



Preliminary Specifications: CM62-EZ-II

Tile bridge included

System Type	6.5-inch, coaxial, in-ceiling, sealed (32-watt transformer for 25/70.7/100-volt or transformer bypass)
Impedance (nominal) ¹	16 ohm
Sensitivity dB @ 2.83 V/1 m	87.0 dB
Sensitivity dB @ 1 W/1 m ²	90.0 dB
Frequency Response (-3 dB) ³	125 Hz - 20 kHz
Frequency Response (-10 dB) ³	65 Hz - 22 kHz
Max. Program Power ⁴	100 W
Max. Continuous Power RMS ⁵	50 W
Max. Power SPL @ 1 m	107.0 dB
Coverage Angle (-6 dB @ 2 kHz)	135°
Coverage Angle (-6 dB @ 10 kHz)	120°
Coverage Angle (Avg. 2 to 10 kHz)	80°
Directivity Factor (Q)	5.1 (Avg. 100 Hz - 10 kHz); 5 (2 kHz)
Directivity Index (DI) dB	6.2 dB (Avg. 100 Hz - 10 kHz); 7 dB (2 kHz)
Tap Selector	Six-position rotary switch with transformer bypass position
Transducer - Low-Frequency Driver	165 mm (6.5 in) treated fiber cone, cloth surround
Transducer - High-Frequency Driver	25 mm (1.00 in) silk dome tweeter
Low Frequency Voice Coil	25.4 mm (1.00 in)
Crossover Frequency	4.0 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
Colors	Black or white
Backcan Diameter	245.6 mm (9.67 in)
Backcan Height	146.1 mm (5.75 in)
Visible Diameter	298.5 mm (11.75 in)
Visible Height	8.6 mm (0.34 in)
Mounting Hole Diameter	266.7 mm (10.50 in)
Min. / Max. Ceiling Thickness	0.9 mm (0.035 in) – 40.6 mm (1.60 in)
Weight	3.6 kg (8.0 lbs)
Shipping Weight	4.1 kg (9.0 lbs)
Included Accessories	Tile bridge, UL-listed flex conduit clamp, paint shield, hole template, wire nuts
Optional Accessories	Pre-construction bracket (AC-CMEZ-6/8-PCB); junction box (AC-CM-EZ-JBOX)
Packaging	One per box
Regulatory - UL	1480 (UEAY) and 2043 approved
Regulatory - CE	Approved
RoHS	Approved

Transformer Taps

70.7 V	Output	100 V	Output	25 V	Output
32 W	105.5 dB	32 W	105.0 dB	4 W	96.0 dB
16 W	102.0 dB	16 W	102.0 dB	2 W	93.0 dB
8 W	99.0 dB	8 W	99.0 dB	1 W	90.0 dB
4 W	96.0 dB	4 W	96.0 dB	0.5 W	87.0 dB
2 W	93.0 dB			0.3 W	84.0 dB

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

Key Features

- One 6.5 in (165 mm) treated fiber woofer with cloth surround and one 1.0 in (25.4 mm) silk dome tweeter.
- Easy-access, six-position tap switch for 25/70.7/100-volt and 16 ohm transformer bypass position allows for easy ordering, stocking and installation.
- Reduced amplification costs with maximum efficiency including 90 dB sensitivity and 16-ohm impedance.
- Superior voice intelligibility with a 10 kHz coverage angle of 80° (Independently verified).
- Incorporates a painted steel grille for lasting durability.
- Adaptable to material thicknesses ranging from 0.04 in (0.9 mm) to 1.60 in (40.6 mm).
- UL 1480 (UEAY) 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-inch flex conduit clamp, paint shield and two wire nuts.
- Optional accessories: Color-coded (green) pre-construction bracket (AC-CMEZ6/8-PCB), junction box (AC-CM-EZ-JBOX).

