



CM42-EZs-II PRODUCT SPECIFICATIONS

System Type	4", coaxial, in-ceiling, sealed (20 W transformer for 25/70.7/100 V or transformer bypass)
Impedance (Nominal)	16 Ω
Sensitivity dB @ 2.83 V/1 M	84.5 dB
Sensitivity dB @ 1 W/1 M ¹	87.5 dB
Frequency Response (± 3 dB) ²	160 Hz - 20 kHz
Frequency Response (± 10 dB) ²	125 Hz - 22 kHz
Max. Program Power ³	40 W
Max Continuous Power RMS ⁴	20 W
Max. Power SPL @ 1 M ⁵	100.5 dB
Coverage Angle (± 6 dB @ 2 kHz)	170°
Coverage Angle (± 6 dB @ 10 kHz)	95°
Coverage Angle (Averaged 2-10 kHz)	100°
Directivity Factor (Q)	4.3 (Averaged 100 Hz - 10 kHz); 4.2 (2 kHz)
Directivity Index (DI)	5.7 dB (Averaged 100 Hz - 10 kHz); 6.2 dB (2 kHz)
Tap Selector	Six-position rotary switch with transformer bypass position
Transducer: Low-Frequency Driver	102 mm 4" treated fiber cone, cloth surround
Transducer: High-Frequency Driver	19 mm 0.75" silk dome tweeter
Low-Frequency Voice Coil	12.7 mm 0.5"
Crossover Frequency	5.0 kHz
Network Type: Low-Pass	12 dB per octave, 2nd order
Network Type: High-Pass	6 dB per octave, 1st order
Enclosure Alignment	Sealed
Enclosure Material	Drawn steel backcan with ABS baffle
Grille	Painted steel
Inputs	4 position ceramic terminal strip
Backcan Diameter	146.8 mm 5.78"
Backcan Height	95.3 mm 3.75"
Visible Diameter	190.5 mm 7.5"
Visible Height	8.4 mm 0.33"
Mounting Hole Diameter	165.1 mm 6.5"
Min. / Max. Ceiling Thickness	0.0 mm / 0.0" - 24.6 mm 0.97"
Weight	1.8 kg 4 lbs
Packaging	One per box
Included Accessories	Tile bridge, UL-listed flex conduit clamp, paint shield, hole template, and wire nuts
Optional Accessories	Pre-construction bracket (AC-CMEZ4-PCB), junction box (AC-CM-EZ-JBOX)
Certifications	CE, EN54, RoHS, UL1480A, UL2043

Description

The CM42-EZs-II is a 4", coaxial, two-way, blind-mount, in-ceiling speaker which delivers true high efficiency and performance across the operating bandwidth. By incorporating a 4" treated-fiber driver with cloth surround in a sealed drawn steel backcan, this speaker delivers maximum frequency response (125 Hz - 22 kHz, ± 10 dB) in a compact design.

Mounting hardware is included and features a constant-tension winged mounting system with a 21-gauge "full metal" steel tile bridge ensuring rapid and secure installation in any sheetrock or drop-tile application. For easy ordering, stocking and installation, this series includes a color-coded (orange) tile bridge, optional pre-construction bracket, and a six-position tap switch for 25, 70.7 and 100 V applications with transformer bypass position.

Features

- Engineered for applications with limited plenum space incorporating a SoundTube-specific shallow backcan with an installed depth of only 3.5"
- One 4" (102 mm) treated fiber woofer with cloth surround and one 0.75" (19 mm) silk dome tweeter
- Easy-access six-position tap switch for 25/70.7/100-volt and 16 Ω transformer bypass position allows for easy ordering, stocking, and installation
- Reduced amplification costs with maximum efficiency including 87.5 dB sensitivity and 16 Ω impedance
- Superior voice intelligibility with an average coverage angle of 100° (2-10 kHz, independently verified)
- Cost-effective 16 Ω settings allows for the use of multiples of two, four, or six speakers in a system using a standard amplifier without a transformer
- Incorporates a painted steel grille for lasting durability
- Clamping allowance from 0.0" (0.0 mm) to 1.5" (38.1 mm)
- UL1480A and 2043, CE (EMC Directive 89/366/EEC, EN55020, EN55013) approved
- High-quality black or white painted finish. Custom colors available
- Included accessories: tile bridge, UL-listed 0.5" flex conduit clamp, paint shield, and two wire nuts
- Optional accessories: color-coded (orange) pre-construction bracket (AC-CMEZ4-PCB), junction box (AC-CM-EZ-JBOX)

