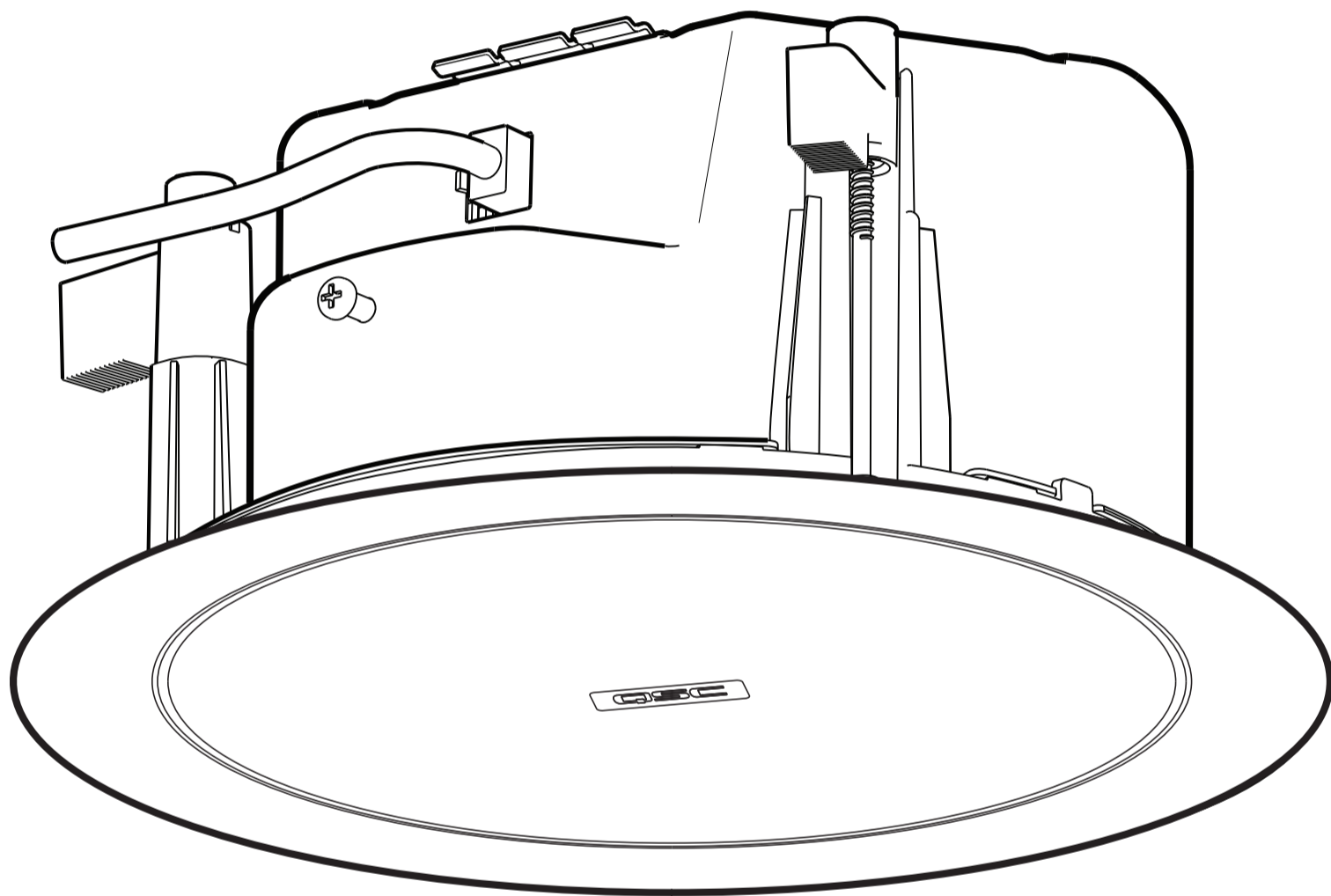# Q-SYS™

**QSC™**

## Hardware User Manual

### NL-C4
4" Full-range, Low-profile Ceiling-mount Network Loudspeaker

# EXPLANATION OF TERMS AND SYMBOLS

The term "**WARNING!**" indicates instructions regarding personal safety. If the instructions are not followed the result may be bodily injury or death.

