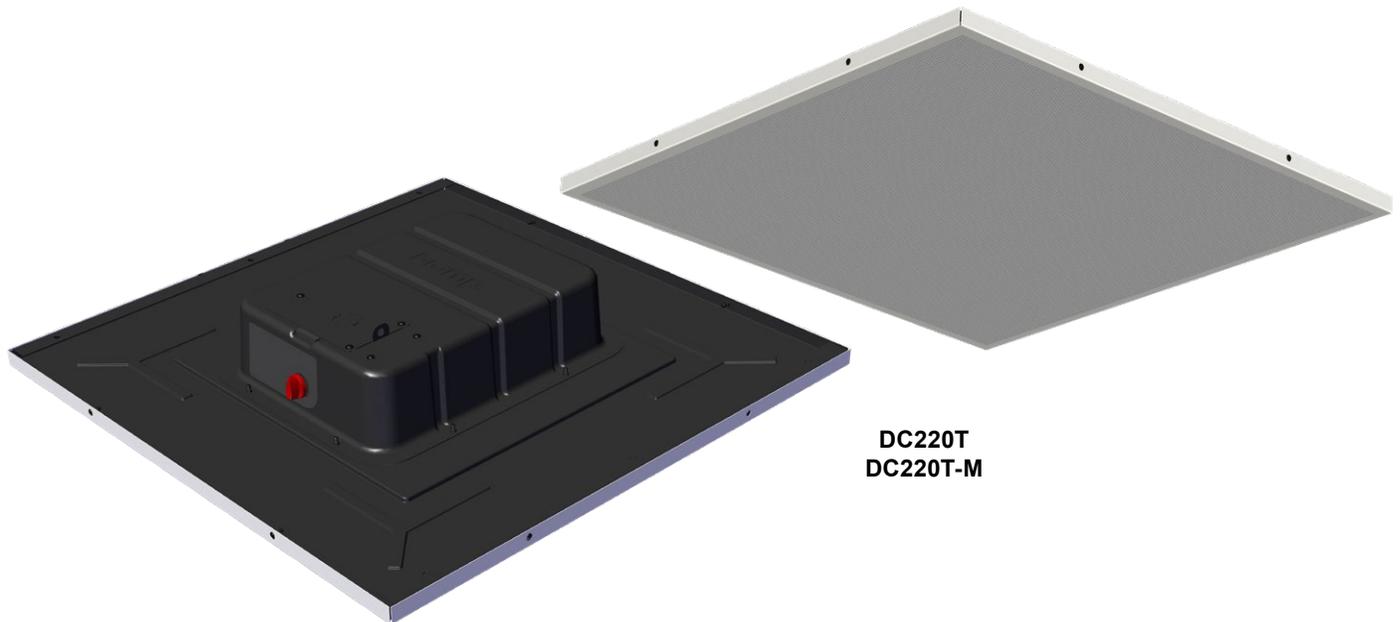


# Commercial Loudspeakers DC220T Ceiling Tile Loudspeakers Installation Guide



DC220T  
DC220T-M

## DESCRIPTION

Commercial Ceiling Tile Loudspeakers are engineered and manufactured to be rugged and are carefully packed in sturdy cartons. However, it is wise to thoroughly inspect each unit after it has been removed from the packaging, as damage could occur during shipping.

All DC220T and DC220T-M loudspeakers are shipped in pairs. Below is a representation of what is included.

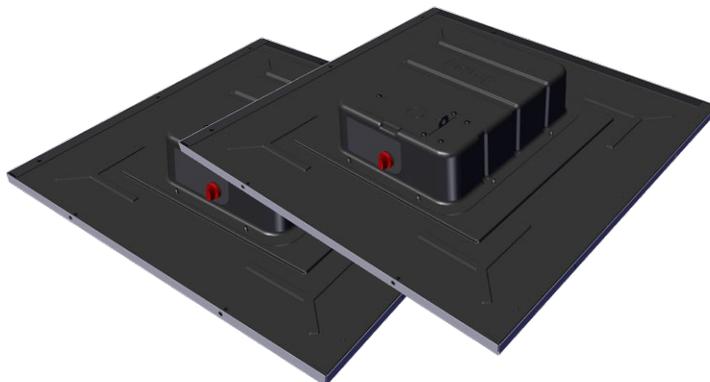
### Box Contents:

