INSTALLATION INSTRUCTIONS
C−4.4 MULTI−ZONE CONTROLLER

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

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 product.

WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
Do not expose this equipment to dripping or splashing and ensure that no objects filled with liquids, such as vases, are placed on the equipment.

To completely disconnect this equipment from the AC mains, disconnect the power supply cord plug from the AC receptacle.

The mains plug of the power supply cord shall remain readily operable.

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INTRODUCTION

Welcome to Nexus Audio Systems and congratulations on your purchase of the C-4.4 Multi-Zone Controller.

The C-4.4 supports 4 independently operated zones and infrared (IR) control of 4 external audio/video source components. Each zone features a solid 20 Watts per channel analog amplifier for clean, unfatigueing listening. Each of the routed source IR outputs can be set for 38 KHz or 56 KHz output for optimum source control. The unit includes a RS-232 Port that allows the C-4.4 to be controlled with a touch-screen or easily integrated with other home automation control systems. The Nexus C-4.4 provides a mute function that can integrate with a doorbell or telephone system to ensure you will not miss a single important call or visitor. The system is expandable to 8 zones using two C-4.4 Controllers.

Source power management is referenced to system status with all sources being automatically turned on when the first zone is activated and turned off when the last zone turns off. Programming power management takes only seconds and requires no additional connections or components.

The K-4.4 Keypads provide simple, intuitive control of zone power, source selection, source control, volume and treble and bass. Four easy to read, backlit source select buttons, indicate zone status (ON/OFF) and the source selected. The K-4.4 features three programmable buttons that can be used for basic device control such as chapter skip, stop or pause for transport devices and tuner up/down or preset up/down for tuners. The keypad features a built-in infrared receiver that can be used with the included RC-4 Remote Control or any properly programmed IR remote for additional flexibility and armchair control.

The keypads also feature a four position DIP switch that sets keypad IR receiver enable/disable, Zone Group configuration, turn on to last volume/preset volume, and assignment as the primary or secondary keypad when two keypads are connected in a single zone.

The Nexus C-4.4 is the easiest multi-zone controller to install and program ever built! At Nexus that's our goal. To provide you with well thought-out system components that reduce the time spent on-site allowing you more time for managing other important parts of your business…such as selling and installing more Nexus Audio Systems!

Thank you for your support.

SYSTEM OVERVIEW
- Four Source/Four Zone System ideal for condominiums, smaller homes and new developments
- 20 Watts per channel analog amplifier housed in an attractive 2U chassis
- Includes four K-4.4 Keypads that connect to the Controller via CAT5 cable terminated with RJ45 connectors
- Each keypad features a built-in IR receiver with IR receiver enable/disable
- RS-232 system expansion output links two C-4.4 Controllers for system status of up to eight zones and easy integration with other home automation control systems
- Fixed and variable stereo line level audio outputs linked to Zone 1 for use with external amplifiers or an A/V Receiver.
- 12VDC Doorbell/Telephone Mute Trigger Input
- 12VDC Trigger Output
- IR outputs with dual frequency switches for 56KHz and 38 KHz sources
- Keypads include a four position DIP switch that configures Zone Group, IR receiver enable/disable, last/default volume, primary/secondary keypad by zone
- Zone LEDs double as programming indicators when learning IR codes
- IR 'pass-through' allows use of IR remote for system, zone and source control
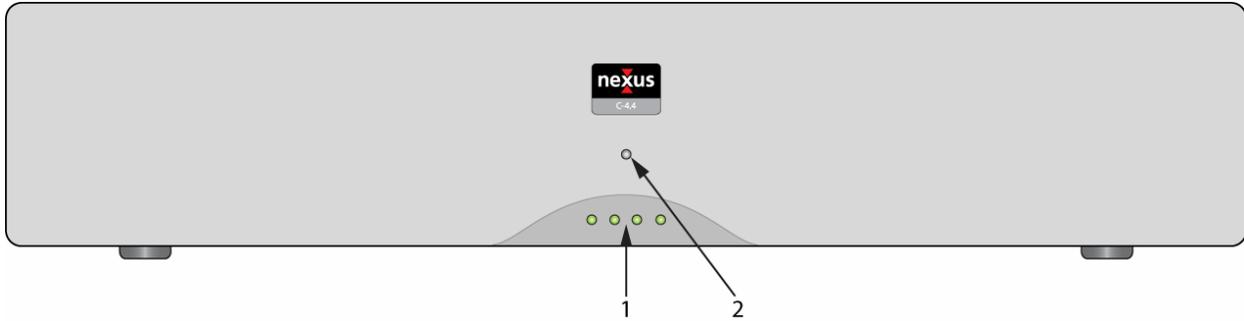
Figure 1 C-4.4 Front Panel

FEATURES

C-4.4 CONTROLLER FRONT PANEL

1. **Zone Status/Programming Indicators –** Four multicolor/multifunction LED's indicate the following modes:
   - **Power Up –** During power up, the C-4.4 will enter an initialization mode where it will try to make contact with the attached keypads. The LEDs give an indication of this process on a per zone basis by illuminating green while the keypad for that zone is tested. If the keypad is contacted successfully, the LED for that zone will remain green, and the LED for the next zone will illuminate as it is tested. If there is a failure to communicate with a particular keypad, because there is no keypad connected or due to a wiring error, the LED for that zone will turn red for the duration of the initialization sequence, after which all LEDs will turn off.
   - **Zone Status –** Solid green indicates an active zone. (Zone ON)
   - **Source IR Output –** When an IR command is output from the C-4.4 the LED for the zone initiating the command will flash green to indicate that the code was sent. When a button is pressed that does not have a command programmed to it, the LED will flash red.
   - **Programming Status –** LEDs will change from green to red to orange with varying modes of scrolling, flickering, flashing and solid states indicating different programming modes and status. See Section: **Programming** for additional information.

2. **IR Port –** IR sensor used for learning IR controlled source commands.
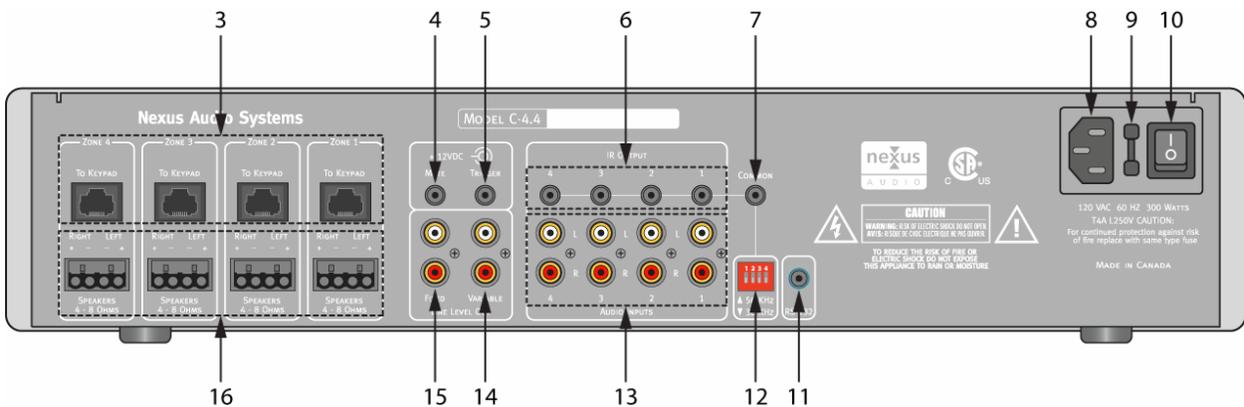

Figure 2 C-4.4 Rear Panel

C-4.4 CONTROLLER REAR PANEL

3. **Zone Keypad Inputs –** Four RJ45 jacks connect to the RJ45 jacks on the K-4.4 Keypads. CAT5 cable should be configured in a pass-through (pin to pin) configuration utilizing the TIA568A Standard pin-out.

