



### Specifications: IW500i

System Type	5.25" Coax, in wall, sealed (33 Watt transformer for 25/70.7/100 Volt or 8 Ohm direct)
Impedance (nominal) <sup>1</sup>	8 ohm
Sensitivity dB @ 2.83V/1M	88.0 dB
Sensitivity dB @ 1W/1M <sup>2</sup>	88.0 dB
Frequency Response (-3 dB) <sup>3</sup>	72 Hz - 22 kHz
Frequency Response (-10 dB) <sup>3</sup>	55 Hz - 22 kHz
Max. Program Power <sup>4</sup>	150 w
Max. Continuous Power RMS <sup>5</sup>	75 w
Max. Power SPL @ 1 M <sup>6</sup>	107.0 dB
Coverage Angle (-6 dB @ 2 kHz)	80° horizontal / 120° vertical
Coverage Angle (-6 dB @ 10 kHz)	120° horizontal / 120° vertical
Coverage Angle (Avg. 2 - 10 kHz)	115° horizontal / 115° vertical
Directivity Factor (Q)	4.2 (Averaged 100 HZ - 10 kHz) / 7.8 (2 kHz)
Directivity Index (DI) dB	5.6 dB (Averaged 100 HZ - 10 kHz) / 8.9 dB (2 kHz)
Tap Selector	6 Position rotary switch with 8 ohm direct
Transducer - Low Frequency Driver	1 x 133 mm (5.25 in) Polypropylene cone, butyl rubber surround
Transducer - High Frequency Driver	25mm (1in) Convex aluminum tweeter with waveguide
Low Frequency Voice Coil	25.4 mm / 1.00 in
Crossover Frequency	3.0 kHz
Network Type: Low Pass	12 dB per octave, 2nd order
Network Type: High Pass	12 dB per octave, 2nd order
Enclosure Material	Injection molded ABS, glass fiber reinforced
Motor-board	Cast aluminum
Grille	Powder coated steel
Inputs	Spring terminal
Colors	White (only) Paintable
Height	11.84 in / 300.7 mm
Width	8.64 in / 219.5 mm
Depth	3.90 in / 99.1 mm
Weight	7.9 lb / 3.6 kg
Shipping Weight	10.0 lb / 4.5 kg
Included Accessories	Paint mask, hole template
Optional Accersories	Preconstruction bracket (AC-IW5-PCB)
Packaging	1 per box
Regulatory - CE	Approved

<sup>1</sup> Impedance listed per IEC 60268-5 with a minimum less than 80% the nominal impedance

<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

<sup>7</sup> Max useable SPL based on testing by NWA Labs

#### Transformer Taps

70.7 V	Output	100 V	Output	25 V	Output
33 w	103.0 dB	33 w	103.0 dB	5 w	95.0 dB
17 w	100.5 dB	17 w	100.5 dB	3 w	93.0 dB
9 w	97.5 dB	9 w	97.5 dB	1.3 w	89.0 dB
6 w	96.0 dB	6 w	96.0 dB	0.63 w	86.0 dB
3 w	93.0 dB				

### Key Features

- BroadBeam® waveguide technology delivers a consistent dispersion pattern up to 10 kHz for maximum coverage area per speaker (EASE™ documented).
- One 133 mm (5.25 in) polypropylene woofer and one 25 mm (1 in) convex aluminum tweeter with FerroFluid cooling mounted to an M5 Motorboard.
- 107 dB Max. SPL offers high output capabilities and reduced amplification costs.
- Rapid installation blind-mount system for quick and secure installation.
- Easy-access 6-position tap switch for 25, 70.7 & 100 Volt applications with voice coil/8 Ohm direct simplifies ordering & inventory tracking.
- Included accessories: Mounting hardware, Paint mask, Hole template.
- Optional accessory: pre-construction bracket (AC-IW5-PCB).
- High-quality white paint finish. Custom paint colors optional.

### Description

The IW500i is a 5.25" coax in-wall loud-speaker that delivers effective low-end response (55 Hz, -10 dB) and optimal off-axis performance (up to 10 kHz, EASE™ documented). SoundTube's proprietary BroadBeam® waveguide tweeter system delivers consistent high-performance audio across the operating bandwidth. The IW500i speaker design incorporates a low-profile grille and 6-position tap switch with an 8 Ohm bypass. Mounting hardware is included and features a fast and secure optimally engineered constant-tension mounting system. A pre-construction bracket is offered as an optional accessory.

### Applications

Designed for in-wall applications, the IW500i is ideal for music and messaging in boardroom, church, corporate A/V, retail, hotel, hospital and education applications. For additional bass response down to 41 Hz (-10 dB), the CM1001d subwoofer may be used.