The term "**CAUTION!**" indicates instructions regarding possible damage to physical equipment. If these instructions are not followed, it may result in damage to the equipment that may not be covered under the warranty.

The term "**IMPORTANT!**" indicates instructions or information that are vital to the successful completion of the procedure.

The term "**NOTE**" is used to indicate additional useful information.

The intent of the lightning flash with arrowhead symbol in a triangle is to alert the user to the presence of un-insulated "dangerous" voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to humans.

The intent of the exclamation point within a triangle is to alert the user to the presence of important safety, and operating and maintenance instructions in this manual.

# IMPORTANT SAFETY INSTRUCTIONS

**WARNING!:**   TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

1. Read, follow, and keep these instructions.
2. Heed all warnings.
3. Do not use this apparatus near water.
4. Clean only with a dry cloth.
5. Do not install near heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
6. Only use attachments/accessories specified by the manufacturer.
7. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
8. Do not use this apparatus in or near water or liquids.
9. Do not submerge the apparatus in water or liquids.
10. Do not use any aerosol spray, cleaner, disinfectant or fumigant on, near or into the apparatus.
11. Adhere to all applicable, local codes.
12. Consult a licensed, professional engineer when any doubt or questions arise regarding a physical equipment installation.

## Maintenance and Repair

**WARNING**: Advanced technology, e.g., the use of modern materials and powerful electronics, requires specially adapted maintenance and repair methods. To avoid a danger of subsequent damage to the apparatus, injuries to persons and/or the creation of additional safety hazards, all maintenance or repair work on the apparatus should be performed only by a QSC authorized service station or an authorized QSC international distributor. QSC is not responsible for any injury, harm or related damages arising from any failure of the customer, owner or user of the apparatus to facilitate those repairs.

**IMPORTANT!** PoE Power Input: PoE+ Type 2 Class 4 capable. See "Connections and Controls".

## Cleaning

**WARNING**: Liquids entering the housing may damage the internal electronics. Keep liquids away and do not use any solvents or chemicals to clean this product. Clean only with a soft, slightly damp or dry cloth.

## FCC Statement

**NOTE**: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

• Reorient or relocate the receiving antenna.
• Increase the separation between the equipment and receiver.
• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
• Consult the dealer or an experienced radio/TV technician for help.

## Specifications and Dimensions

Product specifications and dimension drawings for the NL-C4 can be found online at www.qsc.com.

## Environmental

• **Expected Product Life Cycle**: 10 years
• **Storage Temperature Range**: -20°C to +60°C
• **Relative Humidity**: 5 to 85% RH, non-condensing

# RoHS

The QSC Q-SYS NL-C4 is in compliance with European Directive 2011/65/EU – Restriction of Hazardous Substances (RoHS2).

The QSC Q-SYS NL-C4 is in compliance with "China RoHS" directives per GB/T 26572. The following chart is provided for product use in China and its territories:

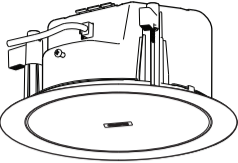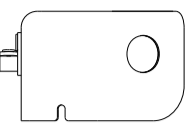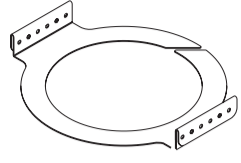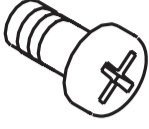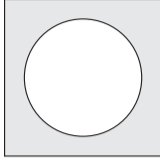| 部件名称<br>(Part Name) | QSC Q-SYS NL-C4 | | | | | |
|---|---|---|---|---|---|---|
| | 有害物质<br>(Hazardous Substances) | | | | | |
| | 铅<br>(Pb) | 汞<br>(Hg) | 镉<br>(Cd) | 六价铬<br>(Cr(vi)) | 多溴联苯<br>(PBB) | 多溴二苯醚<br>(PBDE) |
| 电路板组件<br>(PCB Assemblies) | X | O | O | O | O | O |
| 机壳装配件<br>(Chassis Assemblies) | X | O | O | O | O | O |
| 本表格依据 SJ/T 11364 的规定编制。<br>O: 表示该有害物质在该部件所有均质材料中的含量均在 GB/T 26572 规定的限量要求以下。<br>X: 表示该有害物质至少在该部件的某一均质材料中的含量超出 GB/T 26572 规定的限量要求。<br>（目前由于技术或经济的原因暂时无法实现替代或减量化。）<br>This table is prepared following the requirement of SJ/T 11364.<br>O: Indicates that the concentration of the substance in all homogeneous materials of the part is below the relevant threshold specified in GB/T 26572.<br>X: Indicates that the concentration of the substance in at least one of all homogeneous materials of the part is above the relevant threshold specified in GB/T 26572.<br>(Replacement and reduction of content cannot be achieved currently because of the technical or economic reason.) | | | | | | |
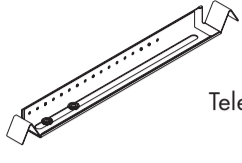
## What's in the Box

| | | | | |
|---|---|---|---|---|
| (1x) NL-C4 | (1x) Cover plate with conduit clamp | (1x) Snap-fit magnetic grille | (1x) C-ring | (2x) Telescoping tile rails |
| (4x) Tile rail screws | (1x) Cutout template | (1x) Warranty statement | (1x) Safety information | |

## Connections and Controls

- **LAN/PoE**: RJ-45 connector for Q-SYS Gigabit Ethernet and Power over Ethernet (PoE). Cat5e cabling or better required. PoE+ Type 2 Class 4 capable.
- **ID Button**: Press to identify this product in Q-SYS Designer Software and Q-SYS Configurator. The STATUS LED blinks when in ID mode. Press again to turn off.
- **Reset Button**: Use the Reset button to restore default network settings and recover factory default settings. Before attempting a reset, refer to the Q-SYS Help for details.