#### DC220T: (2' x 2' or 2' x 4' grid)

- Ceiling tile loudspeakers (2)
- Cross Tee rails for 2' grid (2)
- *Not Shown:*  
Documentation, wire nuts (4)

#### DC220T-M: (600 x 600 mm or 600 x 1200 mm grid)

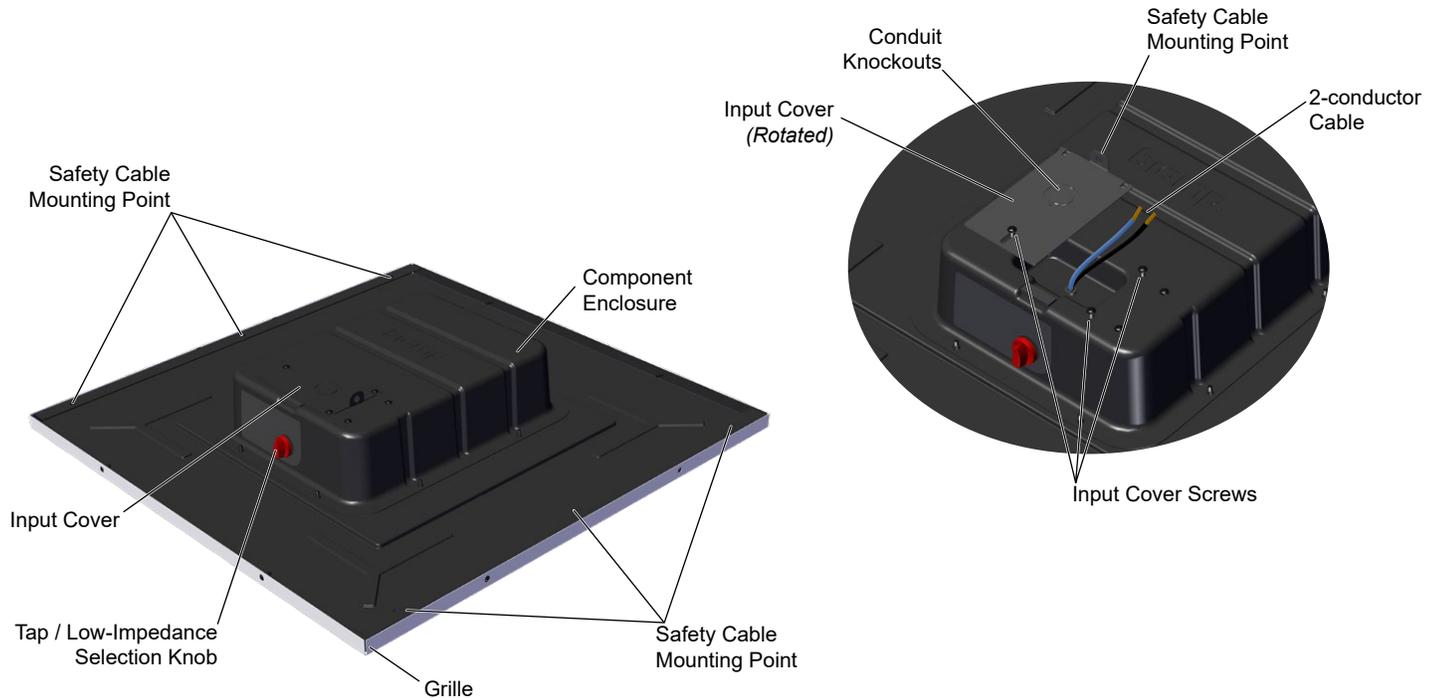
- Ceiling tile loudspeakers (2)
- Cross Tee rails for 600 mm grid (2)
- *Not Shown:*  
Documentation, wire nuts (4)



Cross Tee rails allows installation in ceilings with rectangular tiles



# PRODUCT REPRESENTATION



## Tools Needed

- Standard Phillips head screwdriver
- Wire stripper
- Conduit punch and cutter (for conduit installations)

**NOTE:** The installer is responsible for sourcing the proper safety cable to meet all applicable local building codes and standards. Biamp offers an accessory multi-pack (SPA-SCC100) of safety cables.

