INSTRUCTION/INSTALLATION SHEET
lyriQ™ Studio Keypad

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IS-0420 REV. A

1. Introduction

The lyriQ™ Studio Keypad Volume Control, P/N AU5009-xx **(see *Figure 1*),** is an integral part of the lyriQ™ Multi-Room Audio System. It is a component which, when combined with other essential components (a Source Input Unit, Distribution Module and Speakers) and your source equipment (receiver, CD player, etc.), creates a versatile whole-house audio system that will fill your rooms with high-quality sound for years to come. It uses Category 5 wiring to distribute audio signals, control information and IR for remote control. The Keypad has two on-board class D amplifiers to provide a rich level of clean sound. It also contains a full set of features, including the integrated ability to control all other keypad volume controls in the house. It is available in white (-WH), light almond (-LA), titanium (-TI), or gloss black (-GB). Build an audio system that accommodates the needs of any space by combining the lyriQ™ Studio Keypad with the lyriQ™ Studio High Performance Keypad (AU5010-xx) in the same system.

Figure 1

2. Description

The front panel of the lyriQ™ Studio Keypad **(see *Figure 1*),** contains push buttons for STANDBY (backlit with red LED when in Standby Mode), for MUTE (backlit with red LEDs, when Mute function is selected), VOLUME UP/DOWN (with six associated blue Volume Bar Graph LEDs), SOURCE SELECT (with six blue Source Selection LEDs), and WHOLE HOUSE (backlit with white LEDs when not selected and with flashing blue/white LEDs when Whole House function is selected). There is also an IR target window.

The rear of the lyriQ™ Studio Keypad (see ***Figure 2***) contains an RJ45 jack (J1) for connection to the lyriQ™ Audio Distribution Module. The TB2 speaker output connections (left and right, plus and minus) are spring loaded and designed to support up to 14 gauge wire. The TB1 Line Out connections (left and right, plus and minus) are also spring loaded and designed to support up to 14 gauge wire. These connections can be used to attach a powered subwoofer such as On-Q's 10" (P/N 364664-01) or 12" (P/N 364671-01) subwoofer or an external amplifier to drive additional speakers.

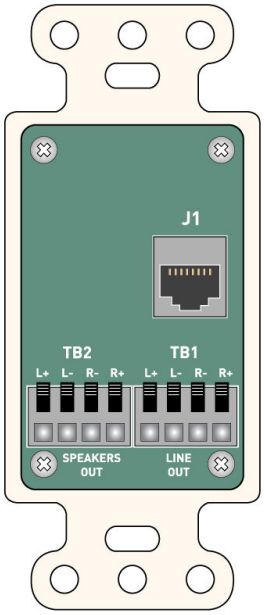

Figure 2

NOTE: The lyriQ™ Studio Keypad is recommended for indoor use only.

3. Installation

Installation of the lyriQ™ Studio Keypad is best accomplished at multiple times during new construction, at "Rough-in" before the drywall is installed, and at "Trim-out" after the drywall is installed and painted**.**

NOTE: Before connecting the volume controls: Make sure that power supplies are not connected to the lyriQ™ Audio Modules. For instructions on pre-wiring and installing other components of the lyriQ™ Audio System, please see the Instruction Sheets included with those components.

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NOTE: Always follow TIA-570-B and T568A wiring standards for installing and terminating Category 5 cable. Failure to follow the correct wiring standard could result in damaged equipment and/or electrical interference issues. Insure all cables are properly marked.
NOTE: Maintain a minimum 12" separation between Category 5 cable and any 120VAC cabling.

A. "Rough-in" steps:

1) A single Category 5 cable should be run from the enclosure location to a single gang outlet box or low-voltage bracket at each Volume Control location.

NOTE: We also recommend running a 16/4 speaker wire along with the Category 5 cable to support future upgrades to High Performance Studio Keypads if desired.

B. "Trim-out" steps:

1) Connect the volume control by terminating the pre-wired Category 5 cable from the enclosure with an RJ45 plug, following the T568A wiring standard and insert this plug into jack J1 (see ***Figure 2***).

2) For the Line Out/Speakers Out connections (TB1/TB2) strip 3/8" of insulation from each of the four conductors and insert the appropriate wires into the appropriate connections (see ***Figure 2***).

