

TECHNICAL DATA

EdgeMax™ EM90

in-ceiling premium loudspeaker with PhaseGuide® technology

BOSE

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Product Overview

Bose Professional EdgeMax™ in-ceiling premium loudspeakers feature proprietary Bose PhaseGuide® technology with high-frequency compression drivers to create a new category that combines the room-filling coverage patterns typical of larger surface-mount speakers with the architect-preferred aesthetics of in-ceiling models. Designed to mount near wall-ceiling boundaries, EdgeMax™ loudspeakers provide improved audio quality and coverage, while reducing the number of required units, compared to conventional dome-tweeter ceiling speakers.

Key Features

- **PhaseGuide technology** – provides a unique asymmetrical vertical pattern for room-filling coverage when mounting near wall-ceiling boundaries
- **Provides improved room visual appearance** – for demanding interior designs by eliminating center-of-ceiling or wall-mounted loudspeakers, and reducing speaker counts
- **Nominal 90° horizontal coverage** – designed for in-ceiling mounting near room corners
- **High-frequency compression driver** – for best-in-class audio quality with superior frequency response and coverage consistency versus typical dome tweeters
- **8-inch woofer** – with wall-boundary loading provides extended bass impact
- **2-way passive crossover with 70/100V transformer**
- **New auto-hold, spring-loaded mounting arms** – for fast, easy installs
- **Magnetically attached grille** – for quick access to wiring and tap settings
- **45 Hz - 20 kHz Frequency Range** – eliminates need for subwoofers
- **Coverage pattern similar to a surface-mount loudspeaker** – enables stereo designs
- **In compliance with the following safety standards: UL1480A, UL2043**



Technical Specifications

SINGLE MODULE PERFORMANCE		
Frequency Response (-3 dB) ⁽¹⁾	50 - 18,000 Hz	
Frequency Range (-10 dB)	45 - 20,000 Hz	
Nominal Coverage Pattern	90° H x asymmetrical 75° V (0° to 75° referenced to wall)	
	Bose extended-lifecycle test ⁽⁴⁾	AES transducer test ⁽⁵⁾
Power Handling, long-term continuous	125 W	150 W
Power Handling, peak	500 W	600 W
Sensitivity (SPL/1W @ 1 m) ⁽²⁾	96 dB	96 dB
Calculated Maximum SPL @ 1 m ⁽³⁾	117 dB	118 dB
Calculated Maximum SPL @ 1 m, peak	123 dB	124 dB
Crossover	1.0 kHz (passive 2-way crossover with integrated 70/100V transformer)	
Loudspeaker EQ	Recommended but not required	
Recommended high-pass protection	55 Hz with minimum 12-dB / octave filter	
Overload protection	Resistor-network power reduction with automatic reset	
Transformer taps	70V: 2.5, 5, 10, 20, 40, 80 W, bypass / 100V: 5, 10, 20, 40, 80 W, bypass	
TRANSDUCERS		
Low Frequency	1x 8-inch woofer (1.5-inch voice coil)	
High Frequency	1x compression driver (1.3-inch voice coil)	
Nominal Impedance	8 ohms (transformer bypass)	
PHYSICAL		
Enclosure Material	Engineered-plastics front baffle with integrated steel formed enclosure	
Grille	Micro perforated steel, powder-coated finish, white: RAL 9010, paintable	
Environmental	Indoor only; UL-1480A listed, in compliance with UL2043 for plenum-space installation	
Connectors	Euro block 6-pin connector with loop-through, front-baffle mounted	
Suspension / mounting	Four (4) auto-hold, spring-loaded mounting arms plus four (4) M6 safety cable tabs	
Maximum ceiling thickness	80 mm (3.2")	
Dimensions (H x W x D)	339 x 339 x 249 mm (13.4" L x 13.4" W x 9.8" D) enclosure	
	390 x 390 x 13 mm (15.4" L x 15.4" W x 0.5" D) grille flange, as mounted	
Ceiling cutout and clearance	345 x 345mm (13.6" L x 13.6" W) with 236 mm (9.3") mounting depth	
Net Weight	10.1 kg (22.2 lbs) with grille	
Shipping Weight	12.5 kg (29 lbs)	
Accessories	Black grille, rough-in pan for new construction	

