



## Specifications: RS400i

System Type	4" coaxial, open-ceiling, ported (20 Watt transformer for 25/70.7/100 Volt or voice coil/4 Ohm applications)
Frequency Response (-3 dB) <sup>1</sup>	94 Hz - 22 kHz
Low Frequency (-10 dB) <sup>1</sup>	72 Hz
Max. Program Power	40 Watts
Max. Continuous Power RMS <sup>2</sup>	20 Watts
Max. SPL dB @ 1 M	98 dB
Sensitivity dB @ 1W/1M (2.83V) <sup>3</sup>	88 dB
Sensitivity dB @ 1W/1M <sup>4</sup>	85 dB
Impedance (nominal)	4 Ohm
Coverage Angle (-6 dB @ 2 kHz)	100°
Coverage Angle (-6 dB @ 10 kHz)	73°
Directivity Factor (Q)	3.04 (Averaged 100 Hz - 10 kHz); 4.7 @ 2 kHz
Directivity Index (DI)	4.1 dB (Averaged 100 Hz - 10 kHz); 6.8 dB @ 2 kHz
Tap Selector	Weather-proof 5-position tap switch w/ voice coil/4 Ohm direct
<b>Transformer Taps</b>	

70.7 V	Output	100 V	Output	25 V	Output
20w	98w	20w	98w	3w	89w
10w	95w	10w	95w	1w	86w
5w	92w	5w	92w	0.63w	83w
3w	89w			0.31w	80w

<b>Transducer</b>	
Low-Frequency Driver	1 x 102 mm (4 in) Polypropylene cone, butyl rubber surround
High-Frequency Driver	25 mm (1 in) Convex aluminum tweeter with waveguide
Low Frequency Voice Coil	25 mm (1 in)
Crossover Frequency	2.27 kHz
<b>Network Type</b>	
Low Pass	12 dB per octave, 2nd order
High Pass	12 dB per octave, 2nd order
Enclosure Material	Injection molded ABS
Grille Material	Iridite-plated steel with powder-coat finish
Inputs	4 Pin, 5 mm Euroblock for individual or daisy chain connection
Color Options	Black, white or custom colors available
Diameter	197 mm / 7.7 in
Total Height	229 mm / 9.0 in
Weight	1.8 kG / 3.9 lbs
Shipping Weight	3.2 kG / 7.1 lbs
<b>Accessories</b>	
Included	Hanging hardware, Euroblock connector & terminal weather boot
Optional	Surface-mount bracket (AC-RS-SM5)
Packaging	1 Per box

<sup>1</sup> Frequency response is measured in full space.

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

<sup>3</sup> Average over published frequency response range.

<sup>4</sup> 1w/1m sensitivity based on voltage required to yield 1w based on the minimum system impedance.

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® waveguide technology delivers a consistent dispersion pattern up to 10 kHz for maximum coverage area per speaker (EASE™ documented).
- One 102 mm (4 in) polypropylene woofer and one 25 mm (1 in) convex aluminum tweeter with FerroFluid cooling.
- Weatherized components for indoor & outdoor applications.
- Includes hanging hardware with aircraft cables and integrated SpeedClamp™ self-locking wire grip for fast, easy & secure installation. Also includes Euro-block connector & terminal weather boot.
- Patented ZeroReflection™ enclosure technology for optimal sound reproduction & cabinet rigidity.
- Easy access 5-position selectable tap switch for 25, 70.7 and 100 Volt applications with voice coil/4 Ohm direct simplifies ordering & inventory tracking.
- Iridite-plated steel grille with protective powder-coated finish for lasting durability.
- High-quality black or white paint finish. Custom paint colors optional.
- Optional surface-mount bracket.