4. **12VDC Telephone/Doorbell Mute –** One 3.5mm mini jack connects to the 12VDC Control Out on a telephone system or doorbell to mute system audio when 12VDC is present. **PINOUT:** TIP=+12VDC; SLEEVE=GND. **MAX LOAD:** 32VDC.

5. **12VDC Trigger Output –** One 3.5mm mini jack connects to the Control or Trigger Input on voltage controlled devices such as screens, drapes, lifts, lights, external amplifiers, powered sub-woofers, etc. Outputs 12VDC when any zone is ON. **PINOUT:** TIP=+12VDC; SLEEVE=GND. **MAX LOAD:** 12VDC@100mA.

6. **IR Output –** Four 3.5mm mini jacks connect to standard IR emitters for IR control of external sources. When initiated by keypad or RC-4 button presses, these outputs are routed IR, allowing selective control of multiple same-brand, same-model components (multiple DVD players, SAT receivers, etc). Each jack has a selectable output frequency of 38 KHz or 56 KHz as set with the IR Output Frequency DIP Switch, item 12. **PINOUT:** TIP=SIG; SLEEVE=GND.
    NOTE 1: IR pass-through, (IR commands initiated by the original equipment remote or a programmed remote) will output from all Source IR Output jacks and the 'All' jack.
    NOTE 2: The IR Output Frequency DIP Switch only affects IR pass-through commands (IR commands initiated by the original equipment remote or a programmed remote).

7. **Common –** One 3.5mm mini jack connects to an amplified IR Connecting Block or standard emitter for IR control of devices other than the four connected sources. This jack outputs all IR commands from all keypads and/or remotes from all zones. **PINOUT:** TIP=SIG; SLEEVE=GND.

8. **AC Mains –** One standard IEC 3-pin AC line cord receptacle connects to the included AC line cord. **RATING:** 120VAC; 60Hz.

9. **AC Fuse –** One T4A L250 Fuse.

10. **Main Power Switch –** One rocker switch turns AC power to the C-4.4 ON/OFF.

11. **RS-232 Port –** One 3.5mm mini jack connects to the RS-232 jack on a second C-4.4 for a communication link for system status in expanded systems using two C-4.4 Controllers. Also used as an input for RS-232 control from a touch-screen or other home automation control system.

12. **IR Output Frequency Dip Switch –** One four position DIP switch allows setting the IR output frequency of each of the four source IR outputs, (item 6) to 38 KHz or 56 KHz as appropriate by source. These switch settings only affect IR pass-through, (IR commands initiated by the original equipment remote or a programmed remote). Learned IR commands are output at the frequency at which they were learned.

13. **Audio Inputs –** Four stereo pair RCA jacks connect to the left & right line level audio outputs on the system source devices. **PINOUT:** TIP=SIG; SLEEVE=GND.

14. **Line Level Out (Variable) –** One stereo pair RCA jacks connect to the left & right line level audio INPUTS on an external audio amplifier that does not have a volume control or when it is desirable to adjust volume on an external amp or receiver from the K-4.4 Keypad or remote control in Zone 1. These jacks output line level audio for the source selected in Zone 1. **PINOUT:** TIP=SIG; SLEEVE=GND.

15. **Line Level Out (Fixed) –** One stereo pair RCA jacks connect to the left & right line level audio INPUTS on an external audio amplifier or receiver when volume will be controlled with in-wall volume controls or the volume control on the receiver. These jacks output line level audio for the source selected in Zone 1. **PINOUT:** TIP=SIG; SLEEVE=GND.

16. **Speakers –** Four four-pin terminals connect to the included plug-in connectors for connecting the C-4.4 zone speaker level outputs to individual zone speaker wire runs.
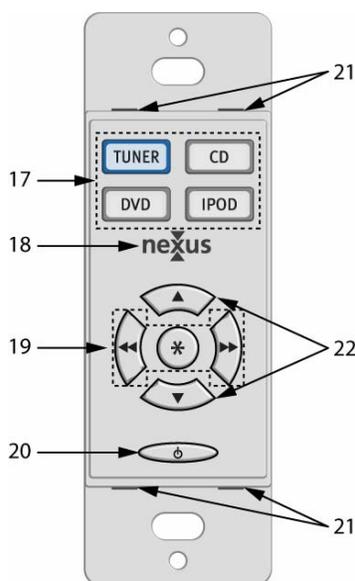

Figure 3 K-4.4 Keypad Front Panel

K-4.4 KEYPAD FRONT PANEL

17. **Source Select Buttons –** Four configurable, backlit buttons, indicate zone status and source selected. When a zone is ON, the button for the source selected will illuminate blue. When a zone is OFF, no source button will be lit. Each source button can be programmed to send a single IR command such as a play command. This programming will have the selected device play when selected, and also provide a 'play' button for normal operation. When programmed, these buttons have the same function as the corresponding buttons on the RC-4 Remote Control.

18. **IR Receiver –** Two photodiodes (38 KHz, 56 KHz) allow remote control compatibility with most brands of IR controlled source components from the included RC-4 Remote Control, the original source remote or a full-function programmable remote.
NOTE: DIP Switch 1 on the keypad rear panel can be used to disable use of the RC-4 Remote when the switch is in the ON position. This setting will not affect IR pass-through (IR commands initiated by the original equipment remote or a programmed remote).

19. **Programmable Control Buttons –** Three, programmable buttons allow control of the most commonly used commands, by source. For transport devices such as DVD/CD players, MP3 players, iPods, etc. commands such as chapter skip forward/reverse and stop can be programmed. For tuners, commands such as scan up/down, seek up/down, preset up/down, select or band can be programmed. When programmed, these buttons have the same function as the corresponding buttons on the RC-4 Remote Control.

20. **Power Button –** One button serves multiple purposes. In typical use, one press of this button will turn the local zone on and select the last source selected. A second press will turn the local zone off. If the zone being turned on is the first zone in the system to turn on, the C-4.4 will automatically output the source power toggle commands to turn all sources on. If the zone being turned off is the last zone to be turned off, after a five second delay, the C-4.4 will output the source power toggle commands to turn all sources off.

21. **Keypad Bezel Tab Slots –** Four slots lock the keypad bezel tabs in place, securing the bezel, rubber membrane and key caps for installation and normal use. (The keypad bezel is removable to allow configuration of the Source Button Labels.)

22. **Volume Control Buttons –** Two buttons provide control of local zone volume.
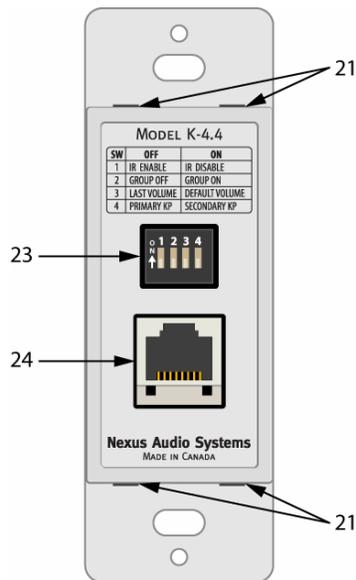
Figure 4 K-4.4 Keypad Rear Panel

K-4.4 KEYPAD REAR PANEL

21. **Keypad Bezel Tab Slots –** Four slots lock the keypad bezel tabs in place, securing the bezel, rubber membrane and key caps for installation and normal use. (The keypad bezel is removable to allow configuration of the Source Button Labels.)