## RIGGING AND ELECTRICAL SAFETY



**IMPORTANT:** The loudspeakers described in this manual are designed and intended to be mounted in a suspended ceiling grid. Installation of loudspeakers should only be performed by trained and qualified personnel. All electrical connections must conform to applicable city, county, state, and national (NEC) electrical codes.



**DANGER:** It is possible to experience severe electrical shock from a power amplifier. Always make sure that all power amplifiers are in the "OFF" position and unplugged from an AC Mains supply before performing electrical work.



**IMPORTANT:** Please review the safety guide accompanying this product and these installation instructions prior to installing this loudspeaker.



**CAUTION:** Installation of Biamp loudspeakers should only be performed by trained and qualified personnel. It is strongly recommended that a licensed and certified professional structural engineer approve the mounting. Severe injury and/or loss of life may occur if this product is improperly installed.



**DANGER:** It is advised that a safety cable be secured to a suitable load-bearing point separate from the primary loudspeaker mounting point, with as little slack as possible so as not to develop undue kinetic force if the primary mount were to fail.



**IMPORTANT:** This loudspeaker is approved for use in plenum air handling spaces.

## INSTALLATION

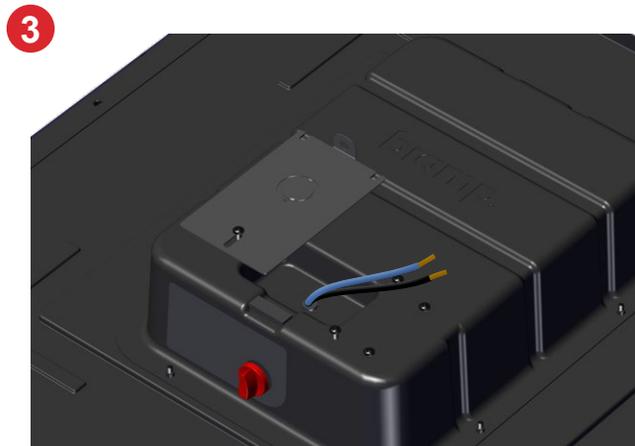
The DC220T ceiling tile loudspeaker is designed to be installed with or without above ceiling access in 2' x 2' or 2' x 4' drop ceilings. The DC220T-M is designed for installation in 600mm x 600mm, or 600mm x 1200mm drop ceilings.

### Typical installation in drop (suspended) ceiling

1. Run wires to the loudspeaker locations. Wiring connections can be made before or after placing the loudspeaker in the ceiling grid. Refer to the Wiring section for details.
2. Remove the existing ceiling tile and place the tile loudspeaker in the grid.
3. If they haven't already been made, loosen the input cover and make the wiring connections (see Wiring Section).



**NOTE:** All electrical installation connections for loudspeaker lines are subject to all applicable governmental building and fire codes. The selection of appropriate electrical hardware to interface with the loudspeaker lies solely with the installation professional. Biamp recommends that an appropriately licensed engineer, electrician, or other professional identify and select the appropriate conduit, fittings, wire, etc. for the installation.



### Installation in a drop (suspended) ceiling with conduit

Access to the loudspeaker through an adjacent tile space is necessary to attach the conduit after the unit is installed in the ceiling grid. The input cover has a knockout on the top allowing 2 sizes of conduit: 1/2" NPT, 3/4" NPT (22mm [.875"], 29mm [1.14"]). Conduit fittings are not included. Use flexible conduit close to the loudspeaker to make alignment and connections easier.

**NOTE:** Conduit use may be required for some plenum spaces and should also be used in damp spaces. Using the cover with conduit wiring will comply with the City of Chicago requirements.

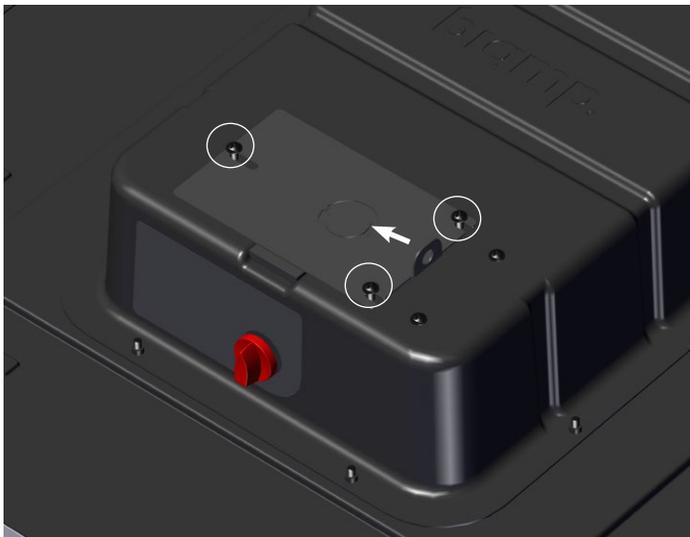
## INSTALLATION (continued)

