Qt® Room Control

Installation & Operations Guide



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Package contents

QtRC Package contains

1 - Qt Room Control

1 - White Decora® style wall plate

1 - Manual

1 - Set of white tipped screws (2 pieces)

1 - White knob (installed)

1 - White Decora center plate

Overview

The Qt Room Control (QtRC) can be used to adjust the sound masking level for an individual room or a space with 2-8 emitters. This wall mounted volume control unit is designed to work with any of the Cambridge Sound Management sound masking systems. It installs easily in new or existing construction and fits in most standard electrical boxes, including open back, low voltage brackets. The QtRC is compatible with both Qt Emitters and Qt Active Emitters.

Since the QtRC is designed for a room of up to 8 emitters, a separate zone should be used in larger areas. The QtRC controlled room can be its own run from the controller or part of a run to other areas. Several system layout options are shown on the following pages and, with each layout, a suggested usage model is described.

When using the QtRC with standard Qt Emitters, the controller needs to supply enough power over the cable run for the emitters and the QtRC(s). From the control modules, a single cable run can support 60 emitters; however, an added QtRC reduces the number of emitters that can be supported, because each QtRC "counts" as 2 emitters in the total for the run. The cable run can support up to a combination of 60 emitters and QtRCs. For example, if there are 30 rooms with 2 emitters in each room, or a total of 60 devices (2 x 30 emitters), then a single run of cable could be used. However, if a QtRC is also used in each room, changing the total to 120 devices (2 x 30 emitters + 30 x 2 QtRCs), then 2 cable runs would be required.

For Qt Active Emitter, the QtRC itself does not "count" as an emitter. It only counts as 2 emitters with the standard emitter.

Qt Room Control Volume Settings

The QtRC features a six position switch that adjusts the sound masking volume in 2.0 dB increments. The volume will increase as the knob is rotated clockwise, with the maximum level at the 5 position as shown in Figure 5.1.

The minimum level will be achieved at position 0. Alternately, this position can be set at time of installation to turn off the sound masking entirely. This option is controlled by a slide switch on the QtRC assembly. See Figure 5.2. The "OFF" position is labeled on the circuit board. Slide the switch to marked "OFF" side to make position 0 turn the sound masking completely off. Slide the switch to the "Normal" position to make position 0 the minimum level. This must be selected before installation into the wall.

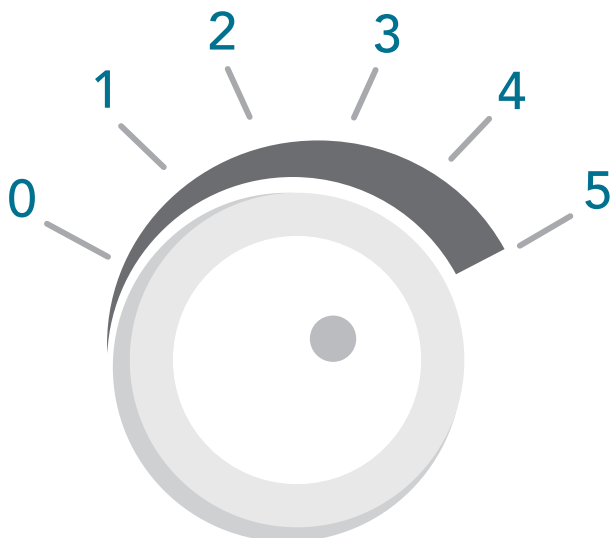

FIGURE 5.1

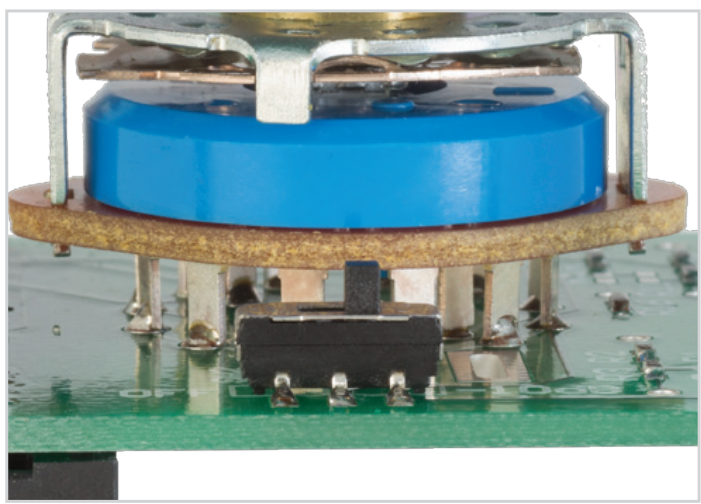

FIGURE 5.2



FIGURE 6.1

We suggest that the QtRC knob be at position 5 (full clockwise) when the room's sound level is being calibrated and set on the controller (figure 5.1). This allows the user to use this system as calibrated or reduce the sound level down in 2.0 dB steps.