NOTE: Polarity and channels are clearly marked (L+, L-, R-, R+) for proper identification during installation.

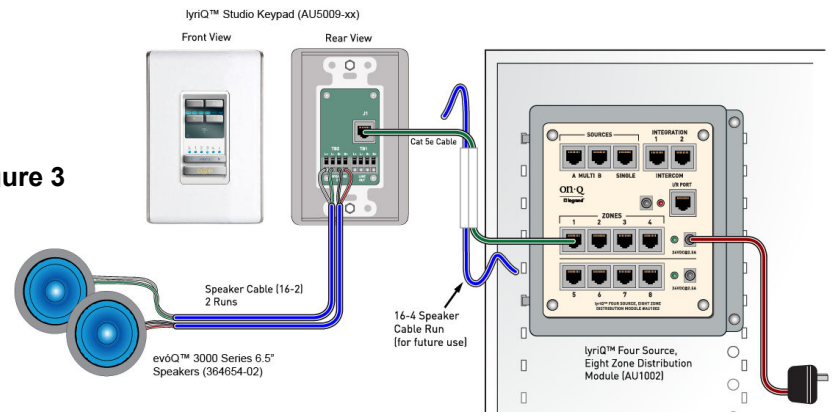
a) Use TB2 to connect one pair (only) of 8 ohm evōQ™ audio speakers to the volume control.

b) Use TB1 to connect your evōQ™ powered sub-woofer or an external amplifier to the volume control. These connection terminals do not provide any amplification but the volume control on the keypad controls the output level of this connection.

3) Connections in the enclosure (see ***Figure 3***):

a) The Category 5 cable that was run to each volume control location should be terminated with an RJ45 plug according to the T568A wiring standard and inserted into one of the zone output jacks of the associated lyriQ™ audio distribution module.

Figure 3



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b) To connect more than four (4) Studio Keypads to a Single Source 4 Zone Module or more than eight (8) Keypads to a 4 Source 8 Zone Module, cascade Single Source Modules. To cascade a Single Source Module, simply run a Category 5 jumper from the "Cascade Out" RJ45 jack on the front panel of the first Module to the "Source In" RJ45 jack on the front panel of the second Module (see ***Figure 4***).

