



RS42-EZ PRODUCT SPECIFICATIONS

System Type	4" coax, open-ceiling, ported (20 W transformer for 25/70.7/100 V or voice coil direct)
Impedance (Nominal) ¹	16 Ω
Sensitivity dB @ 2.83 V / 1 M	82.4 dB
Sensitivity dB @ 1 W / 1 M ²	85.4 dB
Sensitivity dB @ 1 W / 4 M	70 dB
Frequency Response (±3 dB) ³	140 Hz - 22 kHz
Frequency Response (±10 dB) ³	100 Hz - 22 kHz
Max. Program Power ⁴	40 W
Max. Continuous Power RMS ⁵	20 W
Max. Power SPL @ 1 M ⁶	100 dB
Max. SPL @ 4 M	87 dB
Coverage Angle @ ±6 dB	500 Hz: 360° 1 kHz: 200° 2 kHz: 100° 4 kHz: 80°
Coverage Angle (Avg. 2-10 kHz)	115°
Directivity Factor (Q)	2.8 (averaged 100 Hz - 10 kHz) 5.5 (2 kHz)
Directivity Index (DI)	4.4 dB (averaged 100 Hz - 10 kHz) 7.4 dB (2 kHz)
Tap Selector	6 position rotary switch with transformer bypass
Transducer: Low-Frequency Driver	102 mm (4") polypropylene cone, butyl rubber surround
Transducer: High-Frequency Driver	19 mm (0.75") silk dome with BroadBeam Ring™
Low-Frequency Voice Coil	25.4 mm 1"
Crossover Frequency	4.5 kHz
Network Type: Low Pass	12 dB per octave, 2nd order
Network Type: High Pass	6 dB 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	199.6 mm 7.9"
Diameter	189.5 mm 7.5"
Weight	1.4 kg 3.1 lbs
Packaging	One per box
Included Accessories	Hanging hardware, weather plug, cover plate
Certifications	CE, EN54, RoHS, UL 1480A

Description

The RS42-EZ is a 4", 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 RS42-EZ speaker incorporates 4-position ceramic terminal block input connector and a 6-position tap switch with transformer bypass position.

Features

- One 4" (102 mm) coaxial driver with BroadBeam Ring™ technology for consistently smooth high-frequency directivity.
- 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.
- 16 Ω impedance for easy daisy chaining in low voltage systems
- Aluminum grille with protective powder-coated finish.
- Built-in thermal fuse.
- Unit ships in eco-friendly, recyclable packaging.
- UL 1480A
- High-quality black or white paint finish. Speaker is paintable.
- Included accessories: hanging hardware, weather plug, cover plate.

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

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.

Transformer Taps

70.7 V	Output	100 V	Output	25 V	Output
20 W	100 dB 218 Ω	20 W	100 dB 459 Ω	2.5 W	91 dB 218 Ω
10 W	97 dB 459 Ω	10 W	97 dB 926 Ω	1.3 W	88 dB 459 Ω
5 W	94 dB 926 Ω	5 W	94 dB 1815 Ω	0.63 W	85 dB 926 Ω
2.5 W	91 dB 1815 Ω	2.5 W	91 dB 3397 Ω	0.31 W	82 dB 1815 Ω
1.3 W	88 dB 3397 Ω				

Applications

Designed for superior off-axis performance and easy installation, the RS42-EZ offers attractive styling in an economical speaker for open-ceiling uses. The RS42-EZ includes hanging cables and a built-in mounting plate for suspending the speaker and a threaded opening to top of its cover plate for direct-to-conduit mounting. Cost-effective engineering with high-performance sound makes the RS42-EZ speaker ideal 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 RS1201i-II-T 10" subwoofer may be used.

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.

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 one 102 mm (4") low-frequency driver and one 19 mm (0.75") high-frequency driver. 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 100 Hz - 22 kHz (± 10 dB). Measured in sensitivity (2.83 V input, 1 M) shall be at least 82.4 dB. The speaker shall have a nominal impedance of 16 Ω . The speaker shall be available for 25, 70.7, and 100 V modes and shall include a six-position tap switch with a transformer bypass position. Rated power capacity shall be at least 20 W continuous (RMS) and conform to EIA-426-B testing. Maximum continuous output at 1 M shall be 100 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 impedance 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 199.6 mm (7.9") in height by 189.5 mm (7.5") in diameter. The unit shall weigh no more than 1.4 kg (3.1 lbs) and shall include hanging hardware and weather-resistant cover plate plug.