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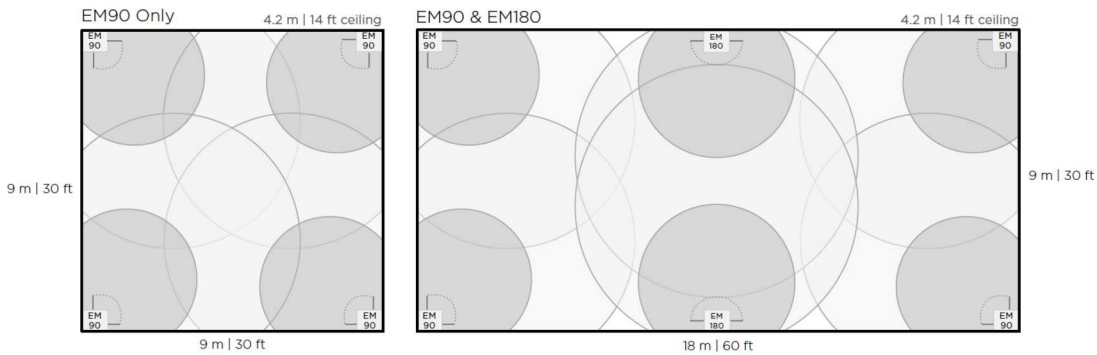
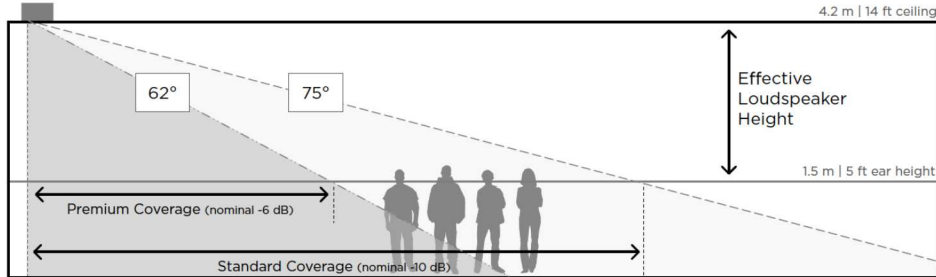
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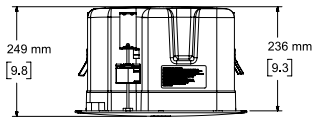
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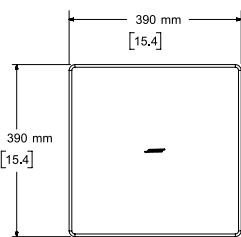
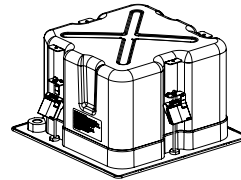
Nominal Coverage and Room Placement



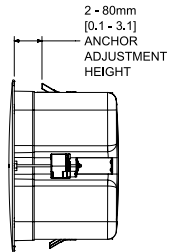
Dimensions



Top View

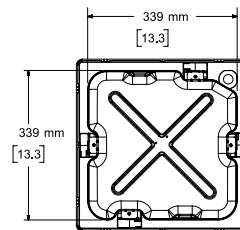


Front View

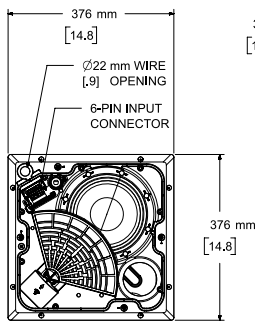


Side View

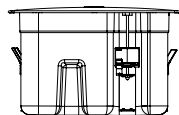
DIMENSIONS APPLY TO BOTH SIDES



Rear View



Front View
(Grille Removed)



Bottom View

NOTES:
1. WEIGHT IS APPROX. 10.0kg [22.0 lbs]
2. DIMENSIONS ARE IN MILLIMETERS OVER INCHES

Footnotes

- (1) Frequency response and range measured on-axis in one-eighth-space (corner loaded) environment with recommended Active EQ
- (2) Sensitivity measured on-axis in one-eighth-space (corner loaded) environment with recommended Active EQ
- (3) Maximum SPL calculated from sensitivity and power handling specifications, exclusive of power compression
- (4) Bose extended-lifecycle test using pink noise filtered to meet IEC268-5, 6-dB crest factor, 500-hour duration
- (5) AES standard 2-hour duration with IEC system noise