

Specifications: CM42-EZs

Tile bridge included

System Type	4" Coax, in-ceiling, sealed (20 Watt transformer for 25/70.7/100 Volt or 16 Ohm direct)
Impedance (nominal)	16 Ohm
Sensitivity dB @ 2.83V/1M	84.5 dB
Sensitivity dB @ 1W/1M 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
Max. SPL @ 3 dB Distortion ⁶	20 w
Coverage Angle (-6 dB @ 2 kHz)	170°
Coverage Angle (-6 dB @ 10 kHz)	95°
Coverage Angle	100° (Avg. from 2 - 10 kHz)
Directivity Factor (Q)	4.3 (Avg. 100 Hz - 10 kHz) ; 4.2 (2 kHz)
Directivity Index (DI) dB	5.7 dB (Avg. 100 Hz - 10 kHz) ; 6.2 dB (2 kHz)
Tap Selector	5-Position rotary switch with 16 ohm direct
Transducer - Low Frequency Driver	102 mm (4 in) Treated fiber cone, cloth surround
Transducer - High Frequency Driver	19 mm (0.75 in) Silk tweeter
Low Frequency Voice Coil	12.70 mm / 0.50 in
Crossover Frequency	5.0 kHz
Network Type: Low Pass	12dB 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	18-Gauge hard wired leads
Colors	Black or white
Backcan Diameter	5.78 in / 146.8 mm
Backcan Height	3.75 in / 95.3 mm
Visible Diameter	7.50 in / 190.5 mm
Visible Height	0.33 in / 8.4 mm
Mounting Hole Diameter	6.50 in / 165.1 mm
Min / Max Ceiling Thickness	0.00 in / 0.0 mm - 1.5 in / 38.1 mm
Weight	4.0 lb / 1.8 kg
Shipping Weight	5.0 lb / 2.3 kg
Accessories	
Included	Tile bridge, UL listed flex conduit clamp, paint shield, hole template, wire nuts
Optional	Pre-Construction Bracket (AC-CMEZ42-PCB) ; Junction Box (AC-CM-EZ-JBOX)
Packaging	1 per box
Regulatory - UL	1480 & 2043 Approved
Regulatory - CE	Approved

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			0.31 w	82.5 dB

¹ 1w1m 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

⁶ Max useable SPL based on testing by NWA Labs

Key Features

- Engineered for applications with limited plenum space incorporating a SoundTube-specific shallow backcan with an installed depth of only 3.5 inches.
- One 102 mm (4 in) treated fiber woofer with cloth surround and one 19 mm (0.75 in) silk tweeter.
- Reduced amplification costs with maximum efficiency including 87.5 dB sensitivity and 16 Ohm impedance.
- Superior voice intelligibility with an average coverage angle of 100° (Independently verified, 2 - 10 kHz).
- Easy-access 5-position tap switch for 25/70.7/100 Volt and 16 Ohm settings allows for easy ordering, stocking and installation.
- Incorporates a painted steel grille for lasting durability.
- UL 1480 & 2043, cUL, CE (EMC Directive 89/366/EEC, EN55020, EN55013) approved.
- Adaptable to material thicknesses ranging from 0.00 in (0.0 mm) to 1.50 in (22.9 mm).
- Included accessories: Tile bridge, UL listed 0.5" flex conduit clamp, paint shield & 2 wire nuts.
- Optional accessories: Color-coded (orange) pre-construction bracket (AC-CM4-PCB), junction box (AC-CM-EZ-JBOX).
- High-quality black or white painted finish. Custom colors available.

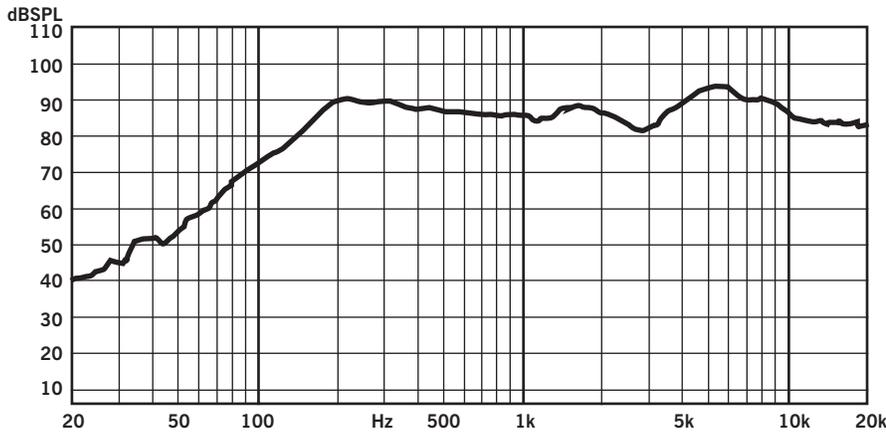
Description

The CM42-EZs is a 4" coaxial 2-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.