¹ 1 W/1 M sensitivity determined using nominal impedance

² Frequency response measured in half or full space as dictated by speaker mounting configuration

³ Max program power is 3 dB above max continuous power

⁴ Continuous power rating, EIA-426-B test

⁵ Max output based on max continuous power

Transformer Taps

70.7 V	Output	100 V	Output	25 V	Output
20 W	100.5 dB	20 W	100.5 dB	2.5 W	91.5 dB
10 W	97.5 dB	10 W	97.5 dB	1 W	88.5 dB
5 W	94.5 dB	5 W	94.5 dB	0.63 W	85.5 dB
2.5 W	91.5 dB	2.5 W	91.5 dB	0.31 W	82.5 dB
1.25 W	88.5 dB				

Applications

Developed specifically for the paging and background music applications where cost, quality and fit are paramount, the CM42-EZs-II is ideal for hotels, retail stores, restaurants, airports, churches (under eave), medical facilities or boardrooms. Indeed, the entire CM-EZ-II series is engineered for installations where high-efficiency and rapid installation are critical attributes. For applications requiring additional bass response, SoundTube's CM1001d-T subwoofer provides true low-end response down to 50 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.

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 Acquisition and Verification

All data for SoundTube speakers is independently collected from and verified by NWA Labs (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 transducer shall consist of one 102 mm (4") low-frequency transducer and one 19 mm (0.75") high-frequency transducer with a frequency dividing network installed in a sealed enclosure. The low-frequency transducer shall have a treated fiber cone material with cloth surround. The high-frequency transducer shall be constructed of silk material using a balanced-dome configuration.

Performance specifications for a typical production unit shall be as follows: Usable frequency range shall extend from 125 Hz - 22 kHz (± 10 dB). The loudspeaker shall include a selectable 25, 70.7, and 100 V and 16 Ω transformer bypass position. The frequency dividing network shall have a crossover frequency of 5.0 kHz. Rated power capacity shall be at least 20 watts continuous (RMS) and conform to EIA-426-B testing. Maximum continuous power output at 1 meter shall be 100.5 dB SPL.

The backcan shall be constructed of galvanized steel with an ABS plastic baffle. The grille shall be constructed of painted steel. Shipped complete with UL-listed flex conduit clamp, color-coded tile bridge (to match color-coded backcan), grille, wire nuts, cut-out template and paint shield. The integrated in-ceiling speaker is engineered for high performance and rapid installation in plenum spaces. The unit incorporates three additional attachment points for added security, or code satisfaction where required.

Installation for the speaker shall be by two-screw, blind-mount, constant tension winged assembly with a clamping allowance of 0.00 m (0.0") to 38.1 mm (1.5"). The external wiring shall be via 4 position ceramic terminal strip accepting up to 12-gauge wire.

The maximum backcan dimensions shall be no more than 146.8 mm (5.78") in diameter by 95.3 mm (3.75") in height. The maximum visible dimensions shall be no more than 8.4 mm (0.33") in height by 190.5 mm (7.5") in diameter. The unit is factory preset to the 20 W setting in the 70.7 V mode with a tap switch located on the front baffle.

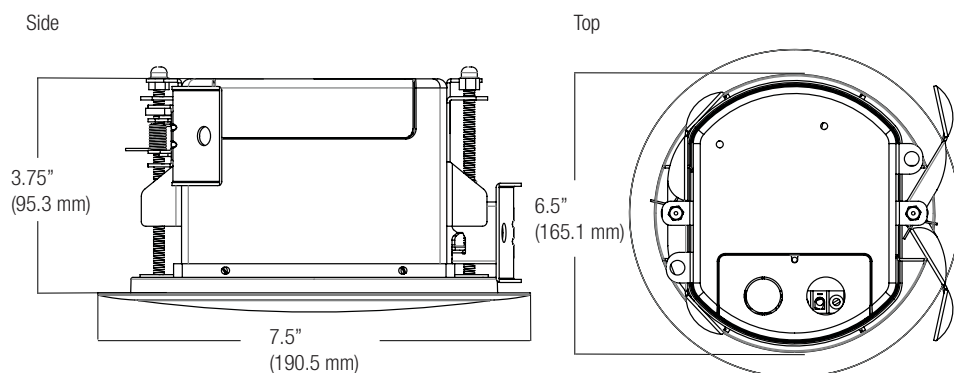
The system shall be the SoundTube CM42-EZs-II for both low- and high-impedance applications.

