INSTRUCTION/INSTALLATION SHEET
lyriQ™ High Performance Keypad

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IS-0369 REV. E

1. Introduction

The lyriQ™ High Performance Keypad, P/N AU1000-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 High Performance Keypad has on-board 20 Watt per channel class D amplifiers to provide a rich level of clean sound even in outdoor or large room applications. It also contains a full set of features, including the ability to control all other keypad volume controls in the house. Build a system that accommodates the needs of any space by combining the lyriQ™ High Performance Keypad with the lyriQ™ Standard Keypad (P/N AU7394-xx) in the same system. The AU1000-xx is available in white (-WH), light almond (-LA), ivory (-IV), or black (-BK).

Figure 1

2. Description

The front panel of the lyriQ™ High Performance Keypad, PN AU1000-xx **(see *Figure 1*),** looks almost identical to the lyriQ™ Standard Keypad (AU7394-xx). It also has push buttons for VOLUME UP/DOWN (with five associated green Volume Bar Graph LEDs), SOURCE (with four green Source Selection LEDs) and MUTE (with one red status LED). There is also an IR target window and tri-colored status LED. The visual cue from the front panel that this is a High Performance Volume Control are the parenthesis surrounding the music note in the lower right hand corner.

NOTE: lyriQ™ Keypads are recommended for indoor use only.

On the rear of the lyriQ™ High Performance Keypad (see ***Figure 2***) the Category 5 connection is an RJ45 jack (J1). The TB2 speaker output connections (left and right, plus and minus) are spring loaded and designed to support up to 14 gauge wire. The TB3 Line Out connections (plus and minus) are also spring loaded and designed to support up to 14 gauge wire. This mono-summed output is designed for powered sub-woofers and as such is filtered through an 80Hz low pass filter. The other terminal block on the rear (TB1) is used for powering the keypad. Up to 14 gauge speaker wire may be used for this purpose, and this speaker wire (two conductor or four conductor) is run from a power distribution module (P/N AU1001) in the enclosure to the ketpad. We recommend 16/4 speaker wire, since it is available paired with Category 5 from a variety of sources. Again, the TB1 connections are spring loaded (plus and minus) with the two plus connections on the red portion of TB1 and the two minus connections on the black portion of TB1. For ease of installation, connect the red wire and white wire to the red (plus) portion of TB1 and the black and green wire to the black (minus) portion of TB1.

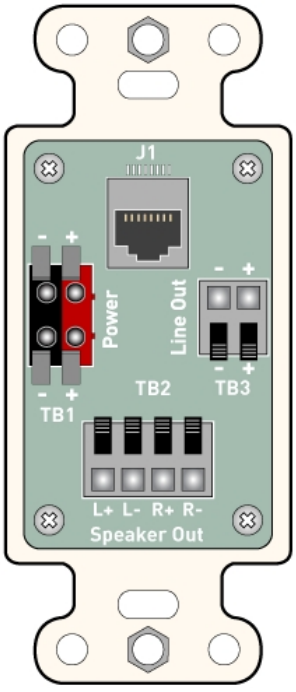

Figure 2

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3. Installation

Installation of the lyriQ™ High Performance 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 keypads: Make sure that power supplies are not connected to the lyriQ™ Audio and Power Distribution Modules. For instructions on pre-wiring and installing other components of the lyriQ™ Audio System, please see the Instruction Sheets included with those components.

NOTE: Always follow TIA-570-B 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.

NOTE: Maintain a minimum 12" separation between Category 5 cable and any 120VAC cabling.

A. "Rough-in" steps:

1) A single Category 5 cable and 16/4 speaker wire should be run from the enclosure location to a single gang outlet box or mud ring at each Volume Control location.

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 power connection (TB1) strip 3/8" of insulation from each of the four conductors and insert the red and white wires into the red (plus) portion of TB1. Insert the stripped black and green wires into the black (minus) portion of TB1 (see ***Figure 2***).

NOTE: The two red connections are tied together, as are the two black connections. They are provided in pairs to provide flexibility of wiring.

NOTE: Electricians may prefer to think of the black and red wires as plus and the green and white wires as minus. That wiring will also work, as long as it is also followed at the other end of the cable (at the Power Distribution Module in the enclosure).

3) Speaker/Line Out/Sub-Woofer 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 evδQ™ audio speakers to the volume control.

b) Use TB3 to connect your evδQ™ 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.