## Description

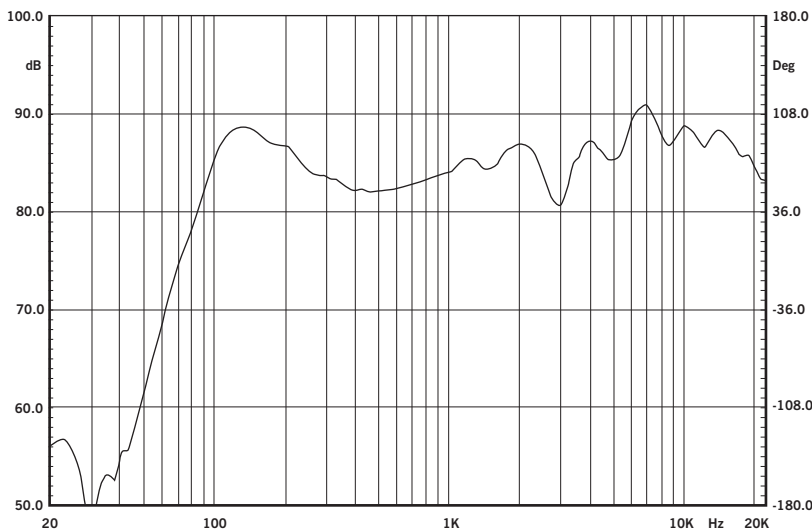
The RS400 is a 4" coaxial, ported speaker with an open-ceiling enclosure design. Hanging hardware is included & features a SpeedClamp™ self-locking wire grip for fast, easy & secure installation. SoundTube's custom-engineered driver and electro-acoustic network delivers high-performance sound in a cost-effective speaker design. The RS400i speaker incorporates a low-profile grille and a 5-position tap switch with voice coil/4 Ohm direct.

## Applications

Designed for indoor & outdoor background to mid-level SPL applications, the RS400i includes a single-point mounting system for rapid open-ceiling installations. Cost-effective engineering with high-performance sound makes the RS400i 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.



**Frequency Response**



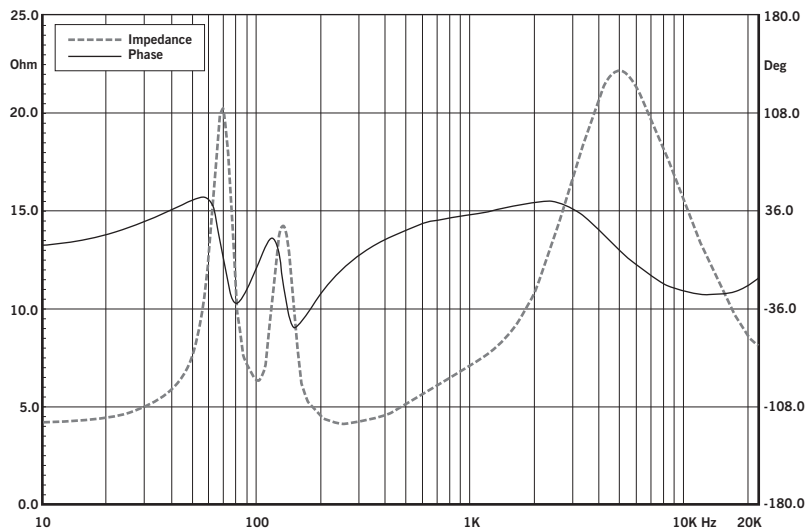
**BroadBeam® Wide Dispersion Technology**

More than 3 years in development, SoundTube's proprietary BroadBeam® technology incorporates a high-frequency waveguide mated to a 1" convex metal tweeter. BroadBeam® waveguide technology delivers a consistent BroadBeam® 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.