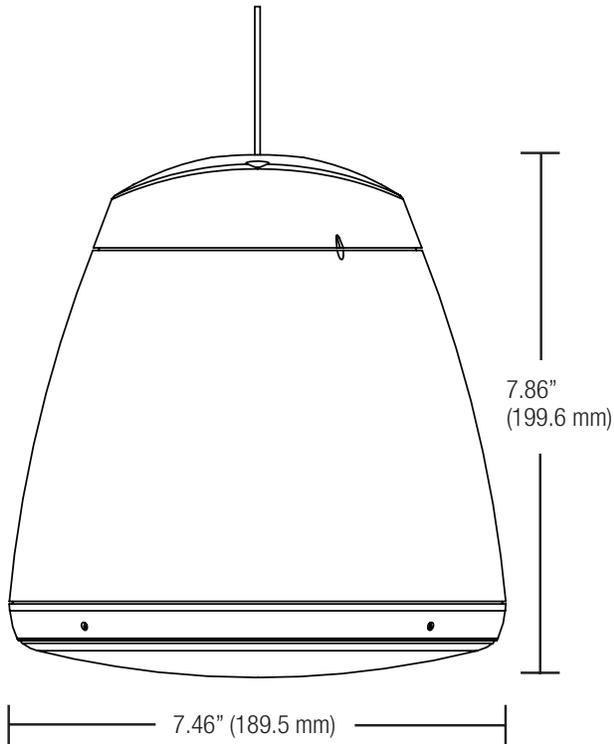
The system shall be the SoundTube RS42-EZ with hanging hardware for both low and high impedance applications.

SoundTube®

13720 W. 109th St.
Lenexa, KS 66215
Phone: 913.663.5600
Fax: 913.663.3200
Toll Free: 855.663.5600
www.mseaudio.com

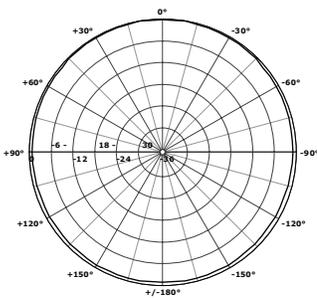
All SoundTube speakers come with a 5-year limited warranty and 3-year warranty on all electronics.