SoundTube®

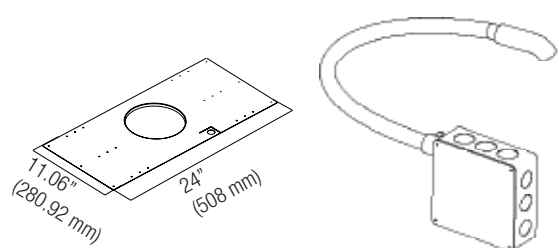
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All SoundTube speakers come with a 5-year limited warranty and 3-year warranty on all electronics.

Mechanical Drawings



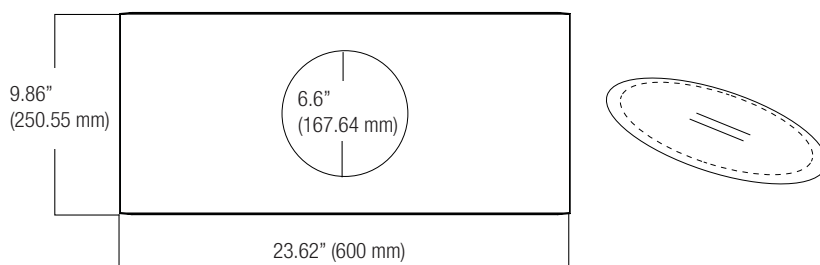
Optional Accessories



Pre-Construction Bracket
(AC-CMEZ4-PCB)

Junction Box
(AC-CM-EZ-JBOX)