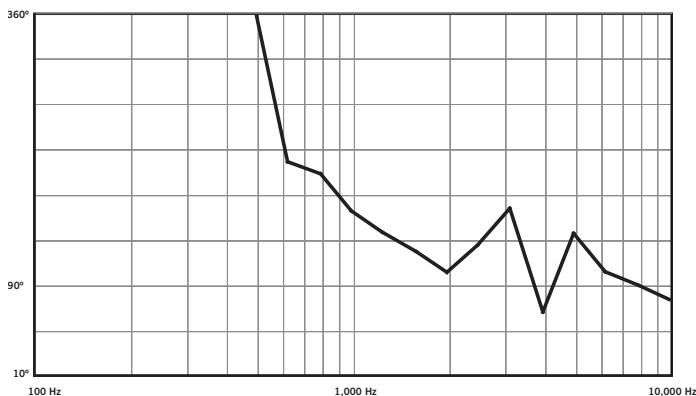
**Patented SoundTube Technologies**

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

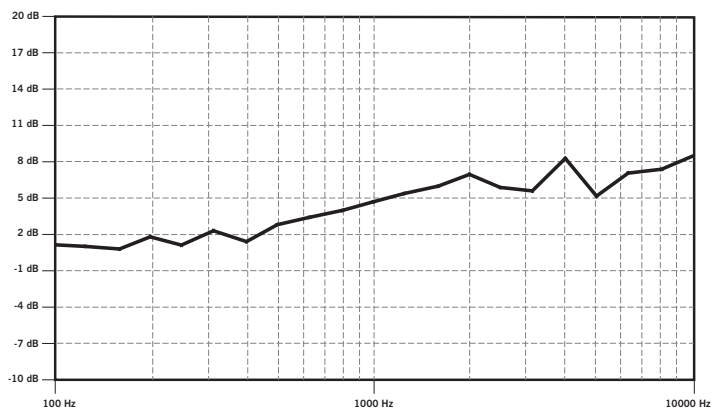
**Phase/Impedance Reponse**



**Beamwidth (-6 dB)**



**Directivity Index (DI)**





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 variety 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 TEF

20/Outline/EASE™ interface.

**EASE™ Data** – 3-D polar plots.

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

**Technical assistance: SoundTube SPEC™ software and engineering support**

For quick and easy specification, visit [www.soundtube.com](http://www.soundtube.com) and use SoundTube’s proprietary specification software. For technical assistance, including detailed EASE™ plots, contact SoundTube Entertainment directly at [techinfo@soundtube.com](mailto:techinfo@soundtube.com) or call us at 435-647-9555 or 800-647-8823.

**Architectural Specifications**

The loudspeaker shall consist of a 102 mm (4 in) polypropylene woofer and one 25 mm (1 in) convex aluminum tweeter with FerroFluid cooling.

Performance specifications of a typical production unit shall be as follows: Useable frequency response shall extend to 72 Hz (-10 dB, no external equalization). Measured sensitivity (2.83 Volt input, 1

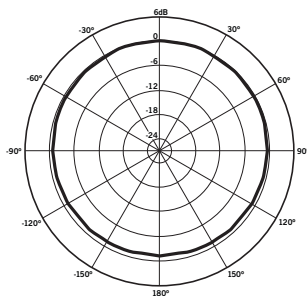
meter) shall be at least 88 dB. The speaker shall have a nominal impedance of 4 Ohms and be available for 25, 70.7 & 100 Volt modes with voice coil/4 Ohm direct. The frequency dividing network shall have a crossover frequency of 2.27 kHz with slopes of 12 dB per octave ( 2nd order) for both low and high pass filters. Rated power capacity shall be at least 20 Watts continuous power (RMS) and conform to EIA-426-B testing. Maximum continuous output at 1 meter shall be 98 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.

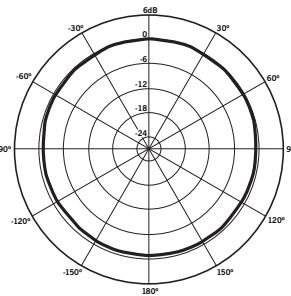
Installation and safety attachment for the RS400i shall be by aircraft cable affixed to the speaker chassis via an integrated forged aluminum clasp with safety gate. The external wiring input connector shall be a 4-pin, 5 mm Euro-block for 4 Ohm or distributed systems and shall accept from 10 – 22 gauge wire. The system shall be for indoor

