



### Specifications: RS500i

### Mounting hardware included

System Type	5.25" Coax, open-ceiling, ported (33 Watt transformer available for 25/70.7/100 Volt or voice coil/8 Ohm direct)
Frequency Response (-3 dB) <sup>1</sup>	75 Hz - 22 kHz
Low Frequency (-10 dB) <sup>1</sup>	55 Hz - 22 kHz
Max. Program Power	150 Watts
Max. Continuous Power RMS <sup>2</sup>	75 Watts
Max. UL Power Rating <sup>3</sup>	50 Watts
Max. SPL dB @ 1 M	107.5 dB
Sensitivity dB @ 1W/1M <sup>4</sup>	88.5 dB
Impedance (nominal)	8 Ohm (nominal value)
Coverage Angle (-6 dB @ 2 kHz)	100°
Coverage Angle (-6 dB @ 10 kHz)	105°
Directivity Factor (Q)	3.40 (Averaged 100 Hz - 10 kHz); 6.64 @ 2 kHz
Directivity Index (DI)	4.62 dB (Averaged 100 Hz - 10 kHz); 8.22 dB @ 2 kHz
Tap Selector	6-Position rotary switch with voice coil/8 Ohm direct

### Transformer Taps

70.7 V	Output	100 V	Output	25 V	Output
33 W	103.5 dB	33 W	103.5 dB	5 W	95.5 dB
17 W	101.0 dB	17 W	101.0 dB	2.5 W	92.5 dB
9 W	98.0 dB	9 W	98.0 dB	1.3 W	89.5 dB
6 W	96.5 dB	6 W	96.5 dB	0.63 W	86.5 dB
3 W	93.5 dB				

### Transducer

Low Frequency Driver	1 x 133 mm (5.25 in) Polypropylene cone, butyl rubber surround
High Frequency Driver	25 mm (1.0 in) Convex aluminum tweeter with waveguide
Low Frequency Voice Coil	25 mm (1.0 in)
Crossover Frequency	3 kHz

### Network Type

Low Pass	12 dB per octave, 2nd order
High Pass	12 dB per octave, 2nd order
Enclosure Material	Injection molded ABS, glass fiber reinforced
Motor Board	Cast aluminum
Grille	Iridite-plated steel with powder-coat finish
Inputs	4 Pin, 5 mm Euroblock for individual or daisy chain connection
Colors	Black or white
Height	298.3 mm / 11.74 in
Diameter	245.9 mm / 9.68 in
Weight	4.3 kG / 9.5 lbs
Shipping Weight	10 kG / 22.0 lbs (2 per box)

### Accessories

Included	Hanging hardware, Euroblock connector & terminal weather boot
Optional	N/A
Packaging	2 Per box

<sup>1</sup> Frequency response is measured in half & full space and includes a low-frequency peak > +3 dB.

<sup>2</sup> Continuous power rating, EIA-426-B test.

<sup>3</sup> UL testing specifies band-limited pink noise over the indicated frequency spectrum.

<sup>4</sup> 2.83 Volts at a distance of 1 meter.

SoundTube continually develops new product innovations and improvements. Updates to existing products without prior notice are an example of SoundTube's drive for constant improvement.

