



SMS4

Compact Two-Way Loudspeaker

SMS4 — COMPACT TWO-WAY LOUDSPEAKER

Careful acoustic design and the use of advanced materials contribute to the exceptional music fidelity and speech intelligibility exhibited by the EAW Commercial SMS4 (black) and SMS4W (white) two-way speaker systems.

The low-frequency driver's carbon fiber diaphragm remains extremely rigid at high power levels, producing a more linear response and lower distortion. The cone is fitted with a durable foam surround and treated to resist moisture. The high-frequency section features a constant directivity horn with a built-in mechanical phase equalizer. The horn is driven by a Ferrofluid® cooled, 0.5" mylar dome tweeter.

The system is nominally crossed over at 4 kHz by a 12 dB/octave network, which uses markedly lower (than conventional) inductance values in series with the woofer. This design reduces sound delays associated with high inductance values and provides excellent low frequency transient response. The high-pass section is corrected for optimum performance of the CD horn and is protected with a circuit based on a low-value/low-mass filament resistor that smoothly limits the power sent to the tweeter driver.

All components are housed in a vented enclosure formed from semi-expanded polystyrene foam that is extremely strong, lightweight and weather resistant. Threaded metal sockets are molded into the cabinet to facilitate quick, safe deployment of the SMS4, as a single unit or in arrays, using specially designed accessory mounting hardware.

The SMS4 is a part of EAW Commercial's SMS Series Surface Mount Speakers, which includes two-way constant directivity, compact speakers in easily installed enclosures.

FEATURES

- .. 5" high-efficiency carbon fiber woofer
- .. CD horn loaded, 0.5" dome tweeter
- .. Built-in multi-tap constant voltage transformer for 25V, 50V, 70V, and 100V distributed systems
- .. Built-in low-inductance passive crossover with high-frequency dynamic protection
- .. Bypass mode for low-impedance operation into 4 ohms
- .. Lightweight, UV/weather resistant, high density polystyrene, trapezoidal shaped enclosure for multiple applications and minimum visual intrusion
- .. Integrated mounting points for use with optional mounting hardware
- .. Articulated wall-mount support bracket included



APPLICATIONS

- .. Meeting Rooms
- .. Hotels
- .. Houses of Worship
- .. Board Rooms
- .. Courtrooms
- .. Multizone Paging/Music Systems
- .. Multi-Purpose Facilities



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SPECIFICATIONS

SYSTEM

Freq. Range (-10 dB):	60 Hz–23 kHz
Freq. Response (-3 dB):	75 Hz–20 kHz
Horz. Coverage Angle (-6 dB):	110° averaged 800 Hz to 16 kHz
Vert. Coverage Angle (-6 dB):	110° averaged 800 Hz to 16 kHz
Directivity Factor; Q (DI):	5.6 (7.5) averaged 800 Hz to 16 kHz
System Sensitivity ¹ :	87 dB, 1W @ 1m
Rated Maximum SPL:	108 dB, @ 1m
System Nominal Impedance:	4Ω (bypassed)
System Input Power Rating ²	
Applicable Power:	60W rms (bypassed)
Musical Power:	120W rms (0.5 sec ON, 0.5 sec OFF, bypassed)
Peak Power:	150W rms (60W rms + 4.5 dB crest factor, bypassed)
Constant Voltage:	25V, 50V, 70V, 100V
Power Taps:	1W, 5W, 10W, 20W, 30W
Crossover:	4.0 kHz

TRANSDUCERS

Low-Frequency:	5 in/130 mm carbon fiber woofer
High-Frequency:	Horn loaded 0.5 in/13 mm dome tweeter, Ferrofluid cooled

PHYSICAL

Enclosure:	45° back angles, high density polystyrene
Attachment Inserts:	2 points M6 threaded on back 2 points M6 threaded on top and bottom
Mounting Hardware:	Adjustable wall-mount support bracket
Color:	Matte black (SMS4) White (SMS4W), scratch resistant paint
Grille:	Matching perforated steel grille
Input Connectors:	Spring-loaded terminal
Dimensions (HxWxD):	10.62 in/270 mm x 7.36 in/187 mm x 6.77 in/172 mm
Net Weight:	8.0 lb/3.6 kg

¹ Measured on axis in the far field with 1 watt (2.00 V rms @ 4 ohms) input and referenced to 1 meter distance using the inverse square law. Listed sound pressure represents an average from 300 Hz to 3 kHz.

