



RS500i PRODUCT SPECIFICATIONS

System Type	5.25", coaxial, open-ceiling, ported (33 W transformer for 25/70.7/100 V or transformer bypass applications)
Impedance (Nominal)	8 Ω
Sensitivity dB @ 2.83 V / 1 M	86.5 dB
Sensitivity dB @ 1 W / 1 M ⁴	86.5 dB
Frequency Response (± 3 dB) ¹	87 Hz - 22 kHz
Frequency Response (± 10 dB) ¹	61 Hz - 22 kHz
Max. Program Power	150 W
Max. Continuous Power RMS ²	75 W
Max. UL Power Rating ³	50 W
Max. SPL dB @ 1 M	105.5 dB
Coverage Angle (± 6 dB @ 2 kHz)	75°
Coverage Angle (± 6 dB @ 10 kHz)	105°
Coverage Angle (Avg. 2-10 kHz)	95°
Directivity Factor (Q)	12.3 (averaged 100 Hz - 10 kHz) 4.8 @ 2 kHz
Directivity Index (DI)	10.9 dB (averaged 100 Hz - 10 kHz) 5.4 dB @ 2 kHz
Tap Selector	Six-position rotary switch with transformer bypass
Transducer	1 x 133 mm (5.25") polypropylene cone, butyl rubber surround
Low-Frequency Driver	133 mm (5.25") convex titanium tweeter with waveguide
High-Frequency Driver	25.4 mm (1")
Low-Frequency Voice Coil	25.4 mm (1")
Crossover Frequency	3 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	Iridite-plated steel with powder-coat finish
Inputs	4-pin, 5.08 mm Euroblock for individual or daisy chain connection
Colors	Black or white
Height	298.2 mm 11.74"
Diameter	245.9 mm 9.68"
Weight	4.3 kg 9.5 lbs
Packaging	Two per box
Included Accessories	Hanging hardware, Euroblock connector, and terminal weather boot
Optional Accessories	Surface-mount bracket (AC-RS-SM5) and hanging kits
Certifications	CE, RoHS, UL 1480A, UL 2239, MIL Spec

Description

The RS500i is a 5.25", two-way ported speaker with an open-ceiling enclosure design that delivers effective low-end response (61 Hz) and 105° off-axis performance (2 to 10 kHz, independently verified). SoundTube's proprietary BroadBeam® waveguide tweeter system delivers consistent high-performance audio across the operating bandwidth. The RS500i speaker design incorporates a low-profile grille, proprietary motor-board, and a six-position tap switch with transformer bypass position. Hanging hardware is included and features a SpeedClamp™ self-locking wire grip for fast, easy, and secure installation.

Features

- Patented BroadBeam waveguide technology delivers a consistent dispersion pattern up to 10 kHz for maximum coverage area per speaker (EASE™ documented).
- One 5.25" (133 mm) polypropylene woofer and one 1" (25.4 mm) convex titanium tweeter with FerroFluid cooling mounted to a proprietary cast aluminum baffle and heat sink.
- Weatherized components for indoor and outdoor applications.
- Includes UL listed hanging hardware with cables and integrated SpeedClamp™ self-locking wire grip for fast, easy, and secure installation. Also includes Euroblock connector and terminal weather boot.
- Patented ZeroReflection™ enclosure technology for optimal sound reproduction and cabinet rigidity.
- Easy access six-position selectable tap switch for 25, 70.7, and 100 V applications with a transformer bypass position simplifies ordering and inventory tracking.
- Plated steel grille with protective powder-coated finish for lasting durability.
- Average sensitivity for 86.5 dB offers high-output capabilities and reduced amplification costs.
- UL 1480A, CE, and MIL Spec approved.
- High-quality black or white paint finish. Custom paint colors optional.
- Optional accessory: AC-RS-SM5 bracket for surface-mount applications.

¹ Frequency response measured in half and full space and includes a low-frequency peak $> \pm 3$ dB.