LAN / PoE

— Figure 1 —

ID BUTTON

RESET BUTTON

— Figure 2 —

4
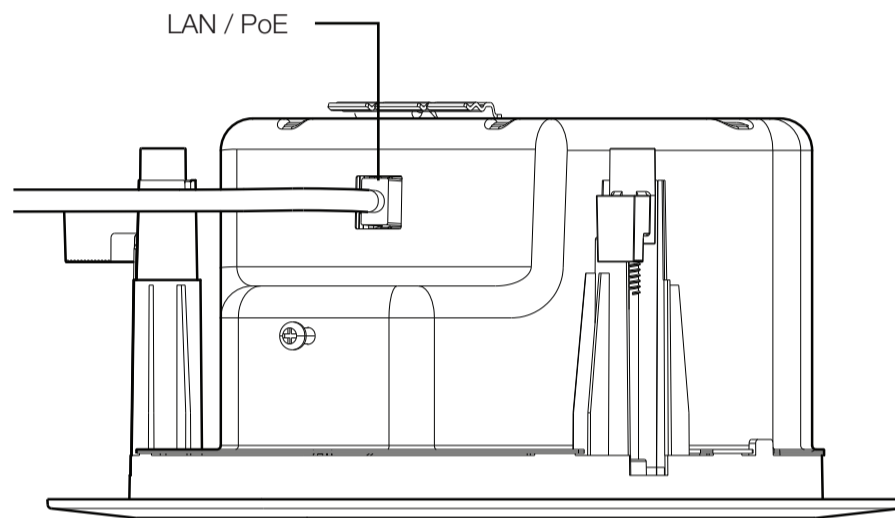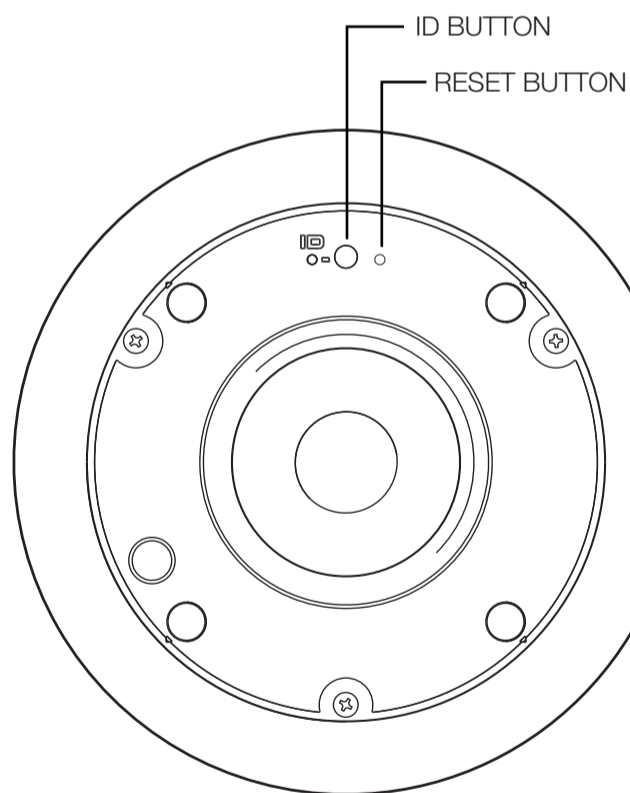
# Installation

## Prepare Ceiling

Refer to Figure 3.

1. Use the template provided to mark and cut a hole (1) in the ceiling where the loudspeaker is to be installed. For frame-construction ceiling, skip to "Wire the Loudspeakers".

2. Install two telescoping tile rails (2), one on each side of the hole and supported by the suspended-ceiling support rails (3).

3. Install the C-ring (4) over the hole using the tile-rails as support. Make sure the clips on the C-ring are properly fitted over the tile-rail.