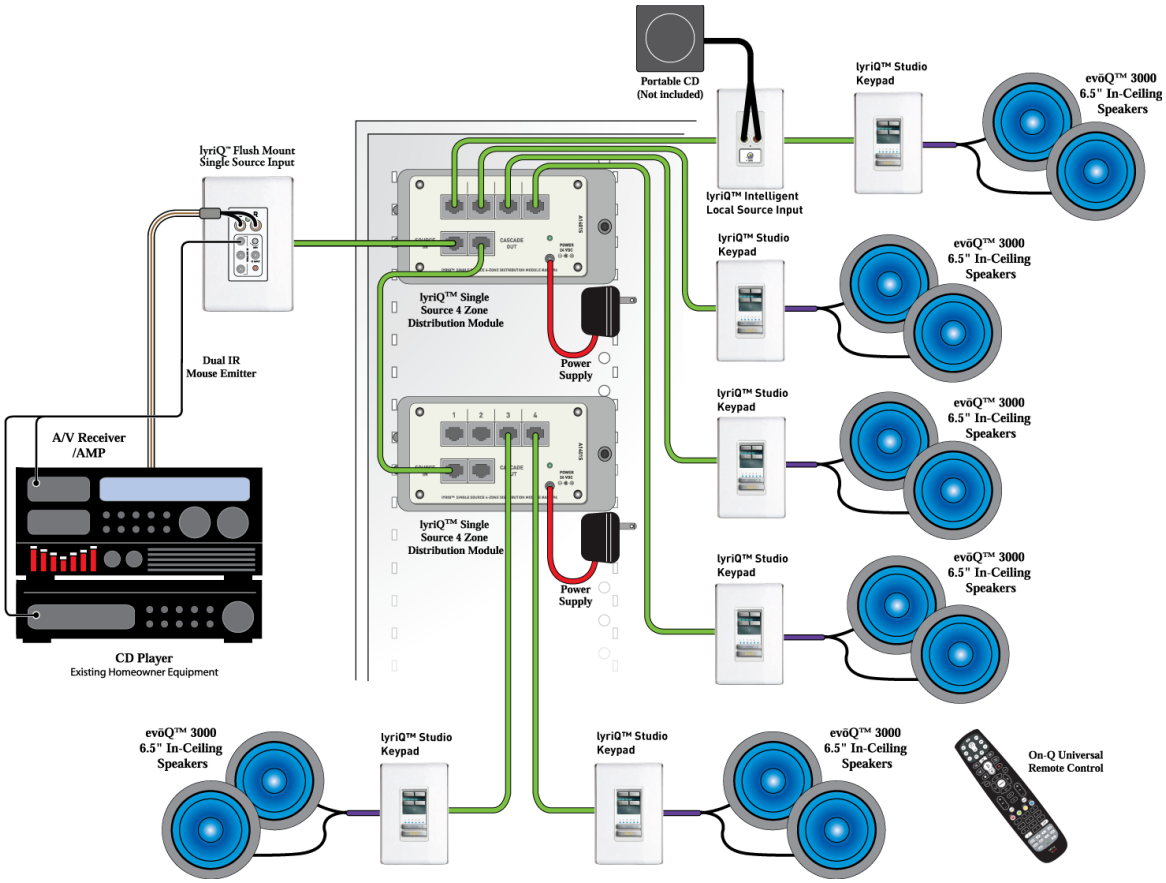

Figure 4

4) Keypad Mounting: check all connections and test the system's operation before installing the volume controls into the wall. Use the included screws to install the volume control and wall plate into the single gang box.

NOTE: A 20 cubic inch or larger single gang box is recommended.

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4. Operation

A. ON/OFF:
Keypad – Press STANDBY button to toggle ON or OFF (see ***Figure 5***).
Remote – After pressing On-Q button, press On/Off button to toggle ON or OFF (see ***Figure 6***).

B. Power-Save Mode:
Keypad only – After 30 seconds of inactivity, the Keypad will go into Power-Save or "sleep" mode. Pressing any button on the Keypad will awaken it from this mode, performing the action associated with the button push.

C. SOURCE select:
Keypad – Press SOURCE rocker switch up (right side) or down (left side) to select desired source (see ***Figure 5***).
Remote – Press SOURCE UP or DOWN button to select desired source (see ***Figure 6***).

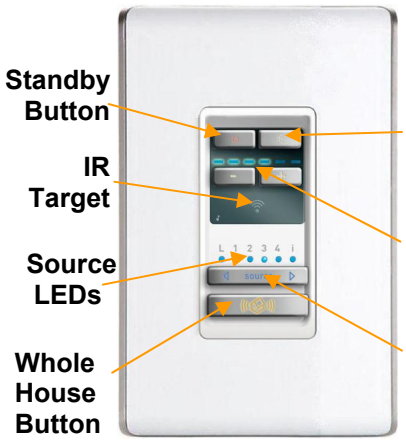

Figure 5

NOTE: (Keypad or Remote) For Single Source Systems, source toggles between source #1 and any connected Studio Local Source/s. For Multi-Source Systems, source toggles between 1, 2, 3, 4 and connected Studio Local Sources. If more than one Local Source is connected, they are indicated by "L" and "2".
NOTE: Upon source change, volume mutes and then ramps back up to prior volume setting automatically.

