



SM82-EZ-II-WX PRODUCT SPECIFICATIONS

System Type	8", coaxial, surface-mount, ported (64 W transformer for 25/70.7/100 V or transformer bypass applications)
Impedance (Nominal) ¹	8 Ω
Sensitivity dB @ 2.83 V / 1 M	87 dB
Sensitivity dB @ 1 W / 1 M ²	87 dB
Frequency Response (±3 dB) ³	50 Hz - 20 kHz
Frequency Response (±10 dB) ³	38 Hz - 22 kHz
Max. Program Power ⁴	150 W
Max. Continuous Power RMS ⁵	75 W
Max. Power SPL @ 1 M ⁶	106 dB
Coverage Angle (±6 dB @ 2 kHz)	70° Horizontal 90° Vertical
Coverage Angle (±6 dB @ 10 kHz)	110° Horizontal 100° Vertical
Coverage Angle (Avg. 2-10 kHz)	90° Horizontal 105° Vertical
Aiming Angle	0° - 90°
Directivity Factor (Q)	5.2 (averaged 100 Hz - 10 kHz) 12 @ 2 kHz
Directivity Index (DI)	6.2 (averaged 100 Hz - 10 kHz) 10.8 @ 2 kHz
Tap Selector	Six-position rotary switch with transformer bypass
Transducer: Low-Frequency Driver	203 mm (8") polypropylene cone, butyl rubber surround
Transducer: High-Frequency Driver	25.4 mm (1") soft dome tweeter
Low-Frequency Voice Coil	38.1 mm (1.5") high temperature Kapton
Crossover Frequency	2.5 kHz
Enclosure Material	High Impact Polystyrene (HIPS)
Network Type: Low Pass	12 dB per octave, 2nd order
Network Type: High Pass	12 dB per octave, 2nd order
Grille	Aluminum with powder-coat finish
Inputs	4-position ceramic terminal strip
Colors	Black or white
Height	457.2 mm 18"
Width	292.1 mm 11.5"
Depth	251.4 mm 9.9"
Weight	7.1 kg 15.4 lbs
Packaging	One per box
Included Accessories	Safety cable, wall-mount bracket, port plug, Allen wrench, and water-tight strain-relief bushing
Optional Accessories	N/A
IP-Rating	IP65
Certifications	CE, RoHS, UL 1480A,

Description

The SM82-EZ-II-WX is a cost-effective, high-efficiency surface-mount loudspeaker for distributed or 8 Ω applications. The SM82-EZ-II-WX incorporates a dedicated 8" polypropylene woofer and an offset 1" soft dome tweeter with waveguide to deliver superb intelligibility for background to foreground music and messaging (up to 106 dB max. SPL).

The SM82-EZ-II-WX uses a 64 W low-insertion loss transformer and a six-position tap switch with a transformer bypass position. Mounting for the SM82-EZ-II-WX includes a pre-mountable U-bracket for fast, secure installation and easy division of labor.

Features

- The SM82-EZ-II-WX is a cost-conscious, weather-resistant, surface-mount loudspeaker.
- BroadBeam Ring™ technology for midrange clarity and ultra-wide off-axis performance up to 10 kHz for maximum coverage area per speaker.
- One 8" (203 mm) polypropylene woofer and one 1" (25.4 mm) soft dome tweeter.
- IP65 rated (when included port plug is installed) for high dust and water-resistance.
- 87 dB average sensitivity offers high output capabilities and reduced amplification costs.
- Easy access, six-position selectable tap switch for 25, 70.7, and 100 V applications with transformer bypass position.
- Aluminum grille with powder-coat finish.
- Vertical and horizontal mounting offer precision aiming for indoor and outdoor applications.
- UL 1480A approved.
- High-quality black or white paint finish.
- Included accessories: safety cable, wall-mount bracket, port plug, Allen wrench, and watertight strain-relief bushing.

¹ Impedance listed per IEC 60268-5 with a minimum less than 80% the nominal impedance.