Alternatively the QtRC knob may be at position 3 when the room's sound level is set on the controller. This option allows the user to adjust the sound level up or down in 2.0 dB steps.

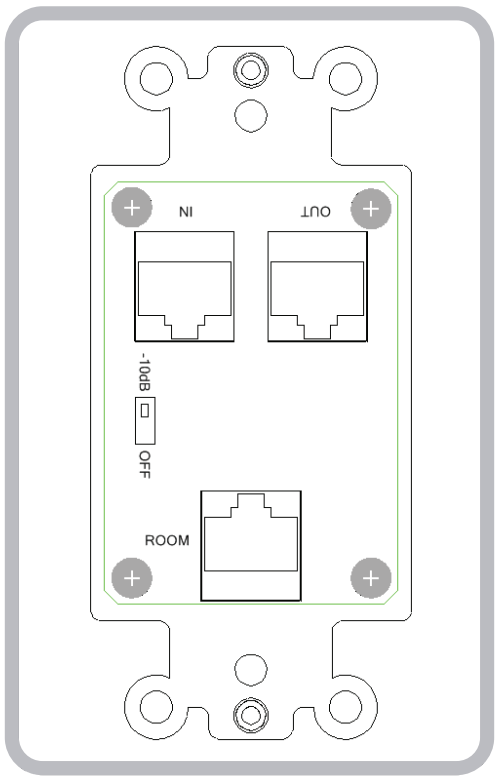

FIGURE 6.2

Installing the Qt Room Control

The QtRC is designed to be installed in a single gang box or low voltage bracket. All power is supplied from the control module, so only CAT cables in and out are required. There are also no requirements for grounding since it is done over the CAT cables.

Typical Installation Options

Sound masking is best used at a constant level so it is perceived as part

of the building's environment. However, there are specific types of situations, such as in hospital rooms, offices, and conference rooms, where it is desirable to be able to adjust the masking level. In this situation, a cable can be brought to the room's QtRC and then connected to the emitters in the room, as discussed below. The QtRC will be able to decrease the power supplied to the emitters in the room, thus decreasing the perceived volume. The following sections and diagrams show the various layout options.

Two Zone System: QtRCs in closed rooms

In the diagram below, Figure 7.1, the control module has two or more zones.

The cable run from the first zone (the black cable) service the open area while the second zone's cable (the red cable) service the 3 closed rooms. The second zone's cable reaches the first QtRC (blue box) and uses its built-in splitter (connect to the QtRC's input jack labeled "In"). Next, a new cable

