

FreeSpace FS4CE

In-ceiling Loudspeaker


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Please read and keep all safety and use instructions.


This product is intended for installation by professional installers only! This document is intended to provide professional installers with basic installation and safety guidelines for this product in typical fixed-installation systems. Please read this document and all safety warnings before attempting installation.

Do not attempt to service this product yourself. Refer all servicing to authorized service centers, installers, technicians, dealers or distributors. To contact Bose Professional or to find a dealer or distributor near you, visit **PRO.BOSE.COM**.


1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
6. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produces heat.
7. Only use attachments/accessories specified by the manufacturer.



WARNINGS/CAUTIONS



This product contains magnetic material. Consult your physician on whether this might affect your implantable medical device.



Contains small parts which may be a choking hazard. Not suitable for children under age 3.

- It is the responsibility of the installer to use a support system which has sufficient wind load strength to comply with the applicable codes and standards.
- All Bose products must be installed in accordance with local, state, federal and industry regulations. It is the installer's responsibility to ensure installation of the loudspeakers and mounting system is performed in accordance with all applicable codes, including local building codes and regulations. Consult the local authority having jurisdiction before installing this product.
- Unsafe mounting or overhead suspension of any heavy load can result in serious injury or death, and property damage. It is the installer's responsibility to evaluate the reliability of any mounting method used for their application. Only professional installers with the knowledge of proper hardware and safe mounting techniques should attempt to install any loudspeaker overhead.
- Do not mount on surfaces that are not sturdy, or that have hazards concealed behind them, such as electrical wiring or plumbing. Ensure the bracket is installed by a qualified professional installer and in accordance with local building codes.
- Use only the hardware and accessories included or specified by Bose for use with FreeSpace FS4CE loudspeakers. For information on compatible accessories, see the product's technical data sheet at **PRO.BOSE.COM**.
- Keep the product away from fire and heat sources. Do not place naked flame sources, such as lighted candles, on or near the product.
- Do not make unauthorized alterations to this product.
- Do not expose loudspeaker or mounting components to any chemical substances that are not specified by Bose, including but not limited to lubricants, cleaning agents, contact sprays, or hydrocarbon-based solvents. Exposure to such substances can lead to degradation of the plastic material, resulting in cracking and creating a falling hazard.
- Clean speakers using only a dry cloth. Do not expose loudspeaker to soap, detergent, mineral oil, alcohol or other cleaning agents or chemicals.

Product Ratings:


Input Voltage: 70V/100V

Impedance: 8 Ω, 40 W


Current or Power: (70V): 2.5W, 5W, 10W, 20W, 40W; (100V): 5W, 10W, 20W, 40W

Regulatory Information

Do not paint or modify factory-applied finishes.

 This product conforms to all applicable EU directive requirements. The complete declaration of conformity can be found at: www.bose.com/compliance.

 This product conforms to all applicable Electromagnetic Compatibility Regulations 2016 and all other applicable UK regulations. The complete declaration of conformity can be found at: www.bose.com/compliance

 This symbol means the product must not be discarded as household waste, and should be delivered to an appropriate collection facility for recycling. Proper disposal and recycling helps protect natural resources, human health and the environment. For more information on disposal and recycling of this product, contact your local municipality, disposal service, or the shop where you bought this product.

China Restriction of Hazardous Substances Table

Names and Contents of Toxic or Hazardous Substances or Elements						
Part Name	Toxic or Hazardous Substances and Elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent (CR(VI))	Polybrominated Biphenyl (PBB)	Polybrominated diphenyl ethers (PBDE)
PCBs	X	0	0	0	0	0
Metal Parts	X	0	0	0	0	0
Plastic Parts	0	0	0	0	0	0
Speakers	X	0	0	0	0	0
Cables	X	0	0	0	0	0

This table is prepared in accordance with the provisions of SJ/T 11364.
 O: Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement of GB/T 26572.
 X: Indicates that this toxic or hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement of GB/T 26572.

Taiwan Restriction of Hazardous Substances Table

Equipment name: FreeSpace FS4CE, Type designation: 841156						
Unit	Restricted substances and its chemical symbols					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent chromium (Cr+6)	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)
PCBs	-	o	o	o	o	o
Metal Parts	-	o	o	o	o	o
Plastic Parts	o	o	o	o	o	o
Speakers	-	o	o	o	o	o
Cables	-	o	o	o	o	o

Note 1: "o" indicates that the percentage content of the restricted substance does not exceed the percentage of reference value of presence.
Note 2: The "-" indicates that the restricted substance corresponds to the exemption.

Date of Manufacture: The eighth digit in the serial number indicates the year of manufacture; "7" is 2007 or 2017.

