1 RJ45 Connector for CAT-5 Connection

The RJ45 input provides a connection for the CAT-5 cable from an A-BUS hub/controller to receive an audio signal, passthrough IR and power over the CAT-5 cable. Use the T568A wiring standard. The recommended maximum length for standard CAT-5 cable is 150 feet.

Before connecting the A-K5L, disconnect the power supply from the A-BUS hub/controller and disconnect the Status power supply if used.

2 Speaker Output Connections for 8-ohm Speaker Pair

The Speaker Output connections provide speaker-level audio output for a pair of 8-ohm speakers. The screw-down terminals accepts up to 16 gauge speaker wire.

NOTE: Use caution when connecting speaker wires, as shorting between terminals will cause damage to the digital amplifier and void the warranty.

3 Line Out Connection for External Amplification

The Line Out provides a variable line-level audio output connection for an external amplifier or powered subwoofer. An amplifier provides more power to a large listening area, and a powered subwoofer adds extended bass response.

Use 22AWG four conductor, two-pair twisted shielded cable to connect to the Left positive (+) and negative (-), and Right positive (+) and negative (-) screw down terminals on the back of the A-K5L. Terminate the four conductor two-twisted pair shielded cable to the rear solder lugs of a wall plate fitted with two RCA jacks on its front. Terminate the shield at the Right negative (-) or Left negative (-) ring of the solder lugs. RCA cables can be used to connect the amp or subwoofer to the wall place for audio signal feed.

4 Status Jumper for Status LED Enable/Disable

The Status option provides visual indication when source equipment is powered on. With this option enabled, the status LED shows green on the keypad when the system is on (keypad can be on or off).

To enable the Status LED, locate the status pins on the right side of the keypad under the faceplate. Place the status jumper over the bottom two pins to enable the status LED.

NOTE: Amplified keypads are shipped with the Status LED option disabled (default).

Status function and operation:

When the source is powered on, the Status circuit is powered by 12VDC and turns the keypad's status LED to green. This indicates to the user that the source is on and ready to receive remote control commands.

When the source is powered off (remotely or manually), it shuts off the 12VDC Status power connected to it, and turns off all the interfaces connected to the controller (green LED off).

5 A-KSC Connection

The A-KSC is an accessory keypad that adds source control and numeric capability to an A-K5L keypad. It attaches to the A-K5L with a 14-pin connector. On the A-K5L, the 14-pin header is located on the right side of the keypad when facing front. It is covered when a trim plate is installed.

6 Keypad Connection to A-C68 Controller

Each keypad connects to a Keypad Output port on the back of the A-C68 controller. Connections use CAT-5 cable with an RJ45 connector.

The Keypad Ports are located on the back of the A-C68 on the left. Connections at the Keypad Ports are made with RJ45 connectors using T568A CAT-5 wire configuration. CAT-5 cable length should be 150 feet or less from controller to keypad.

When connecting A-K5L keypads to the A-C68, the keypad dip switches on the controller's front programming center must be set in the DOWN position. Dip switches correspond to numbered keypad ports.

For a clean installation when wiring from a Keypad Port, use an RJ45 CAT-5 patch cable to connect from the keypad port to an RJ45 wall plate (optional). Using the same RJ45 T568A CAT-5 wiring configuration, use CAT-5 from the RJ45 wall plate to the keypad.

7 Installation

Check all connections and test the system's operation before installing the A-K5L into the wall. Using the included hardware, install the A-K5L into a standard UL/CSA single-gang electrical J-box.
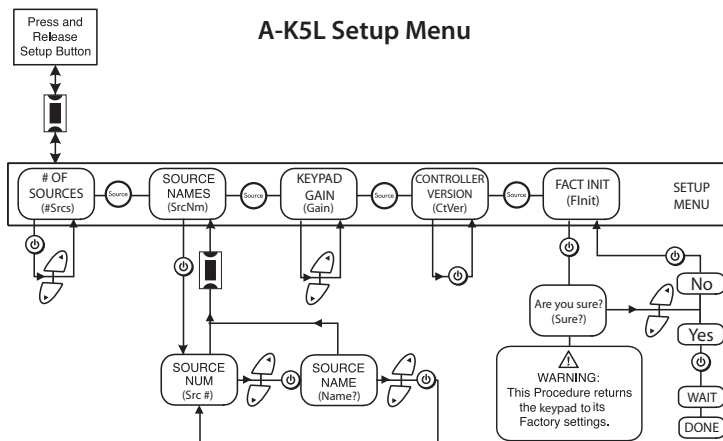
8 Programming

The Setup menu is used to set number of sources and select source names. When used with the A-C68 controller, the menu also shows the controller firmware version number, and allows a controller Factory Initialization.

