



A-C68

A-BUS® Multizone Controller
Installation Manual

SAFETY INSTRUCTIONS



WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE THE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

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. The apparatus shall not be exposed to dripping or splashing liquids and no objects filled with liquids, such as vases, shall be placed on the apparatus.
6. Carts and Stands - The appliance should be used

only with a cart or stand that is recommended by the manufacturer. An appliance and cart combination should be moved with care. Quick stops, excessive force and uneven surfaces may cause the appliance and cart combination to overturn.



7. Wall or Ceiling Mounting - The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
8. Ventilation - The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings, or placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
9. Heat - The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
10. 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.
11. Grounding or Polarization - Precaution should be taken so that the grounding or polarization means of an appliance is not defeated.
12. Power Cord Protection - Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, receptacles, and the point where they exit the appliance.
13. Cleaning - The appliance should be cleaned only as recommended by the manufacturer.
14. Non-Use Periods - The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time. To remove all power (supply mains) from the appliance, remove the plug from the wall outlet.

15. 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.

16. Damage Requiring Service - The appliance should be serviced by qualified service personnel when:

- A. The power supply cord or the plug has been damaged.
- B. Objects have fallen, liquid has been spilled into the appliance;

17. 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.

Precautions:

1. Power – WARNING: BEFORE TURNING ON THE POWER FOR THE FIRST TIME, READ THE FOLLOWING SECTION CAREFULLY.
2. Do Not Touch The Unit With Wet Hands – Do not handle the unit or power cord when your hands are wet or damp. If water or any other liquid enters the cabinet, unplug the unit from power immediately and take it to a qualified service person for inspection.
3. Location of Unit – Place the unit in a well-ventilated location. Take special care to provide plenty of ventilation on all sides of the unit especially when it is placed in an audio rack. If ventilation is blocked, the unit may overheat and malfunction. Do not expose the unit to direct sun light or heating units as the unit internal components temperature may rise and shorten the life of the components. Avoid damp and dusty places.
 - A. 4. Care – From time to time you should wipe off the front and side panels of the cabinet with a soft cloth. Do not use rough material, thinners, alcohol or other chemical solvents or cloths since this may damage the finish or remove the panel lettering.



Conforms to
UL 6500
Certified to
CAN/CSA

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PRODUCT OVERVIEW

Thank you for choosing the Russound® A-C68 A-BUS® multizone controller.

The A-C68 caters to end users who want more control over their multiroom systems with the ability to control the system from anywhere in the house. Six source inputs, simplified programming, IR remote control and user adjustable sound controls make listening to music throughout the home easier than ever.

This innovative product features a rack mountable form (1U) with support for six sources and eight zones. It features six buffered, fixed level audio source loop outputs. This source loop configuration allows the A-C68 to pass source signals to another component, such as a home theater receiver or to another A-C68 for sharing sources in a multiple controller system.

The onboard IR library provides control codes for thousands of source components, and supports learning new codes as well.

System setup and source programming is accomplished through a minimal step process using the system remote control and the front panel programming center.

Key features include:

- Six sources delivered to 8 rooms for sharing music throughout the home.
- Source trim for each source.
- Simplified programming and control via IR library and intelligent IR learning capabilities for quick setup.
- Scalable to 48 zones by connecting multiple A-C68 units, to make whole-house audio available to larger homes and buildings. Your system can grow as your needs grow.
- Muting and paging in each zone.
- Listening options such as Party Mode, local source input.

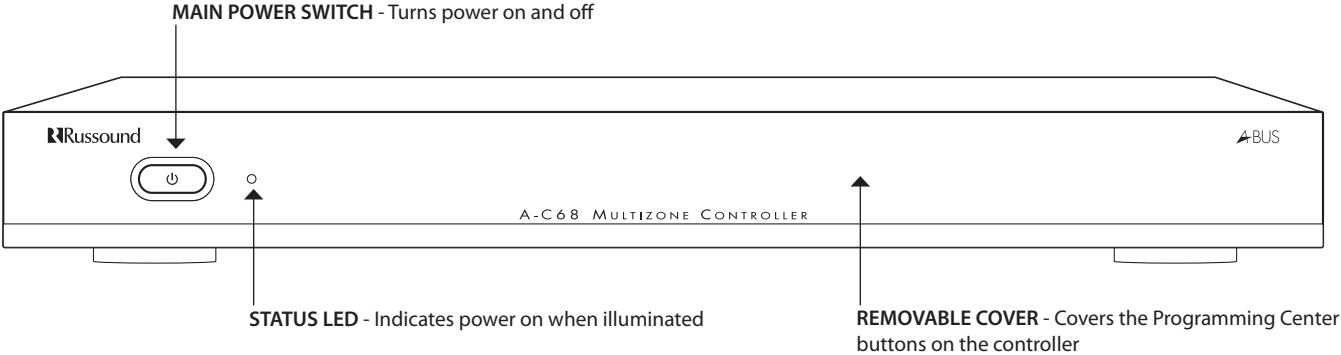
The A-C68 employs a remote control (A-SRC1) and elegant keypads (A-K5L and optional A-KSC) for home audio one-touch control. From each keypad, the user can adjust bass, treble, balance and volume. The controller includes an RS232 connection for infield upgrade capability and future use.



A-C68 CONTROLLER FRONT PANEL

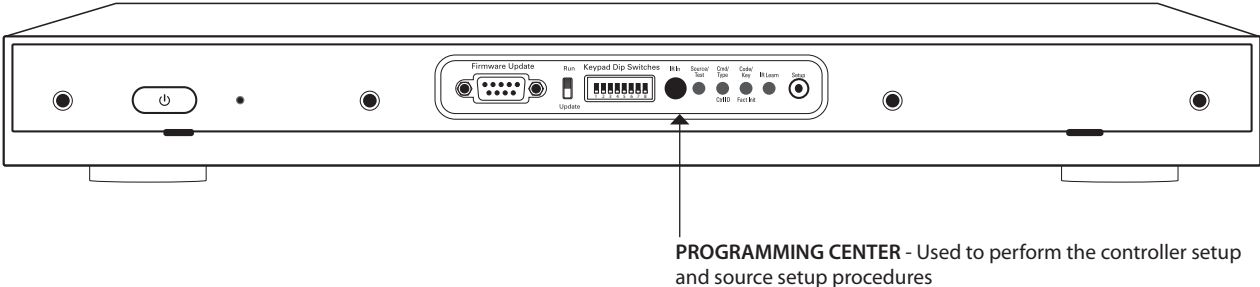
The A-C68 front panel features a removable molded plastic cover that hides the Programming Center buttons. The power switch has a push on/push off

action with a two-color LED (Status) indicator to the right. This LED is green when the unit is active, and red when the unit is in standby mode.



The A-C68 front panel cover hides the Programming Center and keypad dip switch settings. The Programming Center is used to perform the controller setup and source setup procedures. These are explained in detail in the Installer's section of this manual. The Programming Center button LEDs light

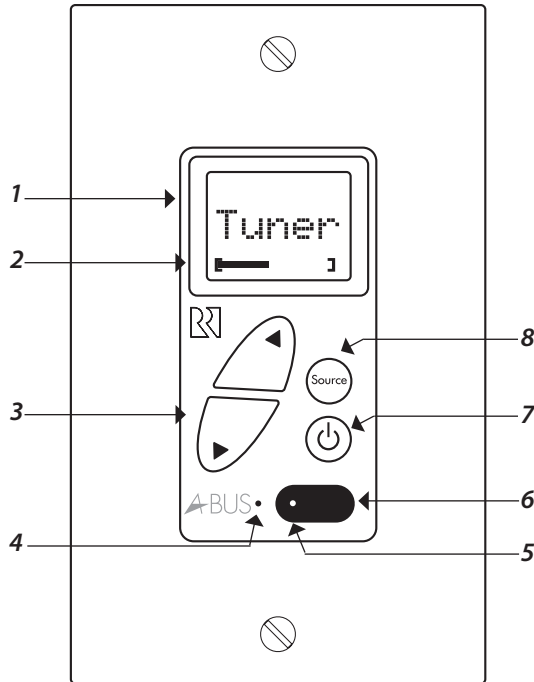
at different rates and in different colors during these procedures to indicate programming steps. It also contains an IR receiver window for remote control use during programming and RS-232 connector for firmware updates.



A-K5L KEYPAD

The A-K5L keypad provides individual zone control of the system. It has amber or green backlit soft-touch buttons for volume, power and source selection for up to 12 sources. The User Menu allows for adjustments to the audio properties

of the room, such as bass, treble, balance, etc. A built-in IR receiver with LED confirmation allows for use of remote controls.



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.

The User Options Menu allows the user to adjust the audio properties of a particular zone. The audio features that can be adjusted are: Loudness, Bass, Treble, Balance, Turn On Volume, Local Source Volume and Page Volume. The background color and All On settings are located here as well.

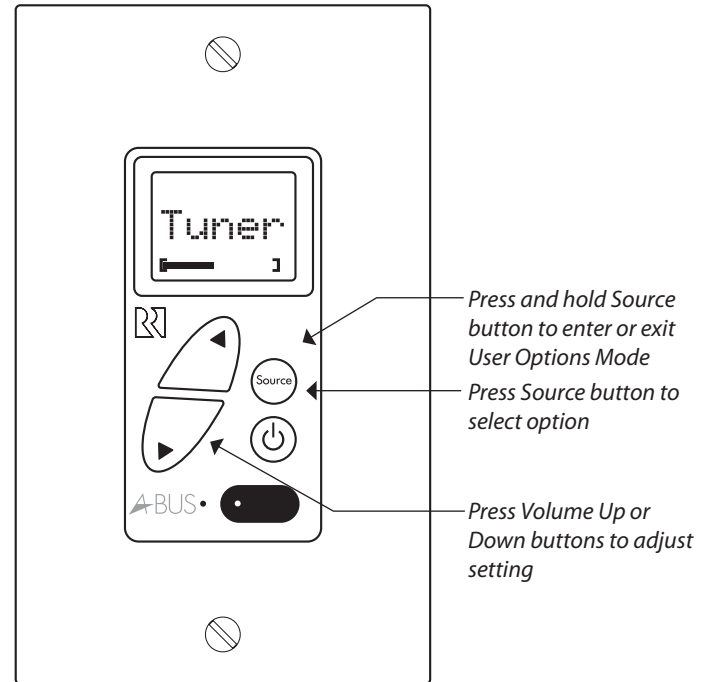
To enter the User Options mode, press and hold the Source button when the zone is on. Press and hold the Source button again (or a 12-second timeout) returns the keypad to regular operation.

The first option (Loudness) appears on the display to indicate it is ready for adjustment. Subsequent presses of the Source button toggle through Bass, Treble, Balance, Turn On Volume, Local Source Volume, Background Color, All On Enable and Page Volume.

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

- Loud (Loudness) (fuller sound): On or Off
- Bass: -10 to +10, Flat =0
- Treb (Treble): -10 to +10, Flat =0
- Bal (Balance): L10 - C - R10
- OnVol (Turn on Volume) (default room volume level): 0-20
- LSVol (Local Source Volume): turn on volume for the local source: 0-20 (when used with A-LC3)
- Bkgnd (Background Color) backlight color: Green, Amber, Off
- AllOn (All On Enable/Party mode): if the zone will respond to an all on command from another keypad: On or Off
- Page (Page Volume): turn on volume for paging to that zone: 0-20

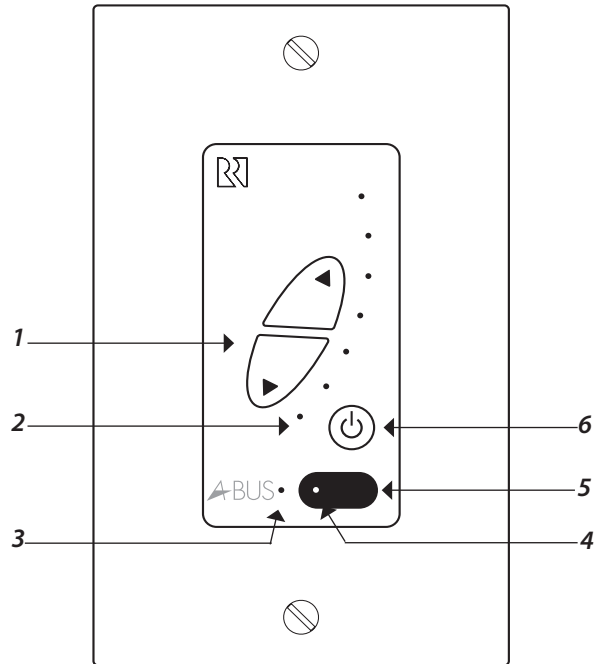


A-K5L Keypad

A-K3 KEYPAD

The A-K3 keypad provides individual zone control of the system. It has green backlit soft-touch buttons for volume, power and source selection for up to six

sources. A built-in IR receiver with LED confirmation allows for use of remote controls.