China Importer: Bose Electronics (Shanghai) Company Limited, Part C, Plant 9, No. 353 North Riyang Road, China (Shanghai) Pilot Free Trade Zone

EU Importer: Bose Products B.V., Gorslaan 60, 1441 RG Purmerend, The Netherlands

Mexico Importer: Bose de México, S. de R.L. de C.V., Paseo de las Palmas 405-204, Lomas de Chapultepec, 11000 México, D.F. For importer & service information: +5255 (5202) 3545

Taiwan Importer: Bose Taiwan Branch, 9F-A1, No. 10, Section 3, Minsheng East Road, Taipei City 104, Taiwan. Phone Number: +886-2-2514 7676

UK Importer: Bose Limited, Bose House, Quayside Chatham Maritime, Chatham, Kent, ME4 4QZ, United Kingdom

UK Importer: Bose Limited, Bose House, Quayside Chatham Maritime, Chatham, Kent, ME4 4QZ, United Kingdom

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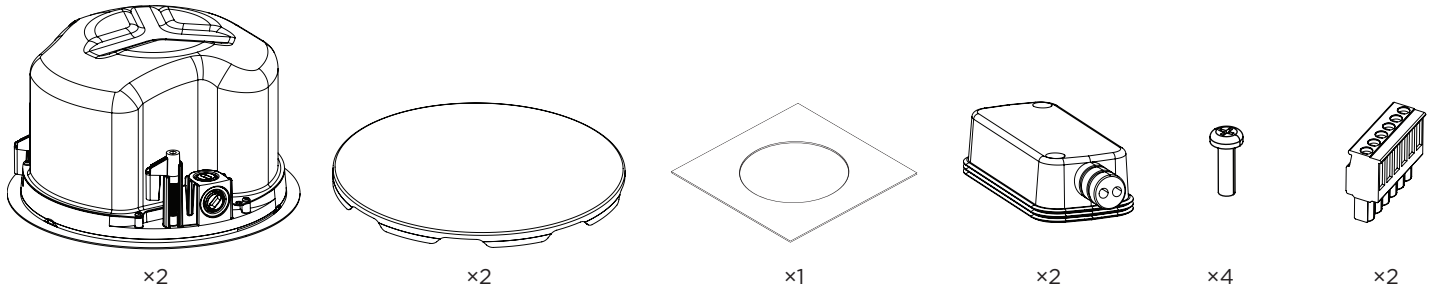
Bose Corporation Headquarters: 1-877-230-5639

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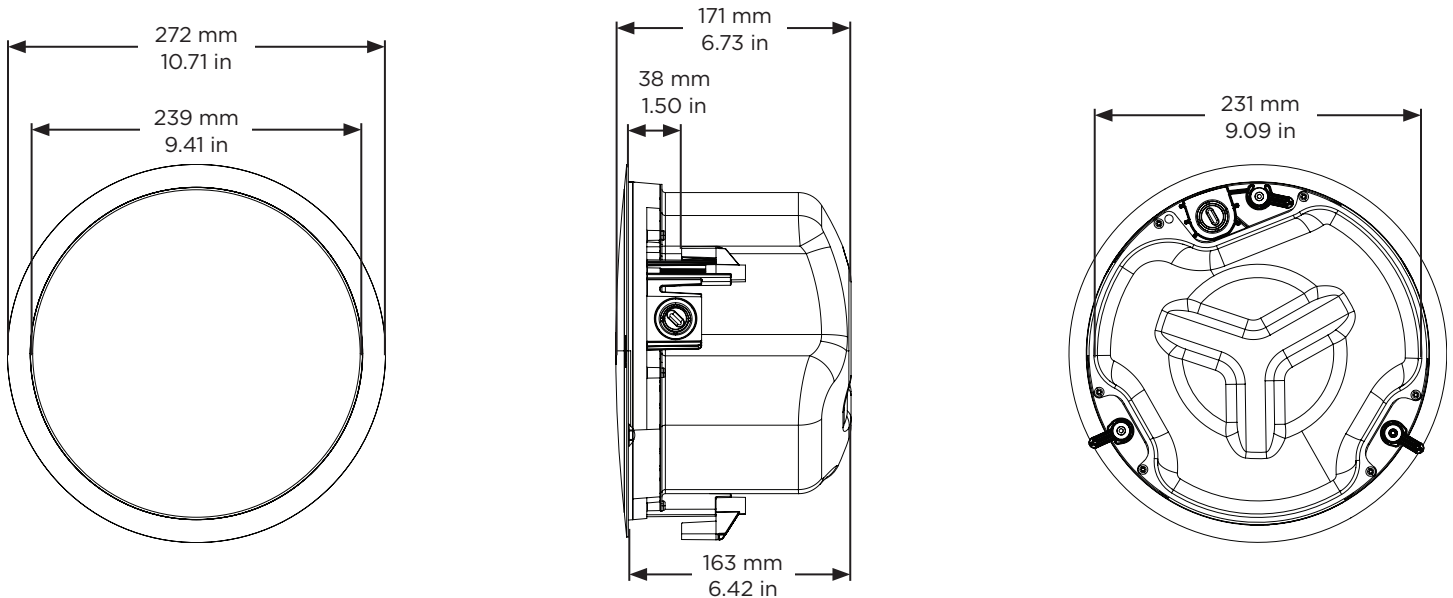
Warranty Information

This product is covered by a limited warranty. For warranty details, visit **PRO.BOSE.COM**.