4. Use the tile rail screws (5) to secure the C-ring to the tile-rails.
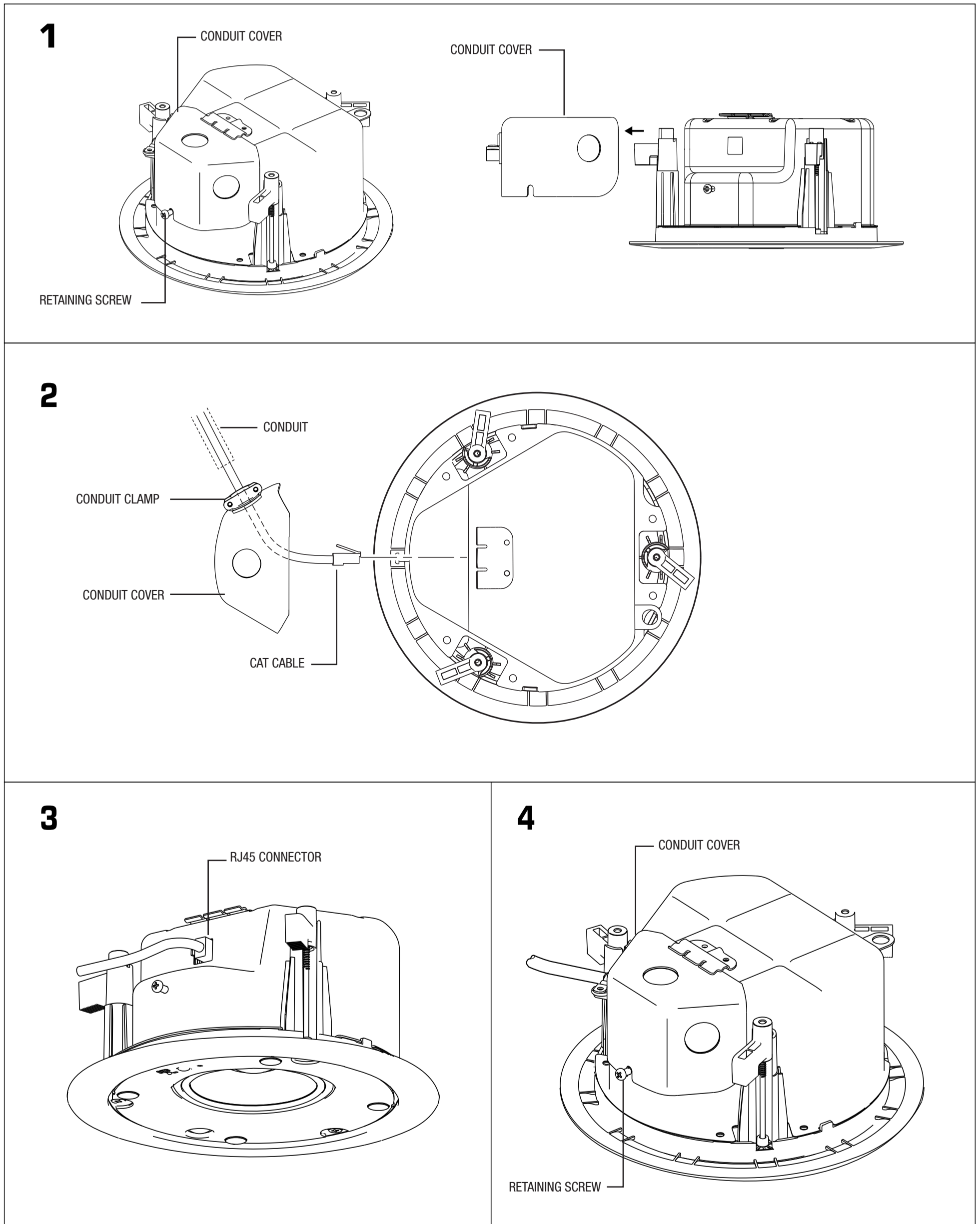
