



### Specifications: SM52-EZ

### Mounting hardware included

System Type	5.25-inch, coaxial, surface-mount, ported (32-watt transformer for 25/70.7/100-volt or transformer bypass)
Impedance (Nominal) <sup>1</sup>	8 ohm
Sensitivity dB @ 2.83V / 1 M	84.0 dB
Sensitivity dB @ 1 W/1 M <sup>2</sup>	84.0 dB
Frequency Response (-3 dB) <sup>3</sup>	65 Hz - 20 kHz
Frequency Response (-10 dB) <sup>3</sup>	55 Hz - 20 kHz
Max. Program Power <sup>4</sup>	100 W
Max. Continuous Power RMS <sup>5</sup>	50 W
Max. SPL dB @ 1 M RMS <sup>6</sup>	101.0 dB
Coverage Angle (-6 dB @ 2 kHz)	91° horizontal / 120° vertical
Coverage Angle (-6 dB @ 10 kHz)	70° horizontal / 110° vertical
Coverage Angle (Avg. 2 to 10 kHz)	95° horizontal / 100° vertical
Aiming Angle	0°-90°
Directivity Factor (Q)	6.9 (averaged 100hz-10khz); 5.9 (2kHz)
Directivity Index (DI)	5.2 (averaged 100hz-10khz); 7.7 (2kHz)
Tap Selector	Six-position rotary switch with transformer bypass
Low-Frequency Driver	1 x 133.0 mm (5.25 in) polypropylene cone, butyl rubber surround
High-Frequency Driver	25.0 mm (1.0 in ) soft dome tweeter
Low-Frequency Voice Coil	25.4 mm (1.00 in) 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 Poly Styrene (HIPS)
Grille	Aluminum with powder-coat finish
Inputs	Ceramic terminal strip
Colors	Black or white (Custom colors available)
Height	301.8 mm (11.88 in)
Width	190.5 mm (7.50 in)
Depth (Without Bracket)	168.4 mm (6.63 in)
Weight	3.35 kg (7.4 lbs)
Shipping Weight	4.26 kg (9.4 lbs)
Included Accessories	Safety cable with speaker mounting bolt, wall mount bracket, port plug, allen wrench and watertight strain-relief bushing
Optional Accessories	N/A
Packaging	One per box
Regulatory - UL	1480 (UEAY) planned
EN54-24	Planned
Regulatory - CE	Approved
RoHS	Approved
IP65 (sealed version)	Approved

### Transformer Taps

70.7 V	Output	100 V	Output	25 V	Output
32 W	99.0 dB	32 W	99.0 dB	4 W	90.0 dB
16 W	96.0 dB	16 W	96.0 dB	2 W	87.0 dB
8 W	93.0 dB	8 W	93.0 dB	1 W	84.0 dB
4 W	90.0 dB	4 W	90.0 dB	.5 W	81.0 dB
2 W	87.0 dB				

<sup>1</sup> Impedance listed per IEC 60268-5

<sup>2</sup> 1w1m sensitivity determined using nominal impedance

<sup>3</sup> Frequency response measured in half or full space as dictated by speaker mounting configuration

<sup>4</sup> Max program power is 3 dB above max continuous power

<sup>5</sup> Continuous power rating, EIA-426-B test

<sup>6</sup> Max output based on max continuous power

### Key Features

- The SM52-EZ 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 inch (133 mm) polypropylene woofer and one 1.0 inch (25 mm) soft dome tweeter.
- IP65 rated (when included port plug is installed) for high dust- and water-resistance.
- 84.0 dB average sensitivity offers high output capabilities and reduced amplification costs.
- Easy access, six-position selectable tap switch for 25-, 70.7- and 100-volt applications with transformer bypass position.
- Aluminum grille with powder-coat finish.
- Vertical and horizontal mounting offer precision aiming for indoor and outdoor applications.
- UL 1480 (UEAY) and EN54-24 planned.
- High-quality black or white paint finish.
- Included Accessories: Safety cable, wall mount bracket, port plug, allen wrench and watertight strain-relief bushing.