23. **Zone Configuration Switch –** One four position DIP switch allows local zone configuration of Group Mode, IR Receiver Enable/Disable, Last/Default Volume and Primary/Secondary Keypad settings. See Section: **Zone Setup** for additional information.

24. **Controller Port –** One RJ45 jack connects to the appropriate Zone Input on the C-4.4 rear panel via CAT5 cable terminated with RJ45 connectors. The cable CAT5 should be configured in a pass-through (pin to pin) configuration, utilizing the TIA568A Standard pin-out.
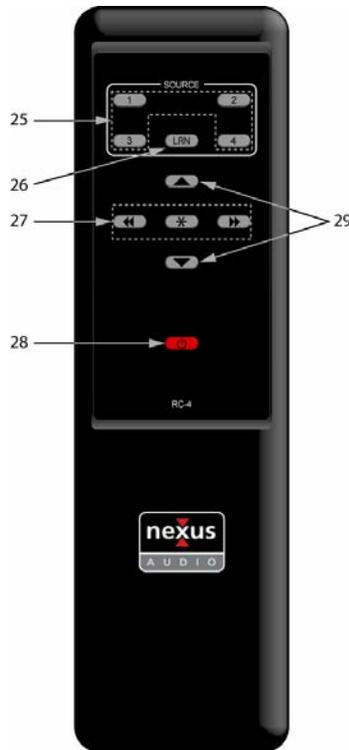
Figure 5 RC-4 Remote

25. **Source Select Buttons –** Four buttons select the source in a zone via the built-in IR receiver in a K-4.4 Keypad. When the system is properly programmed, these buttons have the same function as the corresponding Source Select Buttons on the K-4.4 Keypad (select source and instruct the Controller to output a play command when selecting a transport device such as a DVD/CD player, MP3 player or iPod). These buttons are also used in Program Mode with the IR Port on the C-4.4 Front Panel to select a source during system programming.

26. **LRN –** One button used to put the C-4.4 into the Program Mode for learning source IR commands. Press and hold for five seconds to enter Program Mode. Press again to exit Program Mode.

27. **Programmable Control Buttons –** Three programmable buttons allow control of the most commonly used commands, by source. For transport devices such as DVD/CD players, MP3 players, iPods, etc. commands such as chapter skip forward/reverse and stop can be programmed. For tuners, commands such as scan up/down, seek up/down, preset up/down, select or band can be programmed. When the system is properly programmed, these buttons have the same function as the corresponding buttons on the K-4.4 Keypad. These buttons are used in Program Mode with the IR Port on the C-4.4 Front Panel to select source function buttons during system programming.

28. **Power Button –** One button serves multiple purposes. In typical use one press of this button will turn the local zone on and select the last source selected. A second press will turn the local zone off. If the zone being turned on is the first zone in the system to turn on, the C-4.4 will automatically output the source power toggle commands to turn all sources on. If the zone being turned off is the last zone to be turned off, after a five second delay, the C-4.4 will output the source power toggle commands to turn all sources off. In Program Mode, this button is used with the IR Port on the C-4.4 Front Panel to program the individual source power toggle commands that are used for automatic source power management.

29. **Volume Control Buttons –** Two buttons provide control of local zone volume.

Figure 6 Typical C-4.4 System
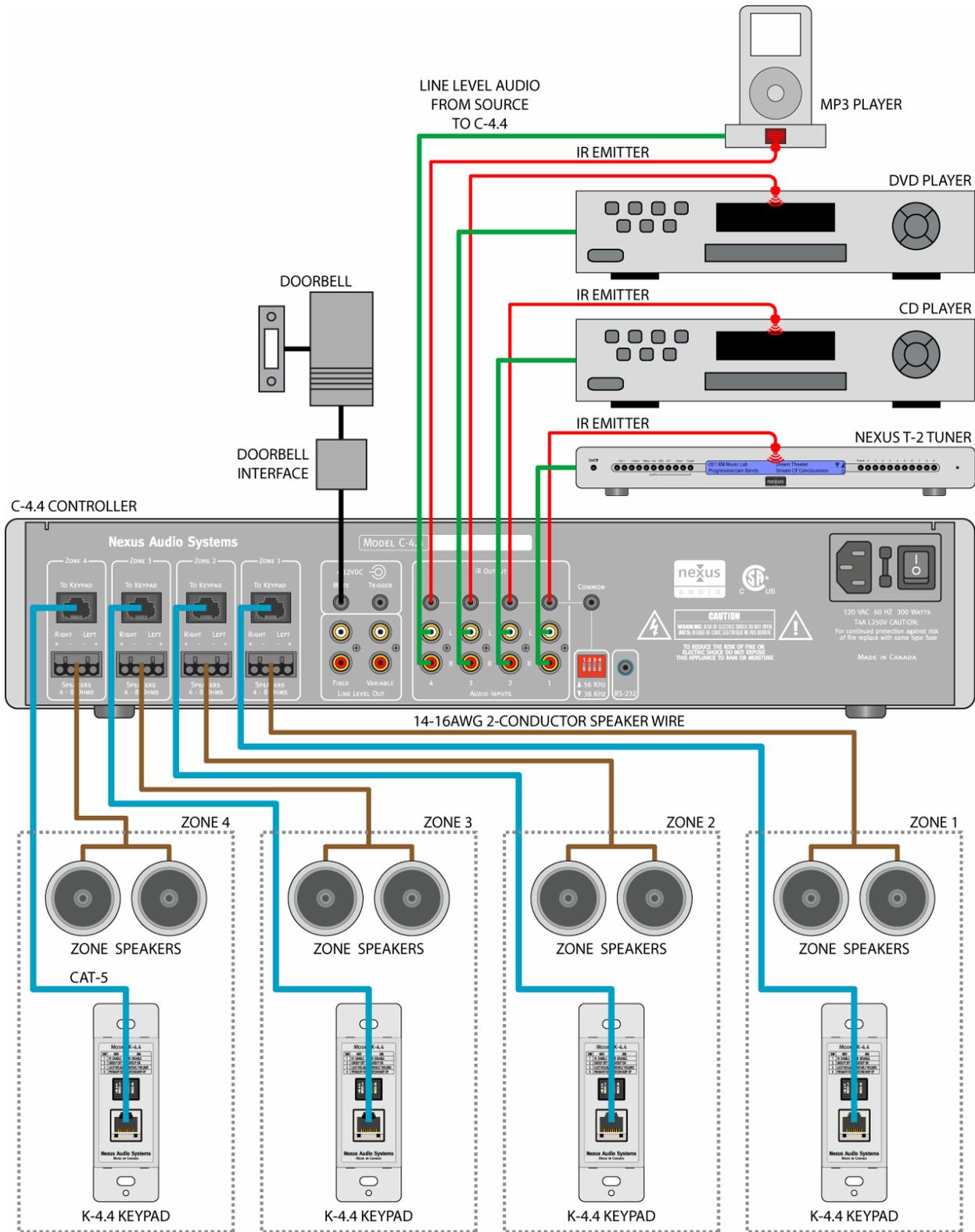
DESIGNING AND INSTALLING A C-4.4 SYSTEM

System Design
It is always good to get as much information from the client/user/homeowner as possible when designing a multi-source, multi-zone system. What sources are they going to use? How many zones will be included in the system? Some zones may only require speakers for background music, while other zones may include a TV or video display for movies, sports and news. It's all part of the same system and planning ahead will insure that the system does what the user requires…or asks for later.