A-K3 Keypad

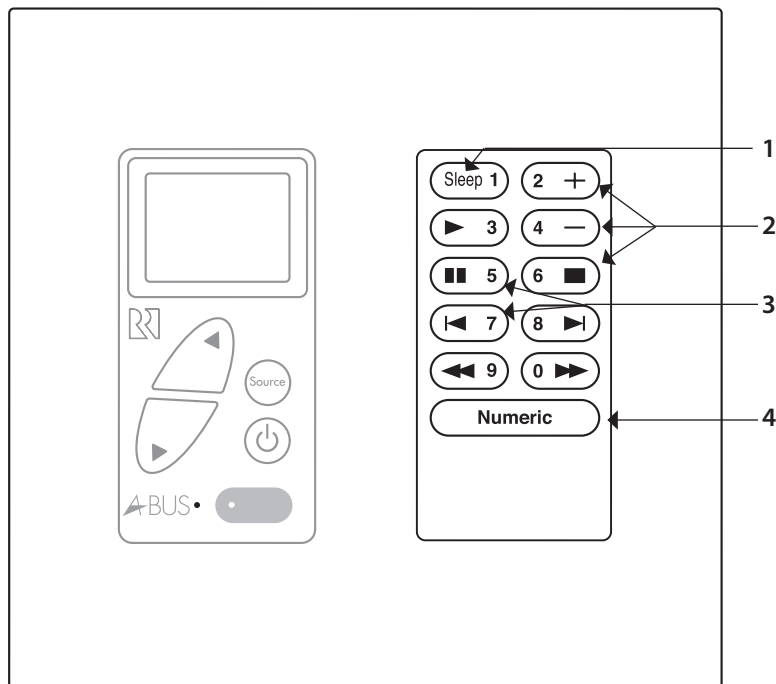
- 1 VOLUME UP/DOWN - Raises/lowers room volume
- 2 VOLUME LEVEL - Volume level indicator LEDs light up from bottom to top to indicate volume level. Also indicates source selected (1-6) when in "multi-source" mode.
- 3 STATUS LED - Green LED lights to show Status "on" and turns off when Status is "off"
- 4 IR CONFIRMATION LED - Red LED blinks to confirm IR signal reception.
- 5 IR RECEIVER - Receives IR signals from a remote control. Source components attached to IR emitters in an A-BUS system can be controlled with their own remote controls or A-LRC2 learning remote aimed at the A-K3.
- 6 POWER - Turns zone ON when pressed once. (In multi-source mode, when ON, press and hold will turn zone OFF. When OFF, press and hold will turn OFF all zones.) Status LED remains lit when keypad/zone is OFF if any other zone in system is ON.
- 6 SOURCE SELECT (Multisource controller) - When the keypad is set in "Multisource" mode, the power button is used to toggle through and select a source. Tap the power button to toggle between 1 and 6 multiple sources (once power is on). The top LEDs of the volume indicator show (from top to bottom) the source that is selected (top LED is source 1, next LED down is source 2, etc).

The A-KSC keypad connects to an A-K5L keypad to add optional source control and numeric capability. The amber or green backlit buttons provide primary source controls when pressed, such as stop, play, next, etc.

When the Numeric button is pressed, it becomes backlit in the opposite color of the backlight (green if amber backlight and vice versa), and changes the buttons to numeric entry (0 - 9).

Pressing the Numeric button also sends a Prefix command of "Disc."

A second press of the Numeric button sends a Suffix command of "Enter" and puts the keypad back into the primary control mode. If the button is not pressed the second time, a 6-second time out will send the Suffix command and exit Numeric mode.

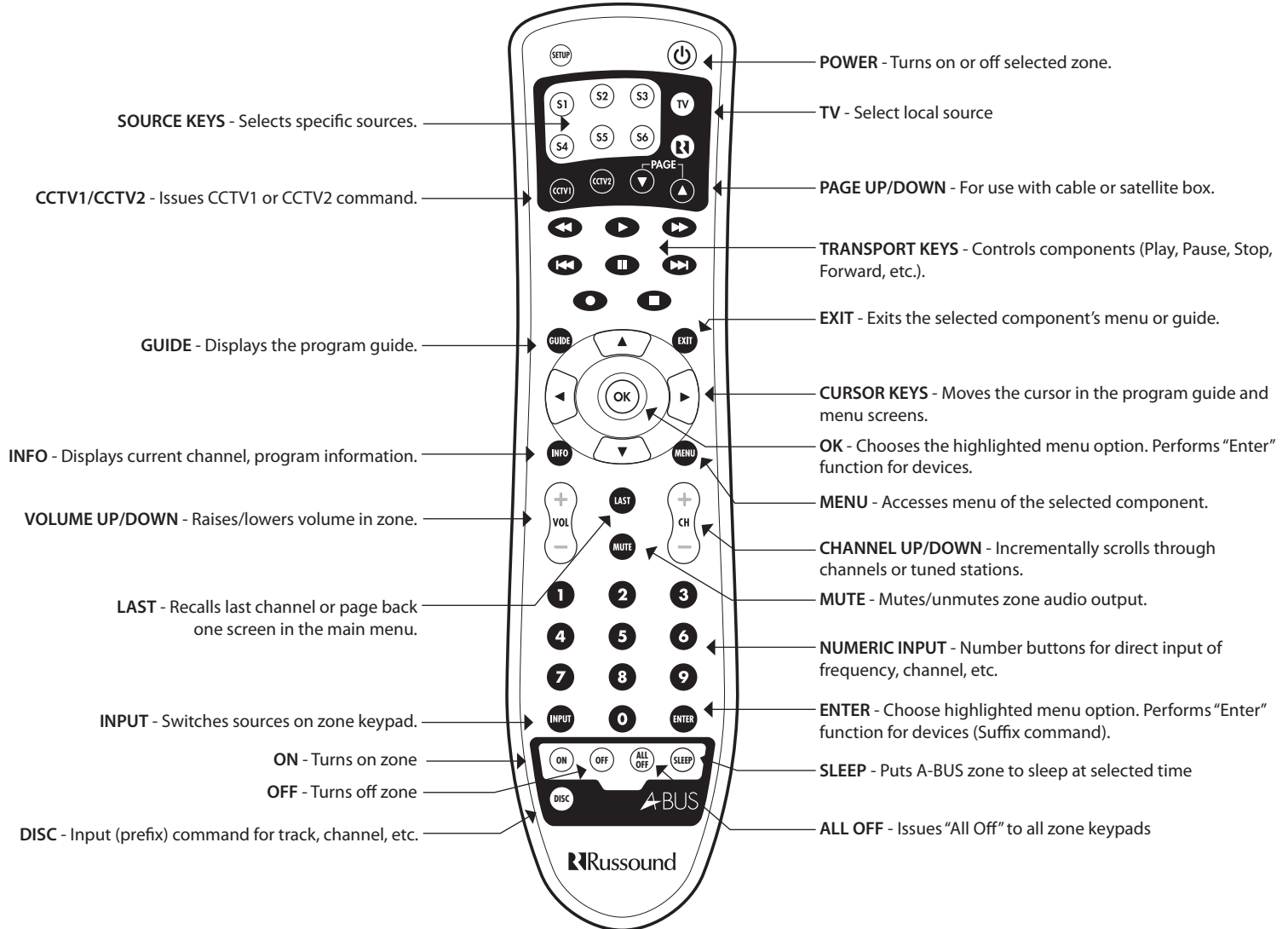


A-K5L Keypad

A-KSC Keypad

- 1 SLEEP - Sets a sleep timer for the zone. When pressed, shows time in minutes on A-K5L keypad. Press Sleep until desired time is displayed (0-60 minutes in 15 -minute increments).
- 2 PRIMARY SOURCE CONTROLS - Functions on outer edge of buttons are default or normal operation for each selected source. These include play, stop, forward, back, pause, etc.
- 3 NUMERIC CONTROLS - Once numeric control is initiated, the primary control buttons now represent the numeric value when pressed (0 - 9).
- 4 NUMERIC SHIFT - Press to shift buttons to numeric control or entry. Also issues Prefix command "Disc" and Suffix command "Enter."

A-SRC1 REMOTE CONTROL



System Installation Considerations

The A-C68 can be shelf or rack-mounted. Locate the A-C68 near the sources for RCA connections and IR emitter placement. Also allow for any other connections for Mute and Page In.

System keypads are located in various rooms and connect to the controller with CAT-5 cable. Speakers in these rooms connect directly to the keypads with standard speaker cable.

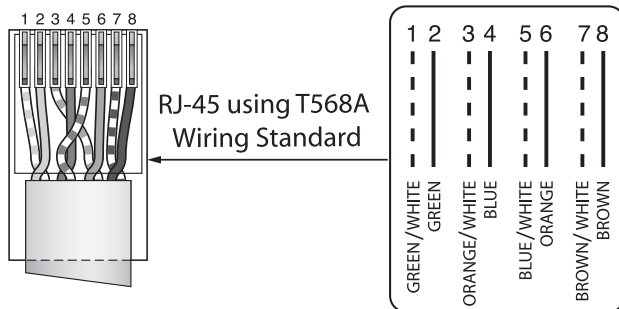
There are several factors to consider before installing the Russound A-C68 system:

- What are the intended listening zones(rooms)?
- What system options and accessories might be required for additional features such as local sources?
- From where in each zone will the user prefer to control the system? Where will the keypads be located? Where will the speakers be located?

Connection Tips

It is recommended that the A-C68 and the source equipment be plugged into a dedicated circuit with an isolated ground. A power line conditioner can reduce interference problems caused by noise found in some electrical systems.

- For all RJ45 connectors, use T568A wiring standard.



- Disconnect all live power cords before making connections to the controller.

- Check for correct connections and polarity.
- Keep all power cords away from all signal cables to prevent humming from induced noise.
- Choose reliable signal cables/patch cords.
- Label all wires with room location at both ends of the wire.

Keypad Wiring

To determine the amount of CAT-5 wire required for the system installation, first decide how many keypads will be used, then determine the distance between each intended keypad location to the planned A-C68 location. The maximum recommended wire run length from controller to keypad is 150 feet for each A-K5L or A-K3 keypad (includes use of A-LC3).

Make sure that the entire wire path between keypads and A-C68 is clear and not obstructed by a floor ceiling joist, or masonry wall which can't be drilled through. Confirm ahead of time that you can drill an outlet hole easily and in an unobtrusive spot to connect wires with the A-C68.

Label wires with keypad and room location. This simplifies A-C68 hook-up once the keypads and speakers are installed.

Speaker Wiring

Speakers in each system room connect to the keypad with standard 16-gauge 4-conductor stranded speaker cable. It can be run up to to 125 feet; 14-gauge wire can be run up to 250 feet.

When running cable, avoid locations concealing pipes, heating ducts and AC wiring in the general vicinity.

Avoid running wires close to house electrical wiring for any distance. If you have to run them parallel, make sure to space the wires at least two feet from the AC line.

A-C68 BACK PANEL

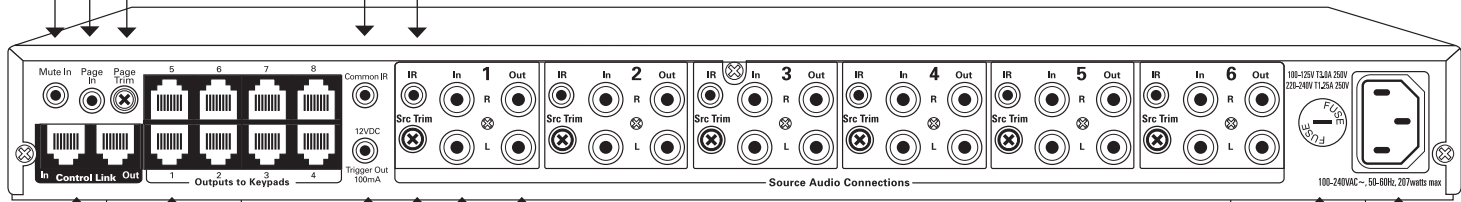
MUTE 12VDC TRIGGER IN - Applying 12VDC to the Mute In jack will mute all A-C68 Zones.

3.5mm PAGE INPUT - Applying audio (in a 3.5mm connector) to the Page In jack will activate audio page for assigned A-C68 zones and initiate a page (overrides signal sense).

PAGE TRIM - Adjust the line level audio page input

COMMON IR OUTPUT - Output jack passes all IR signals from all keypads.

SOURCE IR OUTPUTS - Six source-specific IR Output jacks allow IR control of source equipment.



FUSE HOLDER - Holds a replaceable fuse for A/C input connection:
100VAC operation - T3.0A; 240VAC operation, T1.25A.

AC 100/240 INPUT - Grounded 3-terminal plug detachable power cord connection, autoswitching A/C input voltage for 100 and 240VAC.