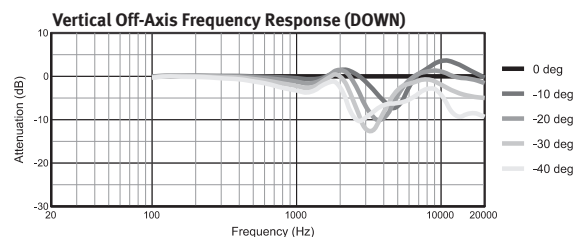
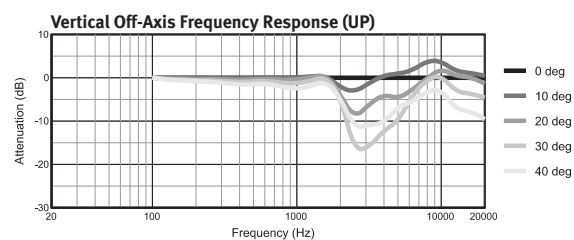
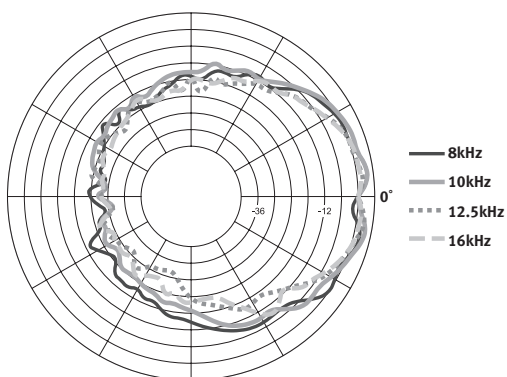
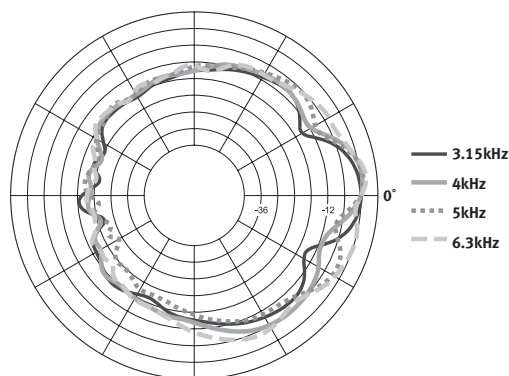
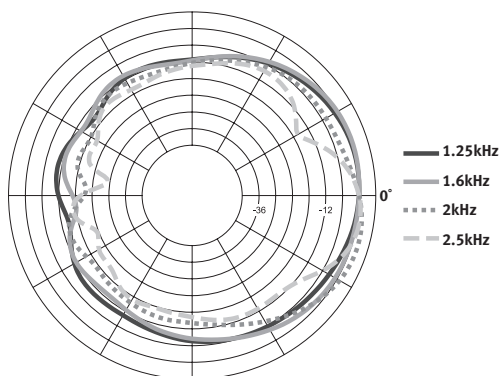
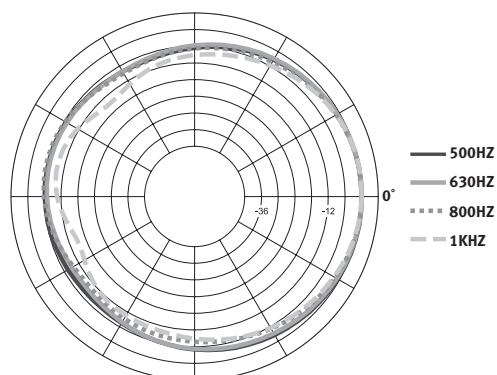
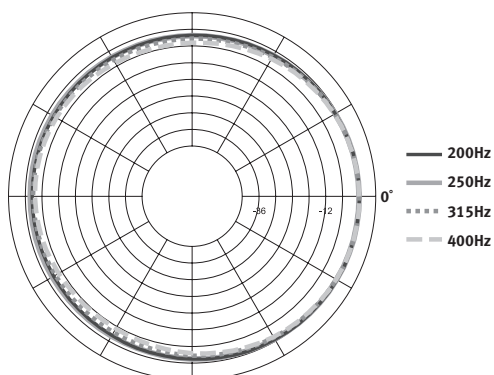
² The specifications provide three power values, which are determined by submitting the speaker to a series of laboratory tests lasting two hours each. In the test for **Applicable Power**, pink noise is applied in the operating range of the speaker, and the signal is filtered at the ends of the band with a 12 dB/octave slope. The applicable power value indicated is an rms value. The signal peaks present in the pink noise, adjusted according to the type of speaker being tested (e.g., +4.5 dB with respect to the average level), are used for determining the **Peak Power** value. To identify the **Musical Power**, the rms power value obtained in the first test is doubled, applying it with impulses lasting 0.5 seconds (0.5 sec ON), and at an interval of 0.5 second between one application and the next (0.5 sec OFF). For all the tests, the maximum power that the speaker can withstand without permanent damage is assumed as the power value.