### Patented SoundTube Technologies

SoundTube Entertainment and the MSE Audio Group constantly develop new technologies which enhance audio product performance. SoundTube Entertainment inno-



vations are protected by multiple U.S. & 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) and includes EASE™ Data – 3-D polar plots and SoundTubeSPEC™ – Proprietary SoundTube speaker placement software.

#### Independent Data Acquisition & Verification

All data for SoundTube speakers is independently collected from and verified by NWAALabs ([www.nwaalabs.com](http://www.nwaalabs.com)) using their proprietary MACH testing system. 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 mm (5.25 in) low-frequency transducer and a 25 mm (1 in) high-frequency transducer with a frequency-dividing network installed to an infinite baffle. The low-frequency transducer shall have a polypropylene cone with a butyl rubber surround. The high-frequency transducer shall be constructed of aluminum with a proprietary BroadBeam® waveguide. The low-frequency voice coil diameter shall be 25.4 mm (1 in).

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, no external equalization). Measured sensitivity (2.83 Volt, 1 meter) shall be at least 88 dB. The speaker shall have a nominal impedance of 8 Ohms and shall be available for 25/70.7/100 Volt modes with voice coil/8 Ohm direct. The frequency-dividing network shall have a crossover frequency of 3 kHz with slopes of 12 dB per octave (second order) for both low and high-pass filters. Rated power capacity shall be at least 75 Watts continuous power (RMS) and conform to EIA-426-B testing. Maximum continuous output at 1 meter shall be 107 dB.

Installation for the IW500i shall be by 4-screw, optimally engineered constant-tension mounting assembly. The external wiring input connector shall be a spring

terminal for 8 Ohm or distributed systems and shall accept from 10 – 22 gauge wire.

The grille shall be constructed of powder-coated steel for lasting performance and attach via pressure fit directly to the ABS baffle.

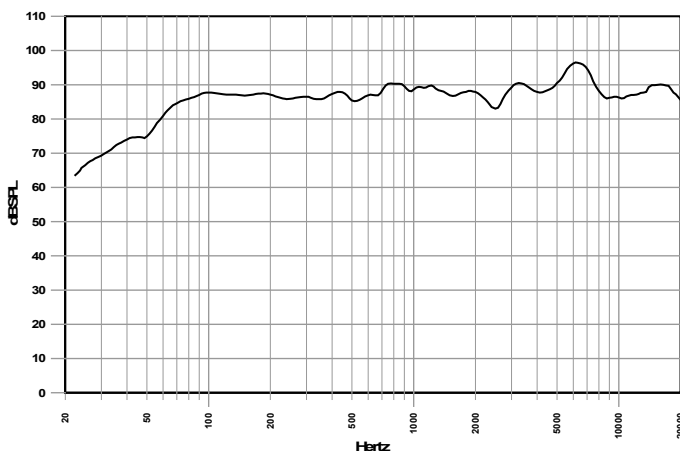
The system shall be the SoundTube IW500i with mounting hardware for both low & high impedance applications.

### SoundTube Entertainment

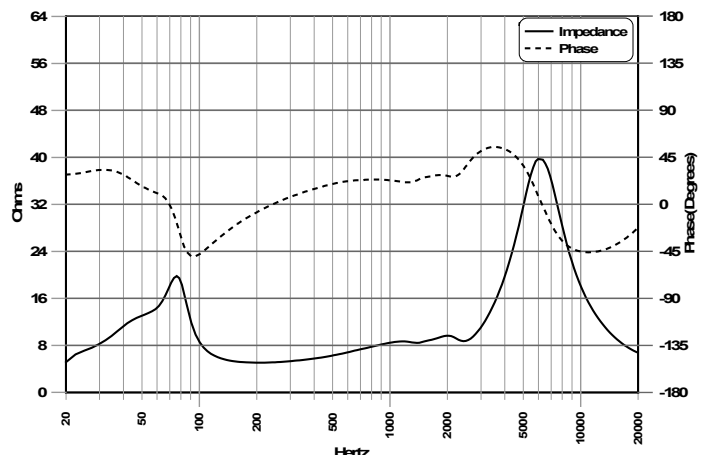
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### Graphs and Plots