AUDIO SOURCE LOOP OUTPUT - Buffered audio line level loop output connection

SOURCE INPUTS - Six pair of audio line level input connections for A-C68 source components.

SOURCE VOLUME TRIM - Adjust the line level audio input

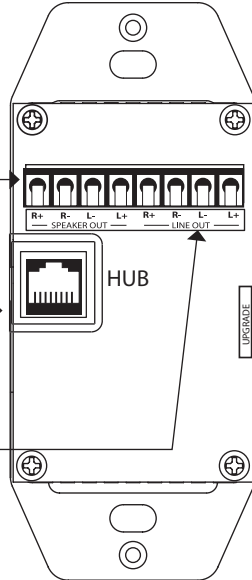
12VDC TRIGGER OUT - 12VDC 100mA Trigger Out turns on when any zone is on, and turns off 5 minutes after the last zone is turned off.

KEYPAD PORTS - One A-BUS Keypad Port for each of the eight A-C68 Zones.

CONTROL LINK IN/OUT - RJ45 female jacks link multiple A-C68 controllers and pass IR, Status and two-way event driven commands between controllers.

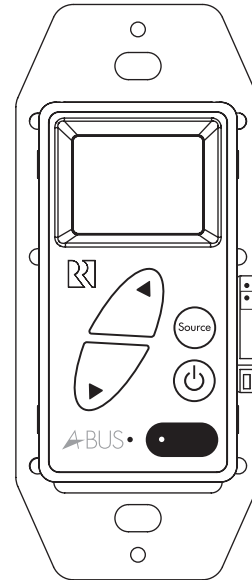
Keypad Connections

- SPEAKER OUTPUT** - Speaker output connections for a pair of 8-ohm speakers. 4-pole screw down terminals accept up to 14 gauge speaker wire.
- RJ45 HUB CONNECTOR** - 8-conductor RJ45 connector for the CAT-5 connection from the keypad to the hub/controller.
- VARIABLE LINE LEVEL OUTPUT** - Line-level audio output connection for external amplifier or powered subwoofer. 4-pole screw-down terminal accepts a stripped two-conductor RCA cable.



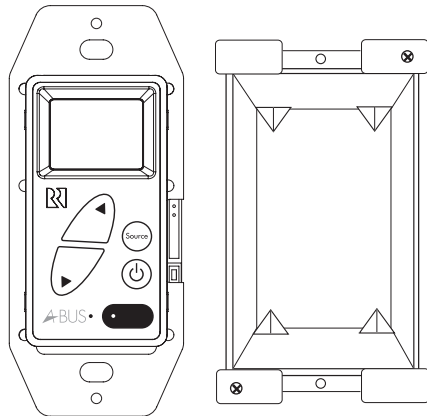
Keypad Status Jumper

- STATUS LED JUMPER** - Both pins jumpered, Status LED enabled. One or no pins jumpered, Status LED disabled
- SETUP BUTTON** - Activates Installer Setup mode and accesses update menus



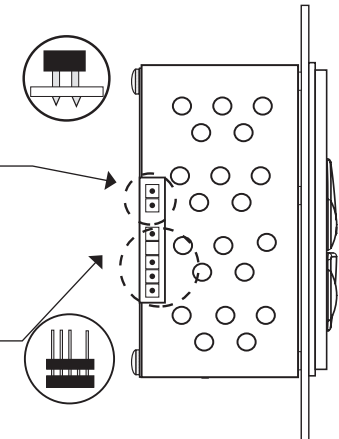
Keypad Installation

1. Ensure it is possible to route the wire to the desired location.
2. To install a single-gang keypad, use a UL/CSA approved plastic single-gang (18 ci) electrical box.
3. Route CAT-5 wire to the electrical box from the A-C68 system controller and connect to keypad via RJ45 connector.
4. Route speaker wire from room speakers to keypad. connect to screw-down terminal.
5. Mount the keypad in the electrical box and attach the trim plate.



Keypad Update Jumper

- OS UPDATE/RUN JUMPER** - (located on the back circuit board, left side) The pins are jumpered when performing a firmware update. with jumper removed during normal use.
- OS UPDATE PORT** - Used to update the A-K5L keypad operating system firmware. Uses the Russound Advanced Programming Cable, Part #2500-521065.



A-K5L / A-KSC KEYPAD CONNECTIONS / INSTALLATION

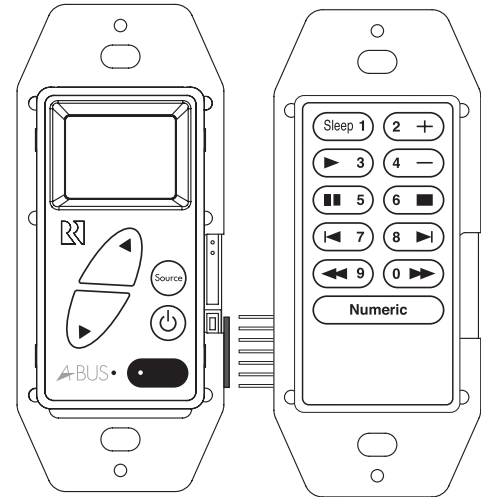
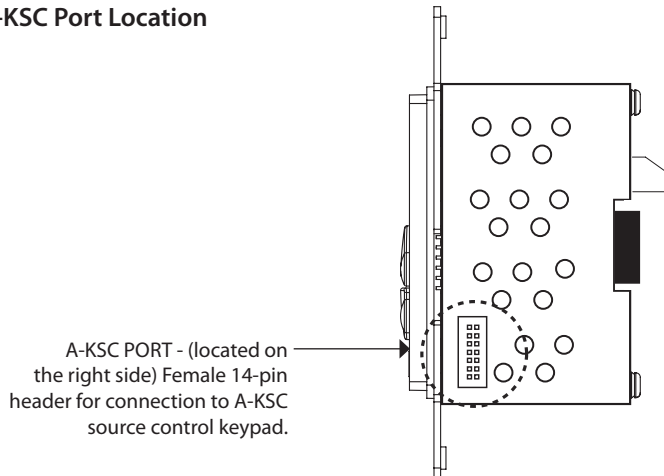
Keypad Installation

The A-KSC keypad is an accessory to an A-K5L keypad to add source control and numeric capability. The amber or green backlit buttons (follows color choice of A-K5L) provide primary source controls when pressed such as stop, play, next, etc.

The A-KSC connects to an A-K5L keypad via a 14-pin connector. A double-gang electrical box and faceplate is required for installation.

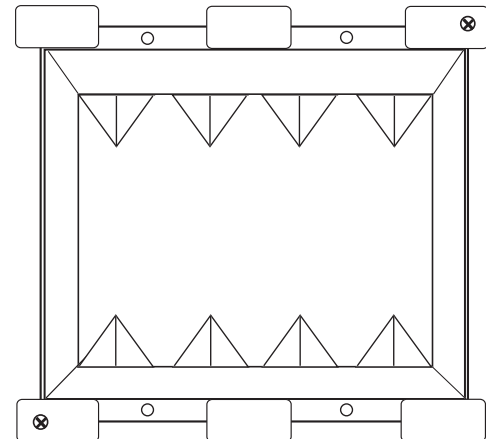
1. Check whether or not you can route the wire to the location you have chosen.
2. Use a UL/CSA approved plastic two-gang (32 ci) electrical box.
3. Route CAT-5 wire to the electrical box from the A-C68 system controller.
4. Insert the A-KSC 14-pin connector into the 14-pin header on the AK5L keypad.
5. Connect the CAT-5 cable to the A-K5L as shown in the A-K5L installation manual.
6. Mount the joined keypads in the electrical box and attach the trim plate.

A-KSC Port Location



A-K5L Keypad

A-KSC Keypad



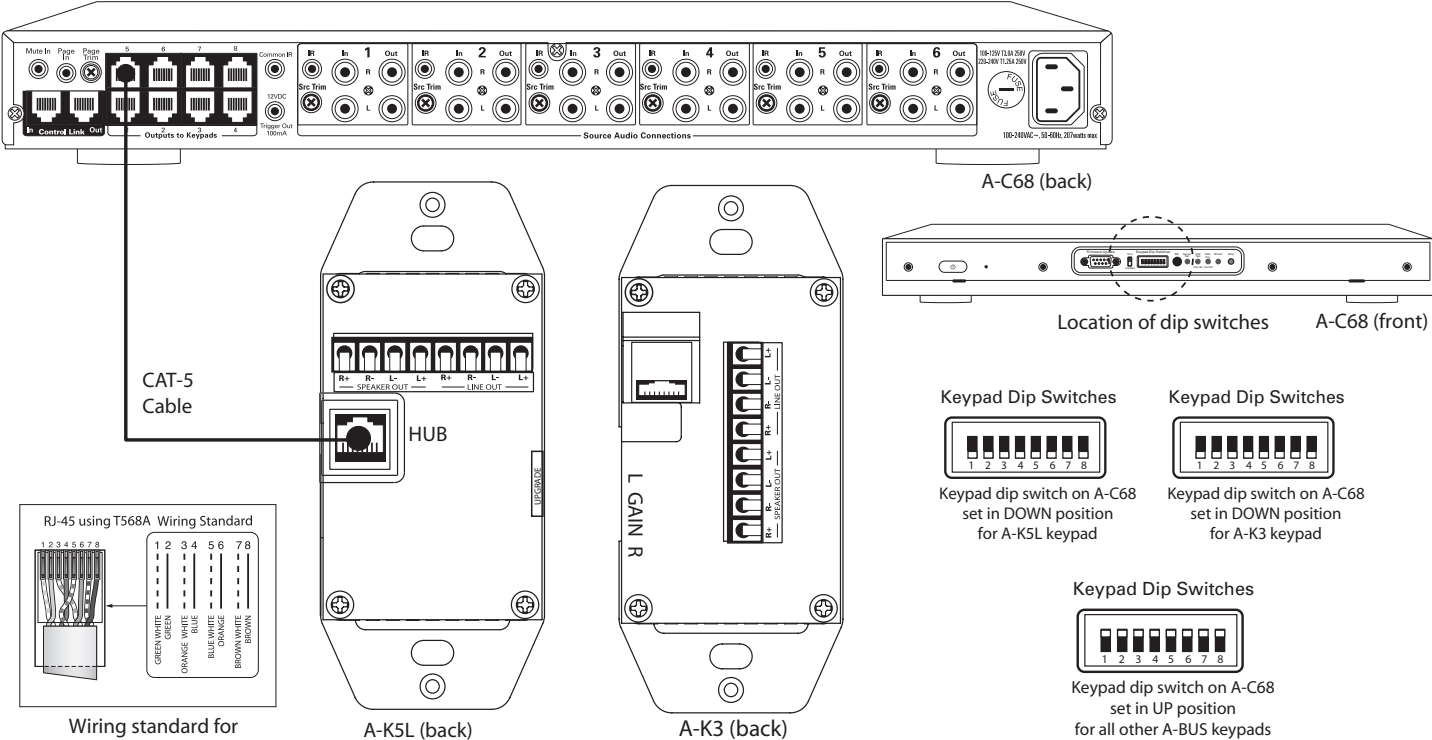
Double-gang Electrical Box

KEYPAD PORT CONNECTION

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 no longer than 150 feet from controller to keypad (also applies when using A-LC3).

If connecting A-K5L or A-K3 keypads to the A-C68, the keypad dip switches on the front programming center must be set in the DOWN position. For other A-BUS keypad connections, the dip switch must be set in the UP 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 RJ-45 wall plate (optional). Using the same RJ45 T568A CAT-5 wiring configuration, use CAT-5 from the RJ45 wall plate to the keypad.



SOURCE AUDIO AND IR CONNECTIONS

Source Audio Connections

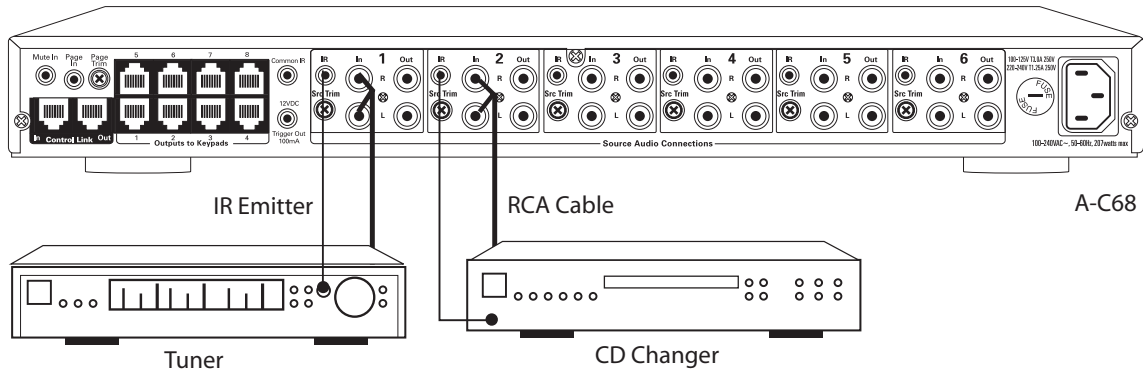
The A-C68 supports up to six audio sources. The source audio connections are located on the back panel. Connect each source using quality RCA signal cables. Connect the Left and Right Audio outputs from each source to the corresponding "In" inputs on the A-C68 controller. Label each cable with the name of the selected source and the source input number located on the A-C68.