To access the Setup menu, press and release the Setup button on the right side of the keypad (behind the face plate) until "SrcNm" (source name) appears on the display. Press the Source button to toggle through the menu options, and use the Volume Up/Down buttons to scroll through selections. Press the Power button to enter a selection.

When finished, press and release the Setup button again.

9 OS Update

The OS Update pins are jumpered for firmware updates, with jumper removed during normal use. The OS Update 4-pin port uses the Advanced Programming Cable, P/N 2500-521065.

A-K5L Setup Menu

Safety Instructions

1. Read Instructions - All the safety and operating instructions should be read before the appliance is operated.
2. Retain Instructions - The safety and operating instructions should be retained for future reference.
3. Heed Warnings - All warnings on the appliance in the operating instructions should be adhered to.
4. Follow Instructions - All operating and user instructions should be followed.
5. Water and Moisture - The appliance should not be used near water; for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool.
6. Wall or Ceiling Mounting - The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
7. Heat - The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
8. Power Sources - The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
9. Grounding or Polarization - Precaution should be taken so that the grounding or polarization means of an appliance is not defeated.
10. Object and Liquid Entry - Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through the openings.
11. Damage Requiring Service - The appliance should be serviced by qualified service personnel when:
    The power supply cord or the plug has been damaged;
    Objects have fallen, liquid has been spilled into the appliance
    The appliance has been exposed to rain
    The appliance does not appear to operate normally
    The appliance has been dropped or the enclosure is damaged.
12. Servicing - The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.
13. Care – From time to time you should wipe off the front panel with a soft dry cloth.

Limited Warranty

R Russound®

R Russound®

A-K5L
Amplified Keypad with LCD Display and Multi-Source Capability for A-BUS System
Installation Manual

A-K5L Overview

The Russound A-K5L is an in-wall amplified keypad used with A-BUS hubs and controllers in a distributed audio system. It can be used with both single- and multi-source A-BUS controllers.

The A-K5L provides source selection and control with amber or green backlit push buttons, plus an IR window to receive remote control signals. The volume up/down buttons control the speakers in the room that are connected to the A-K5L. Typical installations place one A-K5L in each room of the A-BUS system.

The Line Out connection on the A-K5L can be used to feed a separate powered subwoofer or to connect an external amplifier for more power to a larger listening area. When used with the A-C68, the A-K5L keypad supports the A-KSC keypad to add source control and numeric control capability.

A-K5L Key Features

• Digital amplification for increased power
• Supports 1 to 12 sources
• Supports Party Mode when used with A-C68 controller
• LCD panel for source name display (standard source names)
• Amber or green backlighting

A-K5L Operation with Remote Control

With A-C68 controller - uses A-SRC1 remote
With any other A-BUS hub - uses A-LRC2 remote
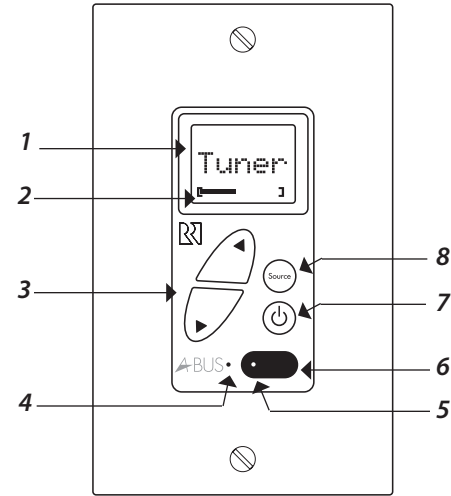With RNET A-BUS subzone - uses RNET system remote

A-K5L Specifications

Output Impedance:	8 ohms/channel (1 pair speakers)
Input Impedance:	30 Kohms
Power Requirements:	+24VDC 1050mA peak
CAT-5 Connections:	RJ45
Dimensions (in-wall):	1.75"W x 2.875"H x 1.75"D (45x73x45mm)
Weight:	5.5oz. (160g)

A∙BUS®

A-BUS is a registered trademark of LeisureTech Electronics Pty Ltd Australia. This product may be covered by one or more of the following patents: US #7,181,023, #6,389,139; EP #1004222, AU #739808, NZ #502982, Mexico #241196, Canada #CA2301062.