### Wiring

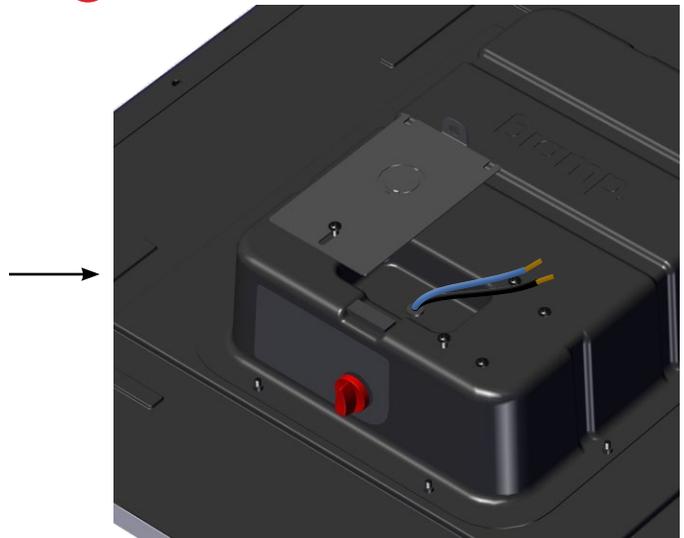
The input cover acts as a strain relief for wiring connections. Connections should be kept inside the input recess. The cover has knockouts to accept 1/2" and 3/4" NPT (22 mm [0.875"], 29mm [1.14"]) conduit fittings.

4. Loosen the screws holding the input cover (circled).
5. Move the cover up to clear the lower screws and rotate it around to expose the recessed area and the cable.
6. Make the connections secure with wirenuts or other connectors. Follow any applicable local electrical rules or codes.
7. Rotate the cover back on and secure with the 3 screws. The exiting cable(s) can be routed between the cover and the foam on the side of the input area (shown), or with conduit applications, by using a conduit fitting or cable clamp in the knockout and routing the wiring through it.

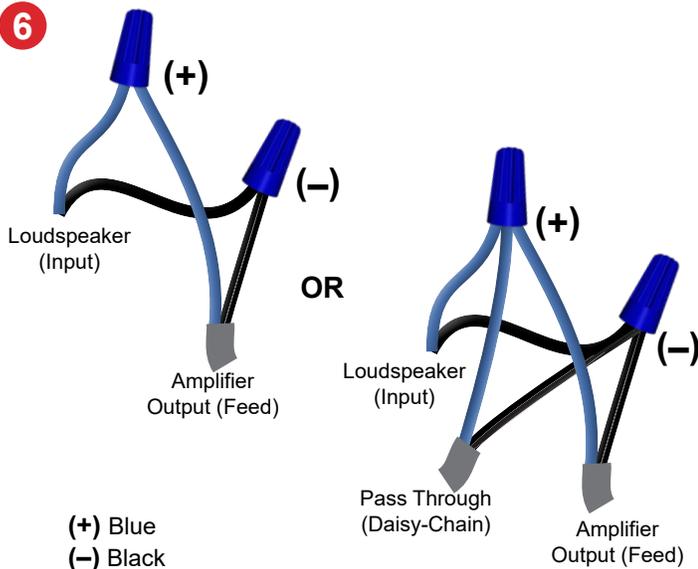
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5



