RS62-EZ

Open-Ceiling Speaker

Technical Information for System Engineers

SOUNDTUBE ENTERTAINMENT

Specifications: RS62-EZ-WH & RS62-EZ-BK

Mounting hardware included

System Type	6.5” Coax, open-ceiling, ported (32 Watt transformer for 25/70.7/100 Volt or voice coil direct)
Impedance (nominal)[1]	16 ohm
Sensitivity dB @ 2.83 V/1 m	88.2 dB
Sensitivity dB @ 1 W/1 m[2]	91.2 dB
Sensitibity dB @ 1W/4 m	74.0 dB
Frequency Response (- 3 dB)[3]	100 Hz - 22 kHz
Frequency Response (- 10 dB)[3]	80 Hz - 22 kHz
Max. Program Power[4]	64 W
Max. Continuous Power RMS[5]	32 W
Max. Power SPL @ 1 m[6]	108.9 dB
Max Power SPL @ 4 m	93.0 dB
Coverage Angle @-6dB 500Hz	360º
1Khz	150º
2Khz	105º
4Khz	74º
Coverage Angle (averaged 2-10 kHz)	85.8º
Directivity Factor (Q)	3.6 (averaged 100 Hz - 10 kHz); 7.1 (2 kHz)
Directivity Index (DI)	5.5 (averaged 100 Hz - 10 kHz); 8.5 dB (2 kHz)
Tap Selector	6 Position rotary switch with transformer bypass
Transducer - Low Frequency Driver	165 mm (6.5 in.) Polypropylene cone, butyl rubber surround
Transducer- High Frequency Driver	19 mm (.75 in) Silk dome with Beam Ring™
Low Frequency Voice Coil	25.4 mm (1.00 in)
Crossover Frequency	3.0 kHz
Network Type: Low Pass	6dB per octave, 1st order
Network Type: High Pass	6dB per octave, 1st order
Enclosure Material	Injection molded ABS, glass fiber reinforced
Grille	Powder coated aluminum
Inputs	4 position ceramic terminal connector
Colors	Black or white (paintable)
Height	264.2 mm (10.4 in.)
Diameter	256.0 mm (10.1 in.)
Weight	2 kg (4.4 lbs.)
Shipping Weight	2.7 kg (5.6 lbs.)
Packaging	One per box
Included Accessories	Hanging hardware, weather plug, cover plate
Optional Accessories	AC-BC-1, AC-SLT-10, AC-RSEZ-H10 & H20 & H50
Regulatory - UL	UL 1480 UEAY
Regulatory - CE	Approved
RoHS	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

Transformer Taps

70.7 V Output			100 V Output			25 V Output		
32 W	104.0 dB	156Ω	32 W	104.0 dB	312Ω	4 W	95.0 dB	165Ω
16 W	101.0 dB	312Ω	16 W	101.0 dB	625Ω	2 W	92.0 dB	312Ω
8 W	98.0 dB	625Ω	8 W	98.0 dB	1250Ω	1.0 W	89.0 dB	625Ω
4 W	95.0 dB	1250Ω	4 W	95.0 dB	2500Ω	0.5 W	86.0 dB	1250Ω
2 W	92.0 dB	2500Ω						

The specifications data was measured in an anechoic chamber, according to EN 54-24.
Reference axis: Axis is on the center of speaker grille and perpendicular to the speaker grille.
Reference plane: Plane is on the speaker grille and perpendicular to the reference axis.
Horizontal plane: Plane is containing the reference axis and perpendicular to the reference plane

Key Features

- One 6.5 inch (133 mm) coaxial driver with BroadBeam Ring™ technology for high frequency dispersion.
- Weatherized components for indoor and outdoor applications.
- Includes hanging hardware with galvanized steel cables and hanging bracket for fast, easy and secure installation. Unit may be hung or mounted direct-to-conduit via locking cover plate.
- Enclosure constructed of injection molded ABS with glass fiber reinforcement for lasting durability in indoor or outdoor applications.
- Easy access six-position rotary switch for 25-, 70.7- and 100-volt applications with transformer bypass position.
- Aluminum grille with protective powder-coated finish.
- Built-in thermal fuse.
- Unit ships in eco-friendly, recyclable packaging.
- UL 1480 UEAY
- High-quality black or white paint finish. Speaker is paintable.
- Included accessories: hanging hardware, weather plug, cover plate.