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SMS4 Vertical Polars

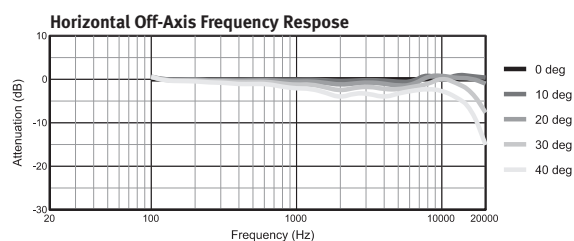
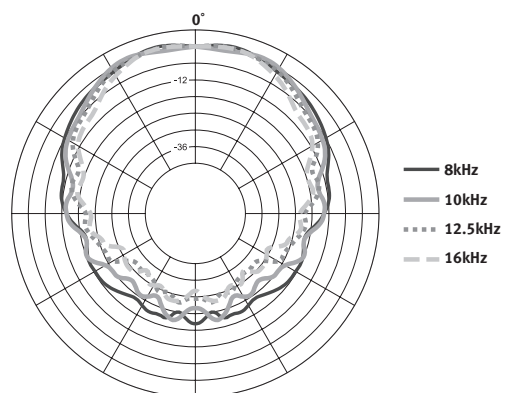
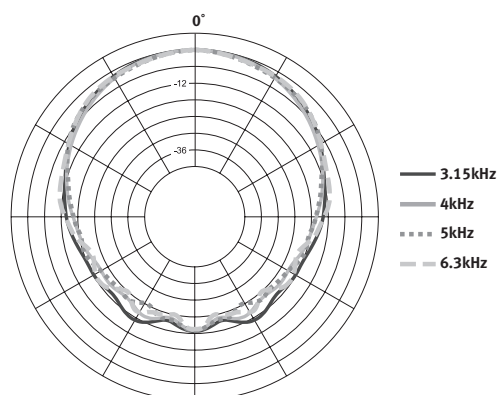
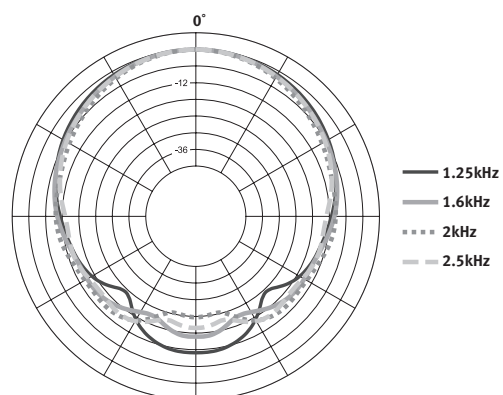
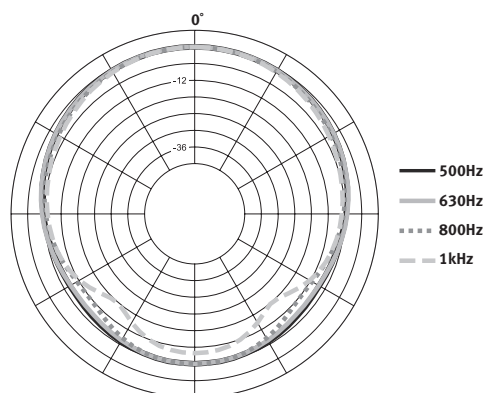
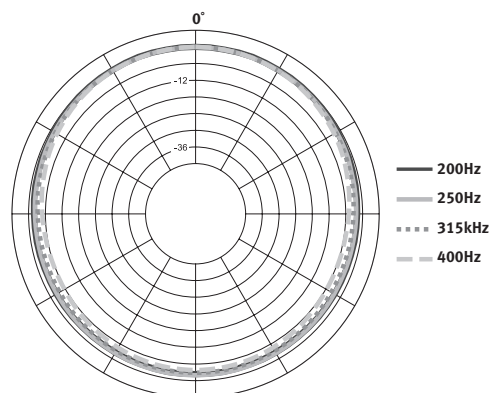