Mechanical Drawings

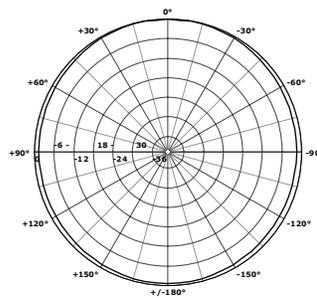


Plots

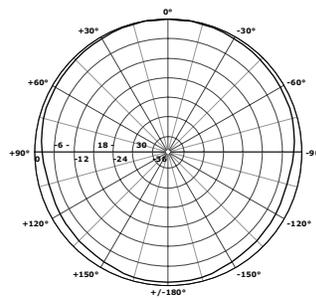
125 Hz



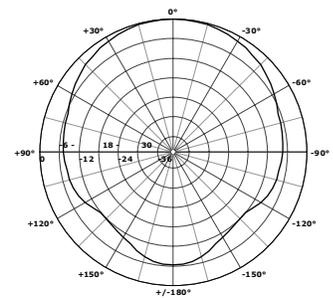
250 Hz



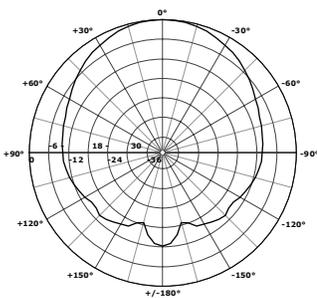
500 Hz



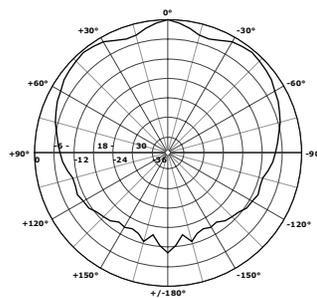
1,000 Hz



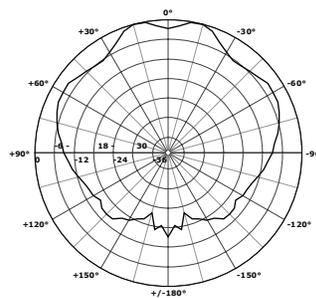
2,000 Hz



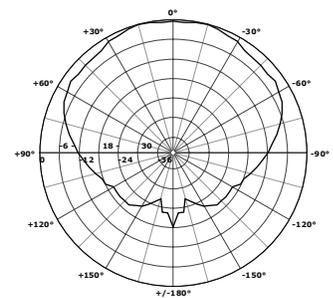
4,000 Hz



8,000 Hz

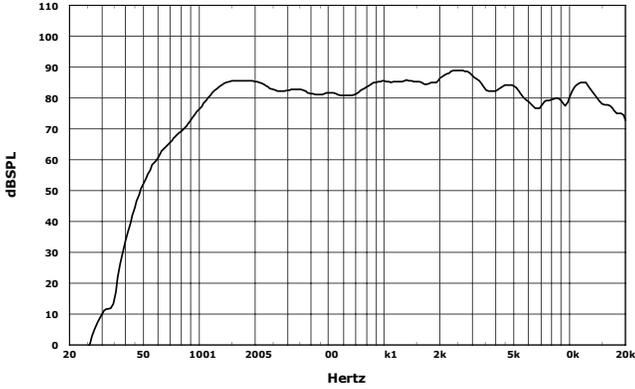


10,000 Hz

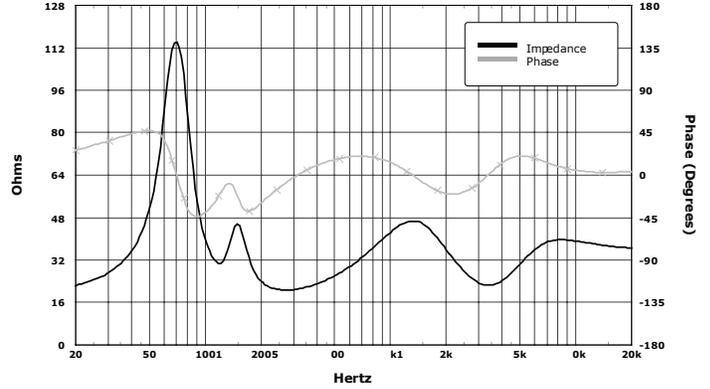


Graphs

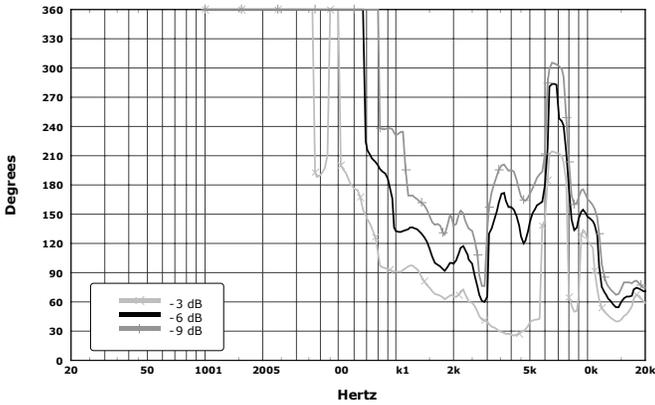
Frequency Response



Phase/Impedance Response



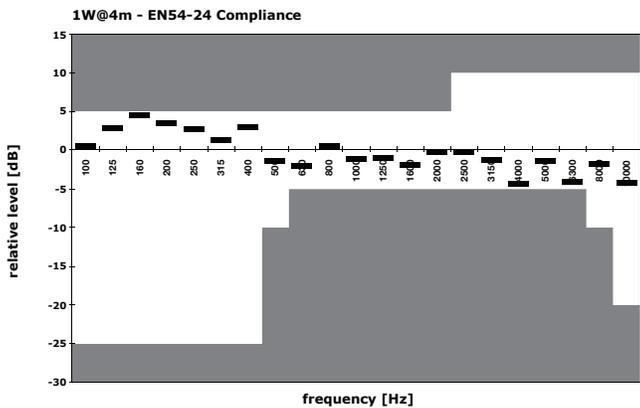
Vertical Beamwidth



Directivity Index (DI)



Frequency Response of the Loudspeaker Type RS42-EZ



RS42-EZ

Octave Band Filter	Declared Coverage Angle	Measured Coverage Angle
500 Hz 1 W / 4 m	360	360
1 kHz 1 W / 4 m	200	195
2 kHz 1 W / 4 m	100	95
4 kHz 1 W / 4 m	80	82.5