Description

The RS62-EZ is a 6.5-inch, coaxial speaker designed for open-ceiling applications. Hanging hardware is included and features built in hanging bracket and screw on cover plate for fast, easy and secure installation. The unit may be mounted direct-to-conduit via the locking cover plate (see installation instructions for additional information). The RS62-EZ speaker incorporates 4 position ceramic terminal block input connector and a 6 position tap switch with transformer bypass position.

Applications

Designed for superior off-axis performance and easy installation, the RS62-EZ offers attractive styling in an economical speakers for open-ceiling uses. The RS62-EZ includes hanging cables and a built in mounting plate for suspending the speaker and a threaded opening on top of it’s cover plate for direct-to-conduit mounting. Cost-effective engineering with high-performance sound makes the RS62-EZ speaker ideal

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for music and paging applications in retail, grocery stores, restaurants, hotels, casinos, museums, trade shows and conference rooms. For applications where additional bass is required, SoundTube's RS1001i-II-T 10-inch subwoofer may be used.

Patented SoundTube Technologies

SoundTube Entertainment and MSE Audio Group constantly develop 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. 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.

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

Data Acquisition and Verification

All data for SoundTube speakers are independently collected from and verified by NWAA Labs (www.nwaalabs.com) using their proprietary MACH testing system. All data are collected and analyzed according to ASTM, ISO and AES standards using EASRA, TEF and MLSSA. Full balloon data including both phase and magnitude are compiled into a variety of formats including EASE 4.x, GLL and CLF.

Architectural Specifications

The loudspeaker shall consist of one 165 mm (6.5 in.) low frequency driver and one 19 mm (.75 in.) high frequency driver. The low frequency voice coil diameter shall be 25.4 mm (1.0 in.).

Performance specications of a typical production unit shall be as follows: Useable frequency response shall extend from 80 Hz – 22 kHz (-10 dB). Measured sensitivity (2.83-volt input, 1 meter) shall be at least 86.0 dB. The speaker shall have a nominal impedance of 16 ohms. The speaker shall be available for 25-, 70.7- and 100-volt modes and shall include a six-position tap switch with a transformer bypass position. Rated power capacity shall be at least 32 watts continuous (RMS) and conform to EIA-426-B testing. Maximum continuous output at 1 meter shall be 108.9 dB.

The low frequency transducer shall have a polypropylene cone with a butyl rubber surround. The high frequency transducer shall have a silk dome tweeter with BroadBeam Ring™ technology.

Installation shall be by galvanized steel cable attached to the speaker chassis via fixed cable end that interlocks with integrated mounting bracket. The external wiring input connector shall be a four-position ceramic terminal block for low impedence or distributed systems and shall accept from 10 – 22-gauge wire. The system shall be for indoor and outdoor applications and shall have a weather-resistant plug protecting all wire connectors inside the cover plate.

The enclosure shall be constructed of injection-molded ABS. The grille shall be constructed of powder-coated aluminum for lasting performance in the elements. Overall cabinet dimensions shall be no more than 264.2 mm (10.4 in.) in height by 256.0 mm (10.1 in.) in diameter. The unit shall weigh no more than 2 kg (4.4 lbs.) and shall include hanging hardware and weather-resistant cover plate plug.

The system shall be the SoundTube RS62-EZ with hanging hardware for both low- and high-impedance applications.