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SMS4 Horizontal Polars

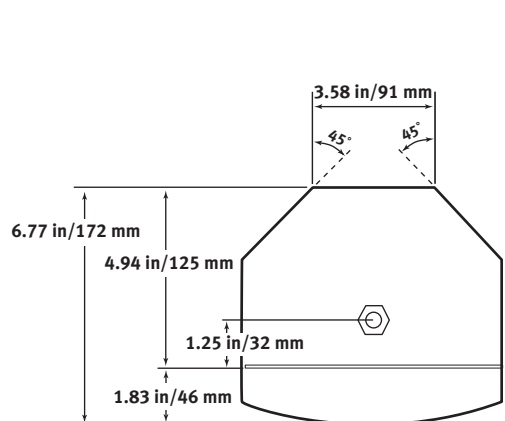
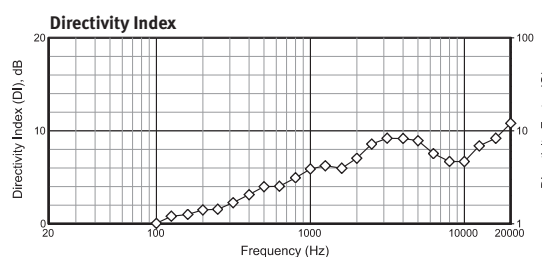
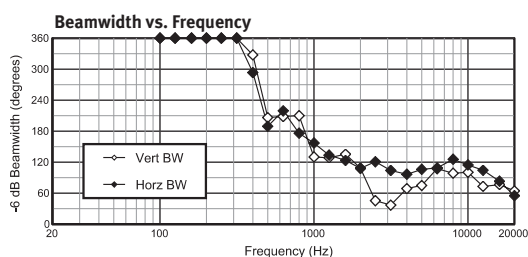
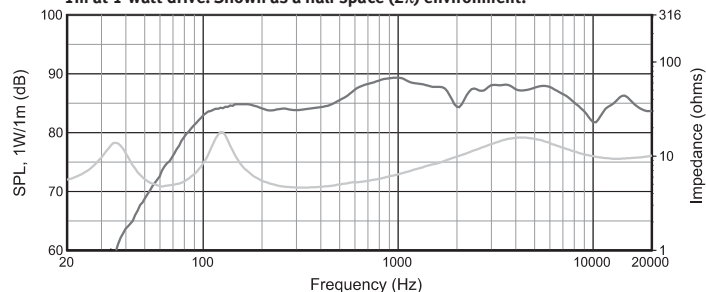




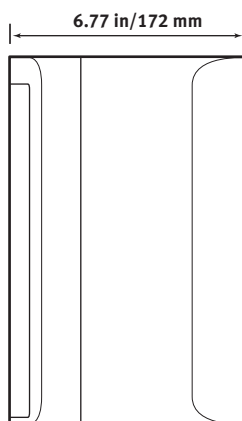
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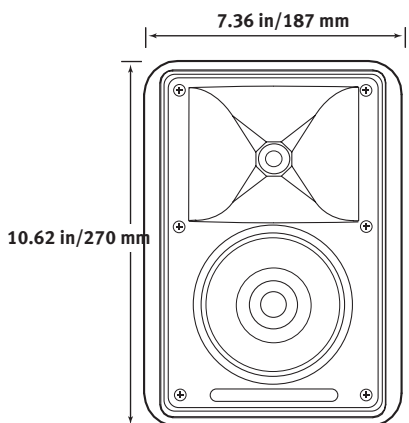
Frequency response is measured on-axis at a distance referenced back to 1m at 1-watt drive. Shown as a half space (2π) environment.