Package Contents



Product Dimensions



Technical Specifications

For additional specifications, see the FreeSpace FS4CE technical data sheet at PRO.BOSE.COM. For EN 54-24 specifications, see the FreeSpace FS4CE EN 54-24 certified ratings (AM857614 Rev. 00) at PRO.BOSE.COM.

Physical	
Product Dimensions	Baffle diameter: 272 mm (10.71 in)
	Enclosure diameter: 231 mm (9.09 in)
	Backcan depth: 163 mm (6.42 in)
Hole cutout	250 mm (9.84 in)
Maximum Ceiling Thickness	38 mm (1.50 in)
Net Weight, Loudspeaker with grille (single)	3.47 kg (7.65 lb)
Shipping Weight (pair)	9.05 kg (19.95 lb)
Environmental	Suitable for use outdoors in wet locations with included weather-resistant input cover (IP55 per EN60529; IP33C per EN 54-24). Optional accessory aluminum grille for harsh environments to prevent red corrosion is available.

Important Installation Information



Before installing the loudspeaker, review **Important Safety Instructions** on page 2.



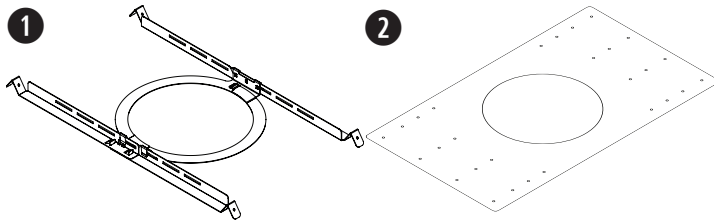
For **fire and evacuation notification applications**, environmental rated to IP33C per EN 54-24. For **general purpose audio installation applications**, environmental rated to IP55 per EN60529.

Installation Options

Installation Options and Accessories

One of the following is required for installation. See the related accessory installation guide at PRO.BOSE.COM for installation instructions.

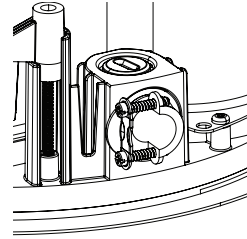
- 1 Adjustable Tile Bridge (not included)
- 2 Rough-in Pan (not included)



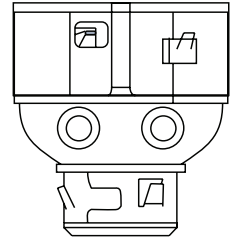
Conduit Fitting

If using a flexible metal conduit, use with a $\frac{3}{8}$ -inch conduit fitting or a $\frac{3}{8}$ -inch dual (duplex) connector.

Note: Conduit fittings are not provided.



$\frac{3}{8}$ -inch single in



$\frac{3}{8}$ -inch duplex in/loop

Choosing an Installation Method

1 Top Knockout

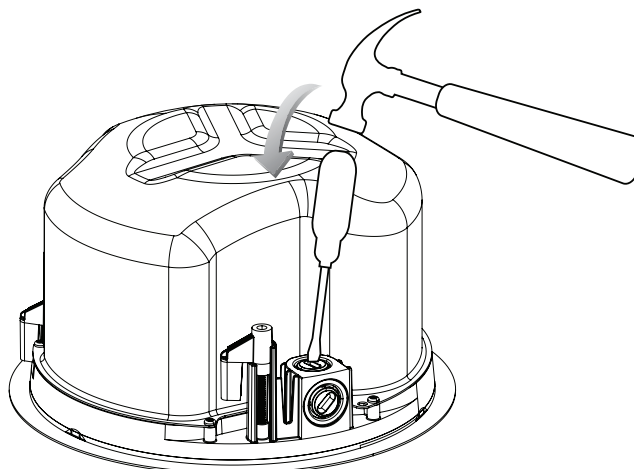
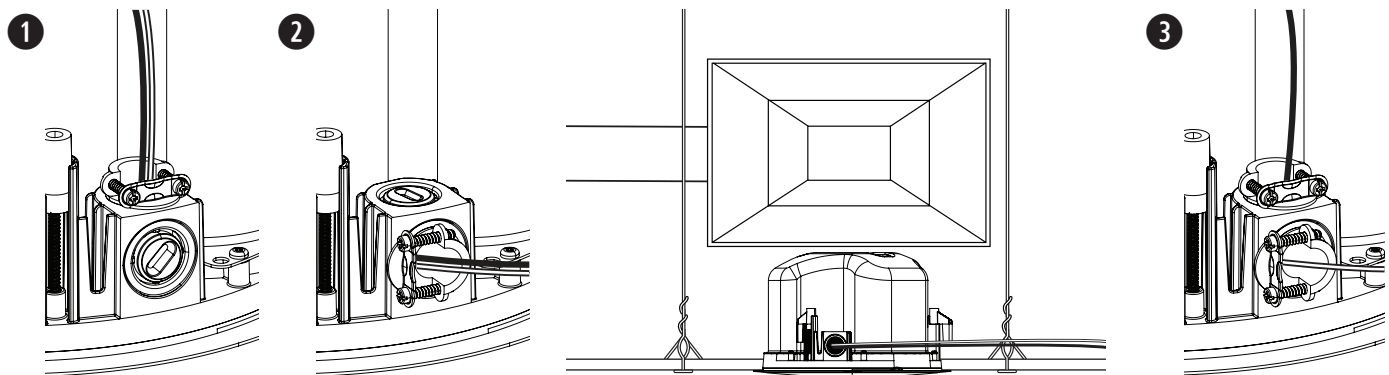
Use the top knockout when there is available space above the ceiling.