### Description

The SM52-EZ is a cost-effective, high-efficiency surface-mount loudspeaker for distributed or 8 ohm applications. The SM52-EZ incorporates a dedicated 5.25-inch polypropylene woofer and an offset 1-inch soft dome tweeter with waveguide to deliver superb intelligibility for background to foreground music and messaging (up to 101.0 dB max. SPL).

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



## Applications

Designed for indoor and damp outdoor (SM52-EZ-WX available for severe weather installations) background to mid-level SPL surface-mount applications. The system includes a detachable mounting bracket designed for pre-mounting in surface-mounting applications. The full frequency dispersion pattern and high sensitivity make the SM52-EZ surface-mount speaker ideal for music and paging in retail, amusement, restaurant, airports, hotels, schools and casinos. For applications where additional bass is required, SoundTube's RS1001i-II-T and SM1001p subwoofers provide bass down to 41 Hz (-10 dB).

## Patented SoundTube Technologies

SoundTube Entertainment and the MSE Audio Group are constantly developing new technologies that 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.

## Independent Data

### Acquisition and Verification

All data for SoundTube speakers is independently collected and verified by a third party. All data is collected and analysed 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 133.0 mm (5.25 in) low-frequency transducer and a 25.0 mm (1.00 in) high-frequency transducer with a frequency-dividing network installed in a vented enclosure. The low-frequency voice coil diameter shall be 25.4 mm (1.00 in). 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: Useable frequency response shall extend from 55 Hz – 22 kHz (-10 dB, half space, independently verified). Measured sensitivity (2.83-volt input, 1 meter) shall be at least 84.0 dB. The speaker shall have a nominal impedance of 8 ohms and be available for 25-, 70.7- and 100-volt 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 watts continuous (RMS) and conform to EIA-426-B testing. Maximum continuous output at 1 meter shall be 101.0 dB.

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 Poly Styrene (HIPS). The grille shall be constructed of powder-coated aluminium for lasting performance. Overall cabinet dimensions shall be no more than 301.8 mm (11.88 in) in height by 190.5 mm (7.50 in) in width by 168.4 mm (6.63 in) in depth (without SM bracket). The unit shall include port plug, allen wrench and watertight strain-relief bushing.

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

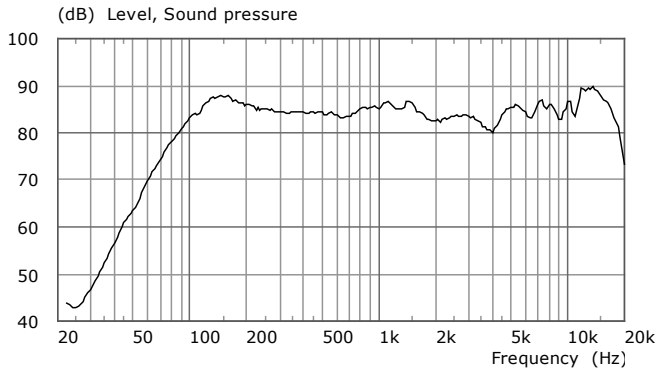
## SoundTube Entertainment

6430 Business Park Loop Road  
Park City, Utah 84098  
Phone 435.647.9555  
Fax 435.647.9666  
Toll Free 800.647.TUBE  
www.soundtube.com  
All SoundTube products come  
with a 5-year limited warranty.

