

FIRE-RATED BACK BOX

INSTALLATION GUIDE



MEETS ONE-HOUR FIRE-RATING REQUIREMENTS PER THE FOLLOWING STANDARDS:
ASTM E 119, NFPA 251, UL 263 & 2043, ULC CAN/ULC-S101 AND UBC 7-1



INCLUDED:

- 1 x LOUDSPEAKER BACK BOX
- 2 x SUSPENDED-CEILING RAILS
- 1 x CONDUIT SET-SCREW CONNECTOR
- 1 x HOLE PLUG
- 1 x INSTALLATION GUIDE

IMPORTANT NOTES:

1. These loudspeaker back boxes were designed to be easily installed. However, if you are unable to clearly and fully understand and follow the instructions in this guide, or if you are unsure of your ability to properly install these back boxes, please contact your dealer or a qualified installer.
2. The customer/installer is responsible for the correct selection and use of mounting hardware (available through hardware stores) that will ensure the proper and safe wall- or ceiling-mounting of the back boxes.
3. In order to provide sufficient depth for loudspeakers, drywall used must be 5/8" (16mm) or thicker.
4. When installing loudspeaker back boxes with rectangular openings in the wall and mounting the speakers to these back boxes, please make sure that they are mounted in the correct orientation, as identified with indented markings on the back box baffle, "TWEETER SIDE" and "WOOFER SIDE." Ordinarily, when in-wall speakers are mounted vertically, the tweeter should point up. Consult your speaker's owner's manual for more details.
5. After the back box is mounted in the wall and drywall is installed, please remember to remove the cardboard retainer from inside the back box before the speakers are installed.
6. There are insulation materials installed inside each back box that are essential for its fire-rating properties. Please ensure that this insulation is not shifted inside or removed from the back box.

INSTALLATION

STUD INSTALLATION

The back box can be installed in a horizontal or vertical orientation. Back box models with a rectangular cutout are designed to be installed in a stud bay with 2" x 4" (50mm x 100mm) studs, minimum. Models with round cutouts are to be mounted in ceilings with existing studs of a minimum of 2" x 6" (50mm x 153mm) in size. Depending on back box model and size, they can be installed in standard stud spacings of 12", 16" or 24" (305mm, 406mm or 610mm). The orientation you choose depends on the stud bay spacing and the desired orientation of the speaker. Choose your mounting orientation from the options shown in Figures 1 and 2.

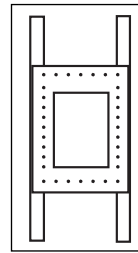


Figure 1. Vertical

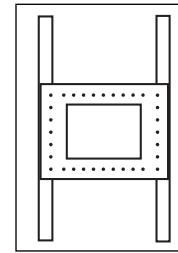


Figure 2. Horizontal

NOTE: Make sure the safety tab is fully recessed and does not come in contact with the wall behind the loudspeaker back box.

Depending on the orientation, install the conduit set-screw connector and the hole plug, as shown in Figure 3.

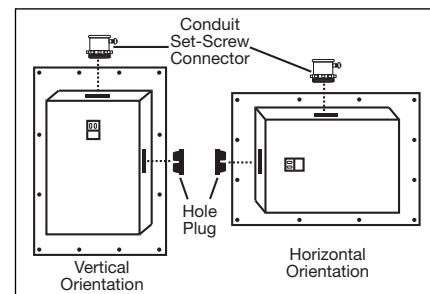


Figure 3. Conduit set-screw connector/hole-plug installation

If conduit use is required, attach the conduit to the conduit set-screw connector and pull the speaker wire through the conduit and conduit set-screw connector and into the back box. Tighten the screws on the conduit set-screw connector.

If conduit use is not required, pass the speaker wire through the conduit set-screw connector into the back box. Pull enough speaker wire into the back box to provide an easy connection to the speaker. When not using a conduit, you may use a UL-approved strain-relief cable clamp of the same hole diameter, instead of the supplied conduit set-screw connector.

Position the back box at the desired location against the studs, using the loudspeaker cutout on its baffle as a guide of where the speaker will be located, and check for possible clearance/interference issues, repositioning if necessary. Before securing the back box to the stud, make sure that the back box is equally spaced away from the stud on both sides. This will ensure that the back box does not touch the stud. Attach one side of the back box to the stud, using an appropriate screw through one of the center predrilled holes. Level the back box and secure it to the other stud with a screw. Install the remaining screws through the predrilled holes into the studs.

After the 5/8" (16mm) or thicker drywall is installed, cut the opening for the speaker by using the outside rim of the back box as a template.

The loudspeaker can now be installed in the back box per the loudspeaker installation guide.