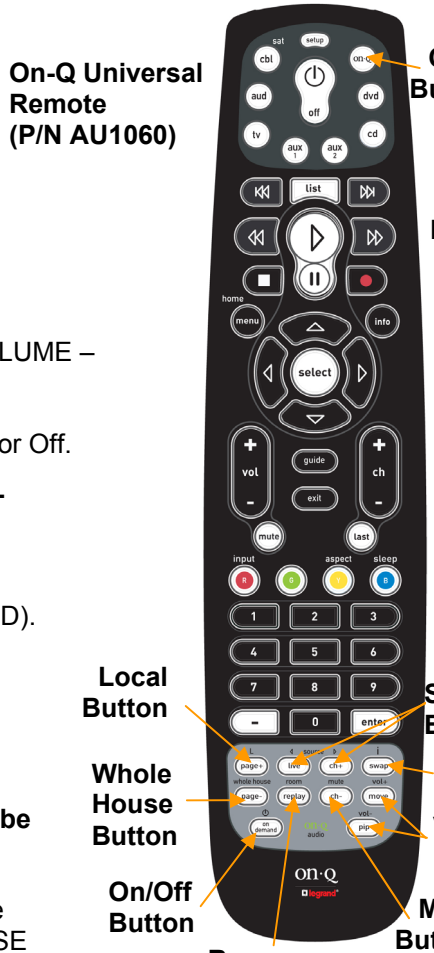

Figure 6

D. VOLUME Steps: Keypad or Remote – Press VOLUME + (Up) or VOLUME – (Down) button (36 steps).

E. MUTE: Keypad or Remote – Press MUTE button to toggle Mute On or Off.

NOTE: When returning from MUTE, volume control will ramp to pre-mute or adjusted state (source, volume and backlight level).

F. DO NOT DISTURB (see ***Figure 5***):
When the Keypad is off, pressing MUTE toggles Do Not Disturb (DND). This mode is indicated by both the red POWER and MUTE LED on. When Keypad is in DND mode, it will Not respond to whole house commands from other locations.

G. WHOLE-HOUSE Mode (see ***Figure 5***):

NOTE: In this mode, every operation performed on this keypad will be relayed to all keypads not in (DND) mode in the system.

Keypad or Remote – Press the WHOLE HOUSE button to toggle the Whole House function On or Off (On the Keypad, the WHOLE HOUSE

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button turns blue).

In this mode, all functions performed on the local keypad such as Volume Up/Down, Mute/Un-Mute, Source selection, or Power On/Off are relayed to and performed on all active keypads in the system.

NOTE: The Whole-House mode will be exited when the user fails to press a key within 10 seconds or by pressing the WHOLE HOUSE button again.

H. DIMMING set-up:
Press Volume+ and Volume- at the same time to enter mode. Backlights will flash. Press + or- to adjust level of light.

I. POWER UP SELF TEST (see ***Figure 5***):
Keypad only – When power is applied to the Studio Keypad, the following start up test will occur:
1) The Keypad white backlight LEDs will illuminate to full intensity.
2) The MUTE button backlight will transition to red and back to white.
3) The WHOLE HOUSE button backlight will transition to blue and back to white.
4) The volume indicator LEDs and then source indicator LEDs will illuminate left to right and then back to the left.
5) The Keypad white backlight LEDs will dim to off and the Standby button will be backlit red.
6) When done, the Keypad powers down,

NOTE: The first 5 power up self tests will take about 15 seconds, and about 2 seconds after that. Hitting any button during the test will interrupt the test and the Keypad will operate as normal.

5. Important Safety Precautions:

Read the instructions that are included with all associated lyriQ™ Audio products before installing any single component. If you are unsure of any of the installation procedures contact On-Q/Legrand Technical Support @ 1-800-321-2343 option 1 or contact an On-Q/Legrand installer.

- Do not attempt to service, move or change any component of the lyriQ™ Audio system unless you are qualified to do so.
- This system should be installed by a qualified installer and must conform to all local building and electrical codes.
- Do not apply power to the lyriQ™ Audio System until all components are installed and wiring is properly terminated.
- Do not attempt to terminate, change or un-install any wiring without first turning off power to the lyriQ™ Audio System located in the Enclosure. Unplug the power to the lyriQ™ Audio System from the power outlet before proceeding with wiring terminations or changes.
- Install all system components away from heat sources such as HVAC ducts/registers, stoves or any other heat source.
- Do not expose any component that was designed for indoor use to moisture. Doing so can create electrical hazards or render the component unusable. Exposure to moisture will also void the warranty on the system.
- Do not use vacuum cleaners, liquid or aerosol cleaners to clean system cover plates. A damp cloth may be used.

6. Installer Setup Mode (see page 6 and 7)

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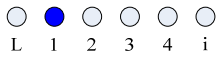
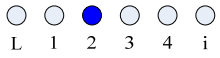
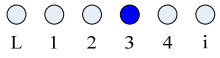
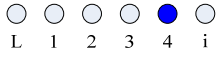
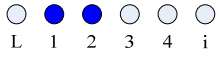
STUDIO KVC – Installer Setup Mode

Activate by pressing the following key sequence (while on):

- MUTE, VOLUME UP, VOLUME DOWN, VOLUME DOWN, MUTE, VOLUME UP, VOLUME DOWN, VOLUME DOWN
- The KVC will indicate Installer Setup Mode by blinking its backlight LEDs.

