

SM52-EZ-WX PRODUCT SPECIFICATIONS

System Type	5.25", coaxial, surface-mount, sealed (with port plug installed) (32 W transformer for 25/70.7/100 V or transformer bypass)
Impedance (Nominal) ¹	8 Ω
Sensitivity dB @ 2.83 V / 1 M	83 dB
Sensitivity dB @ 1 W / 1 M ²	83 dB
Frequency Response (±3 dB) ³	80 Hz - 20 kHz
Frequency Response (±10 dB) ³	62 Hz - 22 kHz
Max. Program Power ⁴	100 W
Max. Continuous Power RMS ⁵	50 W
Max. Power SPL @ 1 M RMS ⁶	100 dB
Coverage Angle (±6 dB @ 2 kHz)	91° Horizontal 120° Vertical
Coverage Angle (±6 dB @ 10 kHz)	71° Horizontal 110° Vertical
Coverage Angle (Avg. 2-10 kHz)	95° Horizontal 100° Vertical
Aiming Angle	0° - 90°
Directivity Factor (Q)	6.9 (averaged 100 Hz - 10 kHz) 5.9 (2 kHz)
Directivity Index (DI)	5.2 (averaged 100 Hz - 10 kHz) 7.7 (2 kHz)
Tap Selector	Six-position rotary switch with transformer bypass
Low-Frequency Driver	1 x 133 mm (5.25") polypropylene cone, butyl rubber surround
High-Frequency Driver	25.4 mm (1") soft dome tweeter
Low-Frequency Voice Coil	25.4 mm (1") high temperature Kapton
Crossover Frequency	3.5 kHz
Network Type: Low Pass	12 dB per octave, 2nd order
Network Type: High Pass	12 dB per octave, 2nd order
Enclosure Material	High Impact Polystyrene (HIPS)
Grille	Aluminum with powder-coat finish
Inputs	Ceramic terminal strip
Colors	Black or white (custom colors available)
Height	301.8 mm 11.88"
Width	190.5 mm 7.5"
Depth (Without Bracket)	168.4 mm 6.63"
Weight	4.3 kg 9.4 lbs
Shipping Weight	4.5 kg 10.0 lbs
Packaging	One per box
Included Accessories	Safety cable with speaker mounting bolt, wall-mount bracket, port plug, Allen wrench, and watertight strain-relief bushing
Optional Accessories	N/A
IP-Rating	IP65
Certifications	CE, RoHS, UL 1480A



Description

The SM52-EZ-WX is a cost-effective, high-efficiency surface-mount loudspeaker for distributed or 8 Ω applications. The SM52-EZ-WX is designed for extreme weather resistance is rated for high levels of protection against both water and dust. The SM52-EZ-WX incorporates a dedicated 5.25" polypropylene woofer and an offset 1" soft dome tweeter with waveguide to deliver superb intelligibility for background to foreground music and messaging (up to 100 dB max. SPL).

The SM52-EZ-WX uses a 32 W low-insertion loss transformer and a six-position tap switch with a transformer bypass position. Mounting for the SM52-EZ-WX includes a pre-mountable U-bracket for fast, secure installation and easy division of labor.

Features

- The SM52-EZ-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 5.25" (133 mm) polypropylene woofer and one 1" (25.4 mm) soft dome tweeter.
- Extreme weather resistance with IP65 ingress protection rating allows use in challenging outdoor conditions.
- 83 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

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
32 W	98 dB	32 W	98 dB	4 W	89 dB
16 W	95 dB	16 W	95 dB	2 W	86 dB
8 W	92 dB	8 W	92 dB	1 W	83 dB
4 W	89 dB	4 W	89 dB	0.5 W	80 dB
2 W	86 dB				

Applications

Designed for damp outdoor background to mid-level SPL surface-mount applications. The system includes a detachable mounting bracket designed for premounting in surface-mounting applications. The full-frequency dispersion pattern and high sensitivity make the SM52-EZ-WX surface-mount speaker ideal for music and paging in retail, amusement, restaurant, airports, hotels, schools, and casinos. For applications where addition bass is required, SoundTube's RS1001i-II-T provides bass down to 41 Hz (± 10 dB).

Patented Technologies

SoundTube Entertainment constantly develops 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. SoundTube 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 133 mm (5.25") low-frequency transducer and a 25.4 mm (1") high-frequency transducer with a frequency dividing network installed in a vented enclosure. The low-frequency voice coil diameter shall be 25.4 mm (1"). The high-frequency transducer shall be constructed of silk material with a proprietary BroadBeam Ring™ waveguide.