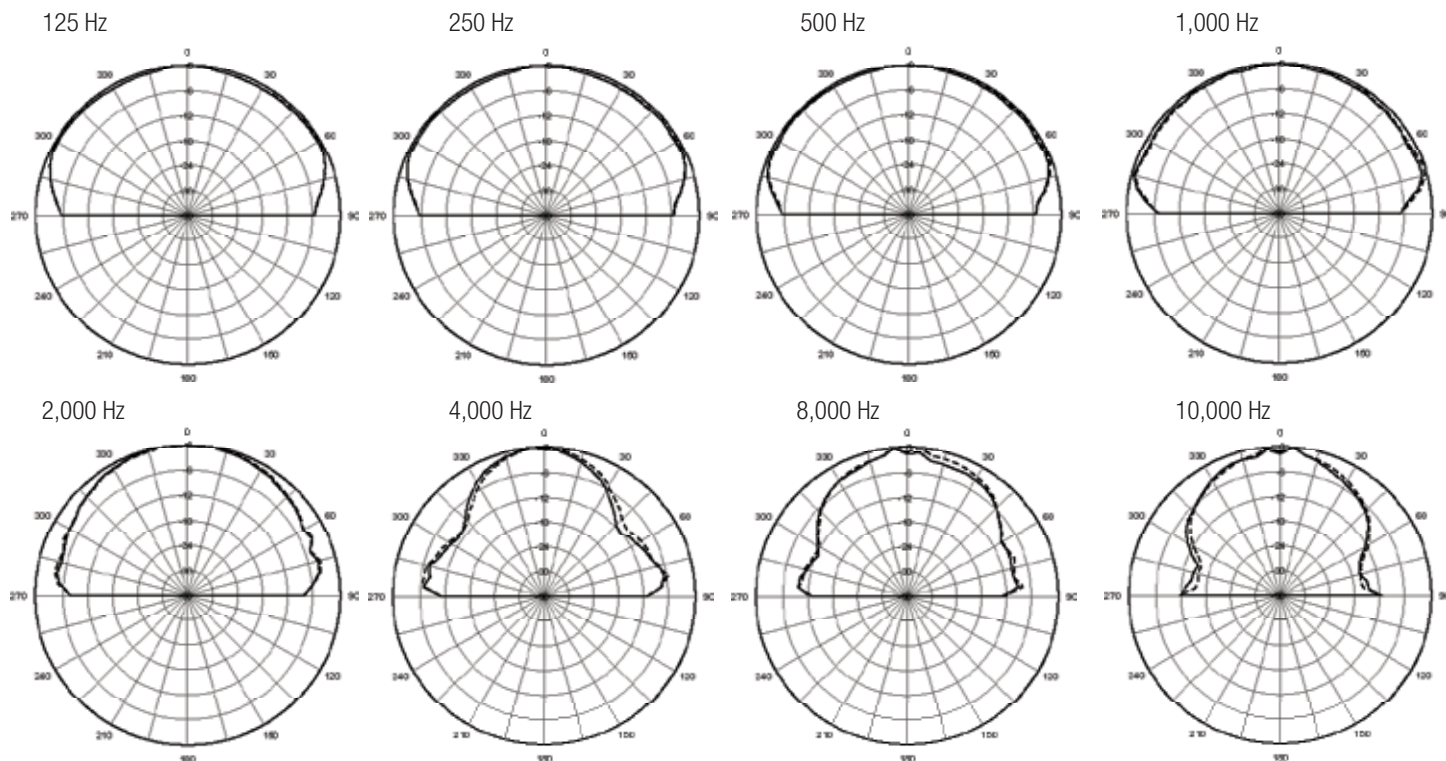
Included Accessories



Tile Bridge

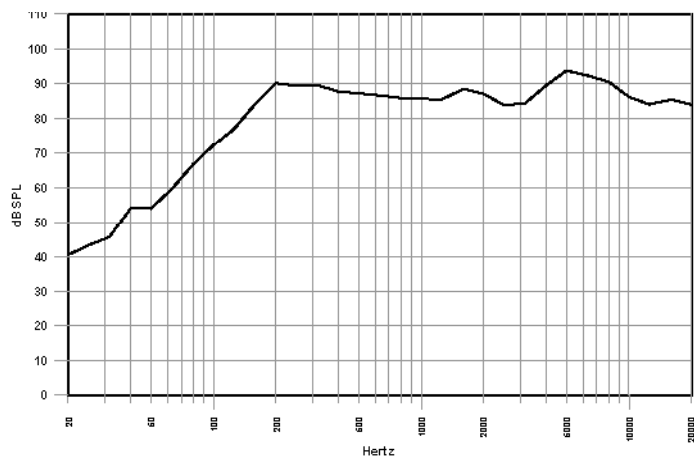
Hole Template

Plots

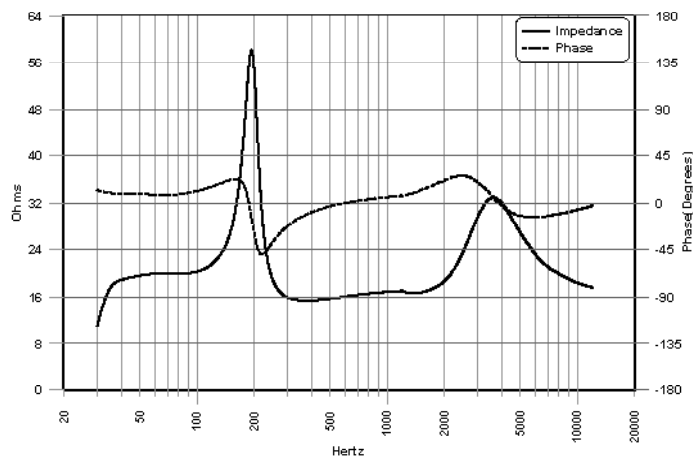


Graphs

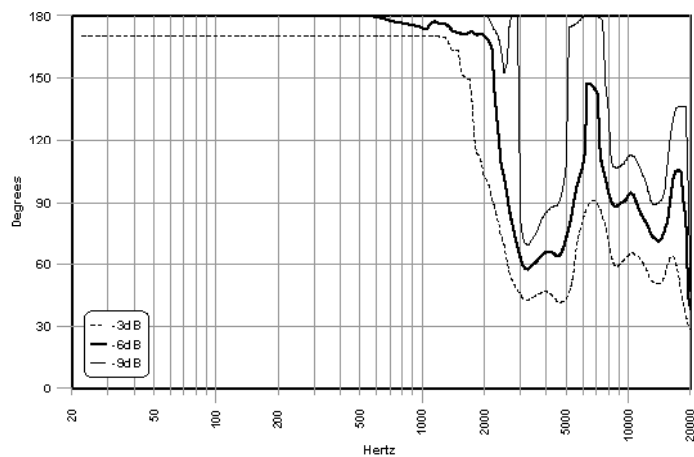
Frequency Response



Phase/Impedance Response



Beamwidth



Directivity Index (DI)

