

RS1001i-II-T

Open-Ceiling Subwoofer

Technical Information for System Engineers



SOUNDTUBE
ENTERTAINMENT



Specifications: RS1001i-II-T

System Type	10-inch subwoofer, open-ceiling, ported (150-watt transformer for 25/70.7/100-volt or voice-coil-direct)
Impedance (nominal) ¹	4 ohm
Sensitivity dB @ 2.83 V/1 m	86.0 dB
Sensitivity dB @ 1 W/1 m ²	86.0 dB
Frequency Response (-3 dB) ³	53 Hz - 175 kHz
Frequency Response (-10 dB) ³	38 Hz - 450 kHz
Max. Program Power ⁴	300 W
Max. Continuous Power RMS ⁵	150 W
Max. Power SPL @ 1 m ⁶	108.0 dB
Tap Selector	Five-position rotary switch with voice-coil-direct
Transducer - Low-Frequency Driver	254 mm (10 in.) polypropylene cone, butyl rubber surround
Low-Frequency Voice Coil	35.0 mm / 1.38 in.
Network Type: Low-Pass	6 dB per octave, 1st order
Network Type: High-Pass	N/A
Enclosure Material	Injection-molded ABS, glass fiber reinforced
Grille	Powder coated steel
Inputs	Four-pin, 5 mm Euroblock for individual or daisy chain connection
Colors	Black or white
Height	17.23 in. / 437.6 mm
Diameter	14.82 in. / 376.4 mm
Weight	27.0 lbs / 12.3 kg
Shipping Weight	32.5 lbs / 14.8 kg
Included accessories	Hanging hardware, Euroblock connector, terminal weather boot
Optional accessories	Surface-mount bracket (AC-RS-SM8)
Packaging	One per box
Regulatory - UL	1480- and 2239-approved
Regulatory - CE	Approved

¹ Impedance listed per IEC 60268-5

² 1 W 1 m sensitivity determined using nominal impedance

³ Frequency response measured in half or full space as dictated by speaker mounting configuration

⁴ Max program power is 3 dB above max continuous power

⁵ Continuous power rating, EIA-426-B test

⁶ Max output based on max continuous power

⁷ Max useable SPL based on testing by NWA Labs

Transformer Taps

70.7 V	Output	100 V	Output	25 V	Output
150 W	108.0 dB	150 W	108.0 dB	19 W	99.0 dB
75 W	105.0 dB	75 W	105.0 dB	9.5 W	96.0 dB
38 W	102.0 dB	38 W	102.0 dB	4.8 W	93.0 dB
19 W	99.0 dB			2.4 W	90.0 dB

Key Features

- One 254 mm (10 in.) polypropylene cone with a butyl rubber surround attached to a reinforced baffle.
- Baffle-mounted, flared and tuned ports for maximum efficiency and frequency response.
- High-output (108 dB) and maximum efficiency with an accentuated 70 Hz peak to maximize listener's low-frequency experience.
- 150-watt, low insertion-loss transformer with an easy-access, five-position tap switch for 25/70.7/100-volt and voice-coil-direct positions allows for easy ordering, stocking and installation.
- Weatherized components including powder-coated steel grille, hanging hardware and a durable ABS enclosure for indoor/outdoor applications.
- Includes hanging hardware with high-quality aircraft-rated cables and integrated SpeedClamp™ self-locking wire clamp for fast, easy and secure installation.
- Included accessories: hanging hardware, Euroblock connector, terminal weather boot.
- Optional accessories: surface-mount bracket (AC-RS-SM8).
- UL 1480- and CE-approved. Hanging hardware is UL 2239-approved.
- High-quality black or white painted finish. Custom colors available.

Description

The RS1001i is a 10-inch open-ceiling or surface-mount subwoofer tuned for maximum output and performance across the operating bandwidth. By incorporating a 10-inch polypropylene woofer and a butyl rubber surround in a tuned and ported enclosure, this speaker delivers maximum low frequency response (38 Hz – 450 Hz, -10 dB) and high SPL (108 dB). For added low-end punch, SoundTube has incorporated an oversized enclosure and a tuned, flared port.

Mounting hardware includes high-quality aircraft-rated cables and integrated SpeedClamp™ self-locking wire clamp for fast, easy and secure installation. For easy ordering, stocking and installation, the RS1001i-II-T includes a five-position tap switch for 25-, 70.7- and 100-volt applications with a voice-coil-direct position.



Applications

The RS1001i-II-T is an indoor/outdoor, background to foreground subwoofer for installations where high quality, true bass response and rapid installation are critical variables. Aerobic rooms, retail, restaurants, nightclubs, bars, theme parks, arenas, ballrooms and churches are all ideal fits for the RS1001i-II-T.