Source IR Connections

Each source component has a designated IR port on the back of the A-C68.

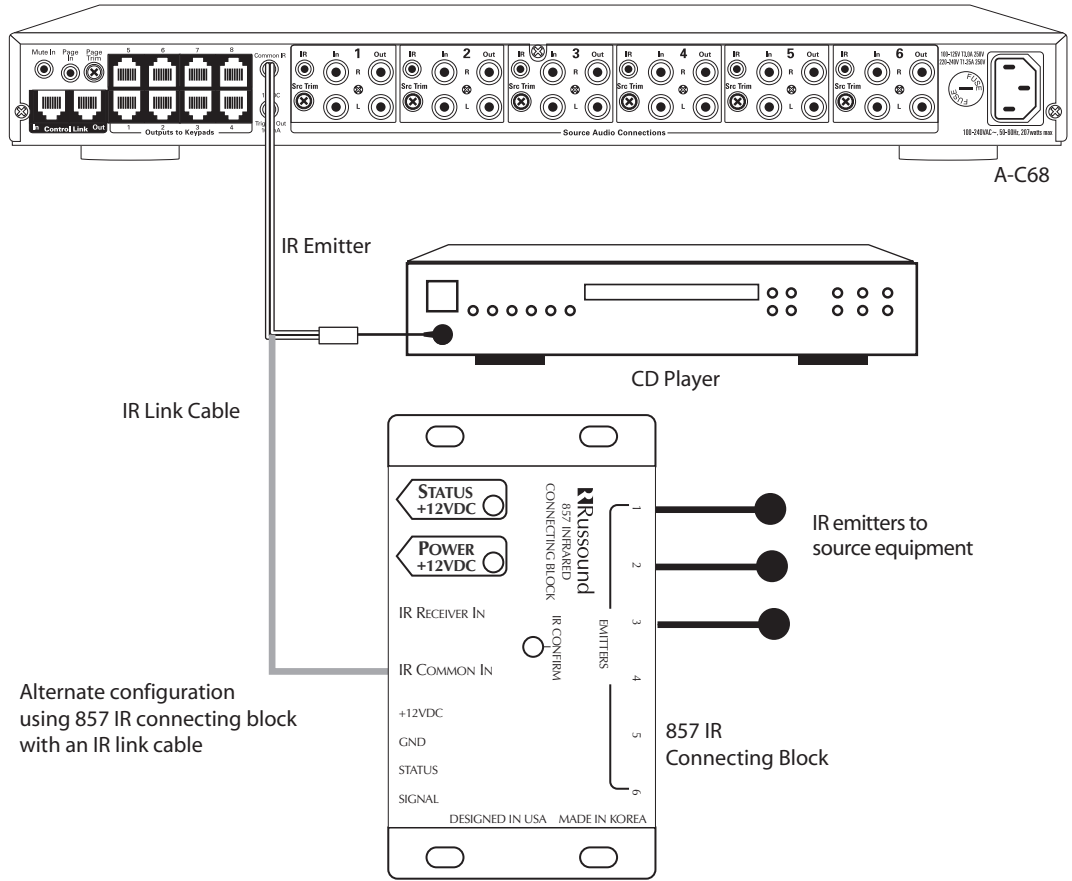
This IR port is next to the source audio input connections.

1. Using an IR emitter (the Russound 845.1 is recommended) attach the end of the emitter with the 1/8" plug to the IR emitter port next to the source input.
2. Remove the adhesive back at the other end of the emitter and attach the emitter over the source component's IR window.
3. In order to control this source component with IR, the source must be selected at the keypad receiving the command.



The Common IR jack on the rear of the A-C68 allows control of any source equipment without that source being selected on the keypad. The connection for the Common IR jack is made using an IR emitter with a 1/8" plug or IR link cable.

The Russound 845.1 single IR emitter is recommended, or use an IR connecting block such as the Russound 857 which allows multiple units to be controlled through the COM IR Port.



Alternate configuration using 857 IR connecting block with an IR link cable

KEYPAD TO SPEAKER CONNECTION

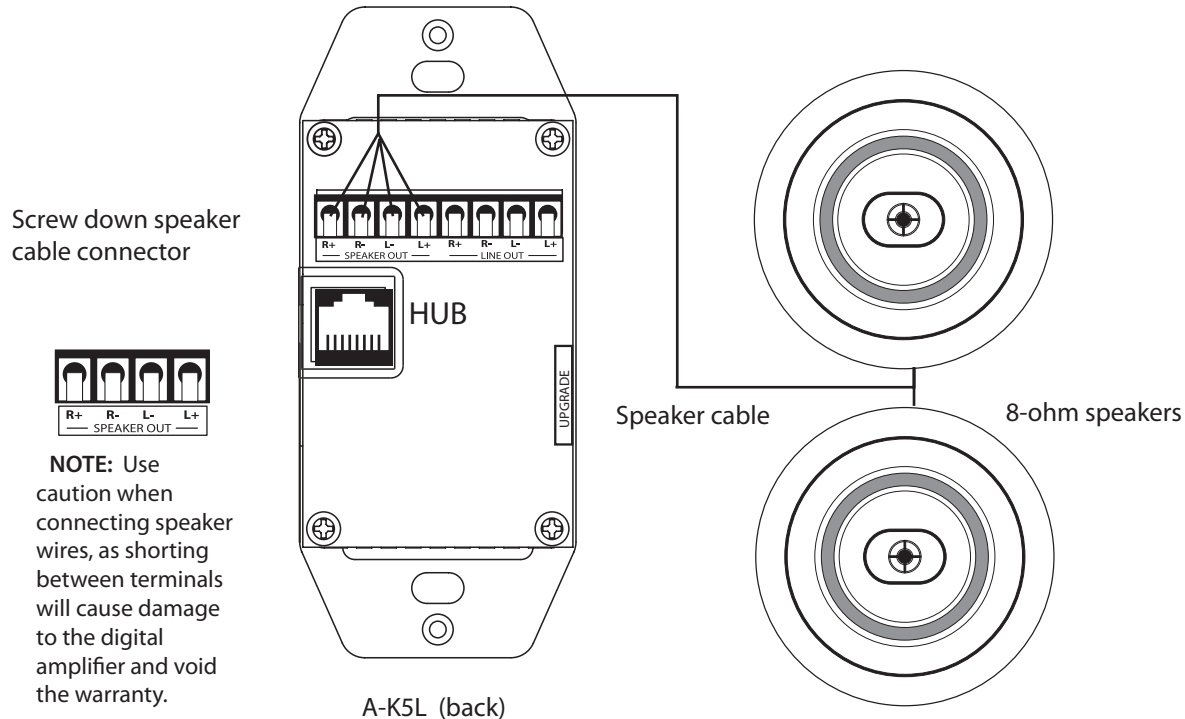
The speakers in each room are connected to the A-BUS keypad using 4-pole screw down terminals.

NOTE: An 8 Ohm minimum speaker is required for each amplified output.

1. Pull the speaker wire conductors apart so they're separated for the first two inches from their ends.
2. Using a wire stripper, remove 1/4 inch of insulation from each conductor. Twist the strands in each conductor into tight spirals.

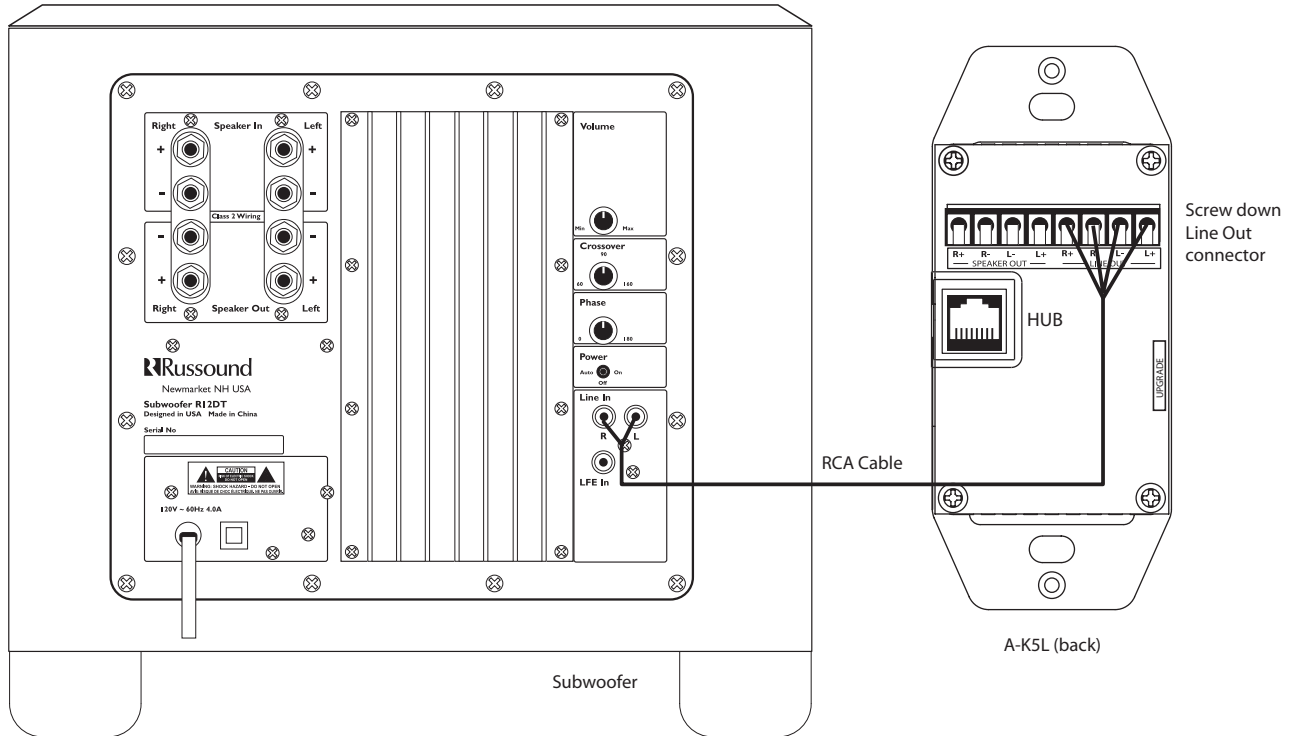
3. Insert the speaker wire conductor into the appropriate Speaker Out screw-down terminal opening, matching channel and polarity for all four wires. Tighten the connection for each conductor.

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



The A-K5L keypad provides a stereo 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.

The screw-down terminal on the back of the A-K5L keypad accepts a two-conductor RCA cable stripped of the RCA connectors or any four conductor linelevel cable. The cable's positive (+) conductor connects to the positive terminal (+) and the negative (-) shield conductor connects to the negative terminal (-) on the A-K5L.



MUTE IN / TRIGGER OUT / PAGE IN

12VDC Mute Trigger In

When 12VDC is applied to the Mute In, the system will fully mute all zones in the system. The connections for the trigger are made using a two-conductor cable with 1/8" male mini-plug jacks. The tip is positive (+) and sleeve is negative (-). This allows for the connection of an external paging or muting device.