2 Side Knockout

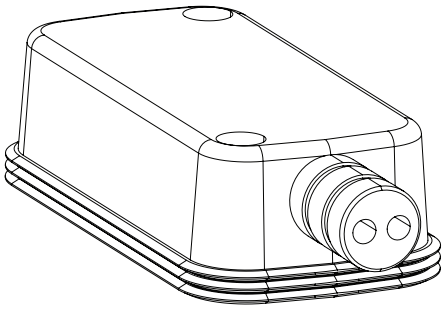
Use the side knockout when there is limited space above the ceiling.

3 Both Knockouts

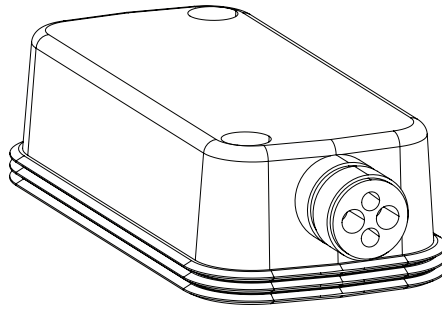
Use both knockouts when an independent signal-in and signal-out wiring scheme is required and there is available space above the ceiling.



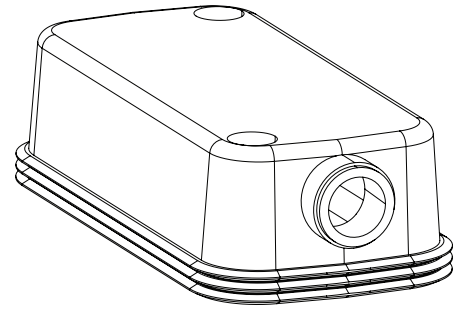
Single In



In and Out



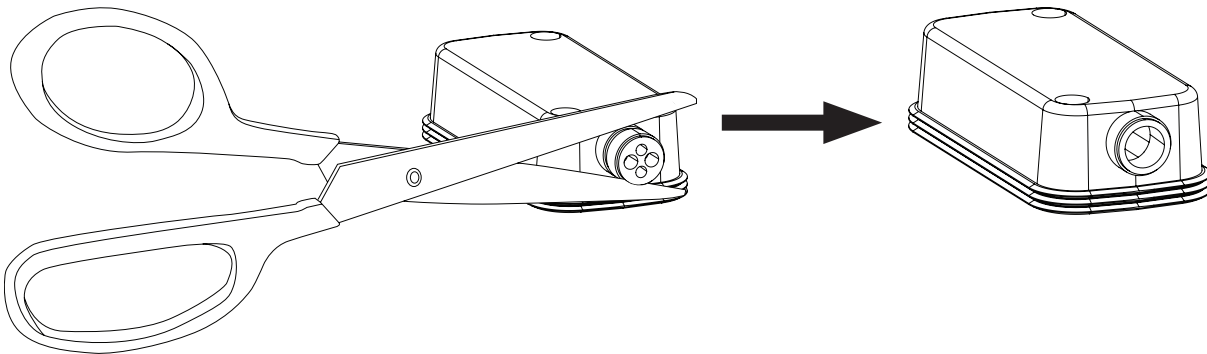
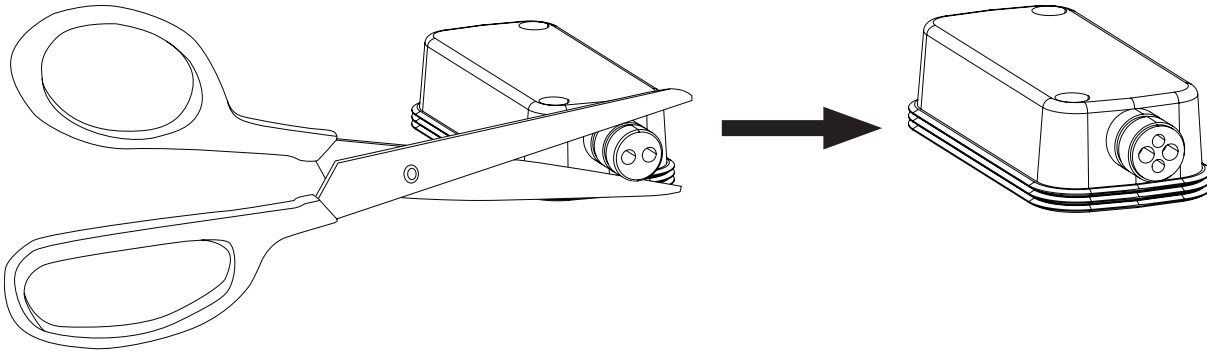
Wide Open



