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SB002 – AU Rev. 1.0
IR Carrier Frequency Adjustments on the lyriQ Multi-Room Audio System

I. Application/Purpose

The lyriQ Multi-Room Audio System allows for control of third party equipment with the use of the OnQ Dual IR Mouse Emitter (F7425). This equipment can include AV Receivers, Blu-ray players, DVD players, and more. The third-party IR signal is fed into the lyriQ volume control or External IR Receiver which then interprets and sends the signal using a multi-burst frequency by default (mixed 40 kHz/56 kHz pattern). This sophisticated method works for most all products, however not every product can be controlled in this manner. In those rare cases where a device does not respond, the lyriQ volume control and the External IR receiver have built-in settings that allow for the adjustment of the carrier IR frequency so that these devices can operate properly.

II. Associated Part Numbers

AU7394-xx – lyriQ Classic Standard Performance Keypad Volume Control (Firmware v.2.0)
AU1000-xx – lyriQ Classic High Performance Keypad Volume Control (Firmware v.2.0)
AU5009-xx – lyriQ Studio Standard Performance Keypad Volume Control (Firmware v2.2)
AU5010-xx – lyriQ Studio High Performance Keypad Volume Control (Firmware v2.2)
AC1016 – External IR Receiver

III. Explanation

All settings adjustments made to the lyriQ Keypad Volume Controls are done using the Installer Setting Mode. To enter this mode, it is necessary to press the following keys in order: Mute, Volume Up, Volume Down, and Volume Down. This will need to be done twice in a row (see Figure 1). These buttons do not need to be held down. Press each button, let go and then press the next button in the sequence. When you've entered the Installer Setting Mode, all of the button LEDs will flash on the Studio Keypad Volume Control.

NOTE: Earlier revisions of the Classic keypads may require an alternate method of entering the Installer Setting Mode. For those keypads, press and hold down the Volume Up, Volume Down, Mute and Source buttons together for five seconds. The IR LED will begin to flash red/green for confirmation.

Enter Installer Setting Mode	Puts keypad into installer setting mode so that keypad can be customized to environment and customer preferences. **To implement:** quickly press keys in the following sequence: Mute, Volume Up, Volume Down, Volume Down. Repeat. **Note: The sequence needs to be done twice.**

FIGURE 1

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Once the Installer Setting Mode has been entered, press the source button to change between the available settings that can be configured. The carrier IR frequency setting is available for adjustment once the source 1 and source 4 LEDs are lit. To change the frequency being used, press the Volume Up or Volume Down key. Setting the Carrier IR Frequency to volume LED number 1 will repeat IR commands using a 40 kHz pattern. Selecting volume LED number 2 is the default multi-burst setting. Finally, selecting volume LED number 3 will repeat IR commands using a 56 kHz pattern. The selection of the carrier IR frequency is a global setting for all sources on the Classic Keypad volume controls. The Studio Keypad Volume Control allows for different patterns to be selected per source.

NOTE: The source button and LED displays on the Classic Keypad Volume Control (see Figure 2) and Studio Keypad Volume Control (see Figure 3) do differ in appearance. Please be aware of these differences when making settings adjustments.

IR Repeat Transmission	**Default** (src 1 & 4, vol. 2) is Multi-Burst Frequency which is 40kHz and 56kHz.	**Default** is used for normal operation and environments. The default will be effective for the vast majority of source devices. Carrier frequency can be changed if end user's source device does not respond to multi-burst.
	IR Carrier Frequency at 40kHz (src 1 & 4, vol. 1) **IR Carrier Frequency at 56kHz** (src 1 & 4, vol. 3)	**IR Carrier Frequency Adjustments** are chosen based on end user's remotes. *(Most devices are 40kHz. Cable and satellite boxes are often 56kHz)*

FIGURE 2

IR REPEATER PATTERN L 1 2 3 4 i	Sets the pattern that this KVC will use when repeating IR commands to the rest of the system. The KVC allows for different patterns based on the selected source (1-4). The pattern selected here will be for the source that was selected when Installer Setup Mode was activated.	■□□□□□ 40 kHz FREQUENCY: This KVC will repeat IR commands using a 40 kHz pattern. □■□□□□ MIXED 40 kHz/56 kHz FREQUENCY: (DEFAULT) This KVC will repeat IR commands using a mixed 40 kHz / 56 kHz pattern. □□■□□□ 56 kHz FREQUENCY: This KVC will repeat IR commands using a 56 kHz pattern.

FIGURE 3

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Finally, the External IR receiver can also select between the same available IR frequencies as the volume controls. However, there is no need to log into an Installer Setting Mode to adjust the frequency settings. The External IR receiver has a small slide switch that selects between the 40k, 56k, and Burst options (see Figure 4). The External IR Receiver ships in Burst mode by default.

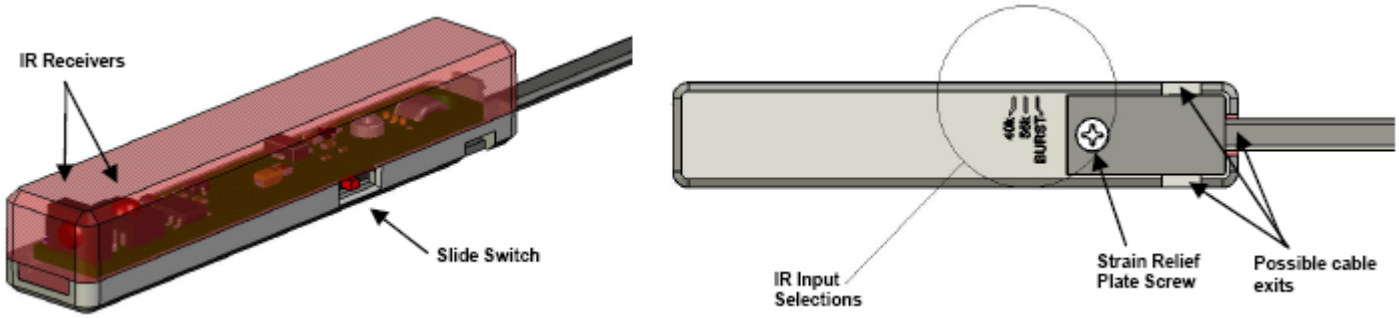

FIGURE 4

Making these adjustments and testing the individual frequencies available can resolve many of the problems associated with the control of third party equipment. If these frequencies have been tested and the problem persists, please contact Technical Support at 1-800-321-2343, Option 1.