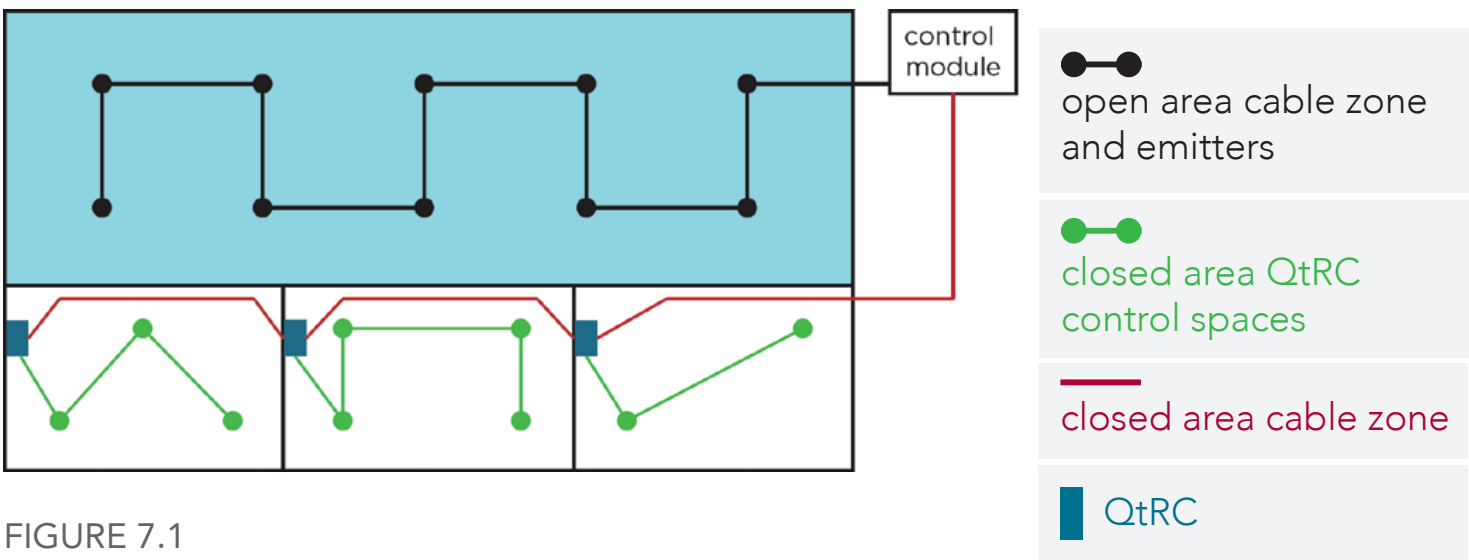

FIGURE 7.1

(shown GREEN) connects to emitters in the room from the "Room" output jack to create a mini control area. Lastly, another cable (shown RED) is run from the first QtRC's output jack, labeled "Out," to "In" on the QtRC to the next room. After installation, each room will have the same maximum volume while the emitters in each room can be turned down by each room's QtRC.

This is the optimal layout when using QtRCs. With the use of a QtRC, each room's occupant may choose sound masking levels at or below the calibrated level, recommended to be 42 dB for a closed room, if calibration was done with the QtRC set to max (clockwise). Alternatively, by calibrating the rooms' sound masking to be correct with the QtRC at step 3, each room occupant will have the ability to raise or lower sound masking level.

Note: Since each QtRC has a built-in splitter, there is no need for an extra splitter or cabling when implementing the layout shown in Figure 7.1.

One Zone System: Providing adjustment in multiple rooms using QtRCs and cable splitters in the ceiling

The cable from the sound masking controller reaches splitter #1. One cable from the splitter connects to QtRC #1 in the first room, while the other cable continues down the hallway (red). In the room, a cable is run from the QtRC room jack to the

input port of the first emitter. Then a cable is run from the output port of the emitter to the input port of the next emitter (these cables shown in green – see figure 9.1).

The cable that was extended down the hallway reaches a splitter that is used in the same way. A cable from splitter #2 goes to the next room, connects to QtRC #2 while another cable continues down the hallway. A multi-way splitter can be used as long as the maximum number of devices on a run doesn't exceed 60 (as shown with splitter #3 connecting to QtRC #3 and QtRC #4).

The layout in Figure 9.1 allows each room's occupant may choose sound masking levels at or below the calibrated level, recommended to be 42 dB for a closed room, if calibration was done with the QtRC set to max (clockwise). Alternatively, by calibrating the rooms' sound masking to be correct with the QtRC at step 3, each room occupant will have the ability to raise or lower sound masking level.