Description

The CM62-EZ-II is a 6.5-inch, coaxial, two-way, blind-mount, in-ceiling speaker which delivers true high efficiency and performance across the operating bandwidth. By incorporating a 6.5-inch treated-fiber driver with cloth surround in a sealed drawn steel backcan, this speaker delivers maximum frequency response (65 Hz – 22 kHz, - 10 dB) in an integrated enclosure 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 (green) tile bridge and a six-position tap switch for 25-, 70.7- and 100-volt applications and 16 ohm transformer bypass. Optional pre-construction brackets are also available.



Applications

Developed specifically for the paging and background music applications where cost, quality and fit are paramount, the CM62-EZ-II is ideal for hotels, retail stores, restaurants, airports, churches (under eave) 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 41 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. 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 includes EASE™ Data – 3-D polar plots and SoundTubeSPEC™ – 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 loudspeaker shall consist of one 6.5 in (165 mm) low-frequency transducer and one 1.00 in (25.4 mm) high-frequency transducer with a frequency dividing network installed in a sealed enclosure. The low-frequency voice coil diameter shall be 1.00 in (25 mm). 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 65 Hz - 22 kHz, -10 dB. The loudspeaker shall be available with selectable 25/70.7/100-volt and transformer bypass position. The frequency dividing network shall have a crossover frequency of 4.0 kHz. Rated power capacity of the components and network shall be at least 50 watts continuous RMS and conform to EIA-426-B testing. Calculated maximum continuous output at 1 meter shall be at least 107 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 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 where required by code.

Installation for the speaker shall be by two-screw, blind-mount, constant-tension, winged assembly and shall attach to ceiling thicknesses ranging from 0.04 in to 1.6 in. The external wiring shall be via 4 position ceramic terminal strip accepting up to 12-gauge wire.

The maximum backcan dimension shall be no more than 146.1 mm (5.75 in.) in height by 245.6 mm (9.67 in.) in diameter. The maximum visible dimensions shall be no more than 8.6 mm (0.34 in.)

in height by 298.5 mm (11.75 in.) in diameter. The unit is factory preset to the 32-watt operating mode in the 70.7-volt mode.

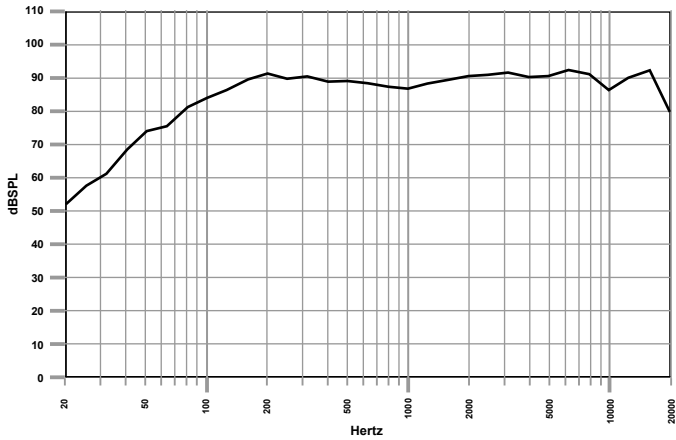
The system shall be the SoundTube CM62-EZ-II for both low- and high-impedance applications.

SoundTube Entertainment

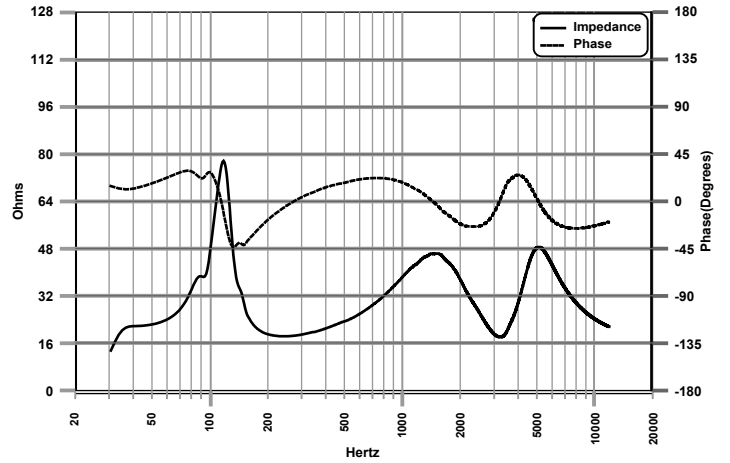
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All SoundTube products come with a 5-year limited warranty.