Performance specifications of a typical production unit shall be as follows: Usable frequency response shall extend from 62 Hz - 22 kHz (± 10 dB, half space, independently verified). Measured sensitivity (2.83 V input, 1 meter) shall be at least 83 dB. The speaker shall have a nominal impedance of 8 Ω and be available for 25, 70.7, and 100 V modes with transformer bypass. The frequency dividing network shall have a crossover frequency of 3.5 kHz with slopes of 12 dB per octave (2nd order) for both low and high pass filters. Rated power capacity shall be at least 50 W continuous (RMS) and conform to EIA-426-B testing. Maximum continuous output at 1 M shall be 100 dB.

Installation and safety attachment for the speaker shall be by stainless steel 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 cabinet dimensions shall be no more than 301.8 mm (11.88") in height by 190.5 mm (7.5") in width by 168.4 mm (6.63") in depth (without SM bracket). The unit shall include port plug, Allen wrench and watertight strain-relief bushing.

The speaker shall carry an ingress protection rating of IP65.

The system shall be the SoundTube SM52-EZ-WX for both low and high impedance applications.

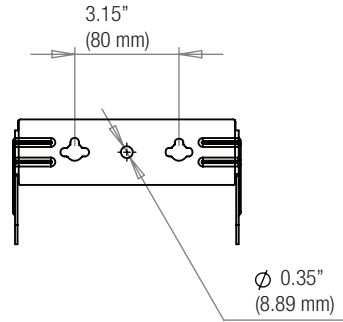
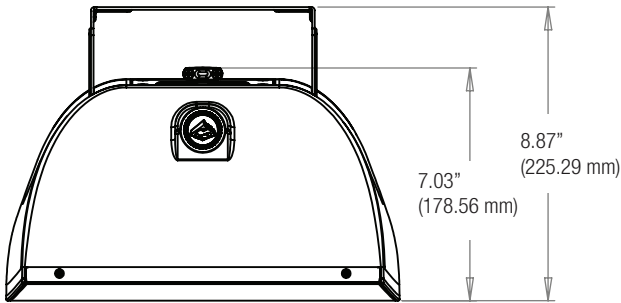
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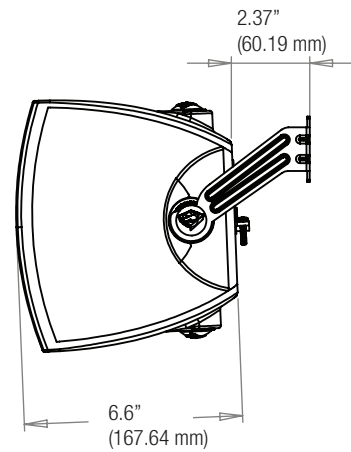
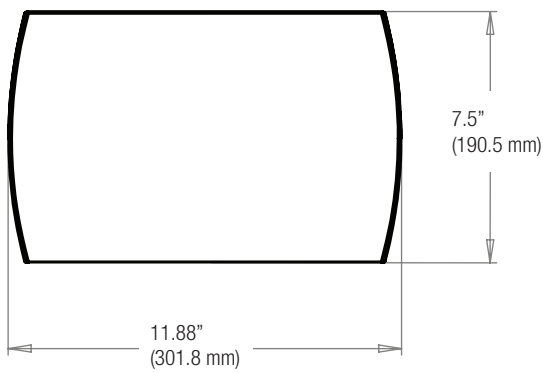
All SoundTube speakers come with a 5-year limited warranty and 3-year warranty on all electronics.