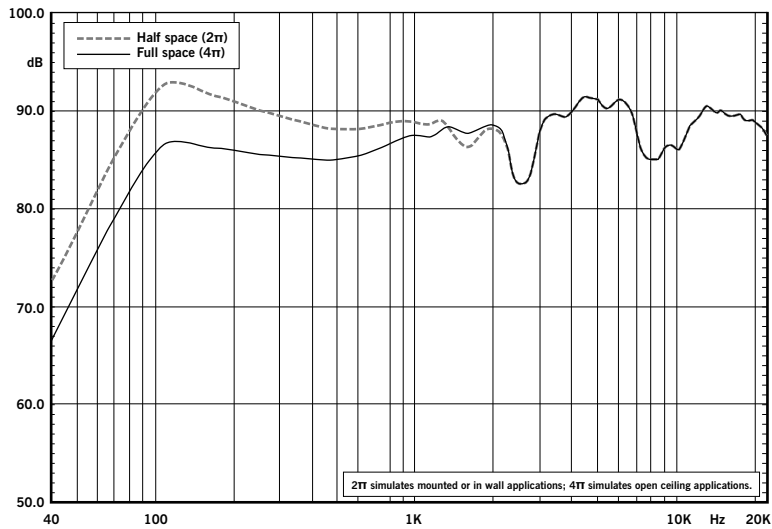
### Key Features

- BroadBeam<sup>®</sup> waveguide technology delivers a consistent dispersion pattern up to 10 kHz for maximum coverage area per speaker (EASE<sup>™</sup> documented).
- One 133 mm (5.25 in) polypropylene woofer and one 25 mm (1.0 in) convex aluminum tweeter with FerroFluid<sup>™</sup> cooling mounted to a proprietary cast-aluminum M5<sup>™</sup> baffle and heat sink.
- Weatherized components for indoor & outdoor applications.
- Includes hanging hardware with aircraft cables and integrated SpeedClamp<sup>™</sup> self-locking wire grip for fast, easy & secure installation. Also includes Euro-block connector & terminal weather boot.
- Patented ZeroReflection<sup>™</sup> enclosure technology for optimal sound reproduction & cabinet rigidity.
- Easy access 6-position selectable tap switch for 25, 70.7 and 100 Volt applications with voice coil/8 Ohm direct simplifies ordering & inventory tracking.
- Iridite-plated steel grille with protective powder-coated finish for lasting durability.
- 88.5 dB average sensitivity offers high-output capabilities & reduced amplification costs.
- UL 1480 rev. 5, CE (EMC Directive 89/366/EEC, EN55020, EN55013 & IEC529 approval pending. MilSpec 810 approved.
- High-quality black or white paint finish. Custom paint colors optional.

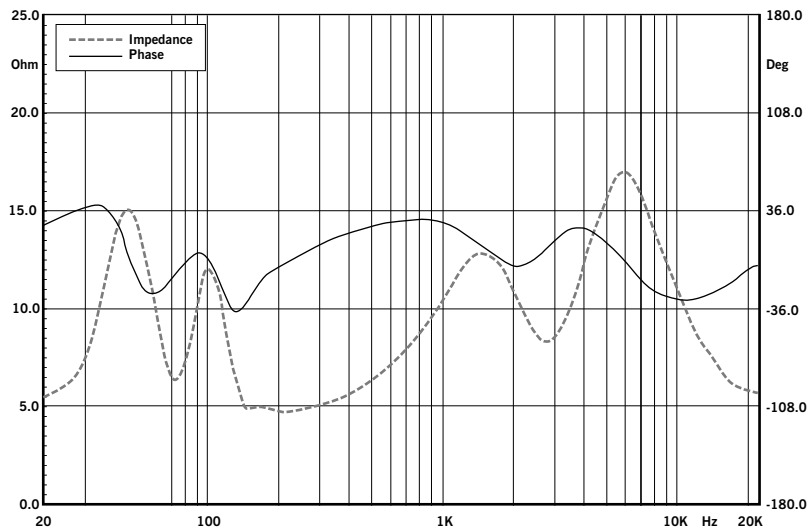
### Description

The RS500i is a 5.25" 2-way ported speaker with an open-ceiling enclosure design that delivers effective low-end response (55 Hz) and optimal off-axis performance (105° dispersion up to 10 kHz, EASE<sup>™</sup> documented). SoundTube's proprietary BroadBeam<sup>®</sup> waveguide tweeter system delivers consistent high-performance audio coverage across the operating bandwidth. The RS500i speaker design incorporates a low-profile grille, proprietary M5 motor-board and a 6-position tap switch with voice coil/8 Ohm direct. Hanging hardware is included & features SpeedClamp<sup>™</sup> self-locking wire grip for fast, easy & secure installation.