² 1 W/1 M sensitivity determined using nominal impedance

³ Frequency response measured in half or full space as dictated by speaker mounting configuration

⁴ Max program power is 3 dB above max continuous power

⁵ Continuous power rating, EIA-426-B test

⁶ Max output based on max continuous power

Transformer Taps

70.7 V	Output	100 V	Output	25 V	Output
64 W	105 dB	64 W	105 dB	8 W	96 dB
32 W	102 dB	32 W	102 dB	4 W	93 dB
16 W	99 dB	16 W	99 dB	2 W	90 dB
8 W	96 dB	8 W	96 dB	1 W	87 dB
4 W	93 dB				

Applications

Engineered for cost-conscious applications requiring true intelligibility, quality low-frequency response and quick installation, the versatile SM82-EZ-II-WX delivers smooth and even coverage ideal for casinos, convention centers, gyms, nightclubs, aerobic rooms, airports, super stores, arenas, theme parks, transportation hubs, shipping centers, and stadiums.

Patented Technologies

SoundTube Entertainment and the MSE Audio Group constantly develop new technologies which enhance audio product performance. SoundTube Entertainment innovations are protected by multiple U.S. and international patents, which explicitly cover SoundTube dome, enclosure and dispersion technologies. The MSE Audio Group actively defends its patents in order to protect SoundTube resellers and end-users.

Technical Data and Specification Tools

SoundTube Entertainment strives to provide complete and effective technical information and data to dealers, engineers and designers. All data is available from SoundTube Entertainment or at www.soundtube.com.

Technical data and downloads include:

- EASE™ data - 3-D polar plots.
- EASE™ Address - 2-D modeling for distributed systems
- AutoDesk® Revit® software
- Tech Sheets - technical information and architectural specs for system engineers
- SoundTubeSPEC™ - Proprietary speaker placement software

Independent Data Acquisition and Verification

All data for SoundTube speakers is independently collected from and verified by NWAALabs (www.nwaalabs.com) using their proprietary MACH testing system. All data is collected and analyzed according to ASTM, ISO and AES standards using EASERA, TEF and MLSSA. Full balloon data including both phase and magnitude is compiled into a variety of formats including EASE 4.x, GLL and CLF.

Architectural Specifications

The loudspeaker shall consist of a 203 mm (8") polypropylene low-frequency transducer with butyl rubber surround and a 25.4 mm (1") soft dome high-frequency transducer. The system shall include a crossover network and 64 W transformer installed in the enclosure. The low-frequency voice coil diameter shall be 38.1 mm (1.5").

Performance specifications of a typical production unit shall be as follows: Usable frequency response shall extend from 38 Hz - 22 kHz (± 10 dB, half space, independently verified). Measured sensitivity (2.83 V input, 1 meter) shall be at least 87 dB. The speaker shall have a nominal impedance of 8 Ω . The speaker shall be available for 25, 70.7, and 100 V modes and shall include a six-position tap switch with a transformer bypass position. The frequency dividing network shall have a crossover frequency of 2.5 kHz with slopes of 12 dB per octave (2nd order) for both low and high pass filters. Rated power capacity shall be at least 64 W continuous (RMS) and conform to EIA-426-B testing. Maximum continuous output at 1 M shall be 106 dB.

The low-frequency transducer shall have a polypropylene cone with butyl rubber surround. The high-frequency transformer shall be constructed of silk material with a proprietary BroadBeam Ring™ waveguide.

Installation and safety attachment for the speaker shall be by U-bracket affixed to the speaker chassis with steel insert. For safety redundancy, a secondary cable shall be included and attached to the speaker chassis.

The external wiring input connector shall be via 4-position ceramic terminal strip, accepting up to 8-gauge wire. The system shall be for indoor/outdoor applications and shall include a weather-resistant cover over all wire connections.

The enclosure shall be constructed of injection-molded, High Impact Polystyrene (HIPS). The grille shall be constructed of powder-coated aluminum for lasting performance. Overall dimensions including the mounting plate and bracket for the speaker are 457.2 mm (18") in height by 292.1 mm (11.5") in width by 251.4 mm (9.9") in depth. The unit shall include port plug, Allen wrench and watertight strain-relief bushing.

The system shall be the SoundTube SM82-EZ-II-WX for both low and high impedance applications.