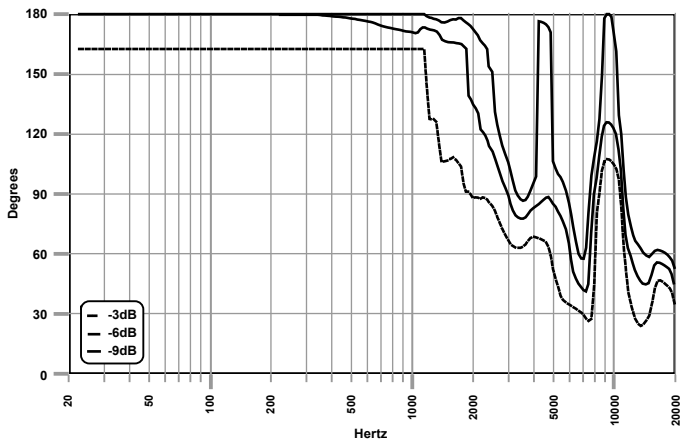
Frequency Response



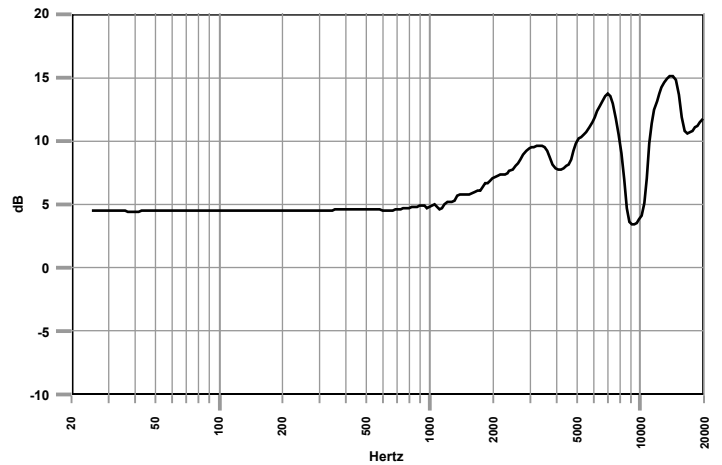
Phase/Impedance Response



Vertical Beamwidth



Directivity Index (DI)