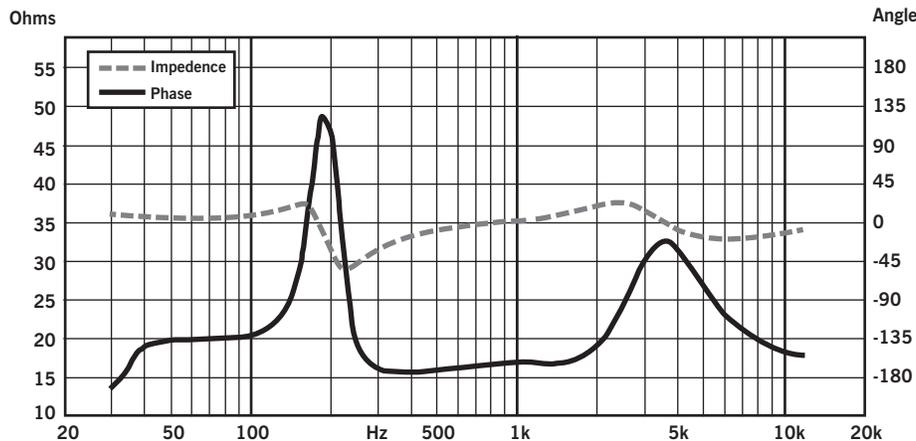
Mounting hardware is included and features a constant-tension mounting system with a 21 gauge "full-metal" steel tile bridge ensuring rapid and secure installation in any sheetrock or drop-tile application. For easy ordering, stocking and installation, this series includes a color-coded (green) tile bridge, optional pre-construction bracket, and a 5-position tap switch for 25, 70.7 & 100 V applications with voice coil/16 Ohm bypass.



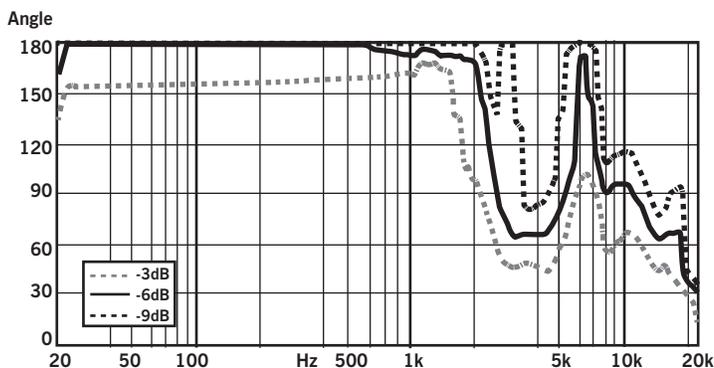
Frequency Response



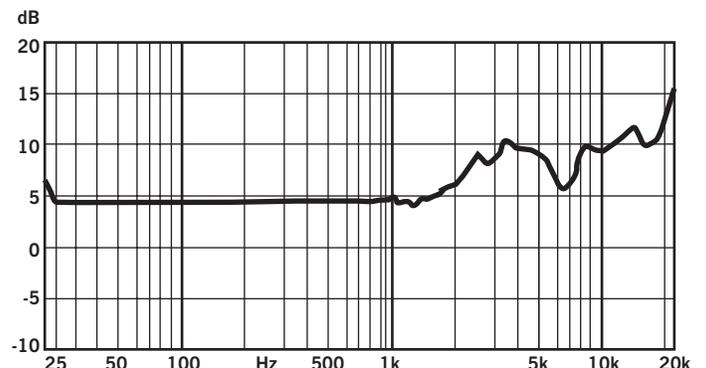
Phase/Impedance Response



Beamwidth



Directivity Index (DI)



Applications

Developed specifically for the paging and background music applications where cost, quality and fit are paramount, the CM42-EZs is ideal for hotels, retail stores, restaurants, airports, churches (under eave) or boardrooms. Indeed, the entire CM-EZ series is engineered for installations where high-efficiency and rapid installation are critical attributes. For applications requiring additional bass response, SoundTube's CM1001d subwoofer provides true low-end response down to 50 Hz.