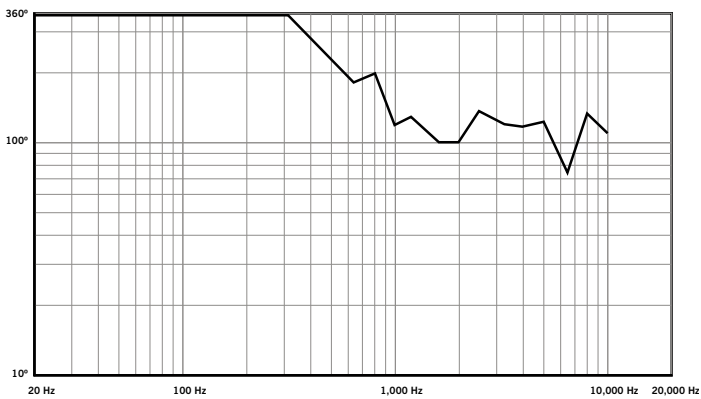
**Frequency Response**



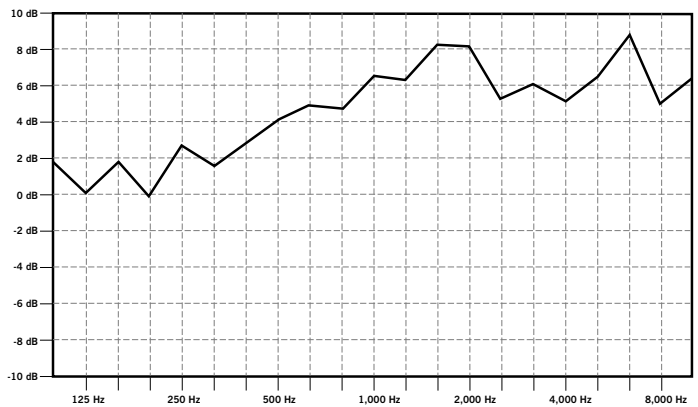
**Phase/Impedance Reponse**



**Beamwidth (-6 dB)**



**Directivity Index (DI)**





### Applications

Designed for indoor & outdoor background to mid-level SPL applications, the RS500i includes a single-point mounting system for rapid open-ceiling installations. The 100° broad dispersion pattern (55 Hz – 10 kHz) and high sensitivity (88.5 dB 1W/1M) make the RS500i speaker ideal for music & paging applications in retail, grocery stores, restaurants, hotels, casinos, museums, trade shows & conference rooms. For applications where additional bass is required, SoundTube's RS801i 8" subwoofer provides bass down to 40 Hz.

### BroadBeam® Wide Dispersion Technology

More than 3 years in development, SoundTube's proprietary BroadBeam® technology incorporates a high-frequency waveguide mated to a 1" convex aluminum tweeter. The BroadBeam® high-frequency waveguide delivers a consistent 100° dispersion pattern across the upper registers of the frequency spectrum (up to 10 kHz, EASE™ documented). The result is an audio system with fewer speakers, reduced power

needs, shorter installation time and cost savings on shipping & labor.

### Patented SoundTube Technologies

SoundTube Entertainment is constantly developing new technologies that enhance audio product performance. SoundTube Entertainment innovations are protected by multiple U.S. & international patents, which explicitly cover SoundTube dispersion, enclosure & dome technologies. SoundTube Entertainment 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).

#### Data Acquisition

All performance data acquired at SoundTube's Technical Measurement Center (TMC) are analyzed using a vari-

ety of standard measurement techniques, including Measured Length Sequence (MLS) and Time Delay Spectrometry (TDS). Performance, development and data acquisition tools include: Gold Line TEF 20, CLIO, LMS, LEAP, and proprietary modeling software. EASE™ data are acquired through an automated TEF20/Outline/EASE™ interface.

**EASE™ Data** – 3-D polar plots.

**SoundTubeSPEC™** – Proprietary SoundTube speaker placement software.

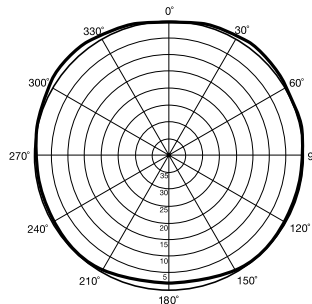
### Architectural Specifications

The loudspeaker shall consist of a 133 mm (5.25 in) low-frequency transducer and a 25 mm (1.0 in) high-frequency transducer with a crossover installed in the ported enclosure. The low-frequency voice coil diameter shall be 25 mm (1.0 in).

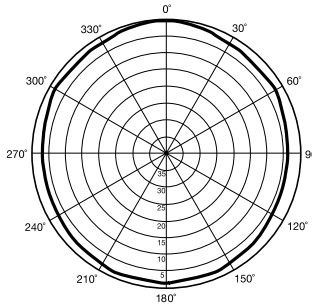
Performance specifications of a typical production unit shall be as follows: Useable frequency response shall extend from 55 Hz – 22 kHz (-10 dB, half space, no external equalization). Measured sensitivity (2.83 Volt input, 1 meter) shall be at least 88.5 dB. The speaker shall have a nominal impedance of 8 Ohms and be available for 25, 70.7 & 100 Volt