A-K5L Keypad Front Panel Operation

A-K5L Keypad

1 *LCD PANEL* - 5-character amber or green backlit display shows source name and volume.

2 *VOLUME LEVEL* - 20-segment volume level bars increase from left to right to indicate volume level. Also shows user option settings.

3 *VOLUME UP/DOWN* - Raises/lowers the volume for the room/adjusts User Menu settings.

4 *STATUS LED* - Green LED lights to show Status "on" and turns off when Status is "off"

5 *IR CONFIRMATION LED* - Red LED blink confirms IR signal reception.

6 *IR RECEIVER* - Receives IR signals and passes them to the controller and source equipment. Source components attached to IR emitters in an A-BUS system can be controlled with their own remote controls, A-SRC1 (with A-C68 controller) or A-LRC2 learning remote aimed at the A-K5L's IR window.

7 *POWER* - Turns zone ON or OFF when pressed once. If connected to an A-C68 controller, when ON, press and hold will turn on all rooms (Party mode). If the A-K5L is connected to a multisource hub, an "All Off" can be performed by a press and hold of the power button when the keypad is OFF. Status LED remains lit when keypad/zone is OFF if any other zone in system is ON.

8 *SOURCE SELECT* (Multi-source controller) - Press and release toggles through the available sources. Press and hold brings up the User Options Menu for Loudness, Bass, Treble, etc.

Conforms to UL 6500
Certified to CAN/CSA

A-K5L User Options Menu

The User Options Menu allows adjustment of the room's sound: Loudness, Bass, Treble, Balance, Turn On Volume, Local Source Volume and Page Volume. The Background Color and All On settings are located here also.

To enter the User Options Menu, press and hold the Source button when the keypad is on. Press and hold the Source button again (or a 9-second timeout) returns the keypad to regular operation.

The first option name (Loudness) appears on the display to indicate it is ready for adjustment. Subsequent presses of the Source button toggle through all options.

Once an option is selected, the Volume Up/Down buttons are used to adjust settings. The volume indicator bars indicate the option setting, along with setting numbers displayed on the LCD. Some settings will simply display an "on" or "off" choice.

Options and Settings

1. Loud (Loudness) (fuller sound): On or Off
2. Bass: -10 to +10, Flat =0
3. Treb (Treble): -10 to +10, Flat =0
4. Bal (Balance): L10 - C - R10
5. OnVol (Turn on Volume) (default room volume level): 0-20
6. LSVol (Local Source Volume): turn on volume for the local source: Off - 20
7. Bkgnd (Background Color) backlight color: Green, Amber, Off
8. AllOn (All On Enable) if the zone will respond to an all on command from another keypad: On or Off
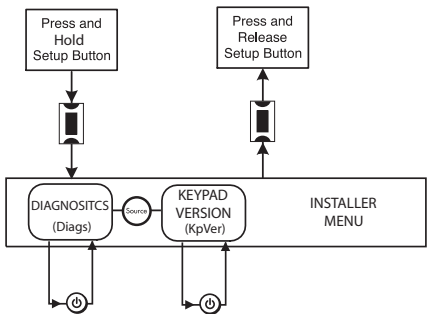9. Page (Page Volume) turn on paging volume to zone: 0 (off) - 20