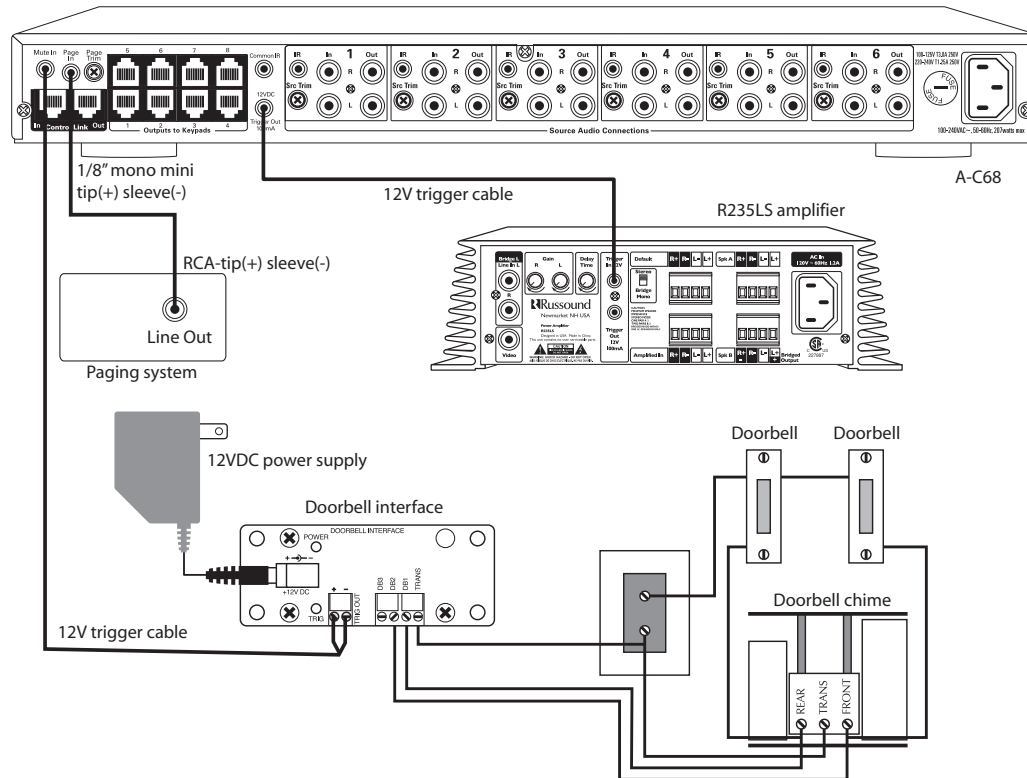
12VDC System Trigger Out

Trigger Out 12VDC output is used for triggering an external amplifier or other component. The connections for the output are made using a two-conductor cable with 1/8" male mini-plug jacks at each end. The tip is positive (+) and

sleeve is negative (-). The System Trigger Out supplies 12VDC 100mA when the first keypad is turned on. The 12 VDC is removed after the last keypad is turned off.

Page Audio Input

When audio is applied to the Page In, the system will page to all enabled zones. The connections for the audio are made using a two-conductor cable with 1/8" male mono mini-plug jacks. The tip is positive (+) and sleeve is negative (-). This allows for the connection of an external paging or muting device.



Controller Link In/Out

NOTE: The Controller Link Out of the LAST controller must be connected with a CAT-5 straight-through patch cable to the Link In of the FIRST controller to complete the communication link.

The Control Link In and Out are used to connect up to six A-C68 controllers. The Control Link In and Link Out jacks pass Status and the six source IR signals. These link ports also communicate the two-way event driven commands between controllers.

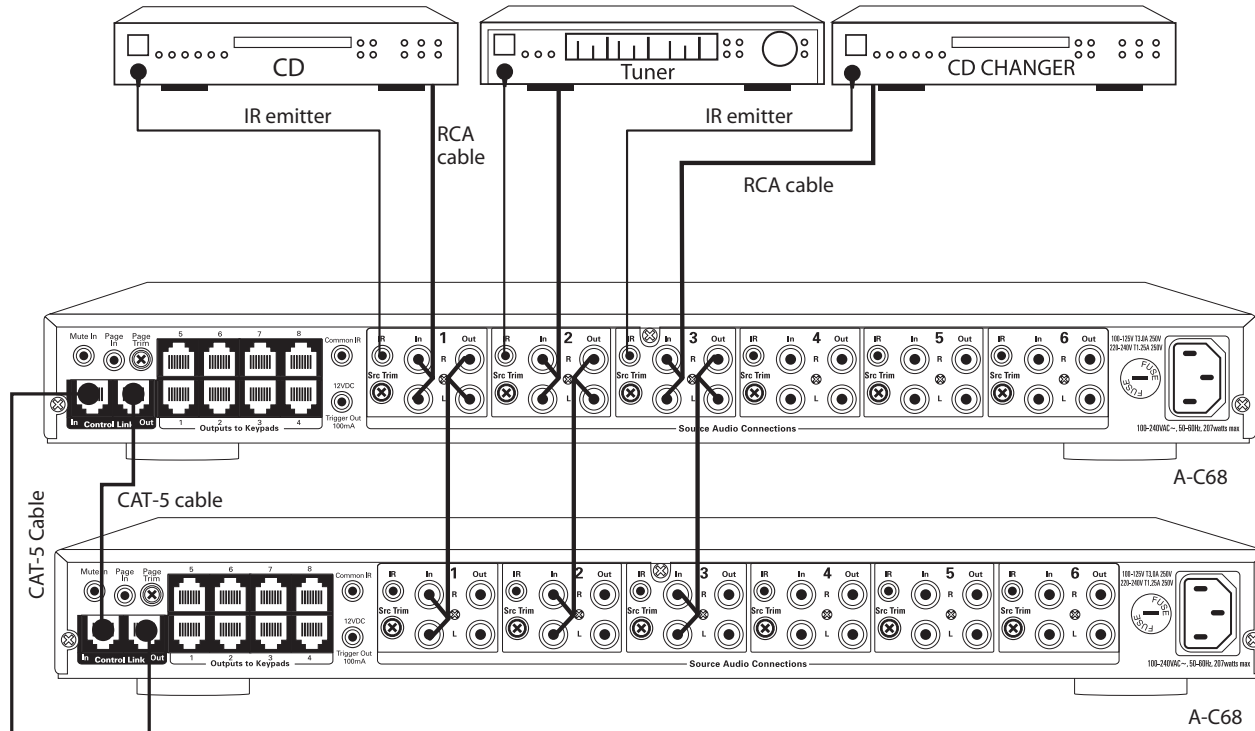
NOTE: The Control Link In and Out are for A-C68 controllers only.

The connection is made using a CAT-5 patch cable from the Link Out of the first A-C68 and into the Link In of the next controller. The link cable should not exceed six feet in length.

Source Audio Loop Out

The A-C68 has six buffered, fixed-level audio source loop outputs. This source loop configuration allows the A-C68 to pass source signals to another controller for sharing sources in a multiple controller system.

The Source Loop Outputs are located directly to the right of the Source Audio Inputs. Use quality RCA signal cables to ensure quality transference of audio signals.

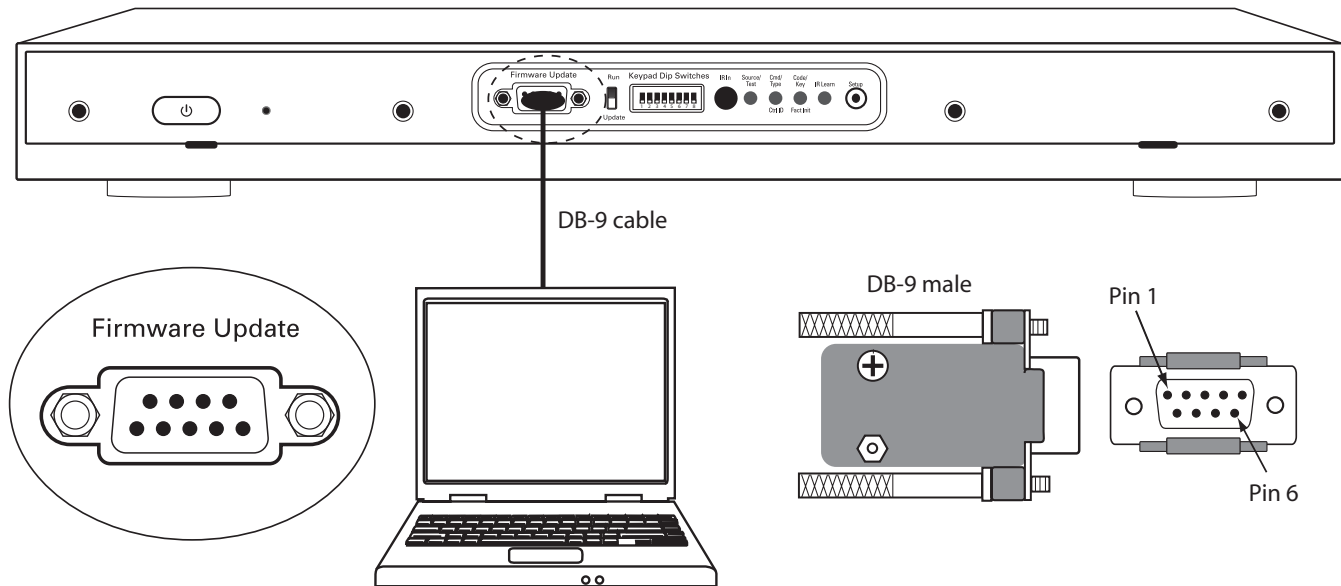


RS232 CONNECTION

The RS232 port in the A-C68's front panel programming center is used for firmware updates only. It supports controller firmware updates from a PC. The RS232 COM port is located behind the removable front panel and uses a DB-9 cable connection.

For firmware updates, be sure the CPU Update switch next to the the RS232 interface is set in the "Update" position.

For firmware updates, see the Document Center at www.russound.com. Look for the Technical Documents under A-BUS Systems.



Before proceeding with system programming section, it's important to conduct an initial test to determine that the hardware components are working properly.

1. Connect the speaker wires from Zone #1 to that zone's keypad's speaker output connectors.
2. Connect the Zone #1 keypad to Keypad Port #1 on the rear of the A-C68.
3. Connect a source to the Source #1 Input on the A-C68 using RCA Audio patch cables.
4. Plug an 845.1 IR emitter into the Source #1 IR Out Jack and adhere the emitter end to the source equipment's IR window.
5. Plug in the main power cord for the A-C68 and the source.
6. Turn on the main power switch on the A-C68 and the source.
7. Manually command the source to provide audio or use the source remote control.
8. Press the power button on the keypad and select Source #1.

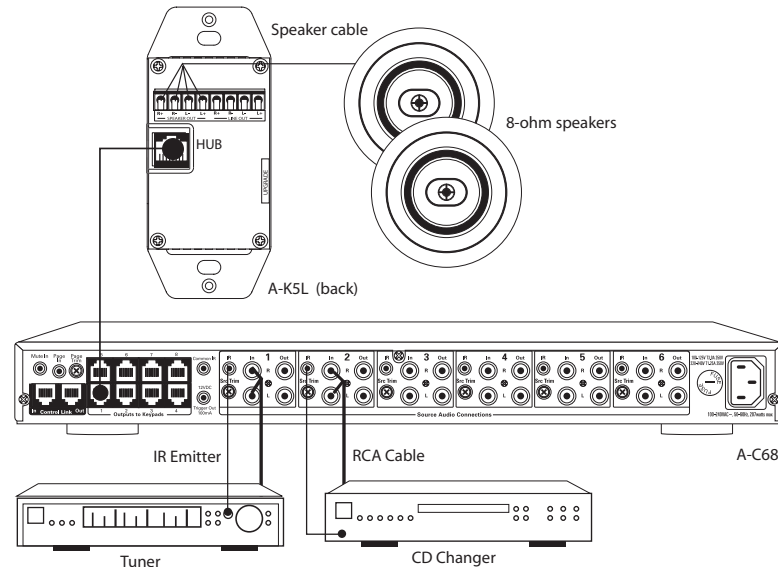
9. To be sure of proper placement of the IR emitter on the source component, aim the source remote control at the keypad for Source #1 and try to control the source. Adjust the emitter over the source's IR receiver if necessary.

Congratulations – you should now hear the source through the speakers in Zone #1.

If there is no sound, follow these diagnostic steps:

1. Check the source to see that it is operating properly.
2. Check the RCA Audio cable connections from the source to the Source #1 Input on the A-C68.
3. Check the speaker connections and verify that they are correct and are connected to the Zone #1 keypad's speaker outputs.
4. Check to see that the keypad is connected to the Zone #1 Keypad Port and verify the CAT-5 is properly terminated at both ends.

If none of these steps produce successful results, call Russound Tech Support for further assistance.



PROGRAMMING CENTER

The A-C68 sources are configured through the Programming Center, located on the front of the A-C68 behind the removable lower panel. The LEDs are dual purpose with different colors to indicate different modes.

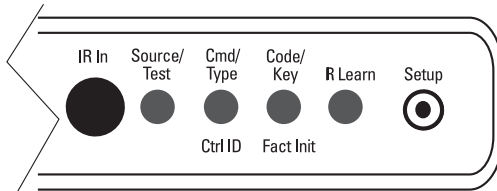
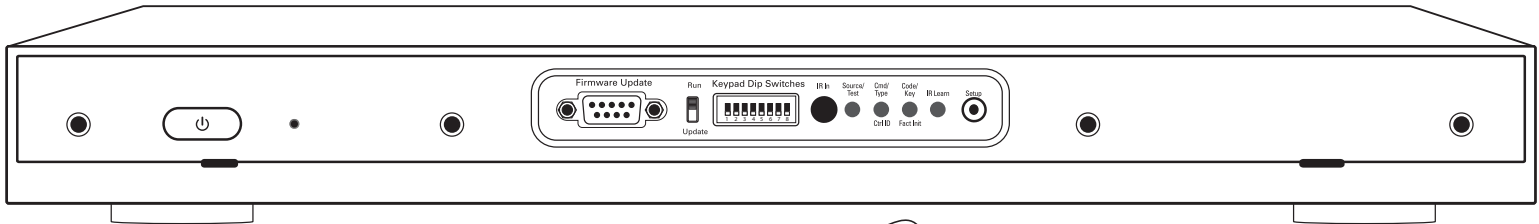
NOTE: To remove cover panel, press in right and left tab at the cover's bottom edge, then lift out and up.