⚠️ **IMPORTANT!** If tile rail screws are not used, unwanted sag to the tile may occur.
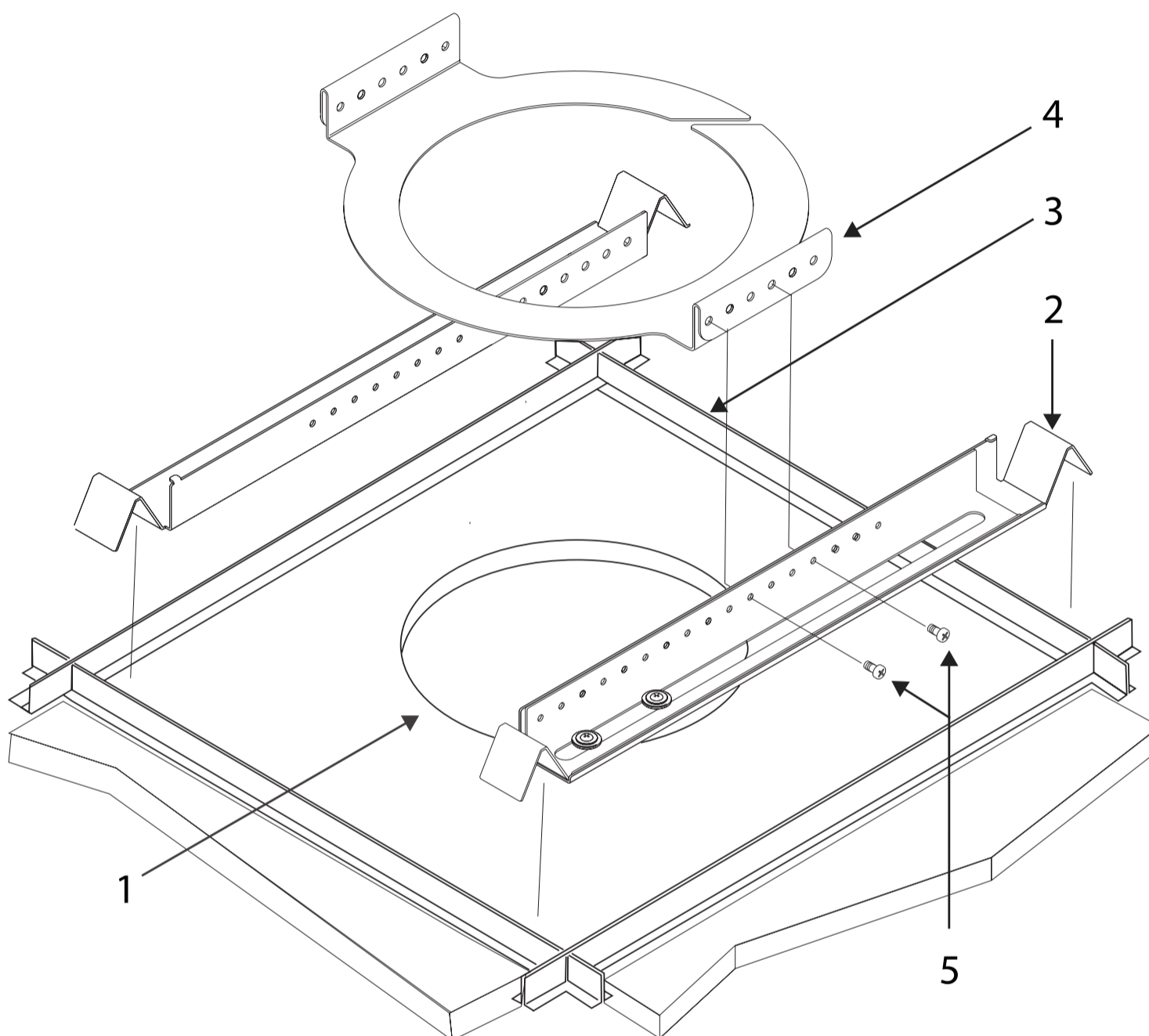
— Figure 3 —