Preparing the Input Cover

The input cover is designed for three different wiring scenarios (see above). To change the configuration of the input cover to support your wiring scenario, cut along the perforation on the rubber conduit.

Note: It is the installer's responsibility to seal against water ingress into the Euroblock connector. Use outdoor or marine-grade silicone to seal all wiring connections to ensure a tight seal.



Wiring the Loudspeaker

Wire Gauge

The FreeSpace FS4CE loudspeaker is designed to work with 18 AWG (0.8 mm²) to 14 AWG (2.1 mm²) size wire only.

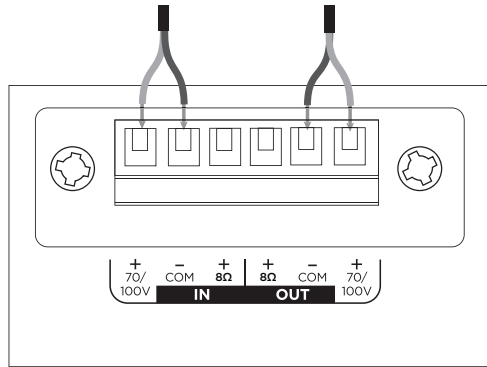
Connection Diagrams

Expose six millimeters (¼ inch) of bare wire to attach to the terminals.

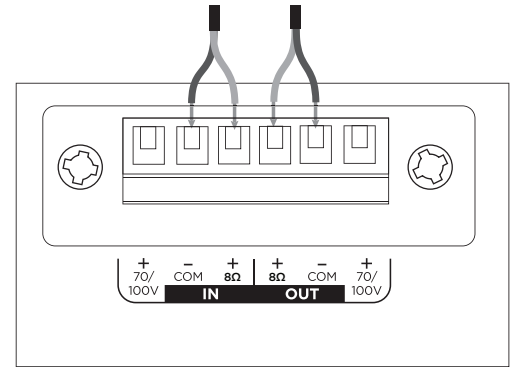
Note: Wiring method must be in accordance with:

In Canada, CSA C22.1, Canadian Electrical Code, Part I, Safety Standard for Electrical Installations, Section 32;

In the United States, The National Electrical Code, NFPA 70, and the National Fire Alarm and Signaling Code, NFPA 72.

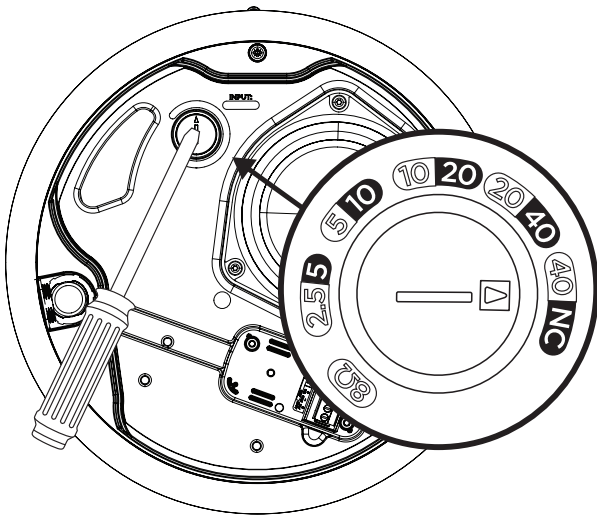


70/100V



8Ω

Loudspeaker Settings



70V					8Ω
2.5W	5W	10W	20W	40W*	
5W	10W	20W	40W	NC**	
100V					

* Factory default

** NC: No Connection (do not use)

Transformer Tap Setting

Set tap by turning. Use a flat head screwdriver.