The A-C68 has two main programming modes: Controller Setup Mode and Source Setup Mode. The functions used in Controller Setup Mode (Ctrl ID and Fact Init) are accessed with a press and HOLD of the Setup button. The functions

used in Source Setup Mode (Source/Test, Cmd/Type, Code/Key and IR Learn) are accessed with a press and RELEASE of the Setup button.

The A-SRC1 system remote control is used to enter information during the setup procedures, and the LEDs show solid, blinking or off to indicate what is being programmed and when to enter information.

To exit either setup mode, press the Setup button until no LEDs are illuminated in the Programming Center.











Indicator LEDs turn on/off and blink slow/fast to indicate setup process steps and to indicate when to enter information via the A-SRC1

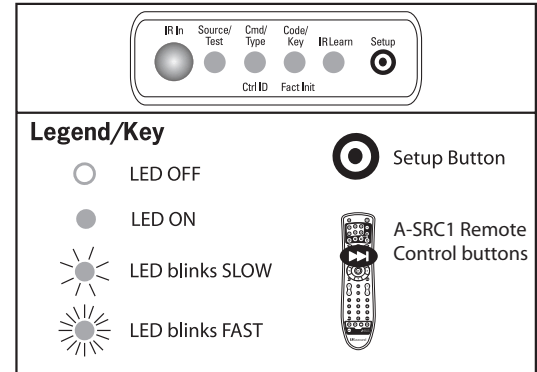


A-SRC1 Remote Control is aimed at IR In on A-C68 during setup

Controller Setup - Controller ID Menu

The Controller ID procedure identifies main (factory default setting) and non-main controllers when using multiple A-C68 controllers in a system.













1.  Press and HOLD Setup button
UNTIL
2.  Ctrl ID (yellow) turns ON
3.  Aim A-SRC1 remote control at IR In
4.  Enter "1" for the main controller OR  Enter "0" for the non-main controller(s)
5.  Ctrl ID (yellow) BLINKS TWICE and stays ON  Ctrl ID (yellow) BLINKS ONCE and stays ON
6.  Press and RELEASE Setup button to EXIT

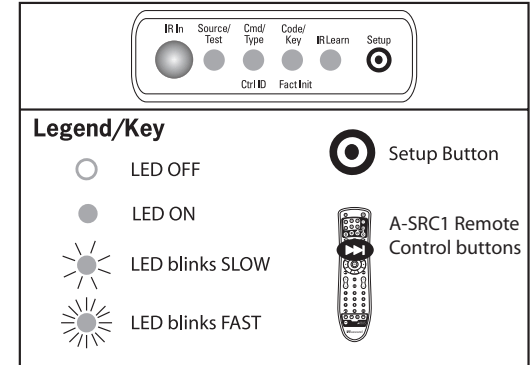


FACTORY INITIALIZATION PROCEDURE

Controller Setup - Factory Initialization Procedure








The Factory Initialization procedure returns the controller to its factory settings and sets all programming and settings back to factory default.

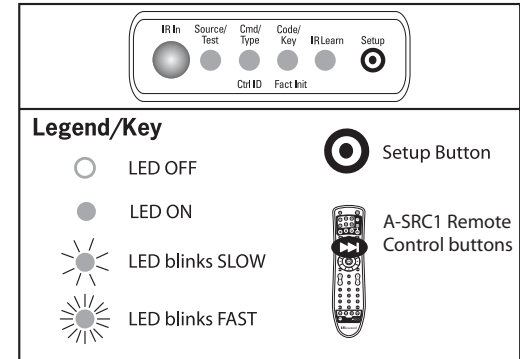
1.  Press and HOLD Setup button
UNTIL
2.  Ctrl ID (yellow) turns ON
3.  Press and HOLD Setup button
UNTIL
4.  Fact Init (orange) turns ON
5.  Aim A-SRC1 remote control at IR In
6.  Press "ALL OFF" then "ON" (A-BUS zone commands, bottom of A-SRC1)
7.  Fact Init (orange) blinks SLOWLY TWICE
8.  All LEDs turn OFF (for 3 seconds or less)
9.  Source/Test (green) turns ON
 Ctrl ID (yellow) turns ON
 Fact Init (orange) turns ON
THEN
10.  Cycle power on controller



Source Setup - Source Setup Procedure Basics

The Source Setup procedure is used to assign source numbers, and command types for IR learning and IR device codes. Below are the primary source setup steps.

1.  Press and RELEASE Setup button.
2.  Source/Test (green) turns ON
3.  Aim A-SRC1 remote control 2 inches away from IR In
4.  Enter source number (S1 to S6)
5.  Source/Test (green) blinks # to match source #
6.  Source/Test (green) turns OFF
7.  Cmd/Type (yellow) blinks SLOWLY
8. Proceed to page listed below for each procedure














Command Type	Device Name	Command Type	Device Name
00	Clear	07	DVD
01	TV	08	Tuner
02	Cable	09	Amplifier
03	Video Accessory	10	CD
04	Satellite/DSS	11	Home Control
05	VCR	99	Learn IR
06	Laser Disk		

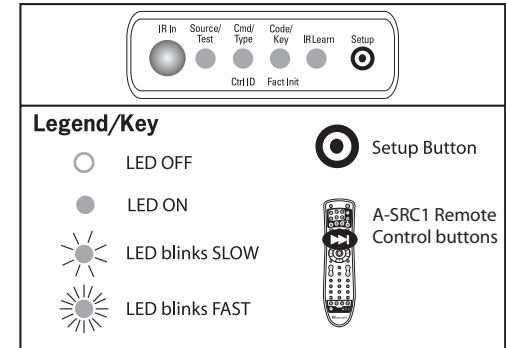
Valid Command Type Code Entries

Device Code	Learn IR	Invalid Entry	Clear Codes
01 - 11 (page 28)	99 (page 29)	## (page 31)	00 (page 32)

Source Setup - Device Type and Code Procedure

The Device Type and Code procedure assigns a command type and IR device code for each source. IR device codes are listed on pages 35-37.

1. Complete primary source setup on page 27
2.  Cmd/Type (yellow) blinks SLOWLY
3.  Aim A-SRC1 remote control at IR In
4.  Enter command type number (see chart at right)
5.  Cmd/Type (yellow) turns OFF
6.  Code/Key (orange) blinks SLOWLY
7.  Enter four-digit device code from list on pages 35 - 37
8.  Code/Key (orange) turns OFF
9.  Source/Test (green) blinks FAST
10.  Test code - press a command button
11.  IR Learn (red) blinks to confirm IR code sent
If IR Learn doesn't blink, code is invalid, go to step 12.
12.  Press and RELEASE Setup button TWICE.
13. For next source, complete primary source setup on page 27














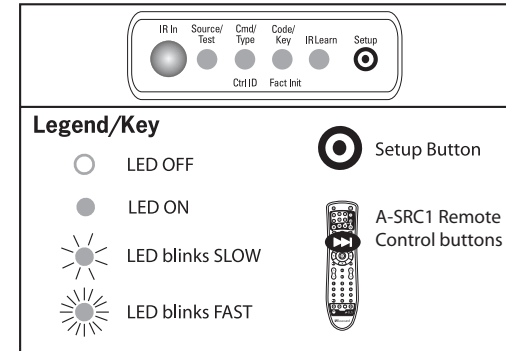
Valid Command Type Code Entries








Command Type	Device Name	Command Type	Device Name
01	TV	07	DVD
02	Cable	08	Tuner
03	Video Accessory	09	Amplifier
04	Satellite/DSS	10	CD
05	VCR	11	Home Control
06	Laser Disk		

Source Setup - Learn IR Procedure

The Learn IR procedure is used to add missing source control commands using the source's factory remote control.

1. Complete primary source setup on page 27
2.  Cmd/Type (yellow) blinks SLOWLY
3.  Aim A-SRC1 remote control at IR In
4.  Enter command type 99
5.  Cmd/Type (yellow) turns OFF
6.  Code/Key (orange) blinks FAST
7.  Press command button to be LEARNED
8.  Code/Key (orange) turns OFF
9.  IR Learn (red) blinks FAST
10.  Aim SOURCE remote control at IR In
11.  Press command button to be LEARNED
12.  IR Learn (red) blinks ONCE then turns OFF






13.  Source/Test (green) blinks FAST
14.  Aim A-SRC1 remote control at IR In
15.  Test code - press learned command
16.  IR Learn (red) blinks ONCE
17.  Source/Test (green) turns OFF
18.  Code/Key (orange) blinks FAST
19. To relearn button or learn another button for the SAME source, go to step 7
20.  To EXIT, press and RELEASE Setup button TWICE.

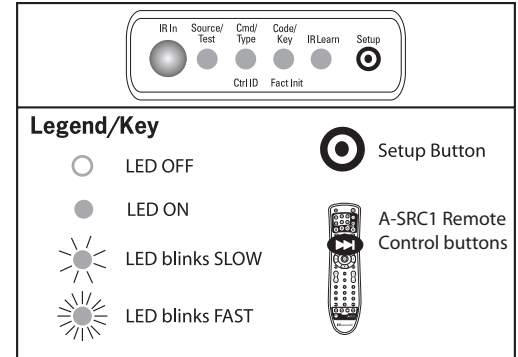
Source Setup - Numeric IR Procedure

The A-C68 controller can be programmed to automatically issue numeric IR prefix and/or suffix commands when using the “Numeric” button on the A-KSC. The prefix will be sent when the Numeric button is pressed and the suffix will be sent out on a second press or when the numeric mode times out (3 seconds).

NOTE: Numeric commands requiring macros are not supported.








See Learning IR procedure on page 29

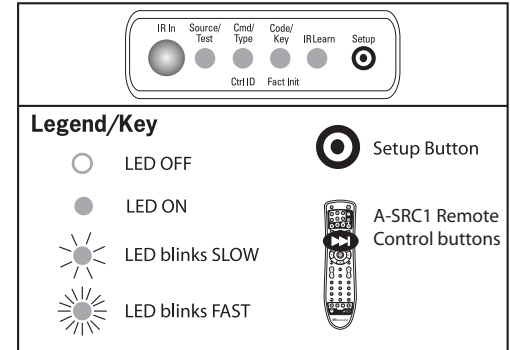
1.  Use these buttons on the A-SRC1 remote control to learn
2.  Numeric Prefix
3.  Numeric Suffix



Source Setup - Invalid Command Type Entry Procedure

The Invalid Command Type procedure allows you to re-enter a correct command type number after an incorrect entry.

1. Complete primary source setup on page 27
2.  Cmd/Type (yellow) blinks SLOWLY
3.  Aim A-SRC1 remote control at IR In
4.  Enter command type number
5.  If number is invalid (not in chart)
Cmd/Type (yellow) blinks FAST for 1 second
6.  Cmd/Type (yellow) blinks SLOWLY
7.  Enter correct command type number
8. **OR**
9.  To EXIT, press and RELEASE Setup button TWICE









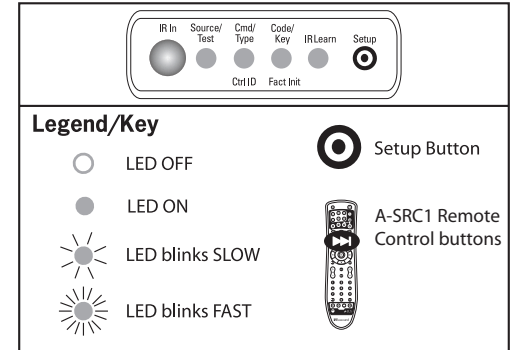
Command Type	Device Name	Command Type	Device Name
00	Clear	07	DVD
01	TV	08	Tuner
02	Cable	09	Amplifier
03	Video Accessory	10	CD
04	Satellite/DSS	11	Home Control
05	VCR	99	Learn IR
06	Laser Disk		

Valid Command Type Code Entries

Source Setup - Clear Code Command Type Procedure

The Clear Code Command Type procedure allows you to clear the current command type of a selected source.