## Wire the Loudspeakers

1. Back out the conduit cover's Phillips retaining screw to its stop point and pull the conduit cover straight out to remove as shown in step 1 of Figure 4.

2. Pass the CAT cable through the conduit/stress-relief clamp, leaving enough wire for making connections as shown in step 2 of Figure 4. Carefully tighten the clamp over the wires, or over the conduit if used.

3. Plug the RJ45 connector securely into the jack as shown in step 3 of Figure 4.

4. Reattach the conduit cover and secure with the Phillips retaining screw as shown in step 4 of Figure 4.

**1**

CONDUIT COVER

CONDUIT COVER

RETAINING SCREW

**2**

CONDUIT

CONDUIT CLAMP

CONDUIT COVER

CAT CABLE

**3**

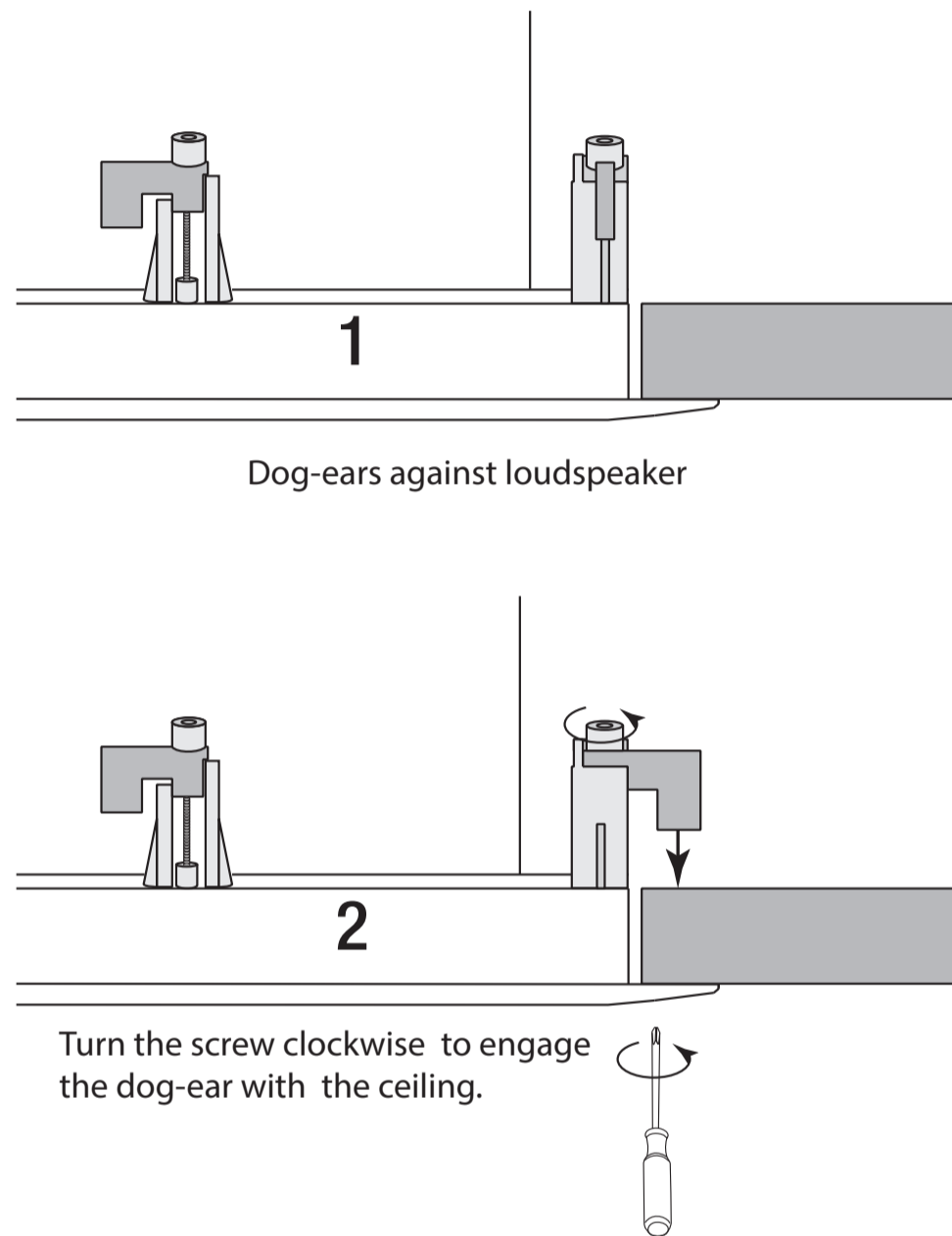RJ45 CONNECTOR

**4**

CONDUIT COVER

RETAINING SCREW

— Figure 4 —

## Mount the Loudspeaker

Refer to Figure 5.

1. Make sure all of the dog-ears are fully extended and in their non-capture position.

2. Position the loudspeaker into the hole prepared in the ceiling.

3. Use a Phillips screwdriver to tighten each of the three dog-ear screws.

4. As you tighten the screws, the dog-ears will swing into capture position over the ceiling. Be sure all dog-ears are properly positioned over the ceiling.