Head End Considerations
When planning a whole-house system, for either new or existing construction, always try to find the most convenient location for the system components. Try to find a central location to pull the wire runs to with adequate space for the components and room to work on them. Certainly not the least important consideration should be convenience for the user. Remember: once the system is installed, the user is still going to need to load discs or tapes or program material…easy access is essential. For service or upgrading components, an equipment closet with rear access to the components is ideal but not always possible. Consider a pull-out rack mount system if rear access is not possible. Leave plenty of extra wire to be able to easily remove components should they need service or replacing.

Zone Considerations
Think the system through in terms of how the system will be used. What is the layout of each room? Where will the speakers go? Where will the keypads go? Are there going to be any other system components in the remote zones such as TV's or video displays? Be sure to pull all required cabling and observe all local building and electrical codes.

INSTALLATION

Controller Location
The C-4.4 should be located at the main termination of all wire and cable runs. The source components (Tuner, CD, DVD, iPod, etc) should also be installed at this location.

The C-4.4 and source components can be placed on shelves in a wall unit in a media room, or rack mounted in a standard 19" rack mount system. Always provide convenient access for loading CDs and DVDs. Easy access for service should also be a consideration.

Ventilation
The C-4.4 must be placed in a location that allows adequate airflow. Leave at least two inches above and below the unit to allow air to flow freely through the vent holes on the top, bottom and sides. Blocking the vent holes can inhibit airflow and possibly damage the unit. Removing the feet a placing the unit on a shelf or another component will inhibit airflow and is not recommended. Additionally, care should be taken to leave plenty of extra room for wires and cables. Extra wire cramped in around the unit can block side vents and inhibit proper airflow.
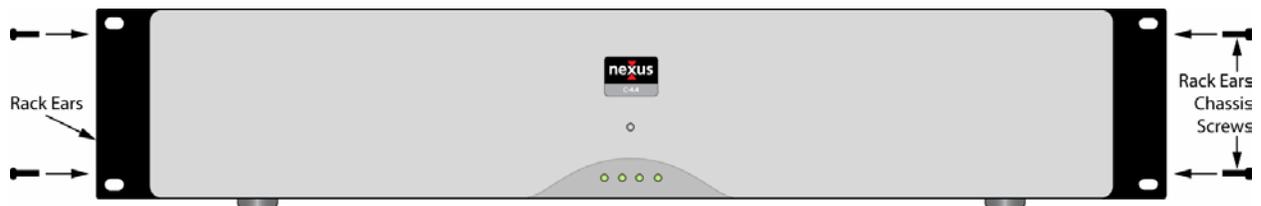
Rack Mounting

Figure 7 C-4.4 Rack Ears

Rack Ears (Nexus Part #RK 3.5) are available as an accessory item that can be ordered from Nexus for rack mounting the C-4.4. The Ears mount behind the C-4.4 Front Panel as shown in Figure 7. The Ears, when secured to the rack, have the same height as other rack panels and allow use of Middle Atlantic Trim Strips for a clean finish. To attach Rack Ears:
1. Align Rack Ears to the Chassis Screw Holes in the sides of the C-4.4. Secure with Rack Ears Chassis Screws included with Rack Ears.
2. Secure to rack using appropriate rack mount hardware.

NOTE: When rack mounting the C-4.4 Controller and other system components, it is recommended that one, one rack space vent panel be used above and below the C-4.4 Controller to provide adequate airflow for cooling.

Keypad Location & Mounting
The K-4.4 Keypads should never be mounted in the same J-box with AC house wiring or any other high voltage device such as a light switch. Avoid mounting the keypads in areas with high moisture such as around sinks, bathtubs, showers or outdoor locations that will be exposed to rain or high humidity. Care should also be taken to avoid mounting the keypads in locations that will be exposed to direct sunlight. Sunlight can interfere with the IR sensors on the keypads and interfere with system performance. The keypad IR receiver should be turned off in rooms with bright sunlight where an IR remote is not going to be used.

WIRING
One of the most important aspects of system design and installation is the wiring infrastructure. When planning the wiring infrastructure, always pull extra wire. In new construction, wires can be damaged during construction, so it is a good idea to use wire with additional conductors in case a nail or staple gets run through a wire. Additionally, even though the system has been designed and contracted based on extensive interviews with the homeowner, things do change. The homeowner may decide to add music, video and control to additional rooms long after the walls have been sealed up. In new construction, always pull wire to every room that could ever possibly be added to the system, so when the homeowner decides to add a room, the wire is already in place. Pull speaker and control wires for audio and control as well as coax for video distribution, (even though the C-4.4 does not switch video and the system will only initially be used for audio sources). Pull each wire or cable to an appropriate location for keypads, speakers and video displays. Terminate with appropriate wall plates or keep a map detailing exactly where the wire runs are terminated in the walls. Always label the wire runs by room and device to assist in installation and troubleshooting.
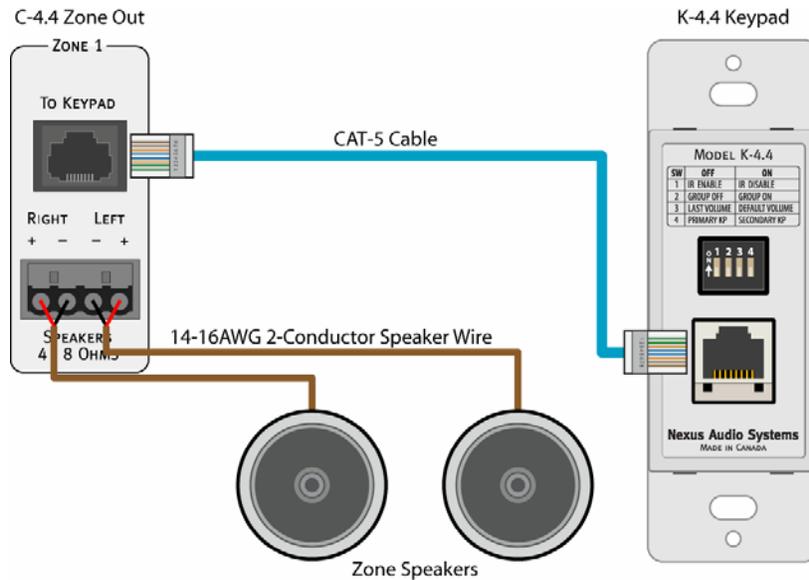
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Figure 8 Typical Zone Configuration

Keypads
Pull CAT-5 in home-runs directly from each keypad location to the C-4.4 Controller location. Terminate with RJ45 plugs in a pass-through (pin to pin) configuration using the TIA568A Standard pin-out.

CAT5	RJ45	SIGNAL
White/Green	PIN 1	+12V
Green	PIN 2	GND
White/Orange	PIN 3	Keypad Data +
Blue	PIN 4	IR Data +
White/Blue	PIN 5	IR Data -
Orange	PIN 6	Keypad Data -
White/Brown	PIN 7	N/C
Brown	PIN 8	N/C

Figure 9 RJ45 TIA568A Standard Pin-out

Speakers
Pull four conductor wire in home-runs directly from each speaker location to the C-4.4 Controller location.
WIRE GAUGE: 16AWG stranded up to 75'; 14AWG stranded up to 100'. Non-shielded preferred.
NOTE: MAX LOAD: 8 ohms per zone. Do not load more than one pair of 8 ohm speakers per zone. This can cause the unit to go into protection and may possibly blow fuses.