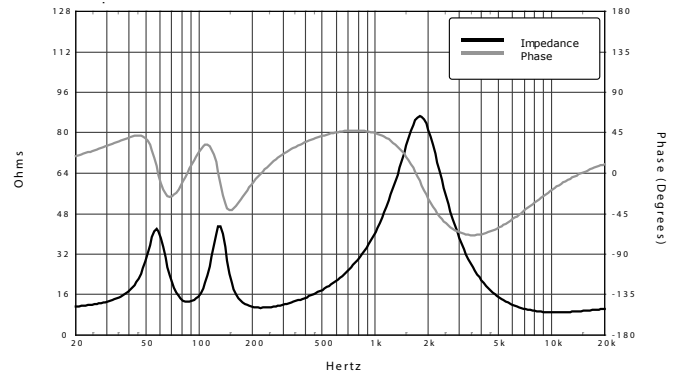


## Preliminary Graphs

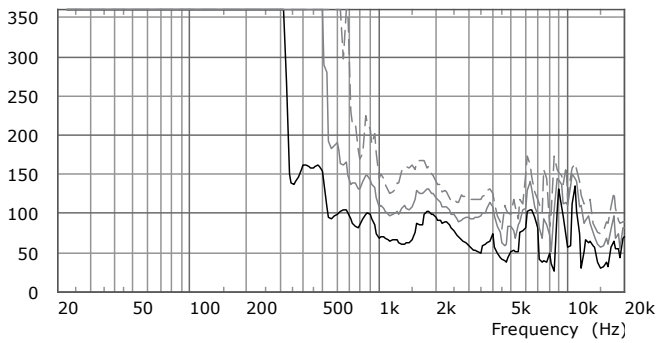
### Frequency Response



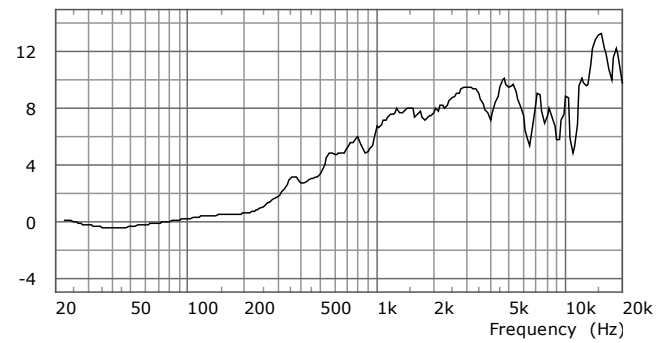
### Phase/Impedance Response



### Vertical Beamwidth (-6dB)



### Directivity Index (DI)

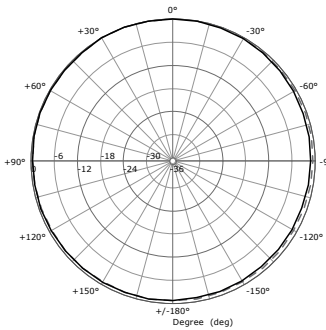




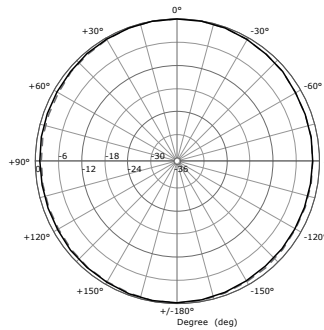
## Preliminary Polar Plots

----- Horizontal  
————— Vertical

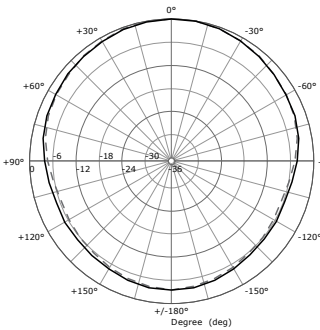
125 Hz



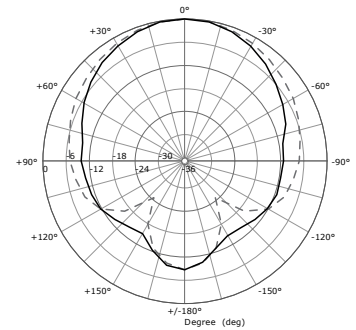
250 Hz



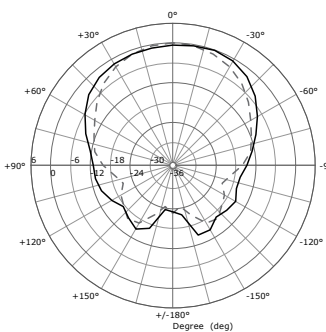
500 Hz