6



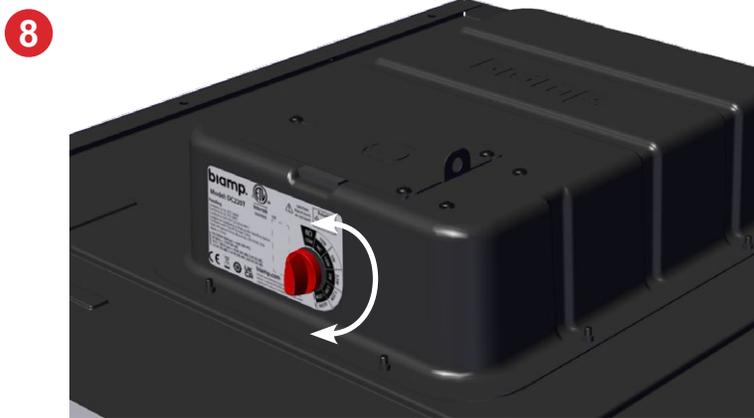
7



## INSTALLATION (continued)

### Set Power Tap

8. Set tap switch by rotating knob to the desired setting. Rotate the tap knob to select the appropriate tap setting before any audio is passed through the loudspeaker. Do not change the setting on the tap switch while the loudspeaker is in use.



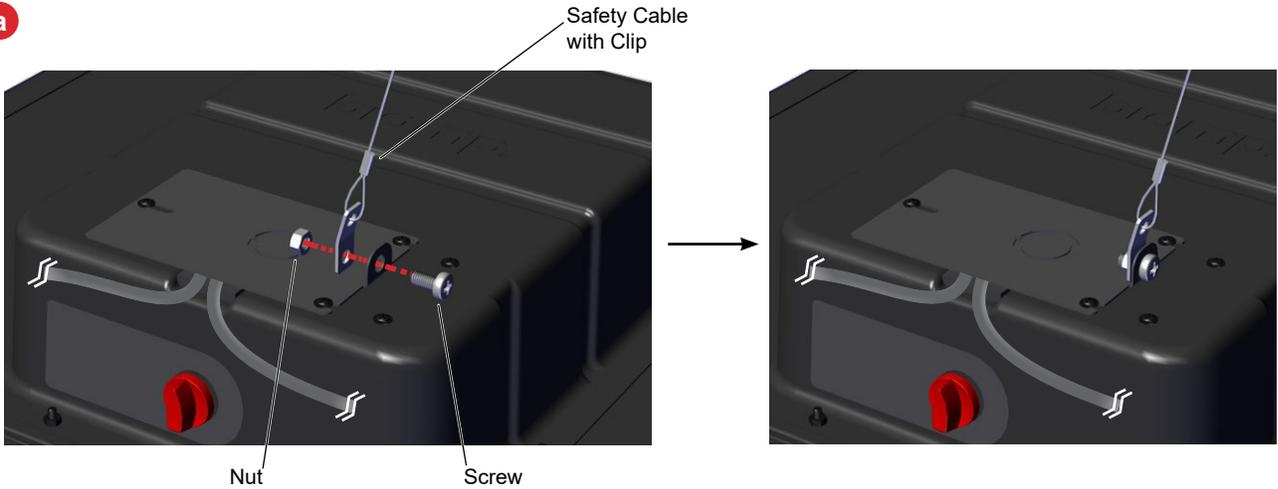
## INSTALLATION (continued)