**Polar Plots**

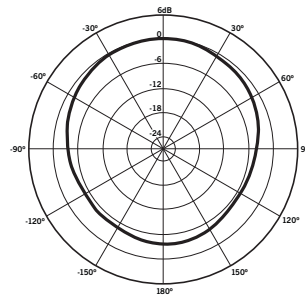
**125 Hz**



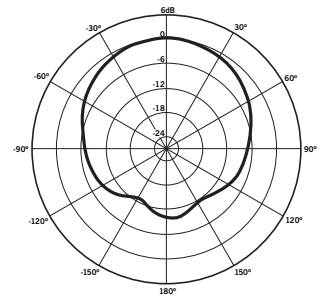
**250 Hz**



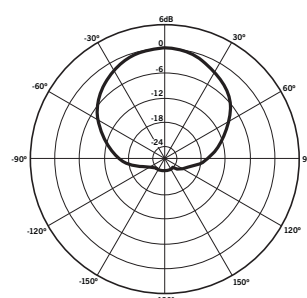
**500 Hz**



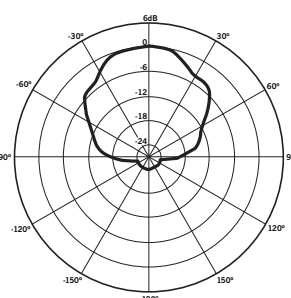
**1,000 Hz**



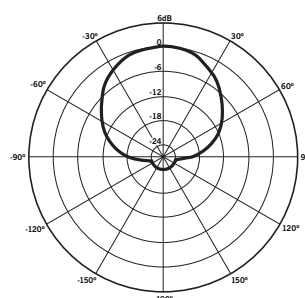
**2,000 Hz**



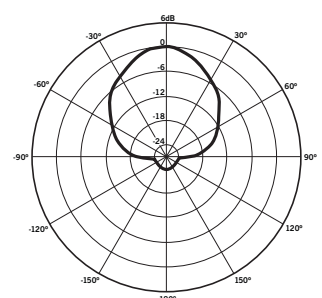
**4,000 Hz**



**8,000 Hz**

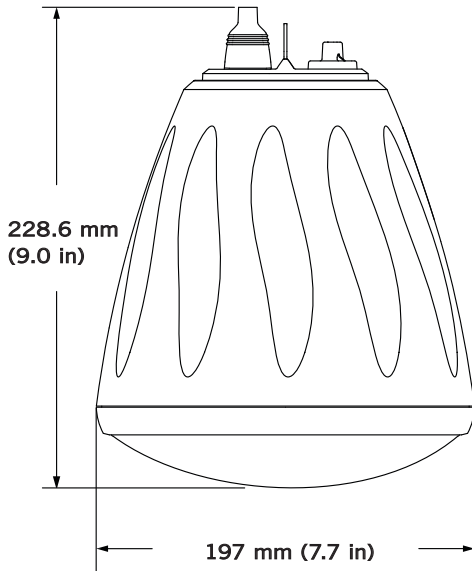


**10,000 Hz**





**Mechanical Drawings**



& outdoor applications and shall have a weather-resistant terminal boot covering all wire connectors.

The enclosure shall be constructed of injection-molded 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 197 mm (7.7 in) in height by 224 mm (8.8 in) in diameter. The RS400i shall include hanging hardware, Euroblock connector and weather-resistant terminal boot.

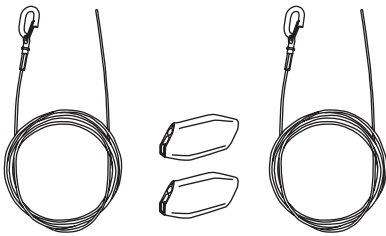
The system shall be the SoundTube RS400i with hanging hardware for both low & high impedance applications.

**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.**

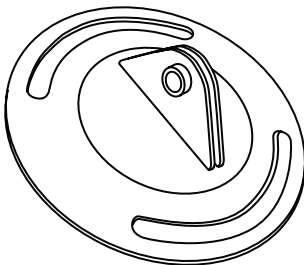
**Included Accessories**



**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).

**Optional Accessories**



**Surface-Mount Bracket (AC-RS-SM5)**

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.