Video (Option)
Though the C-4.4 does not switch video signals, video cable should be pulled to allow whole-house video distribution with audio signals routed through the C-4.4 rather than the TVs for improved audio performance. Pull RG6 coaxial cable in home runs directly from each possible TV or video display location directly to the C-4.4 Controller location. RG6 quad shield preferred. Coaxial cable length will vary with system design. Terminate with appropriate quality gold-plated connectors.

Mute
Pull two conductor stranded wire from the 12VDC output on the device that will trigger audio muting to the C-4.4 Controller location. Terminate with a 3.5mm mini plug at the C-4.4 end. **POLARITY:** TIP = +12VDC, SLEEVE = GND. **WIRE GAUGE:** 20AWG up to 500'; 18AWG up to 1000'. Non-shielded preferred. **MAX VOLTAGE IN:** 32VDC.
NOTE: Audio mute function will mute all active zones when 12VDC is present on this input. No additional programming or configuration is required.

RS-232
When used for a control buss between C-4.4 Controllers in an expanded system using two Controllers, use a pre-configured 3.5mm stereo mini to mini plug cable. When controlling the C-4.4 from an external controller such as a whole-house control system or touch panel, use a cable with at least three conductors and terminate control system or touch screen end as appropriate. Terminate the C-4.4 end with a three-circuit (stereo) mini plug using the following pin-out:
NOTE: RS-232 Connections should not exceed 50'.

RS-232 PIN-OUT	
TIP	Tx
RING	Rx
SLEEVE	GND

Figure 10 RS-232 Pin-Out

Trigger
Pull two conductor stranded wire to a voltage sensing device to be controlled by the C-4.4. Terminate the C-4.4 end with a 3.5mm mini plug. Terminate controlled device end as appropriate. **POLARITY:** TIP = +12VDC, SLEEVE = GND. **WIRE GAUGE:** 20AWG up to 500'; 18AWG up to 1000'. Non-shielded preferred.
NOTE: Check polarity on Trigger connections before powering up the system. An Improper connection can cause damage to the controlled device, the C-4.4 or both.

CONNECTIONS
When connecting source components, or making any connections, be sure that the C-4.4 Controller and all system devices are turned OFF and disconnected from AC power to prevent electrical shock and to avoid possibly damaging components.

HEAD END CONNECTIONS

Keypads
Using CAT5 cable properly terminated with a RJ45 plug (see section: **Wiring/Keypads**) connect the zone CAT-5 cable to the appropriate zone 'To Keypad' terminal on the C-4.4 rear panel.

Speakers
1. Using 14-16AWG two-conductor stranded wire, strip approximately ¼" of insulation from each conductor. Twist the strands until tight.
2. Connect the bare wires to the appropriate L+,L-,R-,R+ terminals on one of the included four-position plug-in connectors. Be sure to maintain proper polarity. Be sure there are no loose strands sticking out that could cause a short.
3. Plug the connector into the appropriate zone speaker terminal.

Source Audio
Use one quality stereo RCA to RCA type audio cable with gold plated connectors for each audio source component. Connect the LEFT and RIGHT audio outputs of each source component to the LEFT and RIGHT audio inputs on the C-4.4 Controller for sources 1-4.

IR Emitters
Sources 1-4 – Use any standard IR emitter with a 3.5mm mini plug for each source component. Plug emitters into the appropriate source IR output jack 1-4. (If the CD player is source 1, plug the emitter for the CD player into emitter jack 1.) Attach the emitter to the front panel of the device being controlled over the IR eye. If the eye is not obvious, refer to the owner's manual for that product or shine a small flashlight into the front panel to locate the eye.
NOTE 1: IR commands initiated by a K-4.4 Keypad or RC-4 Remote will be routed to the emitter for the selected source. (Commands for Source 1 will only output from Emitter 1.) IR pass-through, (IR Commands initiated by the original equipment remote or a programmed remote) will output from all Source Emitters and the 'All' Emitter.
NOTE 2: IR emitters are available as infrared (no flash) or visible/infrared (red flash). Either will work. The visible/infrared emitters are recommended in that they give a visual confirmation of IR output and can be helpful when troubleshooting.
All – Use any standard IR emitter with 3.5mm mini-phone plug to control a single common device. (IR controlled lights, drapes, lifts, screens etc.) If there is more than one common device, use a 3.5mm mini-phone plug with pig tail to connect to the IR and ground input terminals on an amplified IR connecting block to drive additional emitters. **POLARITY:** TIP = SIG; SLEEVE = GND.
NOTE: The ALL IR output will output IR from any keypad or remote in any zone, including IR pass-through, (IR Commands initiated by the original equipment remote or a programmed remote).

Mute
Using a properly configured 3.5mm mini plug, (see section: **Wiring/Mute**) connect the 3.5mm mini plug to the Mute jack on the C-4.4 rear panel. Appropriately terminate and connect the other end to the control voltage output terminal on the device to be used to trigger audio mute. Be sure to maintain proper polarity from the device control out to the 3.5mm mini plug.

RS-232
Using a properly configured 3.5mm mini plug (see section: **Wiring/RS-232**), connect the 3.5mm mini plug to the RS-232 jack on the C-4.4 rear panel. Appropriately terminate and connect the other end to an appropriate RS-232 port on the control device. See section: **RS-232 Protocol** for additional information.

Trigger
Using a properly configured 3.5mm mini plug (see section: **Wiring/Trigger**), connect the 3.5mm mini plug to the Trigger jack on the C-4.4 rear panel. Appropriately terminate and connect the other end to the device to be controlled. Be sure to maintain proper polarity.

ZONE CONNECTIONS

Keypads
Using CAT5 cable properly terminated with a RJ45 plug (see section: **Wiring/Keypads**) connect the zone CAT-5 cable to the Keypad Controller Connection (RJ45) jack on the keypad rear panel.

Speakers
1. Using 14-16AWG two-conductor stranded wire, strip approximately ¼" of insulation from each conductor. Twist the strands until tight.
2. Connect the bare wires to the appropriate L+, L-, R-, R+ terminals on the left and right zone speakers. Be sure to maintain proper polarity. Be sure there are no loose strands sticking out that could cause a short.

Video (Option)
Using appropriately terminated RG6 coaxial cable, connect the Video Out from an A/V source or video distribution amp to the appropriate input on a zone TV or video display.

EXPANDED SYSTEMS
Two C-4.4 Controllers can be linked together to expand a C-4.4 system to up to eight zones. The fundamental installation and connections are similar to those on a single controller system with a few minor changes.

RS-232 Communication Link
This connection allows communication between the Master and Slave Controllers for zone/system status and system/source power management from the keypads or remotes used in the zones connected to the Slave Controller.
1. Using a properly terminated 3-circuit (stereo) 3.5mm mini plug cable, (see section: **Wiring/RS-232**) connect the RS-232 jack on the Master Controller to the RS-232 jack on the Slave Controller.

Source Audio
Source audio must be distributed to both the Master and Slave Controller Source Inputs to have source audio signals available to all zones.
1. Use either 'Y' adapters or an audio distribution amp to split the line level audio signal from the source outputs to the source audio inputs on both controllers as shown in **Figure 14**.
   NOTE: If using an A/V Source an audio/video distribution amp is recommended to split the audio signals to the C-4.4 Controllers and provide multiple video outs that can be distributed to the zone video displays and maintain proper signal level.

