



### Specifications: IPD-SM52-EZ

### Mounting hardware included

System Type	5.25-inch, coaxial, surface-mount, ported, Dante™ IP Controlled
Frequency Response (-3 dB) <sup>1</sup>	65 Hz - 20 kHz   Sealed: 80 Hz - 20 kHz
Frequency Response (-10 dB) <sup>1</sup>	55 Hz - 20 kHz   Sealed: 62 Hz - 20 kHz
Max. SPL dB @ 1 M RMS <sup>2</sup>	97.0 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)
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	RJ45 Ethernet Port
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	UL60065 planned
Regulatory - CE	Approved
RoHS	Approved
IP65 (sealed version)	Approved

<sup>1</sup> Frequency response measured in half or full space as dictated by speaker mounting configuration

<sup>2</sup> Max output based on max continuous power

### Key Features

- STNet IP-addressable, self powered (PoE) speaker.
- Dante™ I/O for interconnectivity with Dante-enable audio systems.
- BroadBeam Ring™ delivers a consistent dispersion pattern 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.
- Fast connection of power, audio and control functions via one CAT5 or CAT6 cable.
- 40 watts PoE provided by SoundTube STNet Switch; also works with Standar PoE plus and PoE switches.
- Provides report-back on any problems via SoundTube software.
- Aluminum grille with powder-coat finish.
- Vertical and horizontal mounting offer precision aiming for indoor and outdoor applications.
- UL 60065 listed.
- 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 IPD-SM52-EZ is a 5.25-inch, two-way surface-mount speakers for IP-addressable audio networks on the Dante platform. It incorporates a 5.25-inch polypropylene woofer and 1-inch soft dome tweeter in an injection-molded enclosure. The speaker delivers a frequency response of 55 Hz – 22 kHz (-10 dB) with consistent, broad high frequency dispersion supplied through SoundTube's proprietary BroadBeam Ring® technology.

Power, audio and control are delivered to the speaker via a CAT5 or CAT6 cable; connection on the other end is made to the STNet-Switch, which provides 40 watts PoE (Power over Ethernet) to each speaker. Configuration of the speaker is done via software. Should any problems occur with the speaker during operation, it will be reported immediately via SoundTube monitoring software.



## Applications

Designed for indoor and 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 IPD-SM52-EZ surface-mount speaker ideal for music and paging in retail, amusement, restaurant, airports, hotels, schools and casinos.

## 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.

## Technical Data and Specification Tools

### Technical Data

SoundTube Entertainment strives to provide complete and effective technical information and data to dealers, engineers and designers. All data are available from SoundTube Entertainment or at [www.soundtube.com](http://www.soundtube.com).

Technical data and downloads include:

EASE™ data – 3-D polar plots.

EASE™ Address – 2-D modeling for distributed systems

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 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). The frequency-dividing network shall have a crossover frequency of 3.5 kHz. The unit shall accept 40 watts PoE in addition to PoE plus and standard PoE, as well as the audio signal from a provided network switch, and shall be configurable via software. Maximum continuous output at 1 meter with a 40 watt input shall be 97dB.

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 RJ45 ethernet port, accepting standard RJ45 ethernet cable. 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 IPD-SM52-EZ for audio over IP Dante™ applications.

## SoundTube Entertainment

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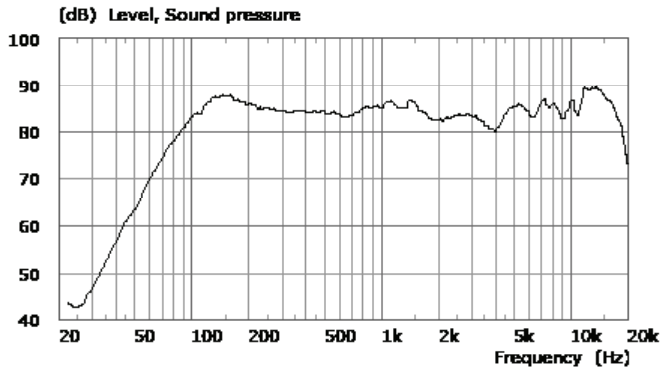
All SoundTube products come

with a 5-year limited warranty.