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

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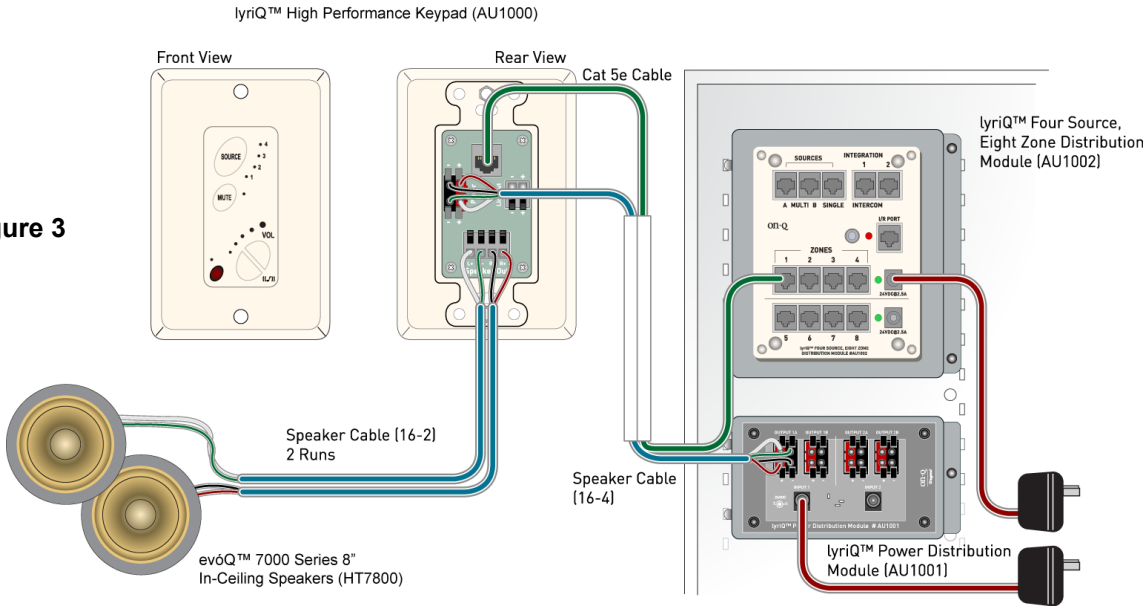
a) The Category 5 cable that was run to each keypad location should be terminated with an RJ45 plug according to the T568A wiring standard and inserted into one of the zone output jacks of the associated lyriQ™ audio distribution module.

Figure 3



b) For the 16/4 speaker wire power cable that was run to each volume control location, strip 3/8" of insulation from each of the four conductors and insert the red and white wires into the red (plus) portion of TB1. Insert the stripped black and green wires into the black (minus) portion of TB1

NOTE: As noted before, Electricians may prefer to think of the black and red wires as plus and the green and white wires as minus. That wiring will also work, as long as it is also followed at each end of the cable.

c) To connect 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 Cat 5e jumper from any Zone port RJ45 jack on the front panel of the Multi-source Module to the "Source In" RJ45 jack on the front panel of a Single Source Module (see ***Figure 4***).