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. & 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 includes EASE™ Data – 3-D polar plots and SoundTubeSPEC™ – Proprietary SoundTube speaker placement software.



Independent Data

Acquisition & 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 analysed 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 in) low-frequency transducer and one 19 mm (0.75 in) high-frequency transducer with a frequency dividing network installed in a sealed enclosure. The low-frequency voice coil diameter shall be 13 mm (0.50 in). 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 of a typical production unit shall be as follows: Usable frequency range shall extend from 120 Hz - 22 kHz, -10 dB. The loudspeaker shall be available with selectable 25/70.7/100 Volt and 16 Ohm/voice coil direct tap switch. The frequency dividing network shall have a crossover frequency of 5.0 kHz. Rated power capacity of the components and network shall be at least 20 Watts continuous RMS power and conform to EIA-426-B testing. Maximum continuous output at 1 meter shall be at least 100.5 dB.

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 CM42-EZs in-ceiling speaker is engineered for high performance and rapid installation in plenum spaces. The CM42-EZs incorporates a secondary attachment point

for added security, or where required by code.

Installation for the CM42-EZs shall be by 2-screw blind-mount constant-tension winged assembly and shall attach to ceiling thicknesses ranging from 0.00 in to 1.50 in. The external wiring shall be hardwired using wire nuts accepting up to three 18-gauge wires.

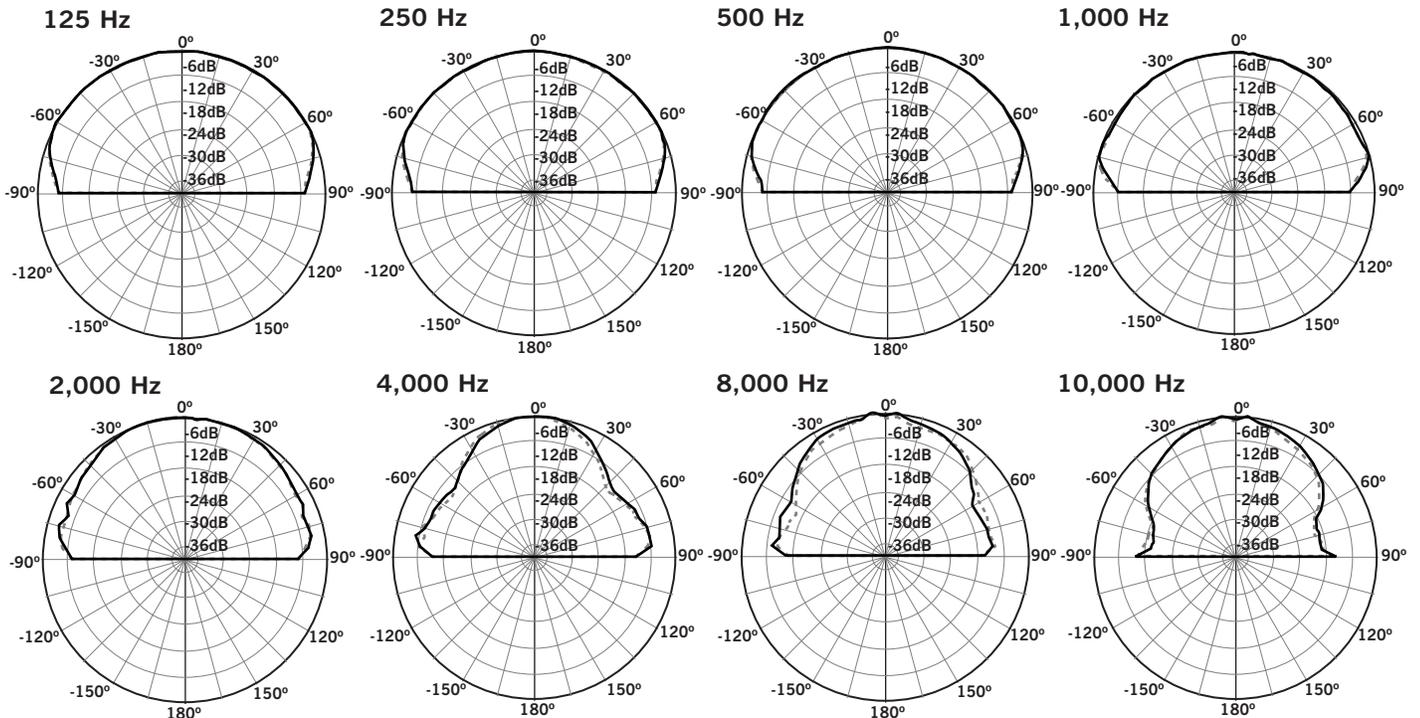
The CM42-EZs is factory preset to the 20 Watt setting in the 70.7 Volt mode with a tap switch located on the front baffle. The system shall be the SoundTube CM42-EZs for both low & high impedance applications.