A-K5L Version Menu

The A-K5L Version menu is used to view the current firmware version installed on the A-K5L keypad. The menu is outlined in the diagram below.
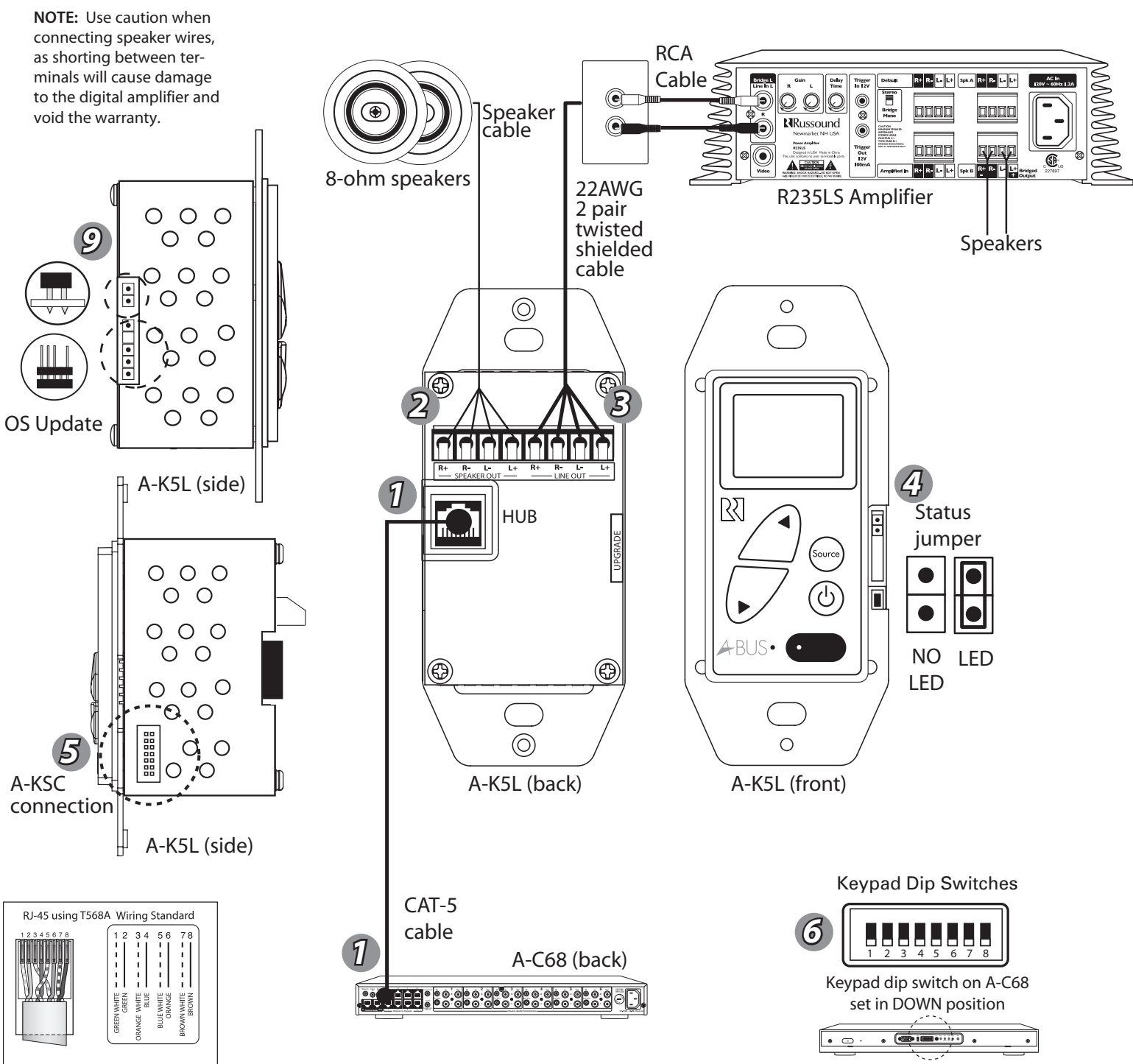
To access the Version Menu, press and release the Setup button on the right side of the keypad until "KpVer" (Keypad Version) appears on the display. Press the Power button to view the keypad version number.

When finished, press and release the Setup button again.

A-K5L Version Menu

NOTE: Use caution when connecting speaker wires, as shorting between terminals will cause damage to the digital amplifier and void the warranty.

RCA Cable

Speaker cable

8-ohm speakers

22AWG 2 pair twisted shielded cable

R235LS Amplifier

Speakers

OS Update

A-K5L (side)

A-KSC connection

A-K5L (side)

RJ-45 using T568A Wiring Standard

HUB

A-K5L (back)

A-K5L (front)

Status jumper

NO LED   LED

CAT-5 cable

A-C68 (back)

Keypad Dip Switches

Keypad dip switch on A-C68 set in DOWN position