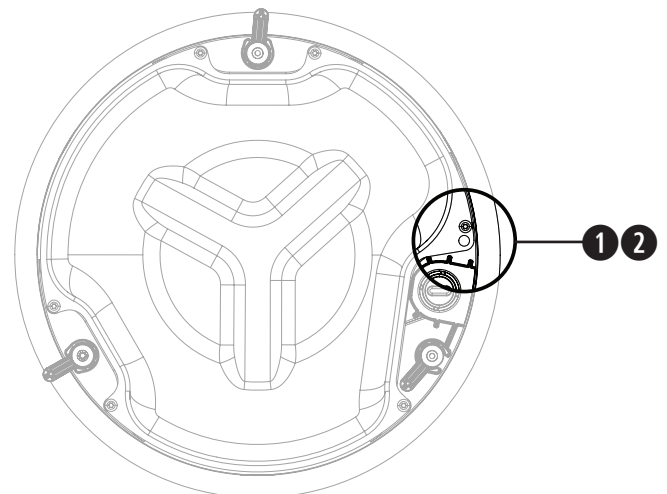
Preparing the Installation

Using a Safety Cable

Some regional construction codes require the use of a secondary method of securing loudspeakers to support structures to provide additional safety. Choose a mounting position, method, and hardware consistent with local building codes and regulations.

Bose recommends using (1) a safety wire or (2) a safety cable as a secondary securing mechanism. See the diagram to the right for safety attachment points.

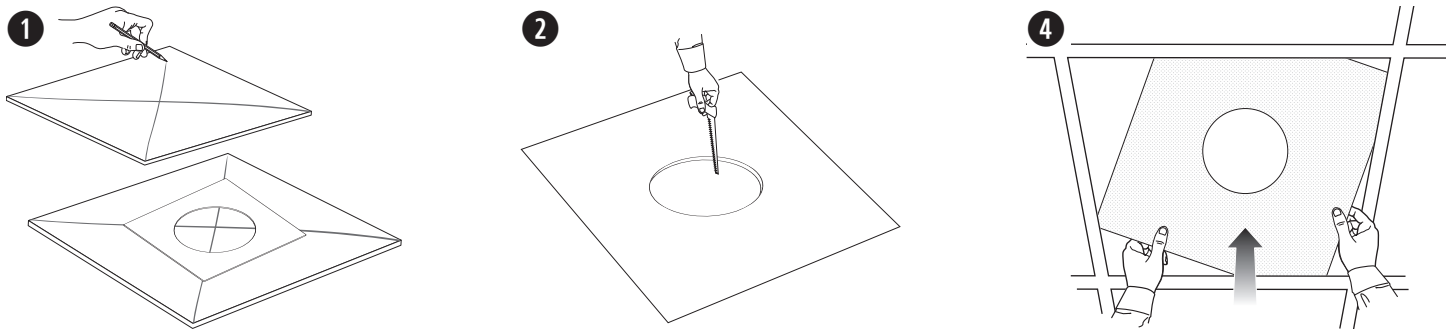
Follow the manufacturer's instructions for any secondary securing mechanism implemented.



Preparing a Tile Bridge Installation

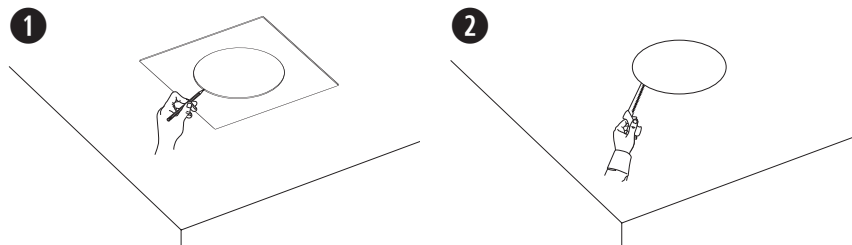
Ceiling Tile

1. Remove the tile and use the template to trace a loudspeaker hole onto the tile. To center the template on the tile, draw an X by connecting the corners diagonally and center the template using the crossing point.
2. Cut a hole into the tile.
3. Install the tile bridge. For instructions on installing a tile bridge, see the installation guide for the applicable tile bridge at PRO.BOSE.COM.
4. Replace the ceiling tile.



Hard Ceiling

1. Use the template to trace a hole onto the ceiling.
2. Cut a hole into the ceiling.
3. Install the tile bridge. For instructions on installing a tile bridge, see the installation guide for the applicable tile bridge at PRO.BOSE.COM.

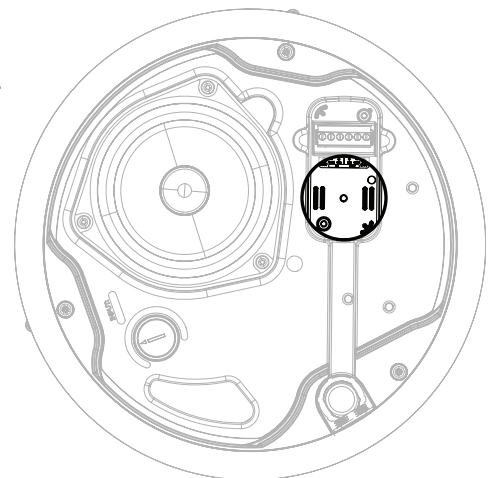


Installing in Hard Ceiling Using a Rough-in Pan (New Construction)

For information on installing a rough-in pan, see the DesignMax and FreeSpace Rough-in Pan installation guide at PRO.BOSE.COM. Once the rough-in pan is installed, see **Mounting the Loudspeaker** on page 8.