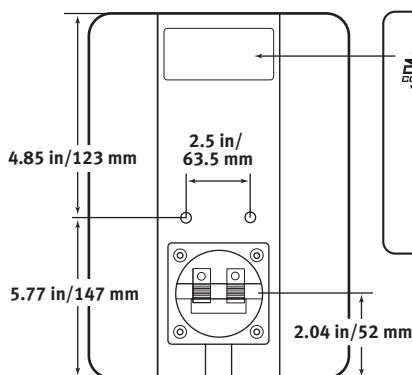
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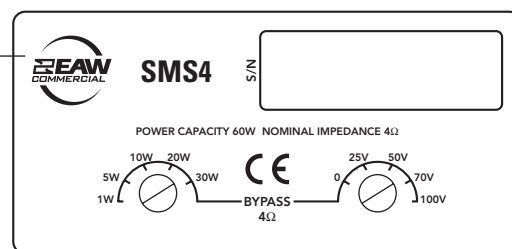
SIDE



FRONT



REAR





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CSI PRODUCT SPECIFICATIONS FOR DESIGNERS, SPECIFIERS, AND CONSULTANTS (ALSO KNOWN AS "A&E SPECIFICATIONS")

The following are "Part 2 Products" CSI-type specifications. It is assumed that "Part 1 General – Administrative and Procedures" and "Part 3 Execution – Installation and Maintenance" are part of an overall audio system or project specification.

PART 2 PRODUCTS

- 2.01 Approved Manufacturer/Product
 - A. EAW Commercial, One Main Street, Whitinsville, MA 01588 USA
 - B. Model number: SMS4
- 2.02 Design
 - A. Configuration: Compact 2-Way Horn-Loaded Speaker
 - B. LF Sub-section: 5 in. carbon fiber cone low-frequency driver
 - C. HF Sub-section: 0.5 in. dome high-frequency driver
- 2.03 Acoustical Properties
 - A. Nominal Dispersion Angle (–6 dB points)
 - 1. Horizontal: 110° averaged 800 Hz to 16 kHz
 - 2. Vertical: 110° averaged 800 Hz to 16 kHz
 - B. Axial Frequency Response (–3 dB points):
75 Hz – 20 kHz
 - C. Axial Frequency Range (–10 dB points):
60 Hz – 23 kHz
 - D. Axial Sensitivity (dB SPL/1 W @ 1 m):
87 dB
 - E. Power Handling
 - 1. Applicable Power: 60 W rms
 - 2. Musical Power: 120 W rms
 - 3. Peak Power: 150 W rms
 - F. Power Taps: 1, 5, 10, 20, 30 watts, and Bypass
 - G. Constant Voltage Taps:
25, 50, 70, 100 volts, and Bypass
 - F. Nominal Impedance:
4 ohms (bypassed)
- 2.04 Physical Properties
 - A. Enclosure Shape: Trapezoidal
 - B. Enclosure Material: High-density polystyrene
 - C. Enclosure Finish: Matte black (SMS4) or white (SMS4W), scratch resistant paint
 - D. Connectors: Spring-loaded terminals
 - E. Mounting/Suspension Hardware:
Four M6 threaded inserts, two on back, one on top, and one on bottom
 - F. Grille: Matching perforated steel grille
 - G. Dimensions
 - 1. Height: 10.62 in/270 mm
 - 2. Width: 7.36 in/187 mm
 - 3. Depth: 6.77 in/172 mm
 - H. Weight
 - 1. Net Weight: 8.0 lb/3.6 kg

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