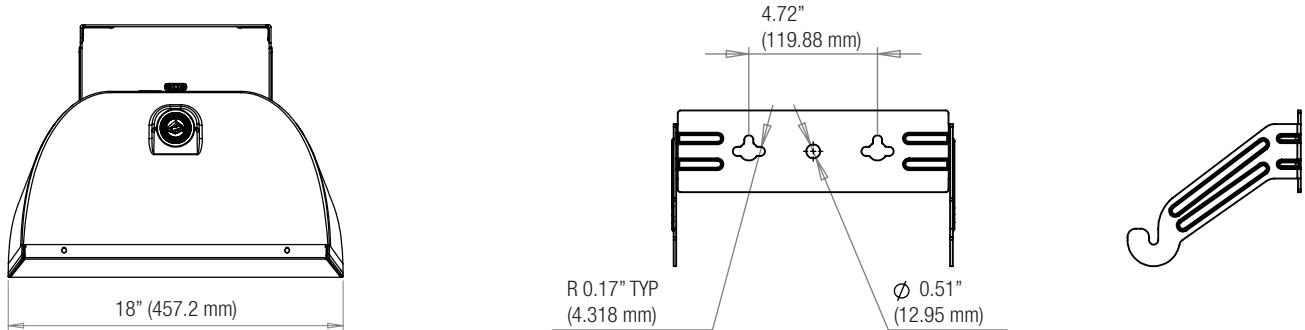
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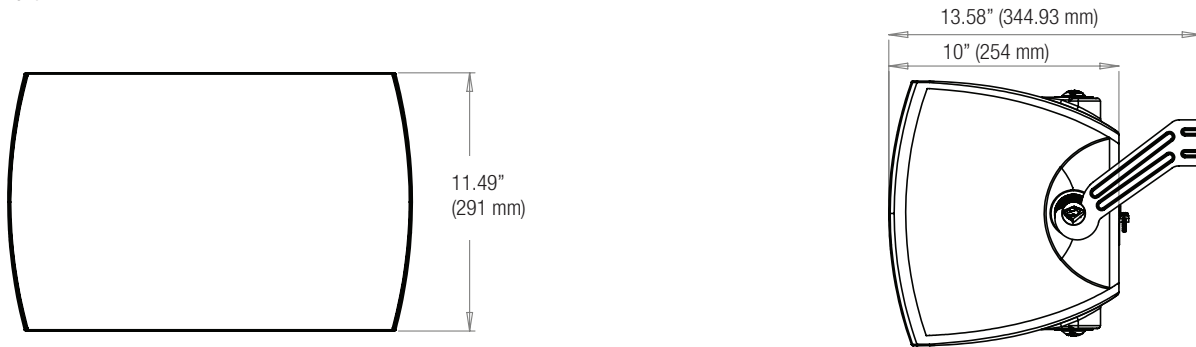
All SoundTube speakers come with a 5-year limited warranty and 3-year warranty on all electronics.