### Polar Plots

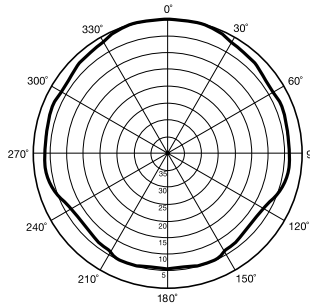
125 Hz



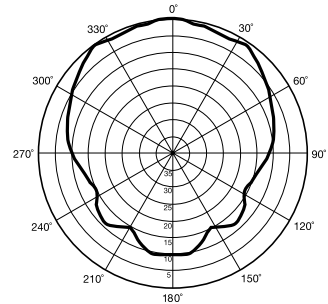
250 Hz



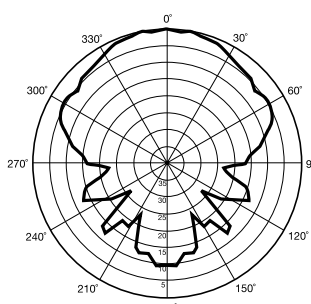
500 Hz



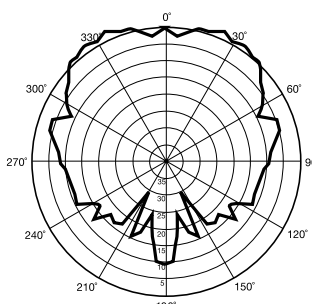
1,000 Hz



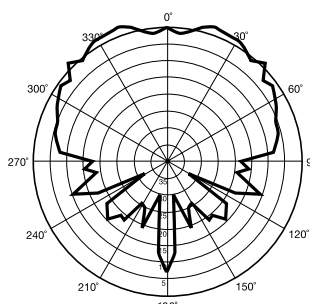
2,000 Hz



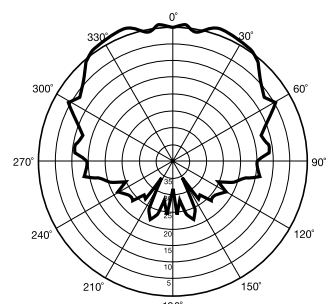
4,000 Hz



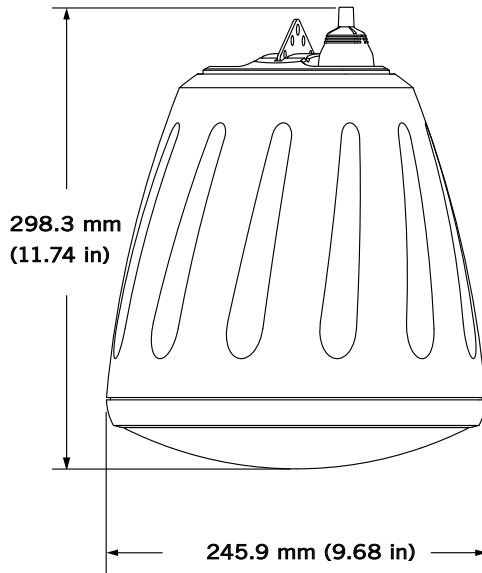
8,000 Hz



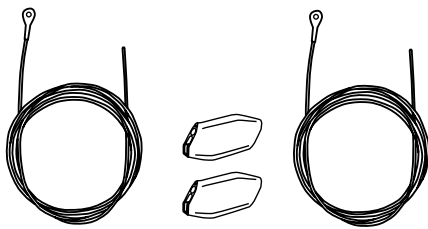
10,000 Hz



## Mechanical Drawings



## Included Accessories



### Hanging Hardware: Main & Safety Cables w/ SpeedClamp™

SoundTube's hanging cable kit incorporates hanging & safety cables & SpeedClamp™ self-locking cable clamps for an integrated and easy-to-install system. Hanging & safety cables are infinitely adjustable to 2.74 M (9.0 ft).

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 (2nd order) for both low & 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 107.5 dB.

The low-frequency transducer shall have a polypropylene cone with butyl rubber surround. The high-frequency transducer shall be constructed of aluminum with a proprietary BroadBeam® waveguide.

Installation for the RS500i shall be by aircraft cable affixed to the speaker chassis via a carabiner. For seismic & safety redundancy, a secondary aircraft cable shall be included and shall attach to the speaker chassis via #10 bolt. The external wiring input connector shall be a 4-pin, 5 mm Euroblock for 8 Ohm or distributed systems and shall accept from 10 – 22 gauge wire. The system shall be for indoor & outdoor applications and shall have a weather-resistant terminal boot covering all wire connectors.

The enclosure shall be constructed of injection-molded glass-reinforced ABS. The grille shall be constructed of iridite-plated, powder-coated steel for lasting performance in the elements. Overall cabinet dimensions shall be no more than 298.3 mm (11.74 in) in height by 245.9 mm (9.68 in) in diameter. The RS500i shall include hanging hardware, Euroblock connector and weather-resistant terminal boot.

The system shall be the SoundTube RS500i with hanging hardware for both low & high impedance applications.

### SoundTube Entertainment

6430 North Business Park Loop  
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.**