IR Emitters
The IR Emitter Outs on the Master and Slave Controllers are independent in that they only output IR commands from button presses from their respective connected keypads or IR commands sent from remote controls via the IR receivers in those same connected keypads. (Button presses or remote commands from Zones 1-4 only output from the Master IR Outs. Button presses or remote commands from Zones 5-8 only output from the Slave IR Outs.)
NOTE: Each Controller must be programmed individually for all source IR commands.

The IR Outs from the Master and Slave Controllers can be connected in parallel to a single emitter for source control from any zone, as shown in **Figure 11**. When connecting emitters in parallel, be sure to connect the matching source IR Outs from the Master and Slave, (i.e.: Master Source 1, Slave Source 1, etc) or the press of a keypad button could wind up controlling the wrong source. To connect the Source IR Outs in parallel:
1. Using a 2-male to 1-female 3.5mm mono mini plug Y adapter, plug the two male ends into the appropriate Source IR Outs on the C-4.4 Master and Slave Controllers.
2. Plug an IR emitter into the female end of the Y adapter and attach the emitter to the device being controlled over the IR eye. If the eye is not obvious, refer to the owner's manual for that product or shine a small flashlight into the front panel to locate the eye.
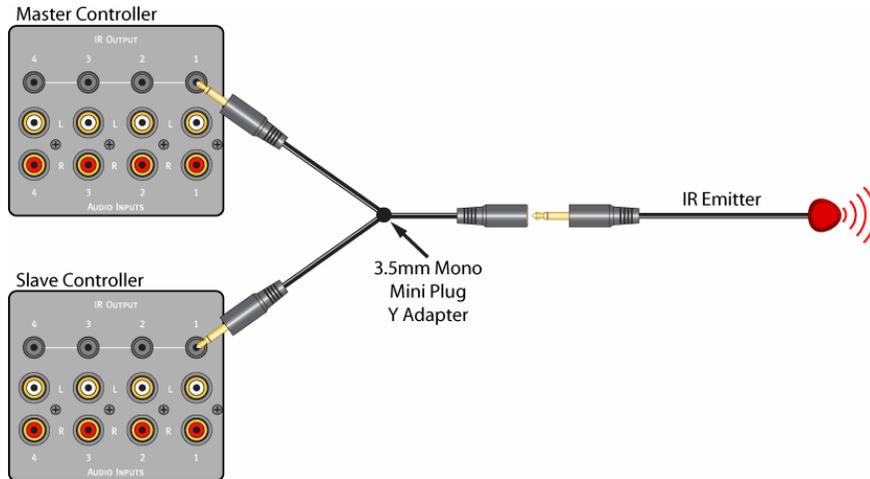3. Repeat for all sources to be controlled by both controllers.

Figure 11 IR Out Parallel Connection

Speakers
Speakers are connected to the appropriate Master or Slave Zone Speaker Out as described in section: **Connections/Speakers**.

Trigger
The Trigger Outs on the Master and Slave Controllers are independent in that they turn on and off with their respective zones. (When any of zones 1-4 is ON, the Master Trigger will output 12VDC. When any of zones 5-8 is ON, the Slave Trigger will output 12VDC.) If there is a system device that is common to both controllers, and needs to be triggered when any zone is ON, the two Trigger Outs can be connected in parallel to trigger a common device as shown in **Figure 12**. To connect the Trigger Outs in parallel:
1. Using a 2-male to 1-female 3.5mm mono mini plug Y adapter, plug the two male ends into the Trigger Outs on the C-4.4 Master and Slave Controllers.
2. Plug a 3.5mm mini plug wire into the female end of the Y adapter and terminate as appropriate for the device being controlled. Maintain proper polarity.

Figure 12 Trigger Out Parallel Connection

Mute

The Audio Mute Inputs on the Master and Slave Controllers are independent in that a 12VDC trigger to the Master or Salve Mute Input will only mute the zones on that Controller. (If 12VDC is applied to the Master, only zones 1-4 will mute. If voltage is applied to the Slave only Zones 5-8 will mute.) The trigger voltage for audio mute can be connected to the Mute Inputs on both controllers in parallel to mute all zones when 12VDC is present as shown in **Figure 13**.

1. Using a 2-male to 1-female 3.5mm mono mini plug Y adapter, plug the two male ends into the Mute Inputs on the C-4.4 Master and Slave Controllers.
2. Plug a 3.5mm mini plug wire into the female end of the Y adapter and terminate as appropriate for the device triggering audio mute. Maintain proper polarity.
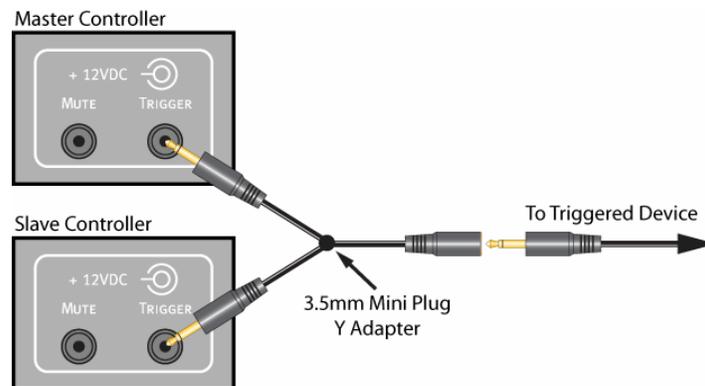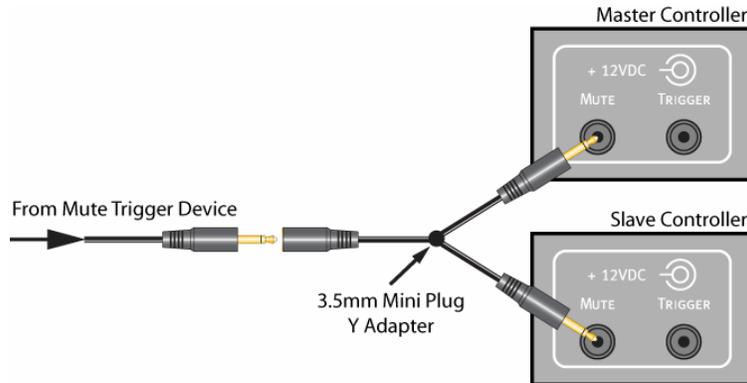

Figure 13 Mute Trigger In Parallel Connection

Figure 14 Expanded C-4.4 System

KEYPAD CONFIGURATION

Source Buttons
The K-4.4 Keypads come with a set of four Source Unit Labels that can be inserted under the Source Button Key Caps to label the Source Buttons.