1. Complete primary source setup on page 27
 2.  Cmd/Type (yellow) blinks SLOWLY
 3.  Aim A-SRC1 remote control at IR In
 4.  Enter command type 00
 5.  Cmd/Type (yellow) turns OFF
 6.  Source/Test (green) blinks SLOWLY
 7. Returns to source selection
 8. Repeat primary source setup on page 27
- OR**
9.  To EXIT, press and RELEASE Setup button



Command Type	Device Name	Command Type	Device Name
00	Clear	07	DVD
01	TV	08	Tuner
02	Cable	09	Amplifier
03	Video Accessory	10	CD
04	Satellite/DSS	11	Home Control
05	VCR	99	Learn IR
06	Laser Disk		

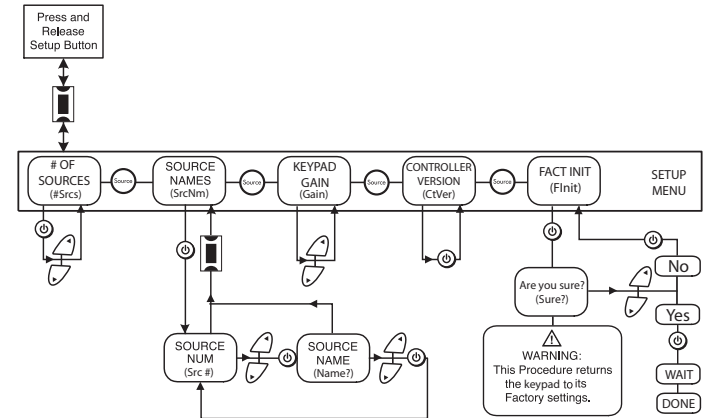
Valid Command Type Code Entries

A-K5L Setup Menu

The A-K5L Setup menu is used to choose source names, check the version number and perform a Factory Initialization of the A-C68 controller. The menu is outlined in the diagram below.

To access the Setup menu, press and release the Setup button on the right side of the keypad 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 the selections. Press the Power button to enter a selection.

When finished, press and release the Setup button again.



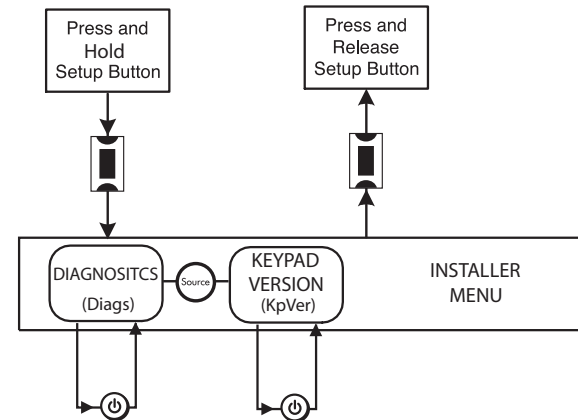
A-K5L Setup Menu

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 to the right.

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

5-CHARACTER SOURCE NAMES FOR A-K5L KEYPAD

A-K5L Display	Description	A-K5L Display	Description	A-K5L Display	Description	A-K5L Display	Description
Aux	Auxiliary	DVDC1	DVD Changer 1	Relig	Religious	TV	TV
Aux 1	Auxiliary 1	DVDC2	DVD Changer 2	RepTV	Replay TV	VCR	VCR
Aux 2	Auxiliary 2	DVDC3	DVD Changer 3	Rock	Rock	VCR 1	VCR 1
Blues	Blues	DVD	DVD Player	Sat	Satellite	VCR 2	VCR 2
Cable	Cable	DVD 1	DVD Player 1	Sat 1	Satellite 1	(XM)	<<<XM>>>
Cbl 1	Cable 1	DVD 2	DVD Player 2	Sat 2	Satellite 2	XM 1	XM 1
Cbl 2	Cable 2	DVD 3	DVD Player 3	Sat 3	Satellite 3	XM 2	XM 2
Cbl 3	Cable 3	FDoor	Front Door	SatRD	Satellite Radio	XM 3	XM 3
CDCh	CD Changer	Hers	Her Music	Src 1	Source 1	XMRad	XM Radio
CDCh1	CD Changer 1	His	His Music	Src 2	Source 2		
CDCh2	CD changer 2	www	Internet Radio	Src 3	Source 3		
CDCh3	CD Changer 3	iPod	iPod	Src 4	Source 4		
CD	CD Player	Jazz	Jazz	Src 5	Source 5		
CD 1	CD Player 1	Kids	Kids Music	Src 6	Source 6		
CD 2	CD Player 2	LD	Laser Disk	Src 7	Source 7		
CD 3	CD Player 3	MSvr.	Media Server	Src 8	Source 8		
Clsc1	Classical	MSvr1	Media Server 1	Spec1	Special		
Cmptr	Computer	MSvr2	Media Server 2	Tape	Tape		
Cntry	Country	MSvr3	Media Server 3	Tape1	Tape 1		
Dance	Dance	MiniD	Mini Disk	Tape2	Tape 2		
DigCb	Digital Cable	Mood	Mood Music	TiVo	TiVo		
DSS	DSS Receiver	MornM	Morning Music	Tuner	Tuner		
DSS 1	DSS 1	MP3	MP3	Tun 1	Tuner 1		
DSS 2	DSS 2	Oldes	Oldies	Tun 2	Tuner 2		
DSS 3	DSS 3	Pop	Pop	Tun 3	Tuner 3		

Device Code For Audio Amplifiers

Durabrand	1561
GE	0078
Harman/Kardon	0892
JVC	0331
Left Coast	0892
Lenox	1561
Marantz	0892
Optimus	0395
Philips	0892
Polk Audio	0892
Realistic	0395
Soundesign	0078
Victor	0331
Wards	0078
Yamaha	0354

**Device Code For Audio Amp/
Tuners**

ADC	0531
Aiwa	1405, 0158, 0189, 0121
Anam	1609, 1074
Audiotronic	1189
Bose	1229
Capetronic	0531
Carver	1189, 0189
Coby	1263
Dell	1383
Denon	1360, 1142
Gateway	1517
Glory Horse	1263
Harman/Kardon	0110, 0189
Hewlett Packard	1181
Integra	0135
JBL	0110
JVC	0074, 1263
Kenwood	1313, 1569, 0027
KLH	1428
Linn	0189
Magnavox	1189, 1269, 0189, 0531
Marantz	1189, 1269, 0039, 0189
MCS	0039
Mitsubishi	1393
Onkyo	0135
Optimus	1023, 0670, 0531, 1074
Panasonic	0039, 0309
Philips	1189, 1269, 0189
Pioneer	1023, 0150, 0014, 0630, 0531
Polk Audio	0189
Proscan	1254
Quasar	0039
RadioShack	1263

RCA	1023, 1609, 1254, 1074, 0531
Rio	1383
Sansui	0189
Sharper Image	1263
Sonic Blue	1383
Sony	1058, 1759, 0158, 1406
Soundesign	0670
Stereophonics	1023
Sunfire	1313
Teac	1074
Technics	1308, 0039, 0309
Thorens	1189
Victor	0074
Wards	0158, 0189, 0014
Yamaha	0176, 1276, 1176

Device Code For Cable Converters

ABC	0003, 0008
Americast	0899
Bell South	0899
Clearmaster	0883
ClearMax	0883
Coolmax	0883
Director	0476
General Instrument	0476, 0810, 0276, 0003
GoldStar	0144
Hamlin	0009, 0273
Jerrold	0476, 0810, 0276, 0003
Memorex	0000
Motorola	0476, 0810, 0276, 1254, 1376
Multitech	0883
Pace	1877, 0237
Panasonic	0000, 0107
Paragon	0000
Philips	0317, 1305
Pioneer	1877, 0877, 0144, 0533
Pulsar	0000
Quasar	0000
RadioShack	0883
Regal	0279, 0273
Runco	0000
Samsung	0144
Scientific Atlanta	1877, 0877, 0477, 0008
Sony	1006
Starcom	0003
Supercable	0276
Supermax	0883
Torx	0003
Toshiba	0000

Tristar	0883
V2	0883
Viewmaster	0883
Vision	0883
Vortex View	0883
Zenith	0000, 0525, 0899

Device Code For CD Players

Aiwa	0157
Burmester	0420
California Audio Labs	0029
Carver	0157, 0179
Denon	0873, 0003
DKK	0000
DMX Electronics	0157
Emerson	0305
Fisher	0179
Garrard	0420
Genexxa	0032, 0305
Harman/Kardon	0157, 0173
Hitachi	0032
Integra	0101
JVC	0072
Kenwood	0681, 0028, 0037, 0190
KLH	1318
Krell	0157
Linn	0157
LXI	0305
Magnavox	0157, 0305
Marantz	0029, 0157
MCS	0029
Miro	0000
Mission	0157
MTC	0420
NSM	0157
Onkyo	0868, 0101
Optimus	1063, 0000, 0032, 0037, 1075, 0179, 0145, 0420, 0087, 0305
Panasonic	0029
Parasound	0420
Philips	0157
Pioneer	1063, 0032, 0305
Polk Audio	0157
Proton	0157
QED	0157
Quad	0157
Quasar	0029
RadioShack	1075
RCA	0032, 0305, 0179, 0053, 0420
Realistic	0420, 0179
Rotel	0157, 0420
SAE	0157

Sansui	0157, 0305
Sanyo	0087, 0179
Scott	0305
Sears	0305
Sharp	0861, 0037
Sherwood	1067
Sonic Frontiers	0157
Sony	0490, 0000, 0100
Soundesign	0145
Symphonic	0305
TAG McLaren	0157
Tascam	0420
Teac	0420
Technics	0029
Victor	0072
Wards	0157, 0053
Yamaha	0888, 0036

Device Code For DVDs

Allegro	0869
Apex Digital	0672, 0717, 0797, 1061, 0796, 1056, 0794, 1020
Aspire Digital	1168
Blaupunkt	0717
Blue Parade	0571
Broksonic	0695
CineVision	0869
Coby	1086
CyberHome	0816, 1129
Daewoo	0784, 0833, 1172, 0869
Denon	0490
DVD2000	0521
Emerson	0591, 0675
Enterprise	0591
Fisher	0670
Funai	0675
Gateway	1073, 1194, 1158, 1077
GE	0522, 0717
Go Video	0744, 0715, 0833, 1099, 0783, 1075, 1730, 0869, 1158
Greenhill	0717
Hitachi	0573, 0664
Hiteker	0672
Initial	0717
JVC	0558, 0623, 0867
Kenwood	0490, 0534
KLH	0717, 1020
Koss	0651
Lasonic	0798
LG	0591, 0869
Lite-On	1158, 1058
Magnavox	0503, 0539, 0675

Marantz	0539
Memorex	0695
Microsoft	0522
Mintek	0839, 0717
Mitsubishi	1521, 0521
Nesa	0717
Onkyo	0503
Oritron	0651
Panasonic	0490, 1762
Philips	0503, 0539, 0646, 0675, 0885
Pioneer	0525, 0571
Polaroid	1086, 1061
Polk Audio	0539
Proscan	0522
Qwestar	0651
RCA	0522, 0571, 0717, 0822
Rio	0869
Rotel	0623
Sampo	0752
Samsung	0490, 0573, 1075, 0820
Sansui	0695
Sanyo	0695, 0670, 0873
Sharp	0630, 0752
Sherwood	1077
Shinsonic	0533, 0839
Sonic Blue	0869, 1099
Sony	0533, 0864, 1033
Sylvania	0675
Symphonic	0675
Technics	0490
Theta Digital	0571
Toshiba	0503, 1154, 0695
Urban Concepts	0503
US Logic	0839
Xbox	0522
Yamaha	0490, 0539, 0545
Zenith	0503, 0591, 0869

**Device Code For Satellite
Receivers**

AlphaStar	0772
Century	0856
Chaparral	0216
Crossdigital	1109
DirecTV	0392, 0566, 0639, 1639, 1142, 0247, 0749, 1749, 0724, 0819, 1856, 1076, 1109, 0099, 1640, 1108, 1392, 1442, 1414
Dish Network System	1005, 0775, 1775, 1505
Dishpro	1005, 0775, 1505, 1775

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MANUFACTURERS' IR DEVICE CODES

Device Code For Satellite Receivers (continued)