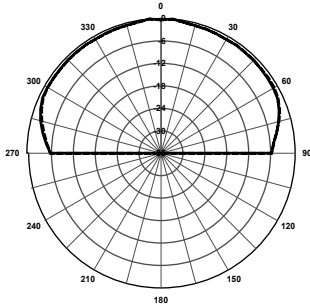




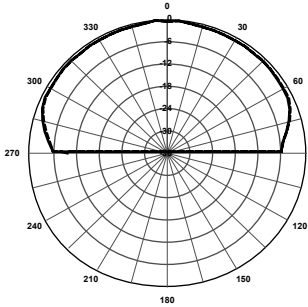
Polar Plots

— Vertical
- - - Horizontal

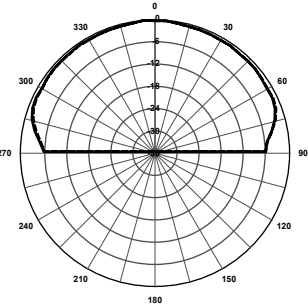
125 Hz



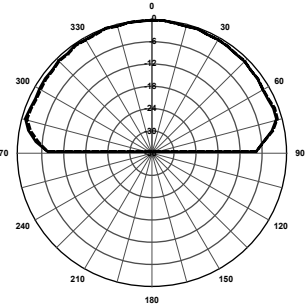
250 Hz



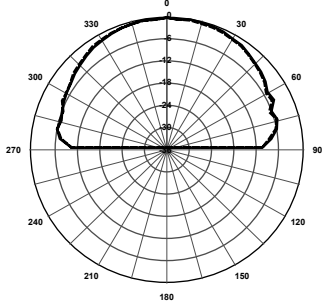
500 Hz



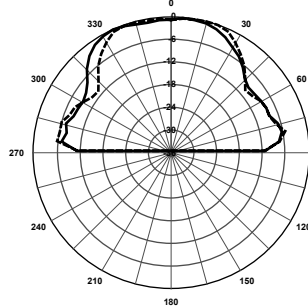
1,000 Hz



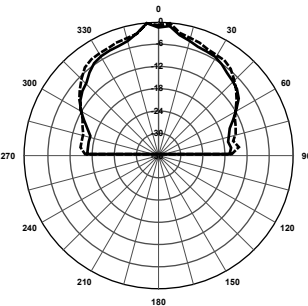
2,000 Hz



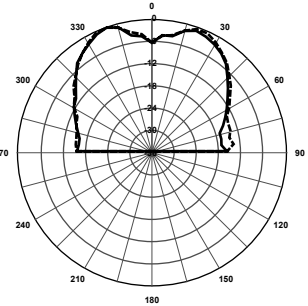
4,000 Hz



8,000 Hz

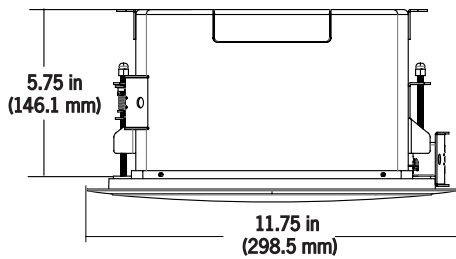


10,000 Hz

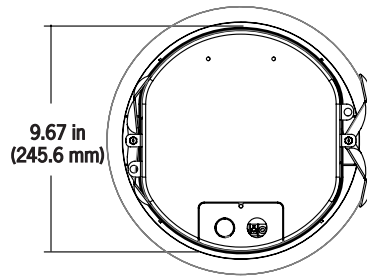


Mechanical Drawings

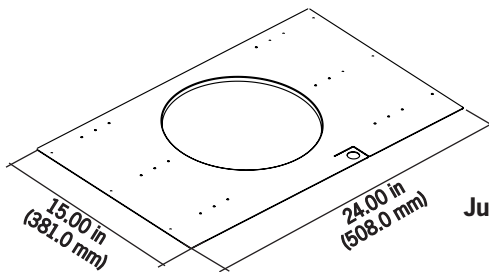
Side



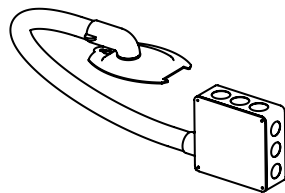
Top



Optional Accesories

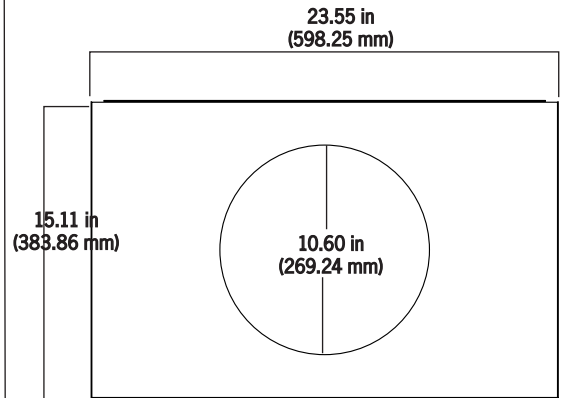


Pre-Construction Bracket (AC-CMEZ6/8-PCB)

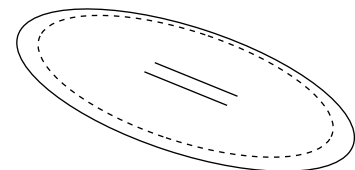


Junction Box (AC-CM-EZ-JBOX)

Included Accessories



Tile Bridge



Paint Mask