CD	CD1	CD2	CD3	CD CHG
DVD	DVD1	DVD2	DVD3	IPOD
HDTV	LASER	MP3	RADIO	TUNER
TUNER1	TUNER2	TUNER3	TV	TV1
TV2	TV3	VCR	XM	SIRIUS

CD	CD1	CD2	CD3	CD CHG
DVD	DVD1	DVD2	DVD3	IPOD
HDTV	LASER	MP3	RADIO	TUNER
TUNER1	TUNER2	TUNER3	TV	TV1
TV2	TV3	VCR	XM	SIRIUS

CD	CD1	CD2	CD3	CD CHG
DVD	DVD1	DVD2	DVD3	IPOD
HDTV	LASER	MP3	RADIO	TUNER
TUNER1	TUNER2	TUNER3	TV	TV1
TV2	TV3	VCR	XM	SIRIUS

CD	CD1	CD2	CD3	CD CHG
DVD	DVD1	DVD2	DVD3	IPOD
HDTV	LASER	MP3	RADIO	TUNER
TUNER1	TUNER2	TUNER3	TV	TV1
TV2	TV3	VCR	XM	SIRIUS

Figure 15 Keypad Button Labels

To configure the Keypad Source Buttons:
1. With the keypad disconnected from the Controller, carefully remove the bezel, by pressing the bottom of the bezel with one thumb and then pulling the bezel down and away from the chassis with two fingers at the top of the bezel.
   NOTE: Keep the keypad facing up so the rubber membrane and source button key caps do not fall off. If the membrane does come loose, carefully put it back in place, and do not touch the contacts on the circuit board.
2. Carefully remove the source button key caps.
3. Carefully peel the appropriate Button Label off of the sheet provided. Place the label on top of the rubber platform for the source button.
4. Carefully slide the key cap down on top of the label and rubber platform until the key cap is firmly positioned on top of the label and rubber platform.
5. Repeat for all Source Buttons.
6. Slide the lower bezel tabs into the lower bezel tab slots on the keypad chassis.
7. Slowly press the top of the bezel toward the chassis checking the alignment of all buttons to the bezel.
8. When all buttons are aligned, snap the top bezel tabs to the keypad chassis.
9. Press all buttons to confirm free movement of all buttons.
10. Repeat for all keypads.

Keypad Zone Configuration

Each keypad can be configured for IR Enable/Disable, Group ON/OFF, Last Volume/Default Volume and Primary/Secondary Keypad within a Zone, using the DIP Switch on the K-4.4 Keypad rear panel.
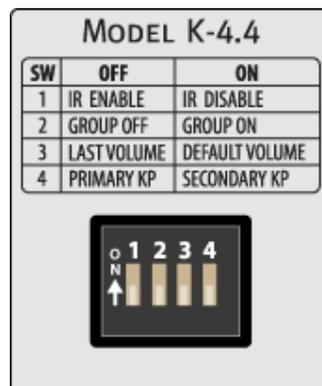

Figure 16 K-4.4 DIP Switch

IR Enable/Disable

This feature allows use of any IR remote control, (RC-4, original equipment remote or programmed remote) with the keypad IR receiver when enabled. Set the switch to ON to disable use of the RC-4 Remote in a zone. In zones where there are two keypads in one zone, in the same room or in close proximity to each other, this switch should be set to the ON or disable position on at least one keypad to prevent 'code clash' from IR receivers in different positions receiving commands at slightly different times (RC-4 only).

NOTE: IR pass-through (IR commands initiated by the original equipment remote or a programmed remote) will still function with IR Disable ON, only the RC-4 Remote will be disabled.

1. Set DIP Switch 1 to OFF to enable the keypad IR receiver.
2. Set DIP Switch 1 to ON to disable the keypad IR Receiver.

Group ON/OFF

This feature has all zones in the Group automatically switch to the same source when more than one zone in the Group is active (ON). That is: After a source has been selected in a zone in the Group, as additional zones in the Group are tuned ON, they will turn on to the source selected by the first active zone. With multiple zones in the Group active, when any zone in the Group changes source, all zones in the Group will change to that source. ON/OFF status and volume control remain independent by zone.

1. To set a Zone for independent zone function, set DIP switch 2 to OFF.
2. To set a Zone for Group function, set DIP switch 2 to ON.

Last Volume/Default Volume

This feature allows setting the turn on volume preference by zone. Each zone can be set to turn on to the last volume set or to the default volume (-25dB) which is a moderate listening level. To set turn on volume:

1. To set a zone for Last Volume, set DIP Switch 3 to OFF.
2. To set a zone for Default Volume, set DIP Switch 3 to ON.

Primary/Secondary Keypad

This feature allows connecting two keypads to a single C-4.4 zone. This can be useful in large rooms where it may be desirable to have a keypad at either end of the room. The Primary and Secondary settings let the C-4.4 know there are two keypads in a zone. See section: **Head End Connections/Keypads** for additional information. To set Primary/Secondary Keypad:

NOTE: Any keypad in a zone with only one keypad should be set to Primary.

1. To set a keypad for Primary Keypad, set DIP switch 4 to OFF.
2. To set a keypad for Secondary Keypad, set DIP switch 4 to ON.

PROGRAMMING

Programming IR Commands
C-4.4 System programming takes only a few minutes and provides power management and basic transport control for the connected sources. Out of the box, the system has default programming for Controller & Zone ON/OFF, Input Select and Volume UP/DOWN so those functions do not require programming. When finished, the buttons on the K-4.4 Keypads and RC-4 will have the same functionality.
NOTE 1: The programmable keypad buttons can only be programmed for single IR commands.
NOTE 2: The power management programming only allows for learning IR toggle commands. Some devices have both discrete and toggle commands available. Use the toggle commands when available. In some cases, if a particular device's remote has discrete ON/OFF commands, the toggle command from another model from the same manufacturer will turn a device ON/OFF.
NOTE 3: When using two C-4.4 Controllers in an expanded system, both controllers must be programmed for Source IR commands.

Programming utilizes the RC-4 Remote Control, the original manufacturer remotes for the sources to be controlled and requires that the C-4.4 Controller has AC power. All sources should be connected and have IR emitters attached to test commands. To program C-4.4 source control:
1. Activate Learn Mode by pointing the Nexus RC-4 Remote Control at the IR Port on the C-4.4 front panel and pressing the LRN Button for 5 seconds. Release the LRN Button. The four LEDs below the IR Port will scroll red from left to right. This indicates the C-4.4 is in Learn Mode and ready for a Source to be selected.
2. Point the RC-4 at the IR Port and press one of the four Source Buttons, (1-4) depending on which source is to be programmed. After a Source has been selected, the LEDs will stop scrolling and the LED corresponding to the source selected will illuminate solid red.
3. If the component being programmed has a play command, (CD play, DVD play etc) on the RC-4, press the source button pressed in Step 2 again to prepare the C-4.4 to learn the play command. (The play command will be placed under the source button and will be output every time the source button is pressed.) If a different source other than the one indicated by the lit LED is selected, the C-4.4 will switch to that source rather than be ready to learn the play command. The LED that was lit solid red will now begin to flash slowly in red. This indicates that the C-4.4 is ready to learn the play command.
4. Point the source remote with the play command to be learned at the IR Port from a distance of 1 to 2 inches. Quickly press and release the play button. The Source LED on the C-4.4 will flicker red, then flash green three times to indicate the command has been learned and then return to solid red. If the LED flashes red three times instead of green, repeat Steps 3-4.
5. Repeat the learning process for the other programmable buttons, (**<<**, ***** , **>>** and PWR) for the selected source, by alternately pressing the **<<**,*****,**>>** and PWR buttons on the RC-4 and then using the source remote to program the corresponding IR commands.
   NOTE: The IR command for PWR for all sources is output automatically whenever the first zone in the system comes on, or after the last zone in the system is turned off.
6. To program the IR commands for the other sources, repeat Steps 2-5 selecting a different source in Step 2 until all source commands have been learned.
7. When all IR programming is complete, press the LRN Button on the RC-4 to exit Learn Mode.
8. Test all commands to confirm programming. Repeat previous steps for commands that do not function properly.
9. If programming an expanded system with two C-4.4 Controllers, repeat all previous steps for the Slave Controller.