5. Tighten the dog-ears until firm contact is made with the ceiling surface.

⚠ **CAUTION!** Do not overtighten the dog-ear screws! Insert the grille's safety tether pin into the supplied hole on the loudspeaker baffle and install the grille.

Dog-ears against loudspeaker

Turn the screw clockwise  to engage
the dog-ear with  the ceiling.

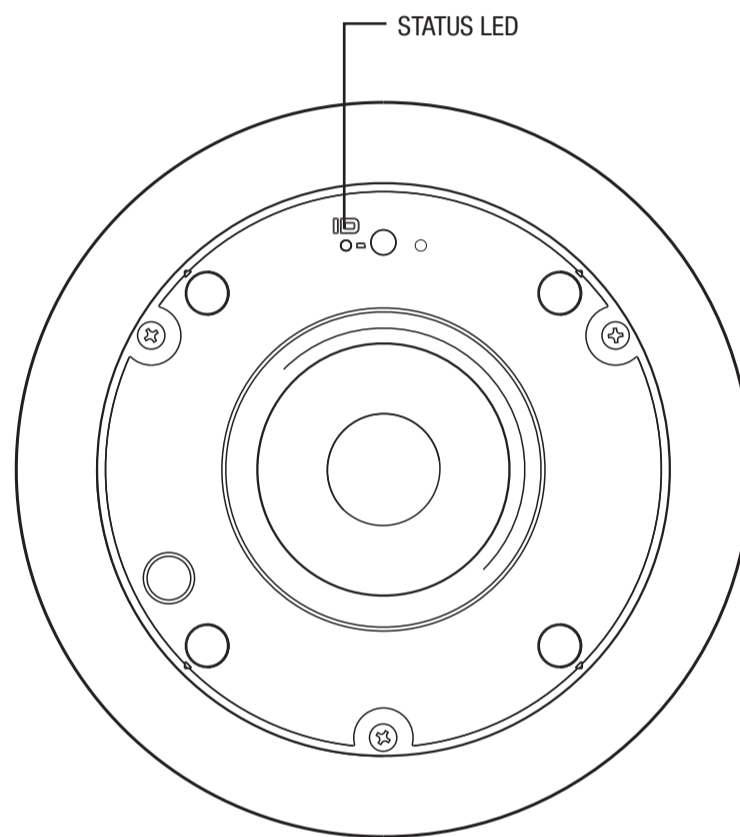— Figure 5 —

## Confirm Connection

1. Once the NL-C4 is connected to a suitable PoE/PoE+ network switch or midspan injector, check the LAN/PoE jack LEDs for network status.

| Left LED | Right LED |
|---|---|
| Yellow | Green |
| Dark - Disconnected | Dark - Disconnected/10Mbps/100Mbps |
| Solid - Link | Solid - 1 Gigabit Link |
| Flashing - Activity | |

LEFT LED            RIGHT LED
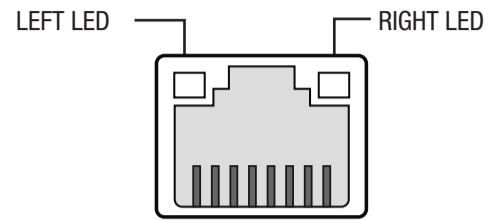
2. For Q-SYS status, check the status LED under the grille (see Figure 6).

| | Identify | Initializing | Fault |
|---|---|---|---|
| NL-C4 | Yellow - Flashing | Blue - Breathing | Red - Breathing |

STATUS LED

— Figure 6 —

## QSC Self Help Portal

Read knowledge base articles and discussions, download software and firmware, view product documents and training videos, and create support cases.
https://qscprod.force.com/selfhelpportal/s/

## Customer Support

Refer to the Contact Us page on the QSC website for Technical Support and Customer Care, including their phone numbers and hours of operation.
https://www.qsc.com/contact-us/

## Warranty

For a copy of the QSC Limited Warranty, visit the QSC, LLC., website at www.qsc.com.