Ceramic Terminal Attachment Point

The FreeSpace FS4CE is compatible with an optional ceramic terminal accessory. See the diagram for the location of the ceramic terminal attachment point. For more information on the ceramic terminal, see the ceramic terminal installation guide at PRO.BOSE.COM.



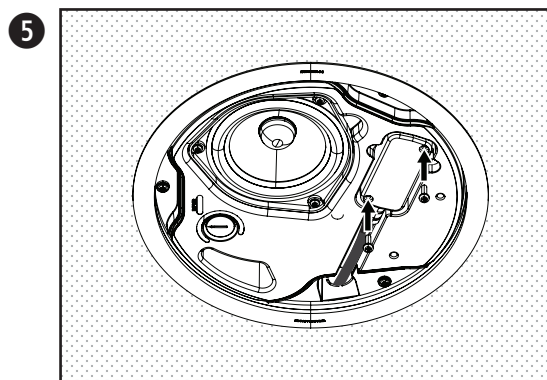
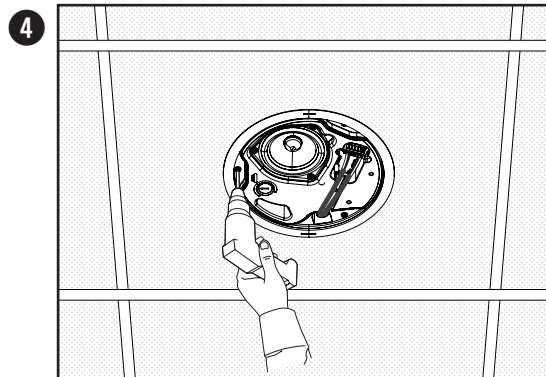
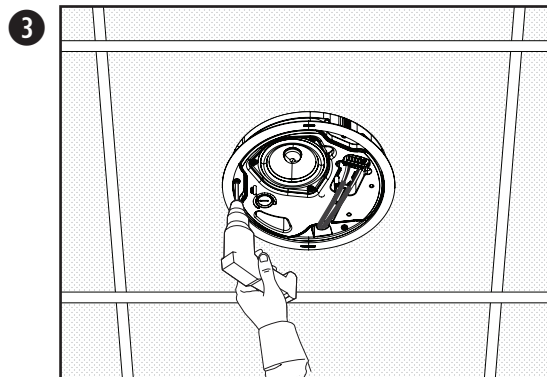
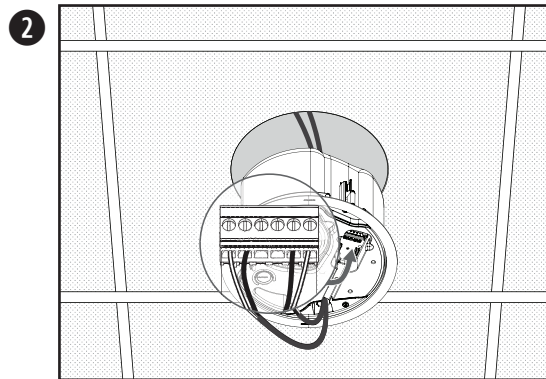
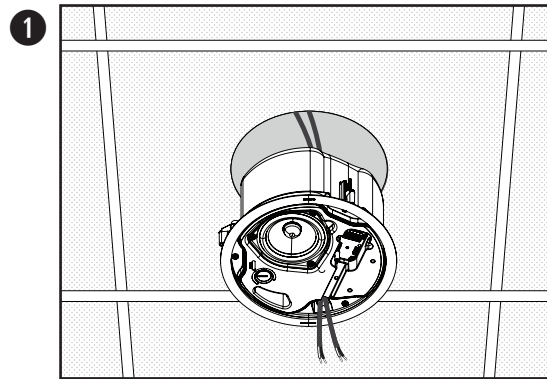
Mounting the Loudspeaker

1. Pass the audio wire through the wire opening and through the input cover (not shown; see **Preparing the Input Cover** on page 5).
2. Wire the connector and insert the connector into the loudspeaker. Tighten the conduit fitting if applicable. For wiring information, see **Wiring the Loudspeaker** on page 6.
3. Insert the loudspeaker through the hole and into the tile bridge or rough-in pan (see page 7) and turn (counterclockwise) the anchor arm screws one half turn to release the anchor arms. Slowly lower the loudspeaker until the anchor arms engage on the tile bridge or rough-in pan.
4. Tighten the anchor arm screws to secure the loudspeaker.