### Attach safety cable

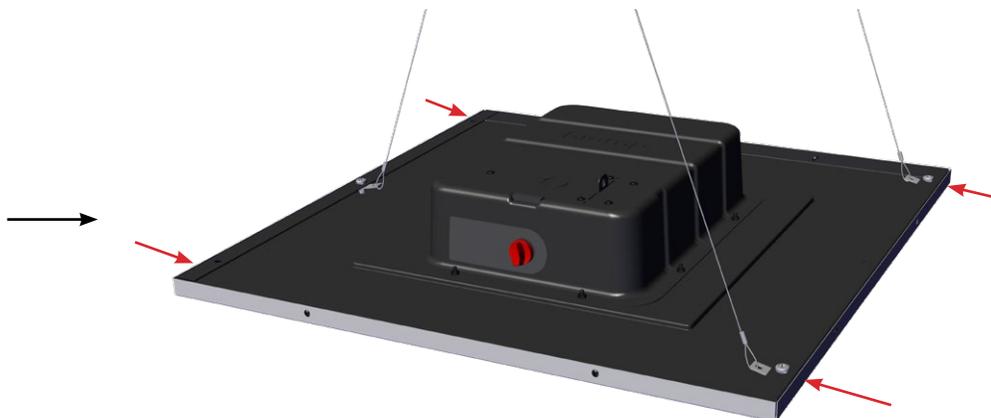
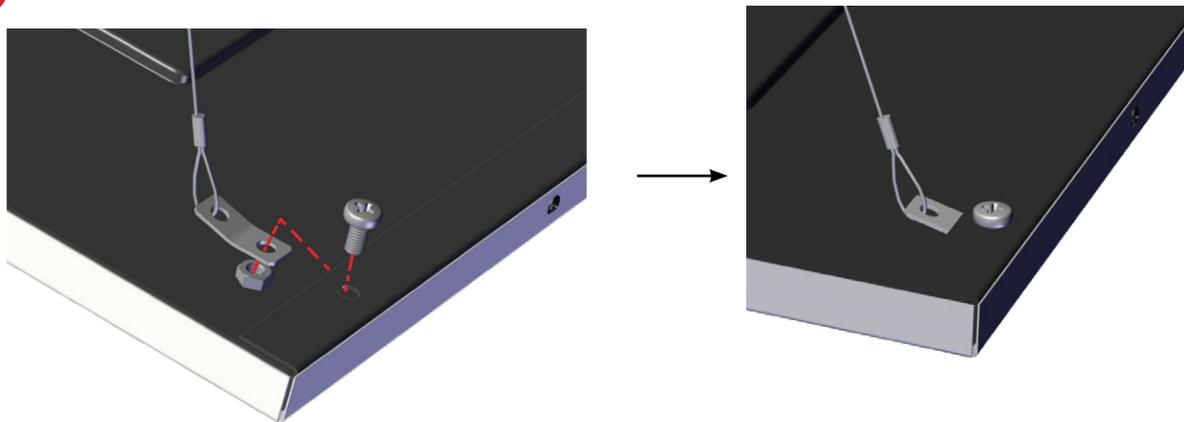
- Secure a safety cable to the safety tab on the input cover (9a) and/or to opposing points on the side flanges (9b). Make the cable(s) as short as possible. *Shown with the safety cables from the accessory multipack (SPA-SCC100) sold separately.*

**IMPORTANT:** Attach the cable to a secondary structural point directly above the seismic safety tab to minimize impact force and swing in the event of a ceiling failure.

9 a



9 b



*A three-point hang is shown above. A four-point hang will use corner holes (red arrows) as attachment points*