Because overall system design is a critical component of subwoofer integration, SoundTube engineering recommends incorporating a DSP system with an active crossover to maximize subwoofer integration and overall system performance. Tuning the system based on room acoustics and loudspeaker selection will result in smooth response and reduced subwoofer localization. For system engineering assistance, contact SoundTube at engineering@soundtube.com or by calling 800-647-8823 (international: +1-435-647-9555).

Patented SoundTube 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.

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 and include EASE™ Data – 3-D polar plots and SoundTube-SPEC™ – proprietary SoundTube speaker placement software.

Independent Data Acquisition & Verification

All data for SoundTube speakers are independently collected from and verified by NWAALabs (www.nwaalabs.com) using their proprietary MACH testing system. All data are 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 subwoofer shall consist of one 254 mm (10 in.) low-frequency transducer installed in a ported enclosure. The transducer shall have a polypropylene cone with a butyl rubber surround. The speaker shall be the RS1001i-II-T (with a 150-watt transformer).

Performance specifications of a typical production unit shall be as follows:
Usable frequency range shall extend from 38 Hz - 450 Hz, -10 dB. Maximum continu-

ous output at 1 meter shall be at least 108 dB. The RS1001i-II-T subwoofer shall be usable at 25/70.7/100 volts with selectable tap settings up to 150 watts or voice-coil direct-position. Rated power capacity of the components and network shall be at least 150 watts continuous RMS and conform to EIA-426-B testing.

The enclosure shall be constructed of injection-molded, glass-reinforced ABS. The grille shall be constructed of powder-coated steel.

Installation for the RS1001i-II-T shall be by high-quality cable affixed to the speaker chassis via an integrated hook assembly. For seismic and safety redundancy, a secondary hanging cable shall be included and attach to the speaker chassis. The external wiring input connector shall be a four-pin, 5 mm Euroblock for 4-ohm or distributed systems and shall accept from 10 – 22-gauge wire.

The RS1001i-II-T is factory preset to 150 watts in the 70.7-volt operating mode with a tap switch located on the front baffle. The system shall be the SoundTube RS1001i-II-T for low- and high-impedance applications.

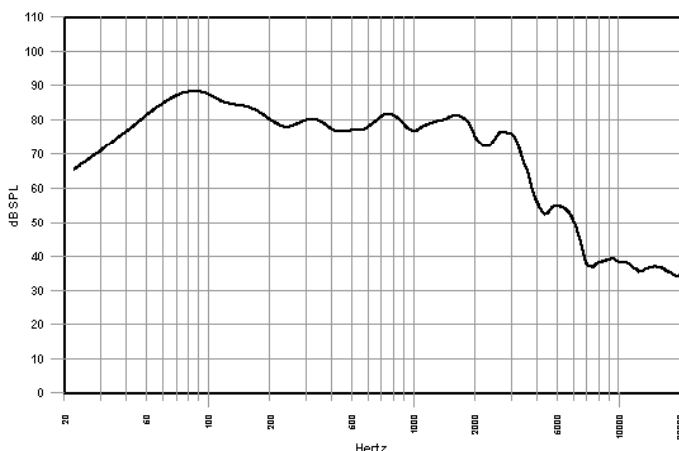
Hanging hardware shall be included for the RS1001i-II-T.

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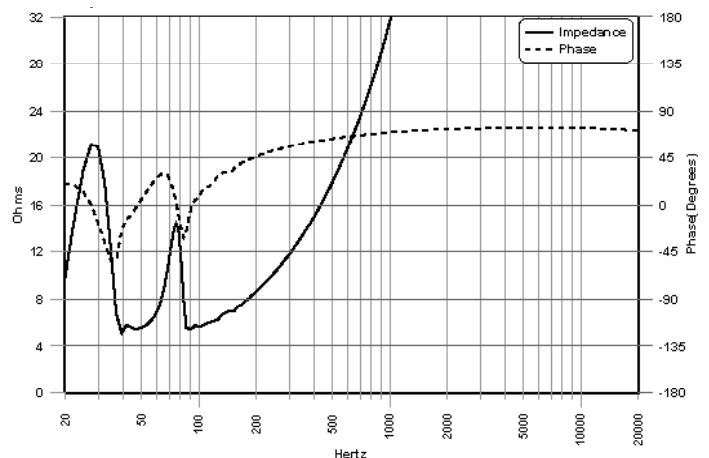
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Graphs and Plots