SoundTube Entertainment

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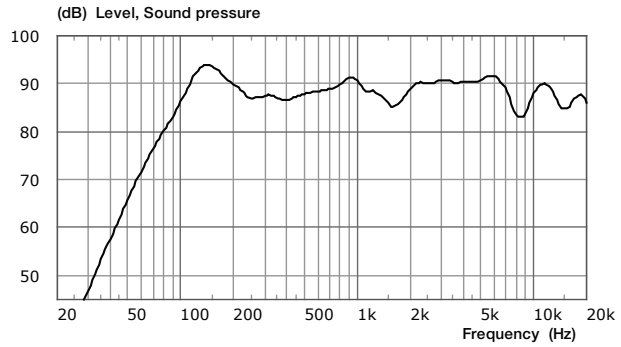
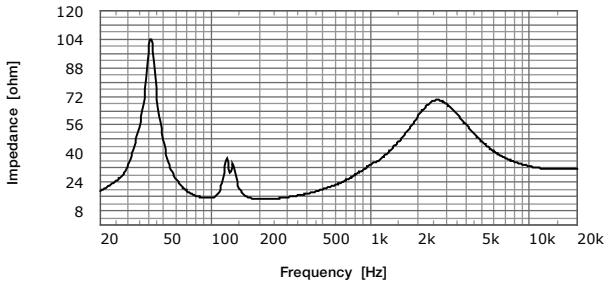
All SoundTube products come with a 5-year limited warranty.

Graphs and Plots

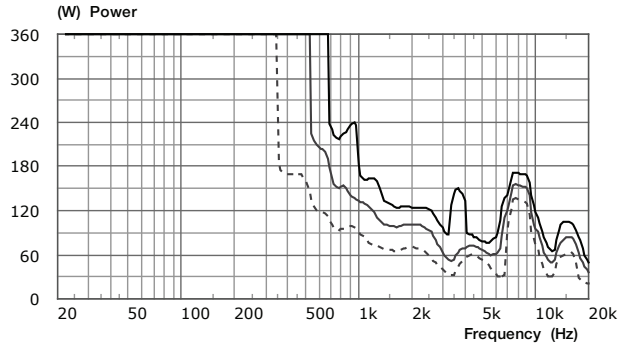
Frequency Response



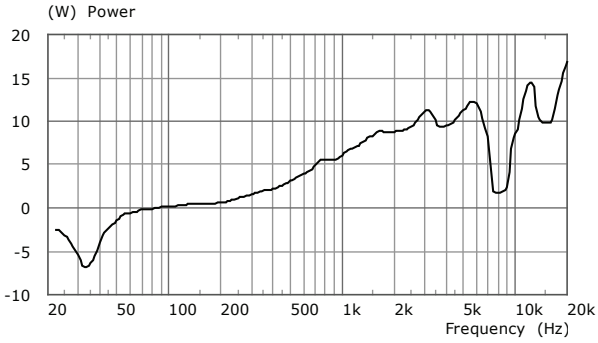
Impedance/Phase

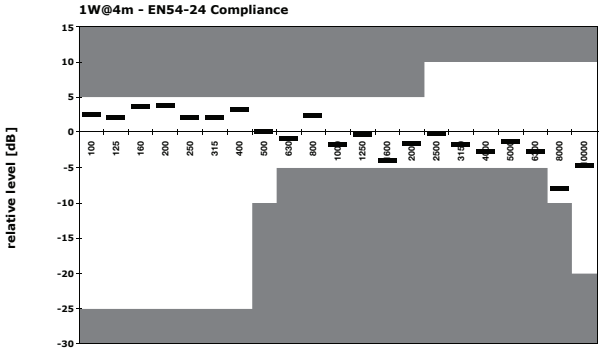


Vertical Beamwidth



Directivity Index (DI)





The frequency response of the loudspeaker type RS62-EZ

RS62-EZ:

Octave band filter	Declared coverage angle	Measured coverage angle
500 Hz / 1W/4m	360	360
1 kHz / 1W/4m	150	150
2 kHz / 1W/4m	105	102,5
4 kHz / 1W/4m	74	70

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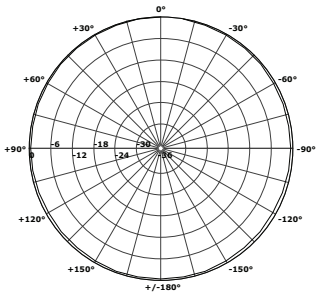
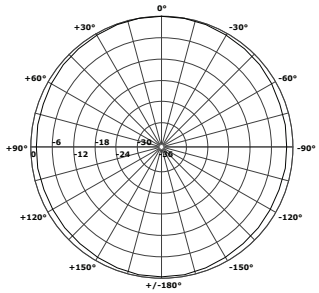
Polar Plots @ 1W/1M