EchoStar	1005, 0775, 1775, 1505	Bell & Howell	0154	Hello Kitty	0451	Princeton	0700	Viewsonic	1755
ExpressVu	0775, 1775	BenQ	1032	Hisense	0748	Prism	0051	Wards	0054, 0030, 0178, 0866, 1156
GE	0566	Bradford	0180	Hitachi	1145, 0145, 1960, 1904	Proscan	1447, 0047, 1347, 1922	Waycon	0156
General Instrument	0869	Broksonic	0236, 0463, 1935, 1911	Hyundai	0849	Proton	0178	Westinghouse	0889
GOI	0775, 1775	Candle	0030	Infinity	0054	Pulsar	0017	White Westinghouse	0463, 0623
Hisense	1535	Carnivale	0030	Inteq	0017	Quasar	0250, 0051	Yamaha	0030
Hitachi	0819, 1250	Carver	0054	JBL	0054	RadioShack	0047, 0154, 0180, 0030, 0178, 1904	Zenith	0017, 0463, 0178, 1911, 0092, 1904
HTS	0775, 1775	Celebrity	0000	JCB	0000	RCA	1447, 0047, 1047, 1347, 1917, 0679, 1247, 1547, 1948, 0090, 1147, 1922		
Hughes Network Systems	1142, 0749, 1749, 1442	Celera	0765	Jensen	0761	Realistic	0154, 0180, 0030, 0178		
I-Lo	1535	Changhong	0765	JVC	0053, 1253, 1923, 0731	Runco	0017, 0030		
JVC	0775, 1775	Citizen	0060, 0030, 0092	KEC	0180	Sampo	0030, 1755		
LG	1414	Clarion	0180	Kenwood	0030	Samsung	0060, 0812, 0702, 0030, 0178, 0766, 1959, 1060		
Magnavox	0724, 0722	Commercial Solutions	1447, 0047	KLH	0765, 0767	Sansui	0463, 1935, 1911, 1904		
Memorex	0724	Contec	0180	KTV	0180, 0030	Sanyo	0154, 0088		
Mitsubishi	0749	Craig	0180	LG	0178, 0700, 0856	Scotch	0178		
Motorola	0869	Crosley	0054	Lloyd's	1904	Scott	0236, 0180, 0178		
Next Level	0869	Crown	0180	LXI	0047, 0054, 0154, 0156, 0178	Sears	0047, 0054, 0154, 0156, 0178, 0171, 1904		
Panasonic	0247, 0701	Curtis Mathes	0047, 0054, 0154, 0451, 0093, 0060, 0702, 0030, 0145, 0166, 1147, 1347	Magnavox	1454, 0054, 0030, 0706, 1904, 1254	Sharp	0093, 1917		
Paysat	0724	CXC	0180	Marantz	0054, 0030	Sheng Chia	0093		
Philips	1142, 0749, 1749, 0724, 1076, 0722, 0099, 1442, 0856	Daewoo	0451, 1661, 0672, 0092, 0661, 0623	Matsushita	0250	Sony	1100, 0000, 1904		
Proscan	0392, 0566	Dell	1080	Maxent	1755	Soundesign	0180, 0178		
Proton	1535	Denon	0145	Megapower	0700	Squareview	0171		
RadioShack	0869	Dumont	0017	Megatron	0178, 0145	SSS	0180		
RCA	0392, 0566, 0855, 0143, 1392	Durabrand	0463, 0180, 0178, 0171, 1034	Memorex	0154, 0463, 0150, 0178, 1911	Starlite	0180		
Samsung	1276, 1109, 1108	Electroband	0000	MGA	0150, 0030, 0178	Studio Experience	0843		
Sony	0639, 1639, 1640	Emerson	0154, 0236, 0463, 0180, 0178, 0171, 1911, 0623	Midland	0047, 0017, 0051	Supreme	0000		
Star Choice	0869	Envision	0030	Mitsubishi	0093, 1250, 0150, 0178, 1917	SVL	0748, 0865		
Tivo	1142, 1442	ESA	0812, 0171	Monivision	0843, 0700	Sylvania	0054, 0030, 0171		
Toshiba	0749, 1749, 0790, 1285	Fisher	0154	Motorola	0093	Symphonic	0180, 0171, 1904		
UltimateTV	1392, 1640	Fujitsu	0853, 0809, 0683	MTC	0060, 0030	Tandy	0093		
Uniden	0724, 0722	Funai	0180, 0171, 1904	Multitech	0180	Tatung	1756		
US Digital	1535	Futurtech	0180	NAD	0156, 0178, 0866	Technics	0250, 0051		
USDTV	1535	Gateway	1756, 1755	NEC	0030	Techwood	0051		
Voom	0869	GE	1447, 0047, 0051, 0451, 0178, 1347, 1922, 1147, 1917	Nikko	0030, 0178, 0092	Teknika	0054, 0180, 0150, 0060, 0092		
Zenith	1856, 0856	Gibraltar	0017, 0030	Norcent	0748, 0824	Telefunken	0702		
		Go Video	0886	NTC	0092	Thomas	1904		
		GoldStar	0030, 0178	Onwa	0180	TMK	0178		
		Grumpy	0180	Optimus	0154, 0250, 0166	TNCI	0017		
		Haier	1034	Orion	0236, 0463, 1911, 1463	Toshiba	0154, 1256, 0156, 0060, 1156, 1656, 1356, 1945, 1935		
		Hallmark	0178	Panasonic	0250, 0051, 1941	TVS	0463		
		Harley Davidson	1904	Penney	0047, 0156, 0051, 0060, 0030, 0178, 1347	V. Inc.	1756		
		Harman/Kardon	0054	Philco	0054, 0030	Vector Research	0030		
		Harvard	0180	Philips	1454, 0054, 1961, 0690	Victor	0053		
		Havermy	0093	Pilot	0030	Vidikron	0054		
		Helios	0865	Pioneer	0166, 0679, 0866	Vidtech	0178		
				Portland	0092				
				Prima	0761				

Device Code For VCRs

ABS	1972
Admiral	0048, 0209
Adventura	0000
Aiko	0278
Aiwa	0037, 0000
Akai	0041
Alienware	1972
America Action	0278
American High	0035
Asha	0240
Audiovox	0037, 0278
Beaumarck	0240
Bell & Howell	0104
Broksonic	0184, 0121, 0209, 0002, 0479
Calix	0037
Canon	0035
Carver	0081
CCE	0072, 0278
Citizen	0037, 0278
Colt	0072
Craig	0037, 0047, 0240, 0072
Curtis Mathes	0060, 0035, 0162, 0041
Cybermax	0240
CyberPower	1972
Daewoo	0045, 0278
Dell	1972
Denon	0042
DirecTV	0739
Durabrand	0039, 0038
Dynatech	0000
Electrohome	0037
Electroponic	0037
Emerex	0032
Emerson	0037, 0184, 0000, 0121, 0043, 0209, 0002, 0278, 0479
Fisher	0047, 0104
Fuji	0035, 0033
Funai	0000
Garrard	0000
Gateway	1972
GE	0060, 0035, 0240

Go Video	0432	Penney	0035, 0037, 0240, 0042, 0038
GoldStar	0037, 0038	Pentax	0042
Gradiente	0000	Philco	0035
Harley Davidson	0000	Philips	0035, 0081, 0618, 0739
Harman/Kardon	0081, 0038	Pilot	0037
Harwood	0072	Pioneer	0067
Hewlett Packard	1972	Polk Audio	0081
HI-Q	0047	Profitronic	0240
Hitachi	0000, 0042, 0041, 0089	Proscan	0060
Howard Computers	1972	Protec	0072
HP	1972	Pulsar	0039
Hughes Network Systems	0042, 0739	Quasar	0035, 0162
iBUYPOWER	1972	RadioShack	0000
Jensen	0041	Radix	0037
JVC	0067, 0041	Randex	0037
KEC	0037, 0278	RCA	0060, 0240, 0042, 0149, 0880
Kenwood	0067, 0041, 0038	Realistic	0035, 0037, 0048, 0047, 0000, 0104
KLH	0072	ReplayTV	0616
Kodak	0035, 0037	Runco	0039
Lloyd's	0000	Samsung	0240, 0045
Logik	0072	Sanky	0048, 0039
LXI	0037	Sansui	0000, 0067, 0209, 0041, 0479
Magnavox	0035, 0039, 0081, 0000, 0149	Sanyo	0047, 0240, 0104
Magnin	0240	Scott	0184, 0045, 0121, 0043
Marantz	0035, 0081	Sears	0035, 0037, 0047, 0000, 0042, 0104
Marta	0037	Sharp	0048
Matsushita	0035, 0162	Shintom	0072
Media Center PC	1972	Shogun	0240
MEI	0035	Singer	0072
Memorex	0035, 0162, 0037, 0048, 0039, 0047, 0240, 0000, 0104, 0209, 0479	Sonic Blue	0616
MGA	0240, 0043	Sony	0035, 0032, 0033, 0000, 0636, 1972
MGN Technology	0240	STS	0042
Microsoft	1972	Sylvania	0035, 0081, 0000, 0043
Mind	1972	Symphonic	0000
Minolta	0042	Systemax	1972
Mitsubishi	0067, 0043	Tagar Systems	1972
Motorola	0035, 0048	Tatung	0041
MTC	0240, 0000	Teac	0000, 0041
Multitech	0000, 0072	Technics	0035, 0162
NEC	0104, 0067, 0041, 0038	Teknika	0035, 0037, 0000
Nikko	0037	Thomas	0000
Noblex	0240	Tivo	0618, 1503, 0739, 0636
Northgate	1972	TMK	0240
Olympus	0035	Toshiba	0045, 0043, 1008, 1972, 1503
Optimus	1062, 0162, 0037, 0048, 0104, 0432	Totevision	0037, 0240
Orion	0184, 0209, 0002, 0479	Touch	1972
Panasonic	1062, 0035, 0162, 0225, 0616	Unitech	0240
		Vector	0045

Vector Research	0038
Video Concepts	0045
Videomagic	0037
Videosonic	0240
Viewsonic	1972
Villain	0000
Wards	0060, 0035, 0048, 0047, 0081, 0240, 0000, 0042, 0072, 0149
White Westinghouse	0209, 0072
XR-1000	0035, 0000, 0072
Yamaha	0038
Zenith	0039, 0033, 0000, 0209, 0479
ZT Group	1972

Device Code For Video Accessories

ABS	1272
Alienware	1272
CyberPower	1272
D-Link	1554
Escient	1151, 1371, 1370, 1373, 1372
Gateway	1272
Hewlett Packard	1272, 1267
Howard Computers	1272
HP	1272
iBUYPOWER	1272
LG	1415
Linksys	1365
Media Center PC	1272
Microsoft	1272
Mind	1272
Motorola	1363
Northgate	1272
Panasonic	1120
Pioneer	1010
Samsung	1190, 1490
Sensory Science	1126
Sharp	1010
SMC	1456
Sony	1272, 1324, 1364
Systemax	1272
Tagar Systems	1272
Toshiba	1272
Touch	1272
Viewsonic	1272, 1329
ZT Group	1272

TECHNICAL SPECIFICATIONS

A-C68 Controller

Dimensions:	16.75"W x 10.5"D x 2.125"H (42.5 x 26.7 x 5.4 cm)
Weight:	12.7 lbs. (5.8 kg)
Power Supply:	100 - 240VAC 50-60Hz
Fuse Rating:	100V input; T3.0A US and Canada 240V input; T1.25A Europe
Frequency Response:	20Hz-20kHz +/- 0.1dB
Total Harmonic Distortion:	<0.3%
Signal to Noise Ratio:	105dB A-weighted / 101dB unweighted
Audio Source Inputs:	6
Input Impedance:	60 Kohms
Max Source Audio Input:	3.5 Vrms
Audio Zones/Keypad Ports	8 RJ45 T568A standard
Trigger Output:	12VDC 100mA Max
Trigger Input:	12VDC

The Russound A-C68 is fully guaranteed against all defects in materials and workmanship for two (2) years from the date of purchase. During this period, Russound will replace any defective parts and correct any defect in workmanship without charge for either parts or labor.

For this warranty to apply, the unit must be installed and used according to its written instructions. If service is necessary, it must be performed by Russound. The unit must be returned to Russound at the owner's expense and with prior written permission. Accidental damage and shipping damage are not considered defects, nor is damage resulting from abuse or from servicing by an agency or person not specifically authorized in writing by Russound.

This Warranty does not cover:

- Damage caused by abuse, accident, misuse, negligence, or improper installation or operation
- Power surges and lightning strikes
- Normal wear and maintenance
- Products that have been altered or modified
- Any product whose identifying number, decal, serial number, etc. has been altered, defaced or removed.

Russound sells products only through authorized Dealers and Distributors to ensure that customers obtain proper support and service. Any Russound product purchased from an unauthorized dealer or other source, including retailers, mail order sellers and online sellers will not be honored or serviced under existing Russound warranty policy. Any sale of products by an unauthorized source or other manner not authorized by Russound shall void the warranty on the applicable product.

Damage to or destruction of components due to application of excessive power voids the warranty on those parts. In these cases, repairs will be made on the basis of the retail value of the parts and labor. To return for repairs, the unit must be shipped to Russound at the owner's expense, along with a note explaining the nature of service required. Be sure to pack the unit in a corrugated container with at least three (3) inches of resilient material to protect the unit from damage in transit.

Before returning a unit for repair, call Russound at (603) 659-5170 for a Return Authorization number. Write this number on the shipping label and ship to:

Russound

ATTN: Service

5 Forbes Road

Newmarket, NH 03857



A-C68

A-BUS[®] Multizone Controller

Installation Manual

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Specifications are subject to change without notice.

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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, #6,389,13; EP #1004222, AU #739808, NZ #502982

Mexico #241196, Canada #CA2301062

28-1255 10/17/07

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