SETTING	FUNCTION	OPTIONS
WHOLE HOUSE ENABLE/DISABLE  	Enables or disables this KVC's ability to respond to whole-house commands from other KVC's in the system	■□□□□□ ENABLED: (DEFAULT) This KVC may be controlled by whole house commands from other KVC's.
		□■□□□□ DISABLED: This KVC will not respond to whole house commands from other KVC's.
TURN ON VOLUME  	Sets the turn on volume for this KVC. Alternatively, the KVC can be set to remember its last volume when it is turned on.	■□□□□□ SPECIFIED VOLUME: (DEFAULT) The displayed volume setting is the turn on volume.
		□□□□□■ LAST VOLUME: When this KVC is turned on, it will be set to its last volume.
MAXIMUM VOLUME  	Sets the maximum allowed volume for this KVC.	■■■■■■ SPECIFIED VOLUME: (DEFAULT) The displayed volume setting is the maximum volume.
IR TARGET & IR REPEAT ENABLED / DISABLED  	Controls the setting of this KVC's IR functionality	■□□□□□ IR TARGET ENABLED / IR REPEAT ENABLED: (DEFAULT) The KVC will process received IR commands and repeat any received IR throught the system.
		□■□□□□ IR TARGET ENABLED / IR REPEAT DISABLED: The KVC will process received IR commands, but will NOT repeat any received IR throughout the system. • This setting may be used to prevent IR noise at this KVC from effecting the rest of the system.
		□□■□□□ IR TARGET DISABLED / IR REPEAT DISABLED: The KVC will not process any received IR commands. • This setting may be used in extremely noisy IR environments to prevent audible noise.
BALANCE  	Adjusts the left/right balance of this KVC's audio.	□□■■□□ MIDPOINT: (DEFAULT) Equal balance between left and right.
		■■■□□□ FULL LEFT: Audio is balanced completely to the left.
		□□□■■■ FULL RIGHT: Audio is balanced completely to the right. NOTE that other settings are available between the maximums.

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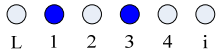
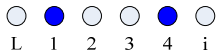
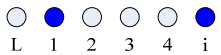
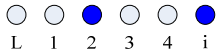
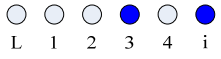
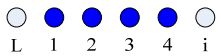
SETTING	FUNCTION	OPTIONS
GROUPING  	Allows the Integration Module to properly control multiple KVC's that are cascaded from an 'AU1002 Four Source, Eight Zone Distribution Module' or an 'AU1014 Advanced Single Source Module'.	NO GROUPING: (DEFAULT) This KVC is not part of a cascaded group. This is also the proper setting in a non-Integration Module system.
		GROUP MEMBER: This KVC is a member of a cascaded group, but is not the master. As such, it will not respond to an Integration Module's status queries.
		GROUP MASTER: This KVC is a member of a cascaded group – and is the group master. As such, it is the only KVC in the group that will respond to an Integration Module's status queries.
IR REPEATER PATTERN  	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.
AUTOMATIC POWER OFF  	Determines whether this KVC will automatically power off after 20 minutes of audio loss.	ENABLED: (DEFAULT) This KVC will automatically power off after 20 minutes of audio inactivity.
		DISABLED: This KVC will never automatically power off.
WHOLE HOUSE BUTTON ENABLED / DISABLED  	Determines if the whole house button on this KVC is operational.	ENABLED: (DEFAULT) This KVC can control other KVC's in the system after pressing its whole house button.
		DISABLED: This KVC cannot activate whole house mode through the use of its whole house button.
IR ACTIVITY FEEDBACK  	Allows the KVC to indicate the presense of IR activity by blinking its power led.	ENABLED: This KVC will show IR activity by blinking its power led.
		DISABLED: (DEFAULT) This KVC will not show any indication of IR activity.
RESTORE DEFAULT  	Allows the user to reset the KVC's settings to their defaults.	ACTIVATED: Pressing either volume button on this setting resets the defaults and blinks the leds to indicate.

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