Mechanical Drawings

Top

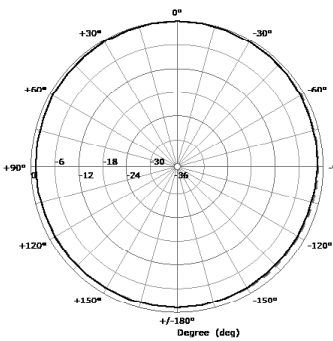


Front

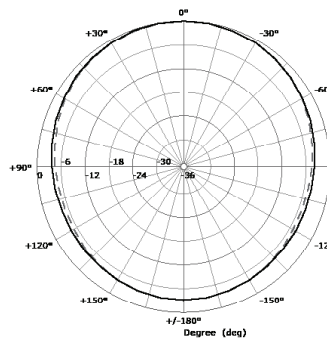


Plots

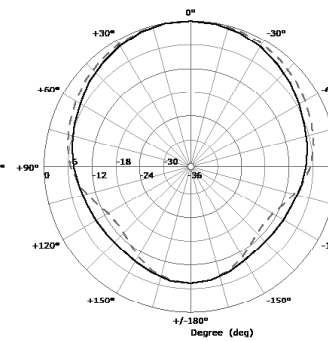
125 Hz



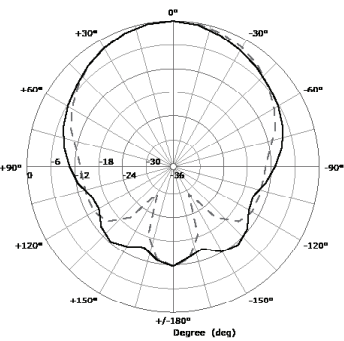
250 Hz



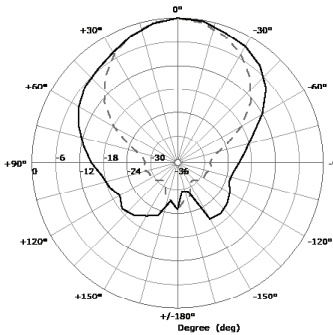
500 Hz



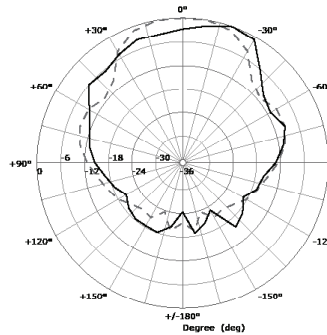
1,000 Hz



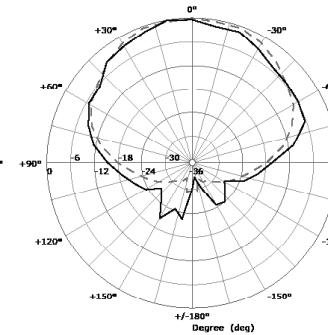
2,000 Hz



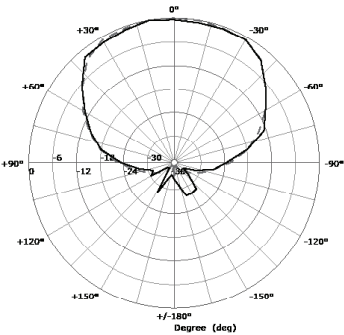
4,000 Hz



8,000 Hz

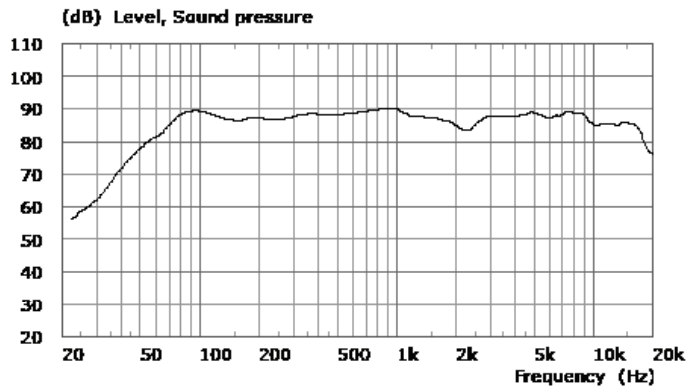


10,000 Hz

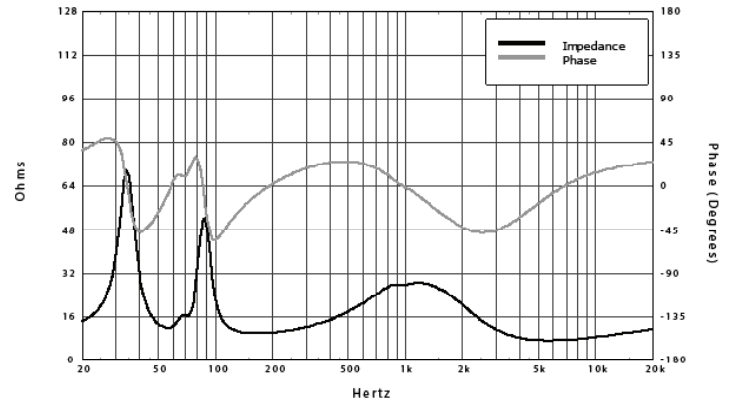


Graphs

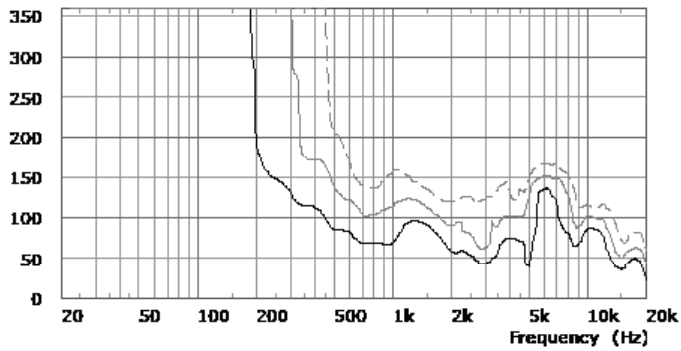
Frequency Response



Impedance/Phase



Vertical Beamwidth



Directivity Index (DI)