² Continuous power rating, EIA-426-B test

³ UL testing specifies band-limited pink noise over and indicated frequency spectrum.

⁴ 2.84 V at a distance of 1 meter.

Transformer Taps

70.7 V	Output	100 V	Output	25 V	Output
33 W	101.5 dB	33 W	101.5 dB	5 W	93.4 dB
17 W	99 dB	17 W	99 dB	2.5 W	90.5 dB
9 W	96 dB	9 W	96 dB	1.3 W	87.5 dB
6 W	94.5 dB	6 W	94.5 dB	0.63 W	84.5 dB
3 W	91.5 dB				

Applications

Designed for indoor and outdoor background to mid-level SPL applications, the RS500i includes a single-point mounting system for rapid open-ceiling installations. The broad dispersion pattern (105°) and high sensitivity (86.5 dB 1 W / 1 M) make the RS500i speaker ideal for music and paging applications in retail, restaurants, grocery stores, hotels, casinos, conference rooms, museums, and trade shows. For applications where additional bass is required, SoundTube's RS1001i-II-T 10" subwoofer may be used with bass down to 38 Hz.

Patented Technologies

SoundTube Entertainment and the MSE Audio Group constantly develop 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. The MSE Audio Group actively defends its patents in order to protect SoundTube resellers and end-users.

BroadBeam® Wide Dispersion Technology

SoundTube's proprietary BroadBeam technology incorporates a high-frequency waveguide mated to a 1" convex titanium tweeter. The BroadBeam high-frequency waveguide delivers a consistent dispersion pattern across the upper registers of the frequency spectrum (up to 10 kHz, independently verified). The result is better edge-to-edge coverage, reduced power needs, shorter installation time and cost savings on shipping and labor.

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 crossover installed in the ported enclosure. The low-frequency voice coil diameter shall be 25.4 mm (1").

Performance specifications of a typical production unit shall be as follows: usable frequency response shall extend from 61 Hz - 22 kHz (± 10 dB). Measured sensitivity (2.83 V input, 1 meter) shall be at least 86.5 dB. The speaker shall have a nominal impedance of 8 Ω and be available for 25, 70.7, and 100 V modes and shall include a five-position tap switch with a transformer bypass position. The frequency dividing network shall have a crossover frequency of 3 kHz with slopes of 12 dB per octave (2nd order) for both low and high pass filters. Rated power capacity shall be at least 75 W continuous (RMS) and conform to EIA-426-B testing. Maximum continuous output at 1 meter shall be 105.5 dB.

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

Installation for the unit shall be by UL listed, galvanized steel cable affixed to the speaker chassis via an integrated snap hook. For safety redundancy, a secondary cable shall be included. The external wiring input connector shall be a four-pin, 5.08 mm Euroblock for 8 Ω or distributed systems and shall accept from 10 - 22-gauge wire. The system 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 powder-coated steel for lasting performance in the elements. Overall cabinet dimensions shall be no more than 298.3 mm (11.74") in height by 245.9 mm (9.68") in diameter. The speaker shall include hanging hardware, Euroblock connector, and weather-resistant terminal boot.

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

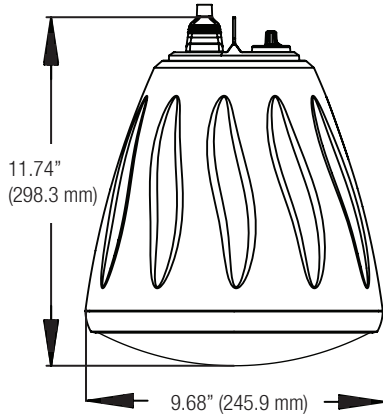
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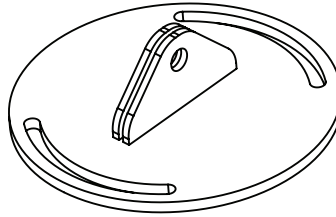
All SoundTube speakers come with a 5-year limited warranty and 3-year warranty on all electronics.