#### Frequency Response

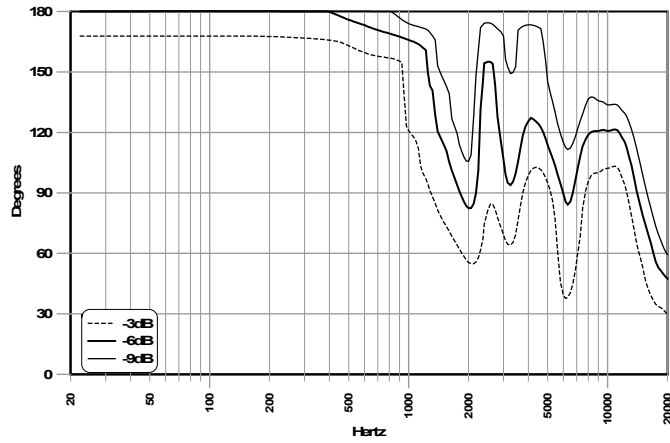


#### Phase/Impedance Response

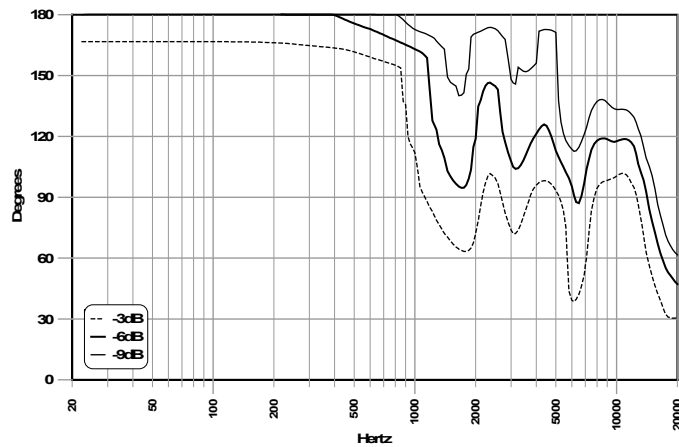




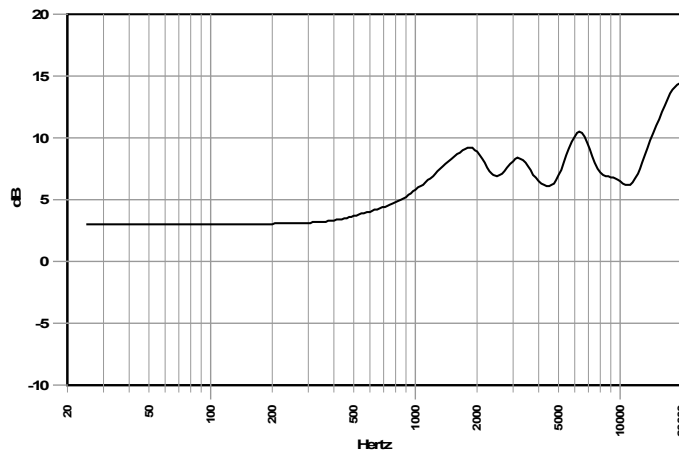
### Horizontal Beamwidth



### Vertical Beamwidth

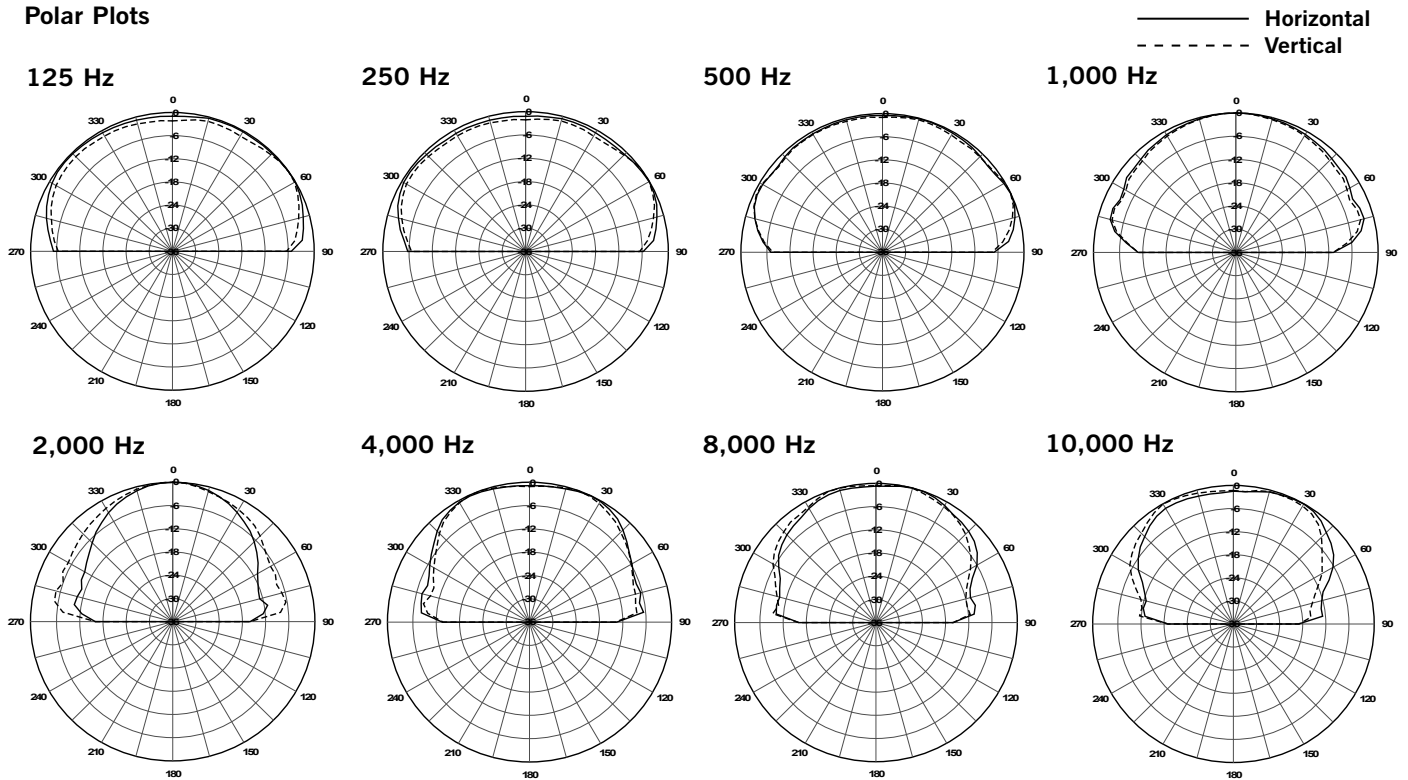


### Directivity Index (DI)



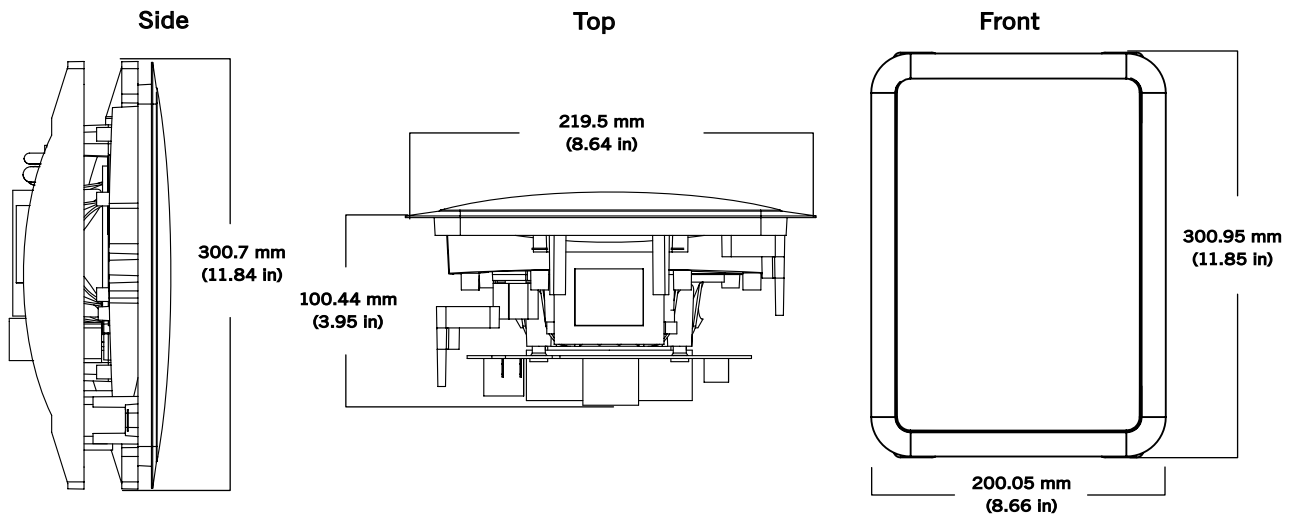


### Polar Plots



Technical data, EASE™ plots, SoundTubeSPEC™ software & product downloads available at [www.soundtube.com](http://www.soundtube.com)

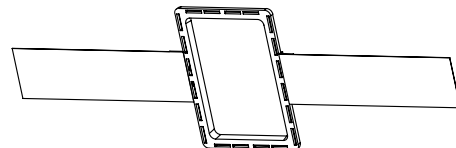
### Mechanical Drawings



### Included Accessories

**N/A**

### Optional Accessories - Pre-Construction Bracket



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.

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