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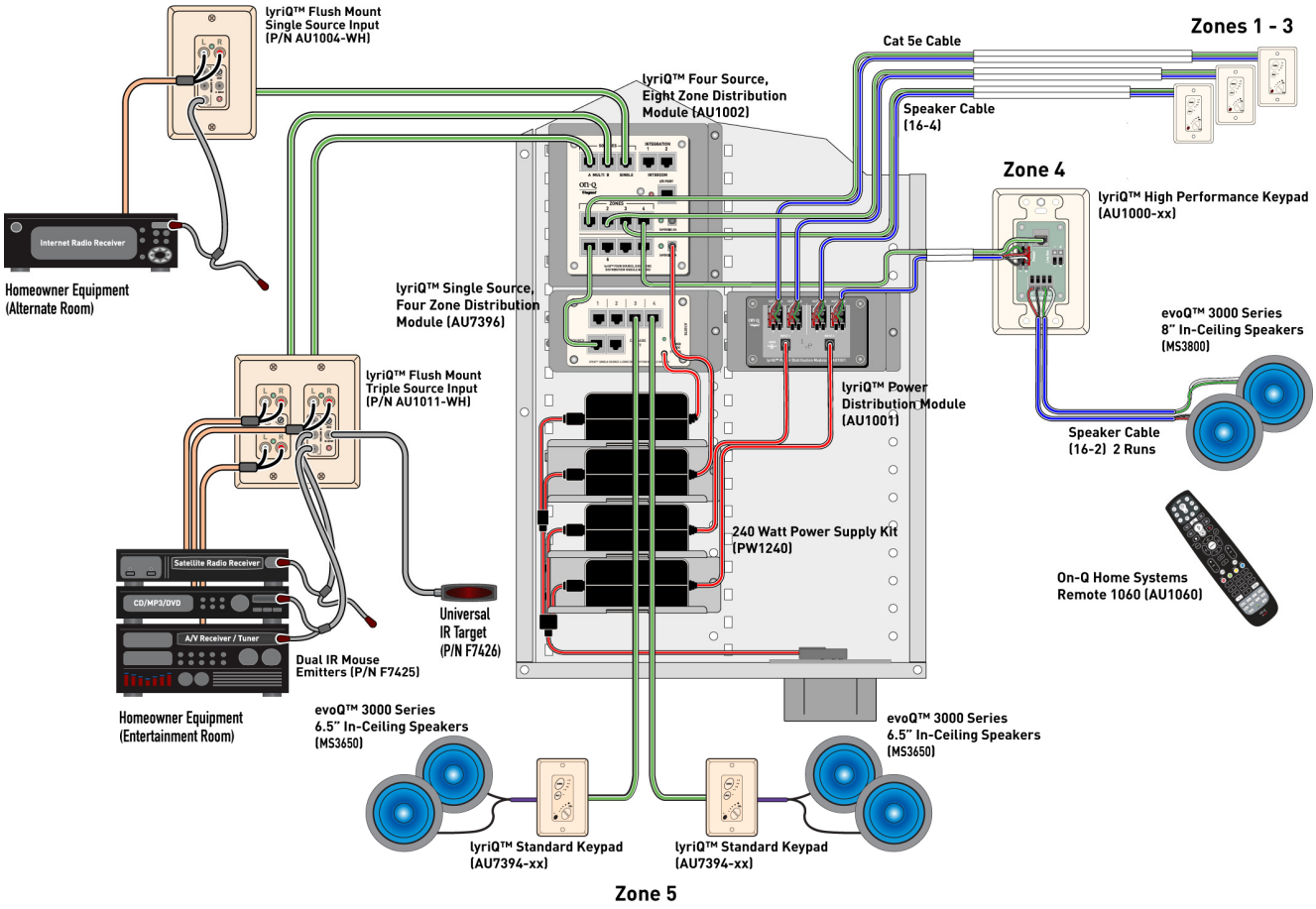
Figure 4



5) 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 in.³ or greater single gang box is recommended.

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4. Operation

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

B. SOURCE select:
Keypad – Press SOURCE button multiple times (see ***Figure 5***).
Remote – Press SOURCE UP or DOWN button to select desired source (see ***Figure 6***).

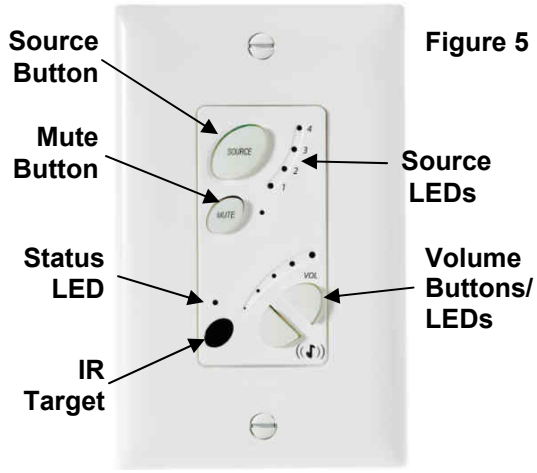

Figure 5

NOTE: Upon source change, volume ramps down and then back up automatically.

C. Volume Steps: Keypad or Remote – Press VOLUME UP or DOWN button (40 steps on Keypad / 36 steps on Remote).

D. Mute: Keypad or Remote – Press MUTE button to toggle ON or OFF.

E. Back Light Level Adjust:
Keypad – Press and hold VOLUME UP and DOWN buttons simultaneously. The button back lights will flash to indicate they may be adjusted. Press VOLUME UP or DOWN button to adjust back light level. Press SOURCE or MUTE button to exit or wait for 10 second time out (see ***Figure 5***).