Mechanical Drawings

Side



Optional Accessory



Surface-Mount Bracket
(AC-RS-SM5)

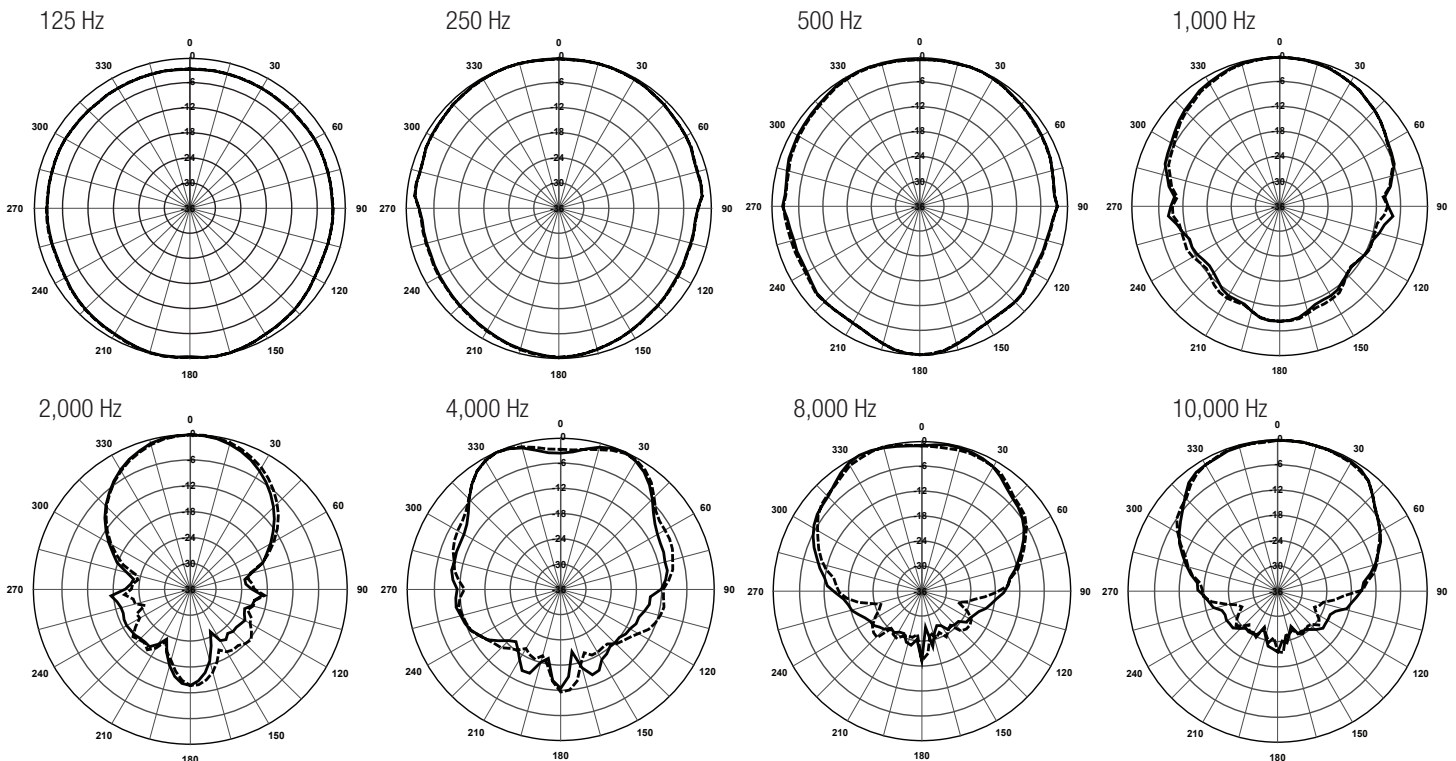
Included Accessory



Hanging Hardware: Main and Safety Cables w/ SpeedClamp™

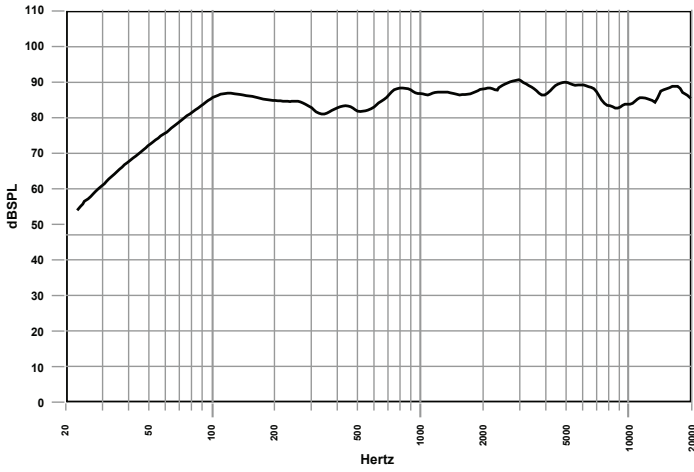
SoundTube's hanging cable kit incorporates hanging and safety cables and fasteners