## INSTALLATION OPTIONS

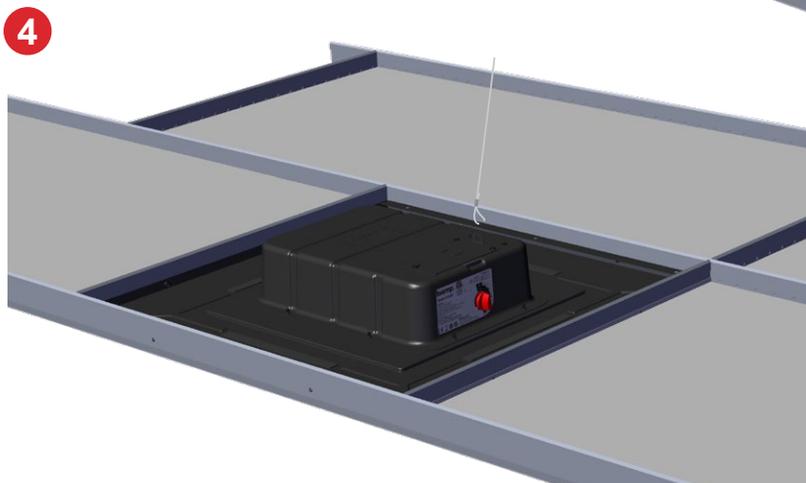
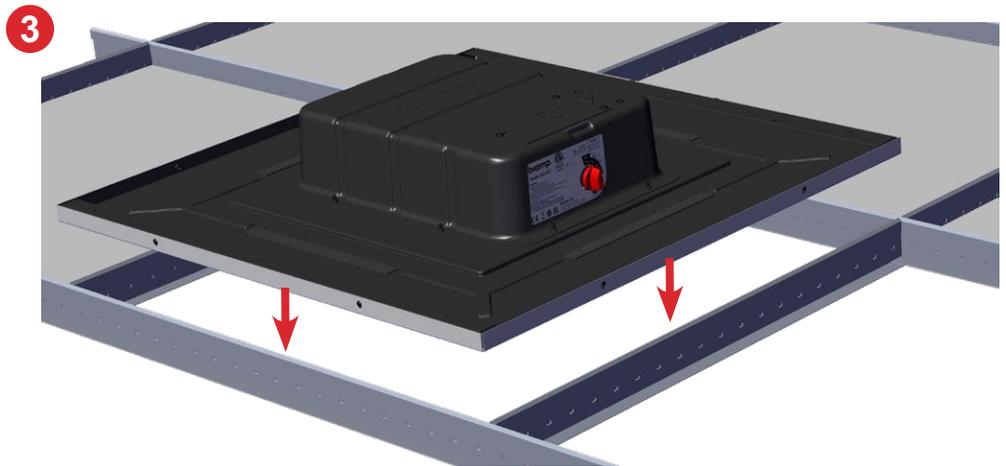
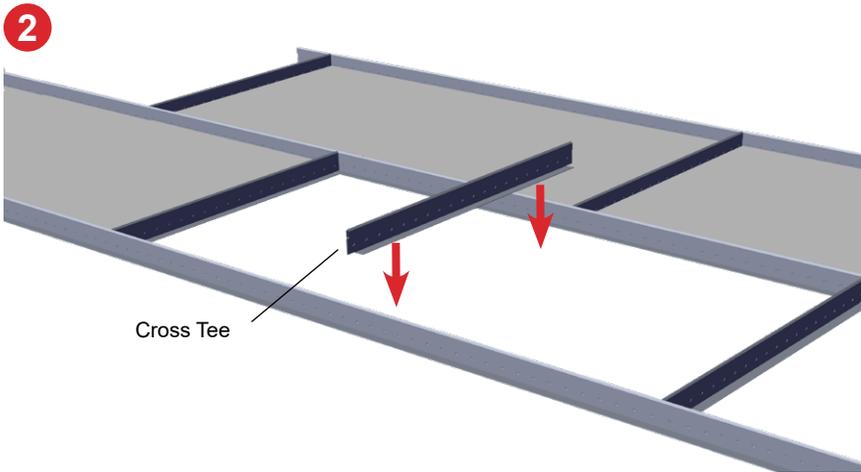
### Installation in a rectangular ceiling grid

1. Remove the rectangular tile from the ceiling grid.
2. Place a cross tee rail in the middle of the open space in the grid.
3. Place the loudspeaker tile in the ceiling grid, and follow the wiring instructions and install the safety tether as instructed earlier.
4. Cut the long tile in half or substitute a matching square ceiling tile. Insert in the open space.

### Models

With the corresponding cross tee installed, the **DC220T** fits in 2' x 4' drop ceilings.

With the corresponding cross tee installed, the **DC220T-M** fits in 600 x 1200 mm drop ceilings.



## CEILING ACCESSORIES

A variety of ceiling accessories are available to aid differing types of installations and applications. Full installation guides for each type are also available on the Biamp website.

SPA-SCC100	Safety cable 10-pack 1.2mm 7x7 strand galvanized steel cable Length: 4.5m (14.7') WLL: 50 lbs at 5:1 rating
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## PAINTING INSTRUCTIONS

The grille may be painted to match room decor. Do NOT paint the grille when on the loudspeaker. The loudspeaker should be removed from the ceiling grid to access the grill screws.

1. Unscrew the grille from the face (2 per side). Carefully remove the grille from the face, do not bend the grille.
2. Thoroughly clean and degrease the grille before painting. Do not use a solvent (see Cautions at right).
3. Paint the grille with several light coats of spray paint at twice the recommended distance from the grille. Do not clog the grille perforations with paint.
4. Allow the paint to fully dry and cure.
5. Fit the grille back on the loudspeaker face, and reinstall the screws to secure it.

 **CAUTION:** NEVER use abrasives, gasoline, kerosene, acetone, methyl ethyl ketone (MEK), paint thinner, harsh detergents or other chemicals on the loudspeaker. These chemicals and agents may permanently damage the finish. Some are also toxic and highly flammable.

**IMPORTANT:** Do not bend or damage the grille on removal or reinstallation.

**IMPORTANT:** Blocking the grille holes with paint or getting any paint on the drivers or internal parts will affect loudspeaker performance and void the warranty.

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## CONTACT US

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