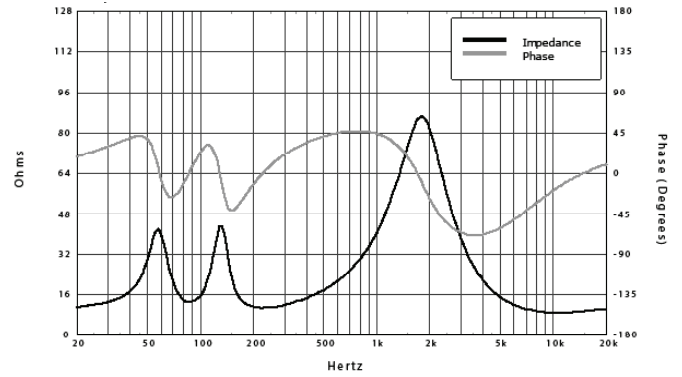


### Preliminary Graphs

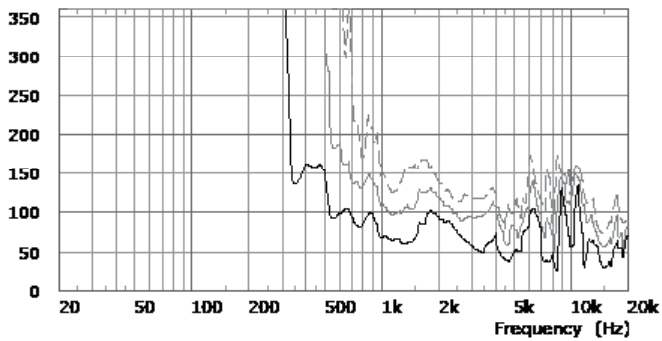
#### Frequency Response



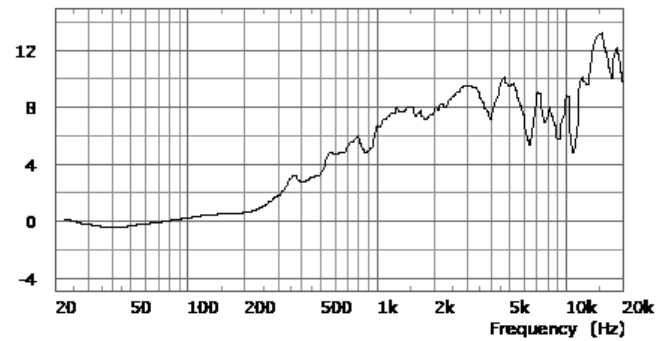
#### Phase/Impedance Response



#### Vertical Beamwidth (-6dB)



#### Directivity Index (DI)



# IPD-SM52-EZ

Surface-Mount Speaker Dante™ IP  
Speaker  
Technical Information for System Engineers