for an integrated and easy-to-install system. Hanging hardware and safety cables are infinitely adjustable to 2.74 m (9 ft).

Plots

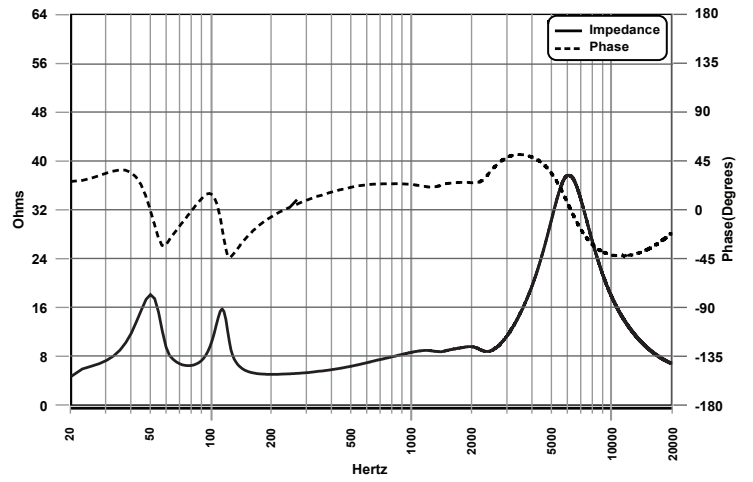


Graphs

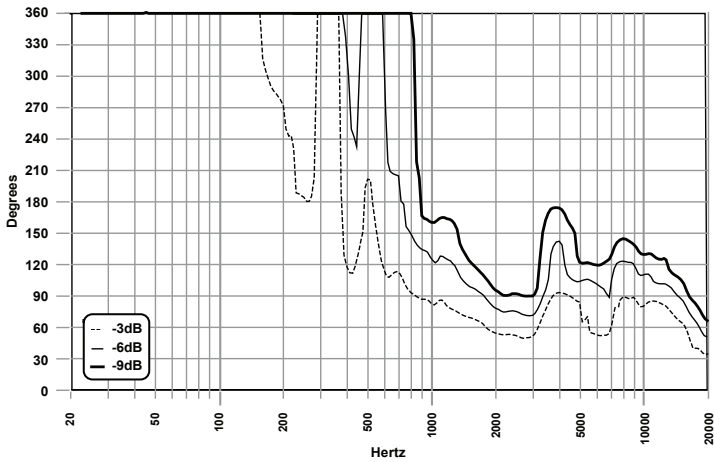
Frequency Response



Phase/Impedance Response



Vertical Beamwidth



Directivity Index (DI)