Mechanical Drawings

Top

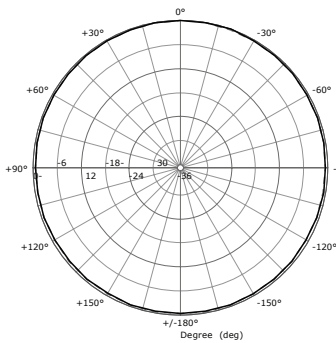


Front

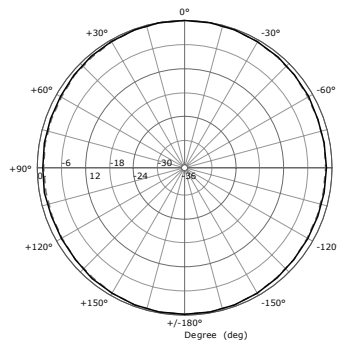


Plots

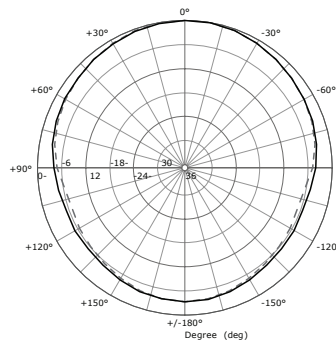
125 Hz



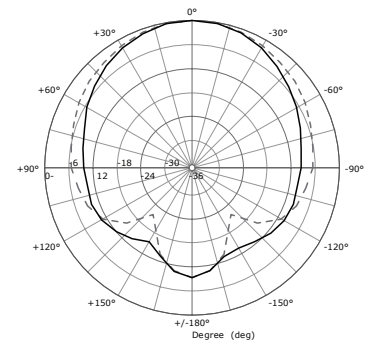
250 Hz



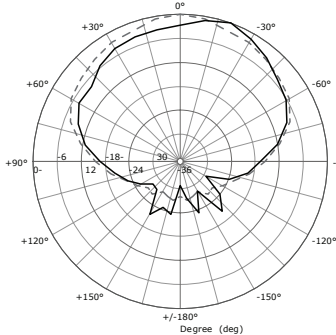
500 Hz



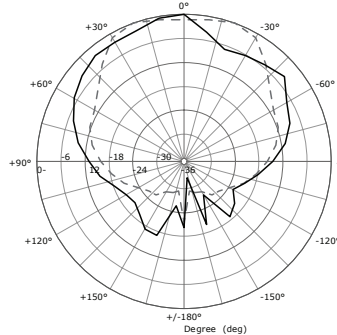
1,000 Hz



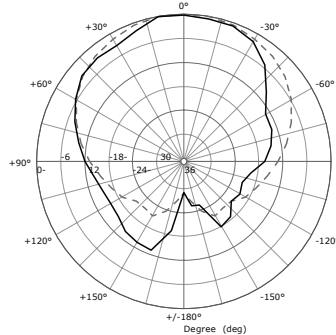
2,000 Hz



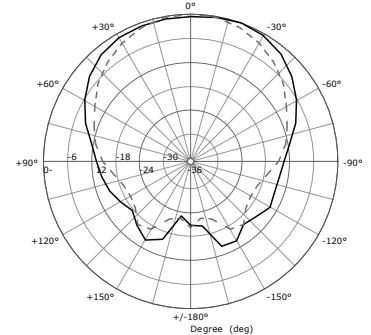
4,000 Hz



8,000 Hz

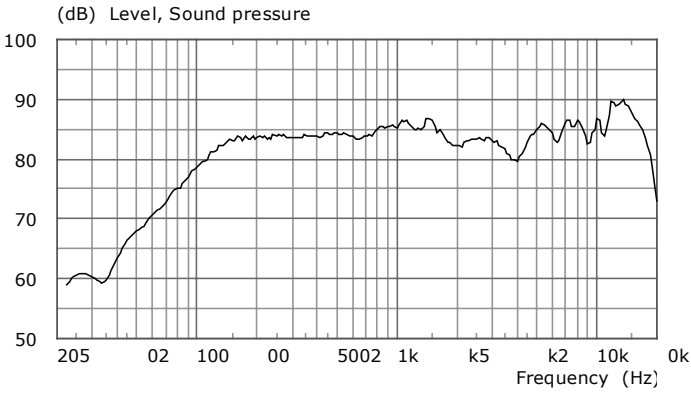


10,000 Hz

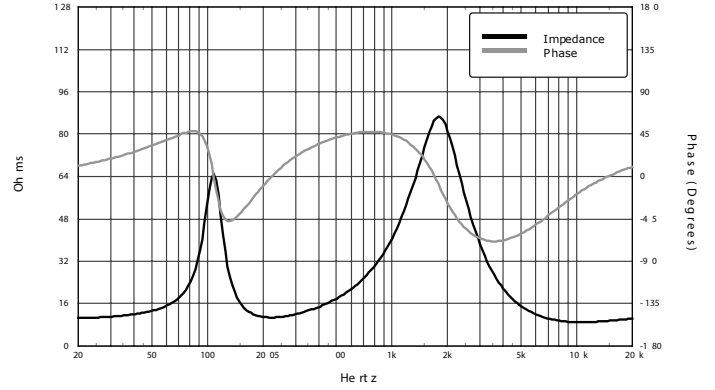


Graphs

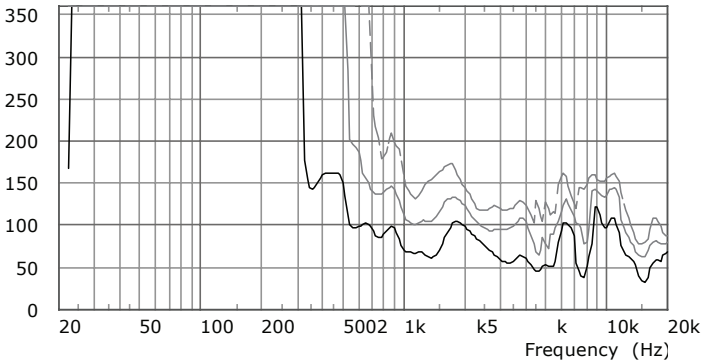
Frequency Response



Phase/Impedance Response



Vertical Beamwidth (± 6 dB)



Directivity Index (DI)

