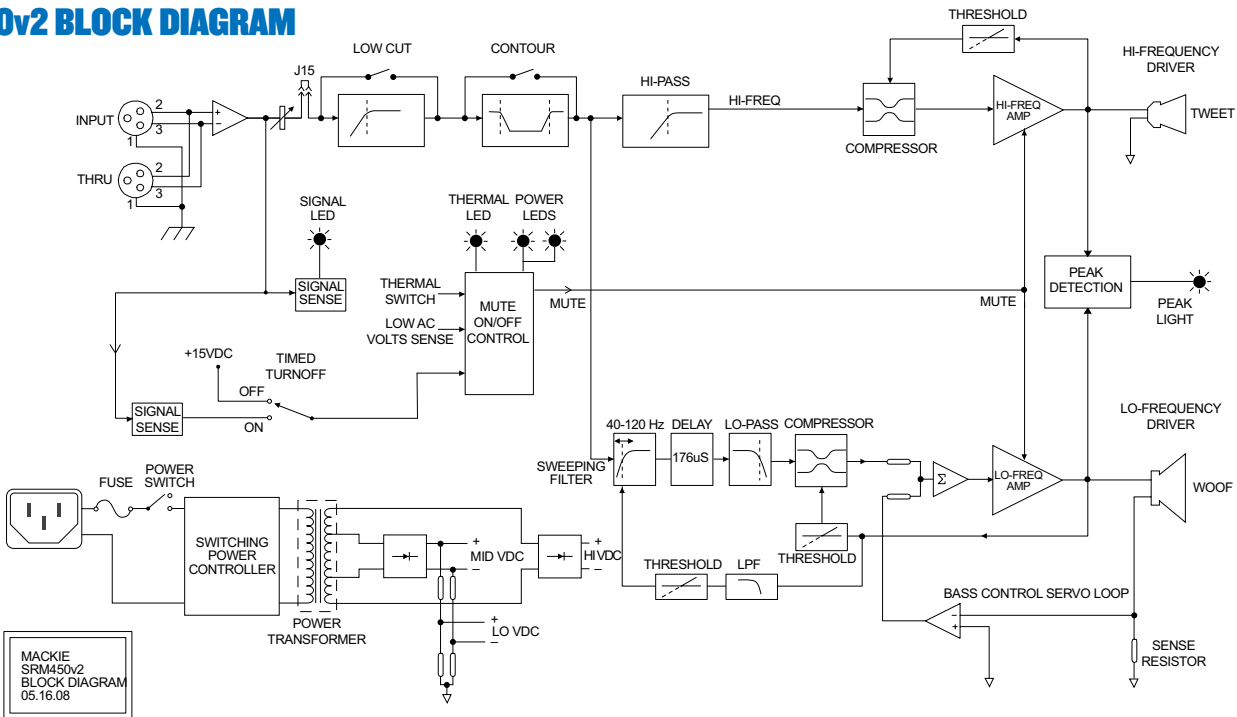
TOLERANCES
LINEAR ± 0.13 in./ ± 3.3 mm; ANGLES $\pm 1^\circ$

(X.XX) = REF DIMS
NO TOLERANCE IMPLIED

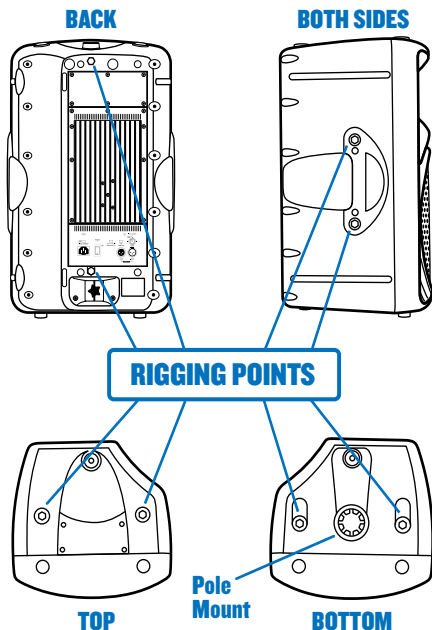
TSC=THEORETICAL SHARP CORNER

DIMENSIONS ACROSS CENTERLINES
TO BE SYMMETRICAL

SRM450v2 BLOCK DIAGRAM



SRM450v2 FLY POINTS



Electronic files for this product are available at:
www.mackie.com

Specification Sheet	SRM450v2_SS.PDF
Owner's Manual	SRM450v2_OM.PDF

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MACKIE®

www.mackie.com
 16220 Wood-Red Road NE
 Woodinville, WA 98072 USA
 800-898-3211, Fax 425-487-4337, sales@mackie.com

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