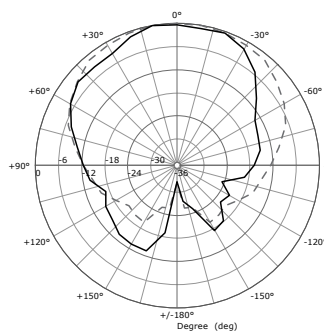
1,000 Hz



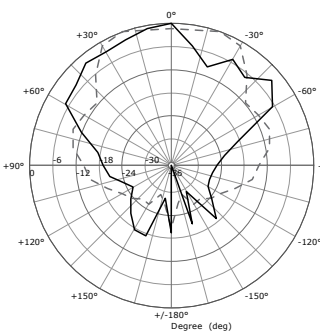
2,000 Hz



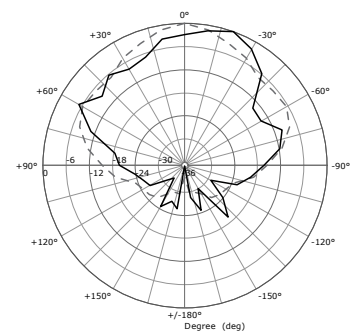
4,000 Hz



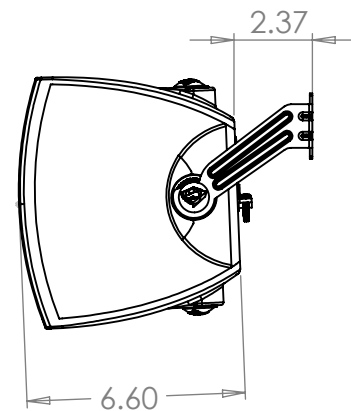
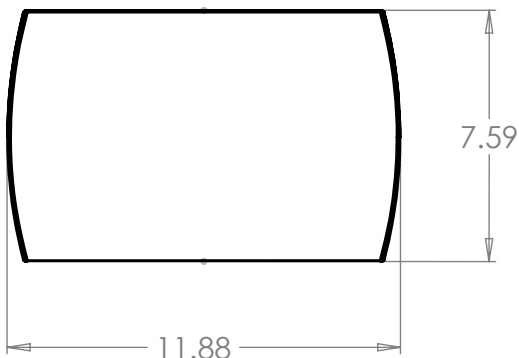
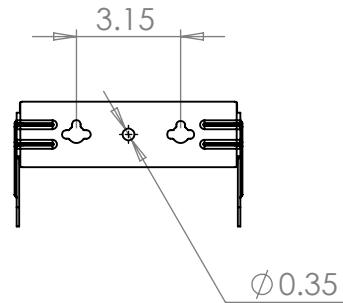
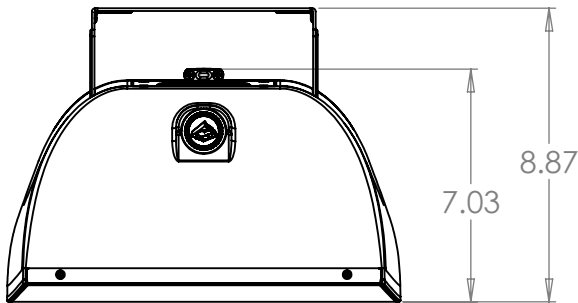
8,000 Hz



10,000 Hz



## Mechanical Drawings



SoundTube Entertainment manufactures a complete line of speakers for:  
**Open-Ceiling • In-Ceiling • Surface-Mount • Outdoor • Sound-Focusing**  
 All SoundTube products are designed and engineered in the USA.