SUSPENDED-CEILING INSTALLATION

Determine the desired location and remove the tile from the ceiling tile system. Ensure that there is a clearance of 6" (153mm) above the ceiling tile chosen. If not, choose a nearby tile that has a clearance of 6" (153mm) above it. Place the tile on a flat surface. Set the back box, in desired position, on the ceiling tile. Gently press down on the back of the back box. This will make an impression in the ceiling tile. This impression will be the template for cutting the hole in the ceiling tile. Cut the hole on the outside of the impression.

Cutout size required for the opening in the ceiling tile.

MODEL	DROP-CEILING CUTOUT SIZE*	
FBB5	8-3/4" x 6-1/4"	(223mm x 158mm)
FBB6	9-13/16" x 7-1/4"	(249mm x 183mm)
FBB7	12-1/8" x 10-1/4"	(307mm x 260mm)
FBB8	11-15/16" x 9"	(303mm x 228mm)
FBB9	17-9/16" x 11-3/4"	(446mm x 298mm)
FBB55	14-1/8" x 6-3/8"	(358mm x 161mm)
FBB81	15-1/8" x 10-7/8"	(383mm x 276mm)
FBB941	19-5/16" x 12-5/8"	(491mm x 320mm)
FBB5C	6-13/16" Diam.	(174mm Diam.)
FBB6C	8" Diam.	(203mm Diam.)
FBB8C	9-11/16" Diam.	(246mm Diam.)
FBB10C	11-7/16" Diam.	(290mm Diam.)

*for reference only

To perform the installation step below, you will need to purchase two sets of carriage bolts and nylon lock nuts (not included). As noted earlier, the customer is responsible for the correct selection and use of mounting hardware (available through hardware stores) that will ensure the proper and safe installation of these back boxes. We recommend carriage bolts that are 1/4"-20 in diameter and thread, and approximately 1/2" (13mm) long. If your local building safety codes and regulations or hardware standards rate bolts and nuts by strength, please ensure that your selected bolts and nylon lock nuts are capable of withstanding the weight of the in-ceiling back box and the loudspeaker. Utilizing the two rails and the two carriage bolts with nylon lock nuts, attach the ceiling rail to the "L" bracket on the backside of the back box front plate with a carriage bolt and lock nut, as shown in Figure 4.

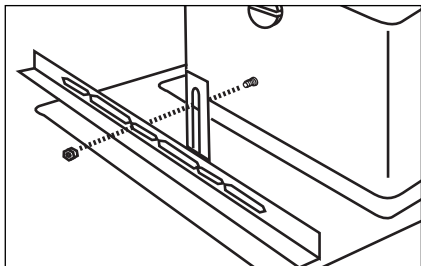


Figure 4. Rail attachment

Hand-tighten the nut using a wrench or socket. Ensure that the nut is snug, but allow the rail to move. Do not overtighten the nut.

If the back box is attached to the building structure using wire hangers or a safety harness, lift the free end of the hanging tab located on top of the back box by bending the tab upwards, as shown in Figure 5.

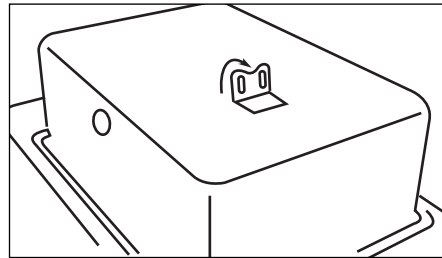


Figure 5. Tab bend

Determine which side of the back box on which to install the conduit or speaker wire. Place the conduit set-screw connector on this side of the back box and install the hole plug on the other side of the back box.

Install the cut ceiling tile in the suspended ceiling grid. Align the loudspeaker back box with this hole and install it above the tile. Adjust the rails on the back box so that the ends of the rail are on top of the suspended ceiling grid (T-bar) and the rail overhangs the grid on both sides. Let the weight of the box rest on the ceiling tile, but do not compress the tile. Once the rails are in the right spot both vertically and horizontally, tighten the lock nut on the screw with a wrench or socket. Ensure that the lock nuts on both sides of the back box are tightened and the rail cannot move.

If conduit use is required, attach the conduit to the conduit set-screw connector and pull the speaker wire through the conduit and conduit set-screw connector and into the back box. Tighten the conduit set-screw connector to the conduit with the screws on the connector.

If a conduit is not used, pass the speaker wire through the conduit set-screw connector into the loudspeaker back box. Pull enough speaker wire into the back box to provide easy connection to the speaker. When not using a conduit, you may use a UL-approved strain-relief cable clamp of the same hole diameter, instead of the supplied conduit set-screw connector.

If the safety strap is used, attach the safety strap per the local building codes to an approved point on the building structure and attach it to the hanging tab on the back box. Both attachment points need to meet the requirements of the local building codes, and it is the responsibility of the customer/installer to ensure that these codes are met.

If the wire hanger is used to attach to the deck of the ceiling, follow the instructions of the installation guide supplied with your wire hanger and attach the wire to the hanging tab on the back of the loudspeaker back box.

The loudspeaker can now be installed in the back box per the loudspeaker's instructions.

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