Frequency Response

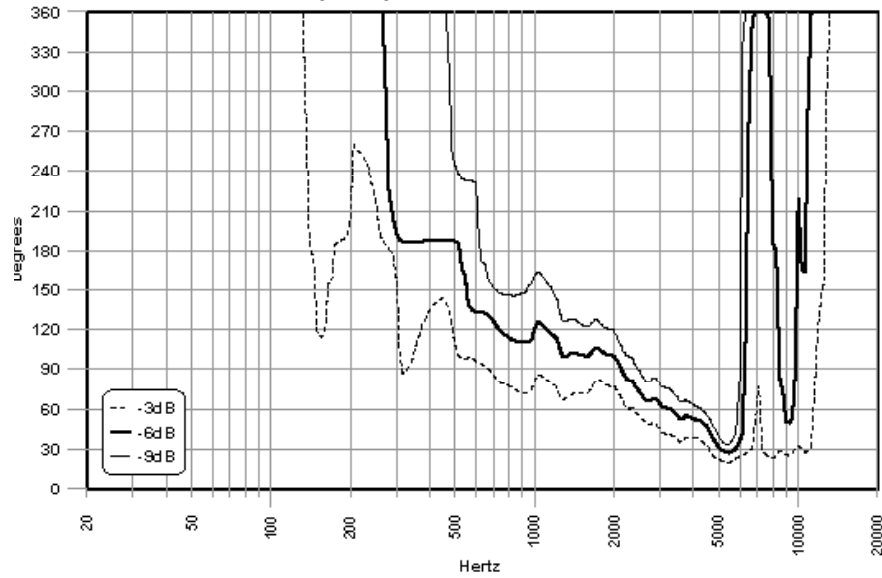


Phase/Impedance Response

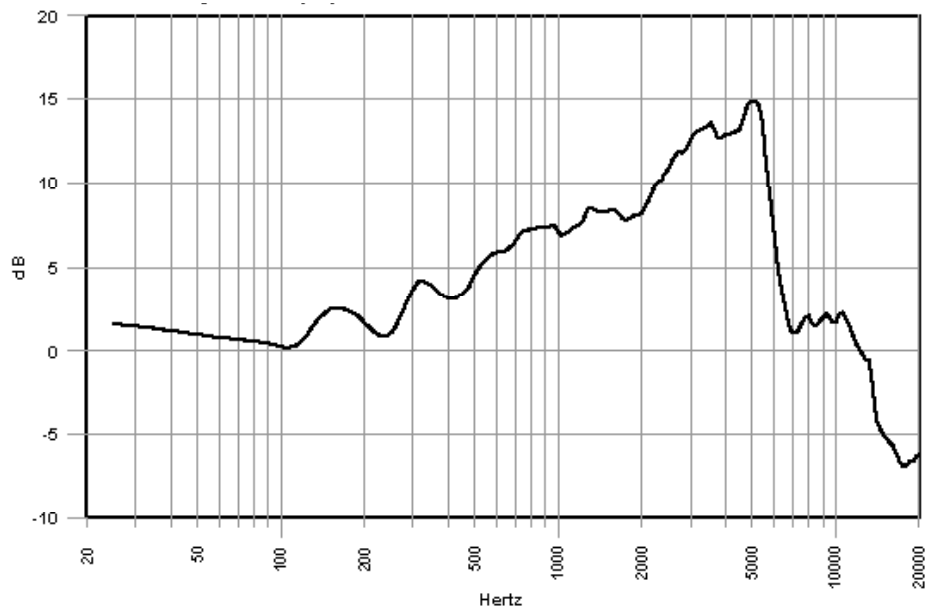




Vertical Beamwidth

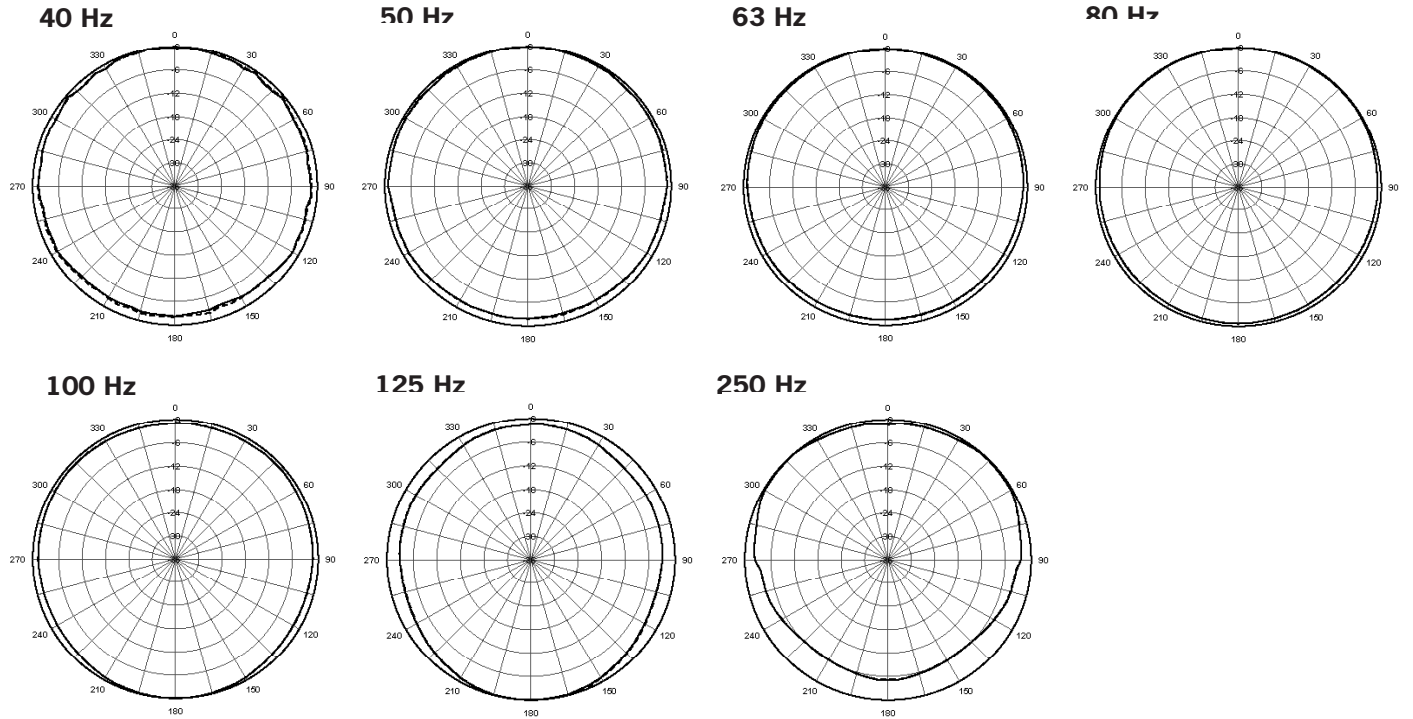


Directivity Index (DI)



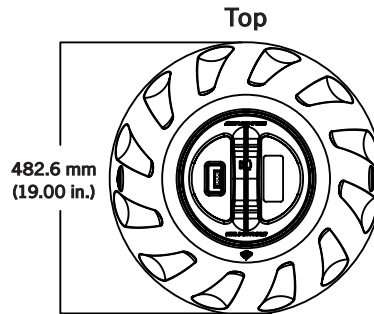
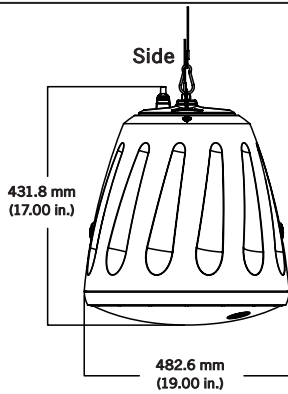


Polar Plots

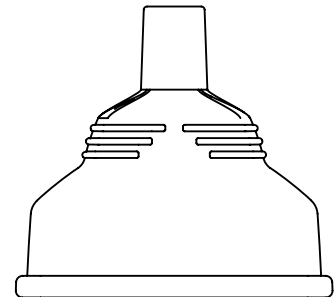


Technical data, EASE™ plots, SoundTubeSPEC™ software and product downloads available at www.soundtube.com

Mechanical Drawings

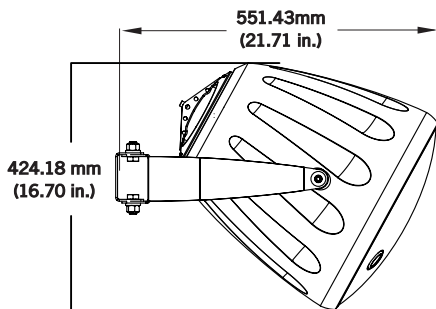


Included Accessories

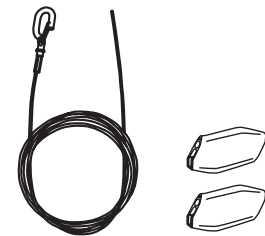


Terminal Weather Boot

Optional Accessories



Surface-Mount Bracket (AC-RS-SM8)



Hanging Hardware

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 U.S.A.