WARNING: Over-tightening or over-loosening the screws may result in damage to the anchor arms, the anchor attachment point, or the ceiling, which could lead to a falling hazard.

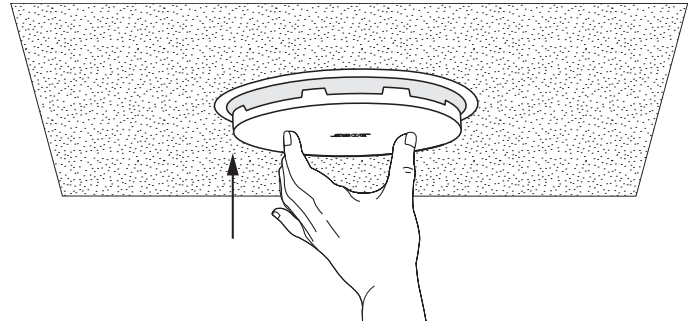
5. Place the input cover over the connector and press it firmly against the loudspeaker to create a tight seal. Use the two included input cover screws to secure the input cover. See **Preparing the Input Cover** on page 5.



Attaching the Grille

Note: Before attaching the grille, adjust the loudspeaker tap settings to the appropriate setting for the installation. See **Loudspeaker Settings** on page 6.

After determining the logo alignment appropriate for the installation, line up the grille with the inside of the loudspeaker enclosure and push upward until it is secured into place. If necessary, push the grille tabs inward to properly fit into the loudspeaker enclosure.



Removing the Grille

Insert a small tool (no larger than 1.5 millimeters in diameter) through the grille perforation at the edge of the grille and pull to disengage the grille.



CAUTION: Do not use a screwdriver to pry the grille from the enclosure. This could result in damage to the loudspeaker.

Safety and Regulatory Compliance

The Bose FreeSpace FS4CE loudspeaker has passed testing and complies with the following specifications and uses:

Listed to ANSI/UL 1480-2016, CAN/ULC-S541

Fire Protective Signaling Use – UL Category UUMW/UUMW7, File Number S 3241. Control Number 42S9.
Not for use with DC-supervised systems.

Suitable for use indoors in dry locations.

EN 54-24: 2008, Loudspeaker for Voice Alarm Systems for Fire Detection and Fire Alarm Systems for Buildings

Environmental: Type B (outdoor applications)

Suitable for installation using Class 1, Class 2, or Class 3 wiring methods in accordance with NFPA 70, National Electric Code, 2002, Article 640.

Suitable for use with fire alarm circuit wiring methods in accordance with NFPA 70, National Electric Code, 2002, Article 760.

Suitable for use in air handling plenum spaces.

UL-2043, Fire Test and Visible Smoke Release for Discrete Products and their Accessories Installed in Air Handling Spaces.

NFPA 70, National Electric Code, 2002, Article 300-22 (c).

NFPA 90-A, 2002, Installation of Air Conditioning and Ventilation Systems, Paragraph 4.3.10.2.6.5.

EMC Directive 89/336/EEC and Article 10 (1) of the directive, EN50081-1 and EN50082-1 as signified by the CE mark.

The FreeSpace FS4CE loudspeaker has been designed to the requirements defined in the following European regulatory specification for combination systems:

British Standard Code of Practice BS 5839, Part 8, when used with the ceramic terminal block and thermal fuse.

Tested to IEC60268-5.

Nominal Coverage Angle (per UL 1480) Vertical: 130°/50° at -3 dB; 160°/20° at -6 dB
Horizontal: 135°/50° at -3 dB; 165°/15° at -6 dB



UL Sensitivity Wattage Tap Sound Pressure Level dBA at 3.1 meters (10 feet):

Wattage	CAN/ULC-S541 Canada		Wattage	ANSI/UL 1480-2016 United States	
	70 V	100 V		70 V	100 V
2.5 W	83.9 dBA	—	2.5 W	79.2 dBA	—
5 W	86.4 dBA	86.9 dBA	5 W	81.7 dBA	80.9 dBA
10 W	89.3 dBA	89.4 dBA	10 W	84.6 dBA	84.5 dBA
20 W	92.1 dBA	92.4 dBA	20 W	87.3 dBA	87.2 dBA
40 W	94.2 dBA	94.8 dBA	40 W	89.7 dBA	89.8 dBA
8 Ω	93.8 dBA	—	8 Ω	90.1 dBA	—

SPLs given are per the UL 1480 specified reporting method.

Frequency response:

Fire alarm (UL): 80 Hz to 17000 Hz

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Bose Corporation 100 The Mountain Rd, Framingham, MA 01701 21 DOP 434849-14	
EN 54-24: 2008 Loudspeaker for voice alarm systems for fire detection and fire alarm systems for buildings FreeSpace FS4CE Provided options: Type B For DOP 434849-14, see pro.Bose.com/FS4CEDOP_NL	



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