NOTE: When any Keypad button is tapped, back light level goes to full bright and returns to the adjusted level when activity ceases. For Remote operation, the back light goes to full bright when an IR command is received and returns to the adjusted level when activity ceases.

F. Temporary Do Not Disturb (DND):
Keypad – Double tap MUTE button, Status/IR LED glows dim RED (see ***Figure 5***).

NOTE: When Keypad is in temporary DND mode, it will NOT respond to whole house commands from other locations. Press any button to disable temporary DND mode.

G. Whole-House Source Control/Party Mode (see ***Figure 5 or 6***):

NOTE: In this mode, every operation performed on this keypad will be relayed to all keypads in the system.

Keypad – Press the MUTE and SOURCE buttons simultaneously and the IR/Status LED should blink orange (just press Whole House button on Remote to toggle function On or Off.).

NOTE: The other keypads that are on and not in DND mode momentarily flash their Volume Bar Graph LEDs (indicating they are under Whole House

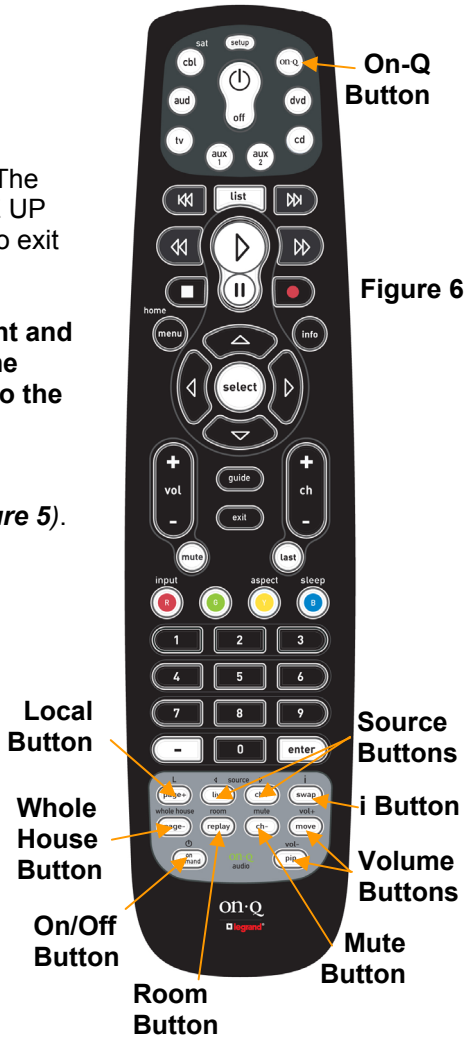

Figure 6

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control). Their IR /Status LED also blinks orange.

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

NOTE: There are also two special SOURCE commands that may be issued In this mode as described below.

1) When in Whole-House Source Control Mode and the SOURCE button is pressed and held, a command will be issued for all keypads to turn on and go to the selected source.

2) When in Whole-House Source Control Mode and the SOURCE button is double tapped, a command will be issued for all active keypads to go to the source that the local keypad is currently on. This is handy to get everyone sync'd to the same source without going through all the selections. Remember, if I'm listening to a source let's say #3 for example and want to perform Whole House commands to get everyone else there, if I simply go into Whole-House Source Control mode and press the SOURCE button it will cause everyone to go to #4 and then #1 and then #2 and finally to #3, while double tapping it will cause every active keypad to go directly to Source #3.

NOTE: The Whole-House Source Control mode will be exited when the user fails to press a key within 5 seconds or by pressing and holding the MUTE and SOURCE buttons simultaneously as before.

5. Important Safety Precautions:

READ ALL INSTRUCTIONS CAREFULLY BEFORE INSTALLING THE lyriQ™ AUDIO SYSTEM.

- **Do not** attempt to service, move or change any component of this 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 has been properly terminated.
- **Do not** attempt to terminate, change or un-install any wiring without first turning off power at the lyriQ™ Audio System which is located in the enclosure. Unplug the power transformer/s that is/are powering the lyriQ™ Audio System from the power outlet before proceeding with wiring terminations or changes.
- Install all components of this system 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.