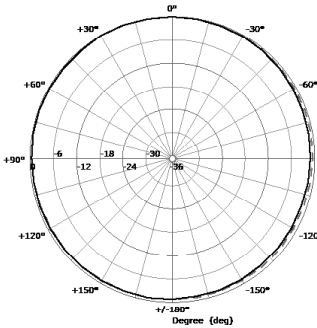


**SOUNDTUBE**  
ENTERTAINMENT

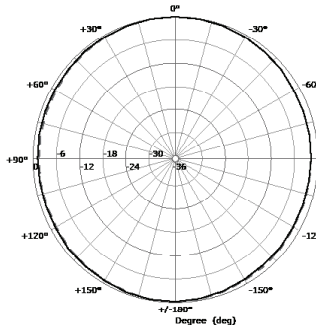
## Preliminary Polar Plots

----- Horizontal  
————— Vertical

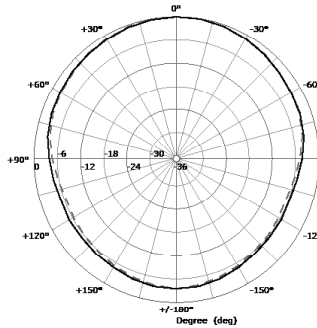
125 Hz



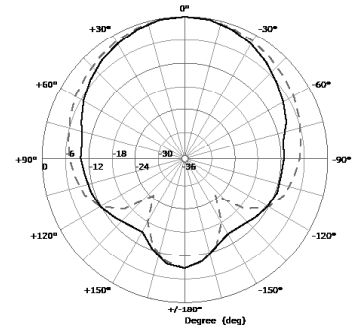
250 Hz



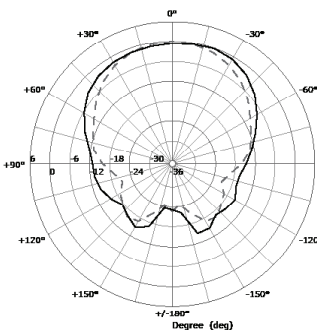
500 Hz



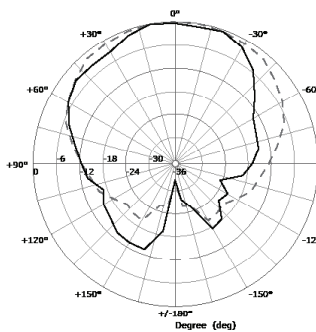
1,000 Hz



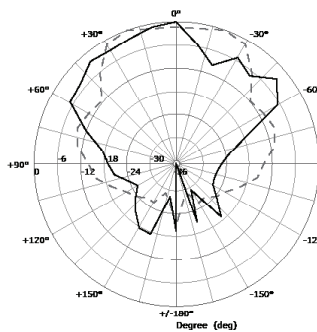
2,000 Hz



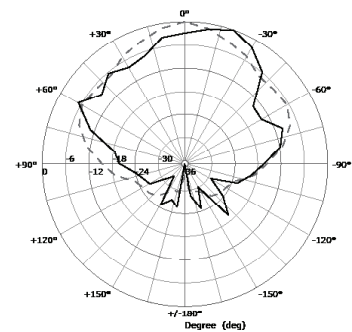
4,000 Hz



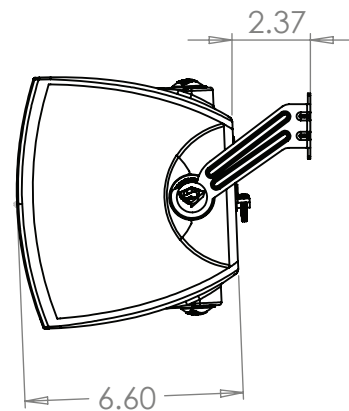
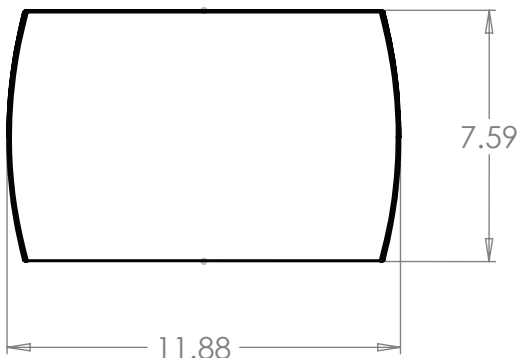
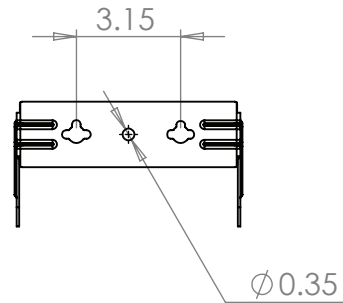
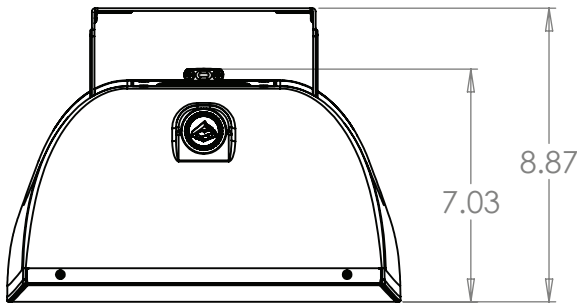
8,000 Hz



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.