Horizontal
Vertical

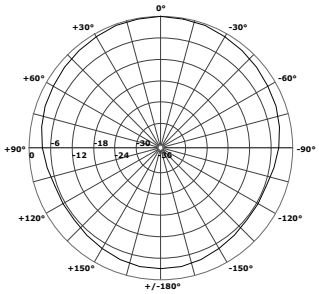
125 Hz



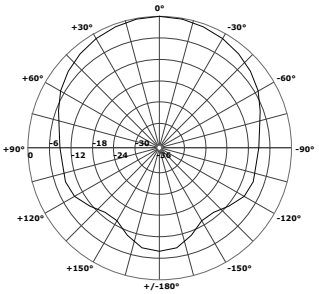
250 Hz



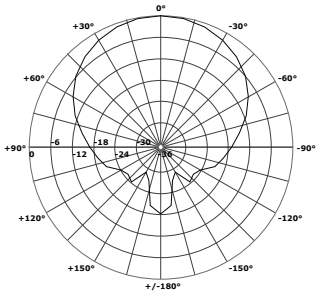
500 Hz



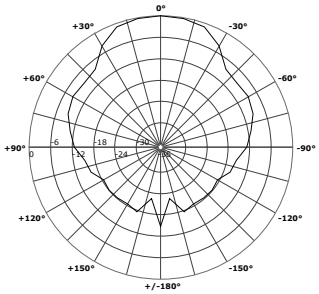
1,000 Hz



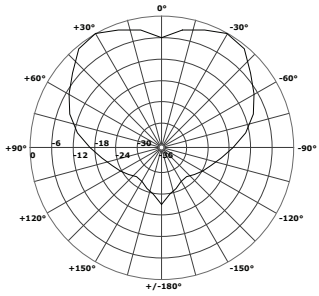
2,000 Hz



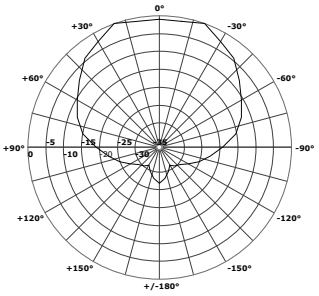
4,000 Hz



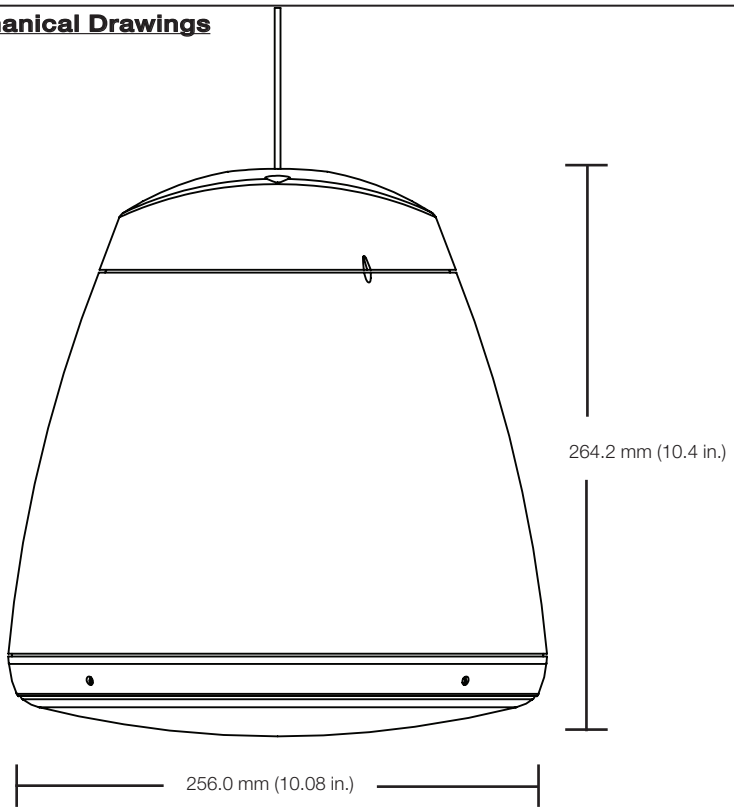
8,000 Hz



10,000 Hz



Mechanical Drawings



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.