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6. lyriQ™ Keypad Installer Settings Reference Guide

AU5009-xx lyriQ Standard Keypad in Studio, **AU5010-xx** lyriQ High Performance Keypad in Studio, **AU7394-xx** lyriQ Standard Keypad, **AU1000-xx** lyriQ High Performance Keypad

Setting	Function	Use Case
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.**	To enter into installer settings so that keypads can be personalized for the user and to their environment.
Whole House: Enable/Disable	**Default** (src 1, vol. 1) The local keypad will respond and be able to be controlled from other keypads on the system that have engaged Whole House Mode. **Whole House Disable** (src 1 vol.2) turns off the ability of a keypad to be controlled by other keypads that have engaged Whole House Mode. Will not respond to audio interrupt. Will still be able to implement a Whole House command from keypad. Keypads connected to systems with the Integration Module will not be controlled by Integration Module communications. **Note**: **This is set on each keypad, not globally.**	**Default** is used for normal operation and environments. **Whole House Disable** is typically used for outdoor spaces, baby's rooms, offices or other areas that should not be disturbed.
Turn-On Volume	**Default** (src 2, vol. 1) turn on volume is about 10% full volume. **Turn-On Volume** - **Variable turn on volume**: (src 2, vol. *adjust to desired level*) enables a standard turn on volume to be selected from 0% - 50% of full volume. - **Last volume**: (src 2, vol. 5) turn on volume will be set at the volume that the user left the keypad at before it was turned off.	**Default** is used for normal operation and environments. **Turn-On Volume** allows installer to customize the volume level to the homeowner's environment and preference.

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Maximum Volume	**Default** (src 3, vol. All) is 100% of volume possible. **Limited Maximum Volume**: (src 3, vol. 3 or 4) can be adjusted down to 50% of total volume to limit the loudest volume that the keypad will play at.	**Default** is used for normal operation and environments. **Limited Maximum Volume** is typically used for small rooms such as a bathroom, bedroom and in children's rooms.
IR Target / IR Output Disabled	**Default** (src 4, vol. 1) enables use of remote control for Whole House commands and source equipment control. **IR Output Disabled** (src 4, vol. 2) enables in-room keypad functions to be controlled by remote. Whole House commands and source equipment control is not available. **IR Target Disabled** (src 4, vol 3) The keypad will not respond to remote controls	**Default -** normal operation and environments **IR Output Disabled** –for use when system is installed in environments that have above normal levels of radiated interference. **IR Target Disabled** –for use when system is installed in environments that have extreme levels of radiated interference.
Nightlight	**Default** (src 1 & 3, vol. 1) Keypad glows dimly when off. **Nightlight Disabled** (src 1 & 3, vol. 2) Keypad produces no light when off.	**Default** is used for normal operation and environments. **Nightlight Disabled** is used for those customers that require absolute darkness in the room when the Keypad is off**.**
Balance Setting	**Default** (src 1 & 2, vol. 3) is the middle of the range **Balance Adjustment** (src 1 & 2, vol. 1,2,4,5) can be adjusted greater or less to left and right channels	**Default** is used for normal operation and environments **Balance Adjustment** is used to accommodate various user environments and to adjust sound to listening position.
IR Repeat Transmission	**Default** (src 1 & 4, vol. 2) is Multi-Burst Frequency which is 40kHz and 56kHz. **IR Carrier Frequency at 40kHz** (src 1 & 4, vol. 1) **IR Carrier Frequency at 56kHz** (src 1 & 4, vol. 3)	**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 Adjustments** are chosen based on end user's remotes. *(Most devices are 40kHz. Cable and satellite boxes are often 56kHz)*

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	NOTE: The source which is on when entering setup is the only source changed (this procedure must be done for each individual source which requires a change).	
Auto Off Enable / Disable	**Default** (src 2 & 4, vol. 1) Keypad will turn off after 20 minutes of no music. **Auto Off Disable** (src 2 & 4, vol. 2) Keypad will remain on until manually turned off.	**Default** (Auto Off Enable) is used for normal operation and environments **Auto Off Disable** is used when user desires Keypad to remain on until manually turned off.
Restore Defaults	(src ALL, vol. NONE) Returns all setting to factory defaults	Use for trouble shooting issues when experiencing problems that may have been caused by an installer setting.

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