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.

Polar Plots



CM42-EZs

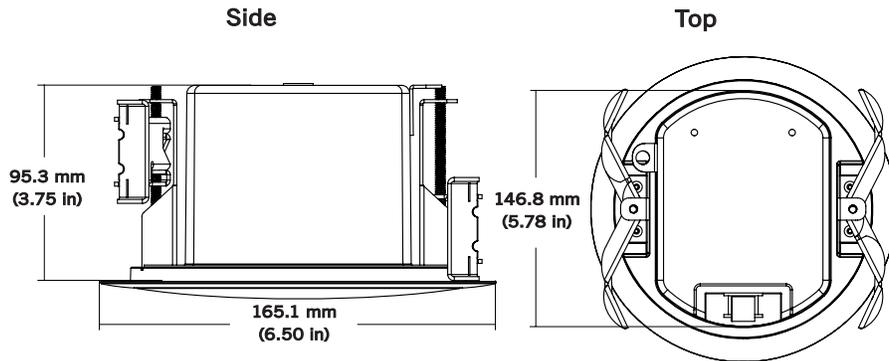
In-Ceiling Speaker

Technical Information for System Engineers

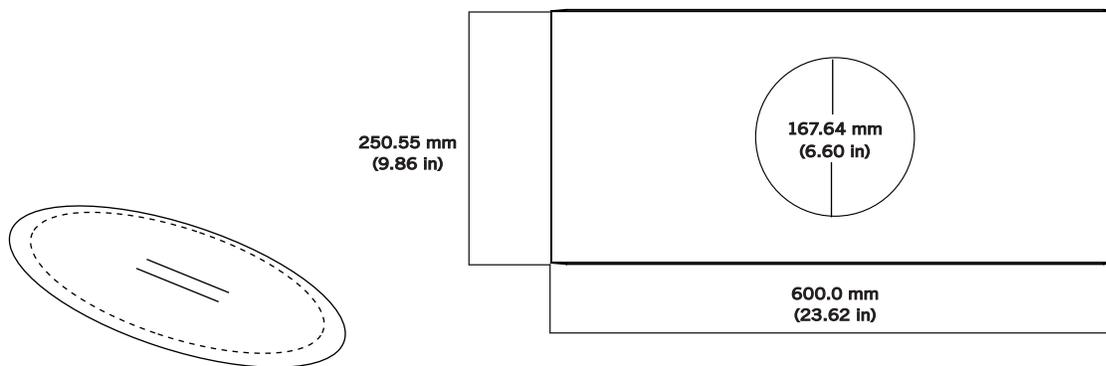


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Mechanical Drawings



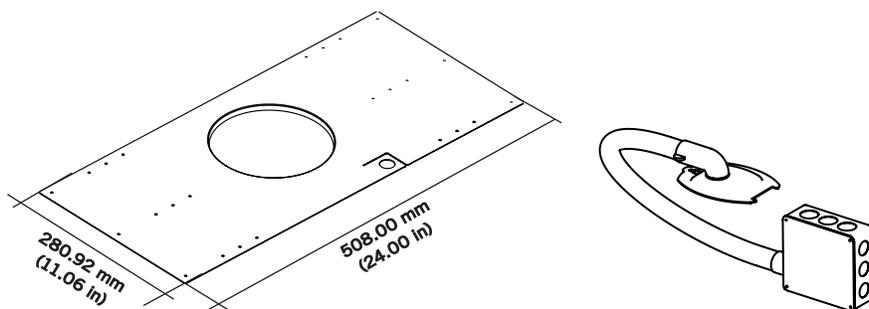
Included Accessories



Paint Mask

Tile Bridge

Optional Accesories



Pre-Construction Bracket (AC-CMEZ42-PCB)

Junction Box (AC-CM-EZ-JBOX)

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.