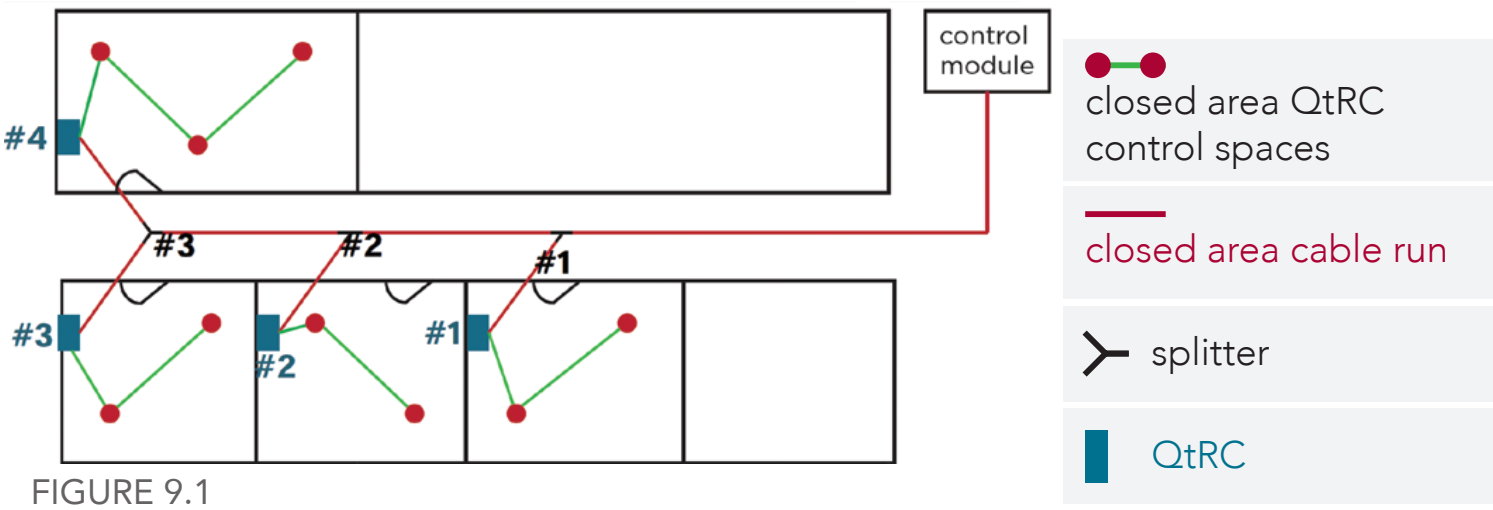

FIGURE 9.1

A Single Room: A QtRC from a cable run to an open area

In the diagram shown below, the maximum volume for the room with an QtRC is the same as the volume of the emitters in the open area. The power supplied to all of the emitters in the open area is the same as the power supplied to the QtRC. The QtRC has the ability to reduce the power supplied to the emitters within the closed room. Since a closed room typically requires a lower sound masking level than an open area, with the use of a QtRC, a closed room can achieve this lower level by decreasing the maximum level (see Figure 10.1).

Note: Each QtRC's area may have a maximum of 8 emitters. The maximum number of rooms supported on a single run is determined by ensuring that the total number of emitters and QtRCs does not exceed 60 devices.

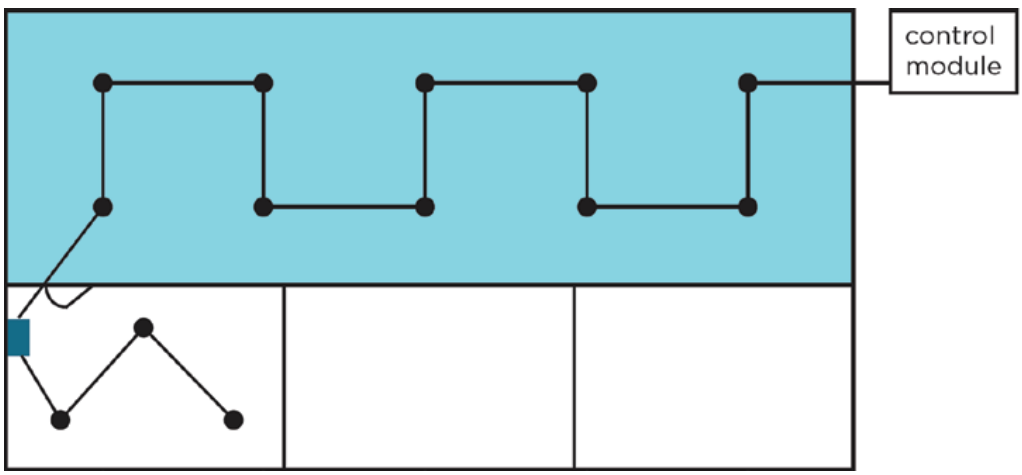

FIGURE 10.1

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Warranty Coverage — Qt® Room Control

The warrantor will, for a period of one (1) year, starting with the date of purchase, warrant that the Qt room control (the "device") will be free of defects in materials and workmanship that interfere with its proper operation as a sound masking, paging and music distribution control system. During that period, the warrantor will, at its option, either (a) repair the device, with new or refurbished parts, or (b) replace the device with a new or refurbished device of equal functionality at no charge. The decision to repair or replace will be made by the warrantor.

The following terms apply to all. These warranty terms are extended only to the original purchaser of a new product. A purchase order or other proof of the original purchase date and purchaser is required for warranty service

Obtaining warranty repairs:

Please access and review on-line help resources for the product before requesting warranty service. If the product is still not functioning properly after making use of these resources, please contact Cambridge Sound Management for a return authorization number. All returns are to be prepaid. The warrantor will pay return surface freight within the continental United States on warranty repairs. All customs and freight charges in excess of surface freight within the United States will be borne by the purchaser.

Warranty Limits and Exclusions

This warranty ONLY COVERS failures due to defects in materials or workmanship, and DOES NOT COVER normal wear and tear or cosmetic damage. THIS WARRANTY DOES NOT COVER USE OF THE SYSTEM WITH ANY OTHER emitter OR EMITTER MANUFACTURED BY ANY ENTITY, ORGANIZATION OR COMPANY OTHER THAN CAMBRIDGE SOUND MANAGEMENT, LLC OR USE OF THE SYSTEM FOR ANY PURPOSE OTHER THAN SOUND MASKING AND/OR PAGING AND/OR MUSIC DISTRIBUTION.

THIS WARRANTY DOES NOT COVER THE USE OF ANYTHING OTHER THAN CAT-3 OR EQUIVALENT, 24 GAUGE CABLING. The warranty ALSO DOES NOT COVER damages that occurred in shipment, failures that are caused by products not supplied by the warrantor (e.g., replacement power supplies) or failures that result from accidents, misuse, abuse, neglect, mishandling, misapplication, alteration of any sort, installation, use as a system driver during emitter installation, set-up adjustments, mis-adjustment of controls, improper maintenance, power line surge, lightning damage, power surges, modification, rental use, service by anyone other than the warrantor or damage that is attributable to acts of God.

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