Erasing IR Commands
There are two methods to erase IR commands on the C-4.4. One is to erase an entire source the other is to erase an individual command.

1. To erase an entire source:
   a) Point the RC-4 remote toward the C-4.4 IR Port and press the LRN Button for 5 seconds. This will put the C-4.4 into the Learn Mode.
   b) Press the ▲ Button. The four LEDs will scroll orange from left to right.
   c) Press the Source Button (1-4) for the code bank to be erased. All learned IR commands for that bank will be erased and the LEDs will flash green three times.

2. To erase a single command:
   a) Point the RC-4 remote toward the C-4.4 IR Port and press the LRN Button for 5 seconds. This will put the C-4.4 into the Learn Mode.
   b) Press the source button (1-4) for the bank that contains the command to be erased.
   c) Press the ▼ Button. The selected source LED will slowly flash orange.
   d) Press the RC-4 function button (**<<,*,>>** or PWR) with the code to be erased. Any learned IR command for that button will be erased and the source LED will flash green three times.

RS-232 PROTOCOL

The C-4.4 Controller has an RS-232 Port that allows the system to be controlled with a touch screen controller or become a sub-system in a whole-house control package. This allows system operation such as turning on certain zones for background music when the alarm system is deactivated. Conversely, a command can be sent to turn all zones off when the alarm system is activated.

The C-4.4 RS-232 Port allows full control of all system functions. In addition to being able to control the C-4.4 Controller's 'on board' functions (ON/OFF, input select, etc) RS-232 control also allows control of the connected source components. When the C-4.4 'sees' a command for one of the on board functions, it responds accordingly. When it sees a command such as CD play, the incoming RS-232 command is interpreted in a similar manner to a keypad button press and the C-4.4 will then output the appropriate corresponding IR command.

The RS-232 Port on the C-4.4 is a 3.5mm mini jack. Tx (transmit) = TIP, Rx (receive) = RING, Ground = Sleeve. Communication settings are 9600 baud, 8 bits, 1 stop bit, no parity.

RS-232 PIN-OUT	
TIP	Tx
RING	Rx
SLEEVE	GND

Figure 17 RS-232 Port Pin Out

Baud Rate	Parity	Data Bits	Stop Bits	Flow Control
9600	None	8 bits	1	None

All command parameter values are one digit. (Zone 1 = 1; Input 3 = 3, etc.) Each command must be terminated with a carriage return: **<cr>**. If an invalid command is sent, the C-4.4 will respond with **ERR**. If a valid command is sent, the C-4.4 will respond with **OK** unless it is a query type command, in which case the C-4.4 will respond with information. Every response from the C-4.4 is terminated with **CR/LF**.

The C-4.4 sends out unsolicited information whenever a keypad is operated. The syntax is the same as that used for controlling the C-4.4. Unsolicited information is preceded by a '$' except for zone power which is reported ZNx1 (Zone x ON) and ZNx0 (Zone x OFF) where 'x' is the zone number. The string will be terminated with **CR/LF**.

Command	Syntax	Parameters	Description
Zone Power	Zxy<cr>	x=zone, valid range 1-4 Y=state, 1=on, 0=off	Similar to pushing the power button on the remote keypad. This will power up/down the specified zone
Zone Power Query	Zx?<cr>	x=zone, valid range 1-4	Ask the C-4.4 if a zone is on or off. The C-4.4 will respond with Zxyz where x is the zone number (1-4), y is the power status (0=off, 1=on) and z is the source selected (1-4).
All on/off	Zay<cr>	y=state 1=on, 0=off	Turn all zones on or all zones off. When using two C-4.4's in a single system, RS-232 control of each controller is independent.
Source Select	Sxy<cr>	x=zone, valid range 1-4 y=input, range 1-4	Similar to selecting a source on a remote keypad. 1-4=inputs 1-4.
Source Query	Sx?<cr>	x=zone, valid range 1-4	Ask the C-4.4 what input a zone is on. The C-4.4 will respond with Sxy, where x is the zone number queried and y the input it is set to.
Function	Fxyy<cr>	x=zone, valid range 1-4 y=function, FF, RW, OK	Similar to pressing a function on a keypad or RC-4 remote. FF=>>, RW=<<, OK=*.
Volume Absolute	Vxyy<cr>	x=zone, valid range 1-4 yy= volume, range 00-63	Set an absolute volume level in a C-4.4 zone. NOTE: yy number is in dB so 00 is the loudest at 0dB and 63 is the softest at -63dB.
Volume Query	Vx?<cr>	x=zone, valid range 1-4	Ask the C-4.4 what volume a zone is set to. The C-4.4 will respond with Vxyy where x is the zone number, (1-4) and yy is the volume of that zone (00-63) which corresponds to 0dB to -63dB.
Volume Step	Vx++<cr> or Vx--<cr>	x=zone, valid range 1-4	Increase or decrease the volume of a zone by one step (1dB).

OPERATING INSTRUCTIONS

The following describes basic system operation using K-4.4 Keypads with system default programming and suggested IR programming. All functions described can also be controlled by pressing the same buttons on the RC-4 Remote.

ON/OFF, Source Select, Volume
Press Power to turn a Zone ON.
Press 1-4 to choose a Source.
Press ▲ or ▼ to adjust Volume Up or Down.
Press Power to turn a Zone OFF.
Press and Hold Power to turn ALL ZONES OFF.

Tone Controls
Press and Hold * on a Keypad until the Source 1 Button flashes. Release * button. Zone is in Bass Adjust Mode.
Press ▲ or ▼ on Keypad to adjust Bass. Press * for flat.
While in Bass Adjust Mode (Source 1 flash) press the Source 2 Button. Source 2 will flash indicating that the zone is in Treble Adjust Mode.
Press ▲ or ▼ on Keypad to adjust Treble. Press * for flat.
Press any button not related to Tone Control Setup other than the Power Button to exit Tone Control Setup.
NOTE: Tone controls can only be adjusted from the keypads.

CD, DVD, VCR, MP3 etc
Press a Source Button (1-4) to select and play a device such as a CD or DVD player, iPod, etc.
Press ◄◄ or ►► to select previous or next track or disc as programmed.
Press * to stop or output programmed command.
Press RC-4 Remote buttons for same functions from remote.

Satellite, Cable, XM, Sirius, VCR Tuner Etc
Press 1-4 to select a Source.
Press ◄◄ or ►► to change frequencies up or down to select preset stations.
Press * for 'enter' if necessary, if programmed or output programmed command. (Optional)
Press RC-4 Remote buttons for same functions from remote.

Group
The Group function must be configured with DIP switch 2 on the back of two or more keypads set to the ON position for Group Mode to function.
Press any source button to select a Source. All active zones that are part of the Group will switch to the selected source after about three seconds.
Individual Zone ON/OFF status and volume settings remain independent for all zones in the Group. (Each zone in the Group can turn on/off or adjust volume without affecting the other Group Zones' settings.)
NOTE: After changing any DIP switch settings on a keypad, cycle the keypad power button once so the keypad reports the new switch settings to the C-4.4.

TROUBLESHOOTING

PROBLEM	SOLUTION
Power	
System will not Power up	a)Confirm C-4.4 Controller is plugged into an unswitched AC outlet. b)Confirm Power cord is plugged into C-4.4 Controller.
Keypads will not power up	Confirm connections and configuration of CAT5 cables from Controller to Keypads.
Audio	
No Audio From Source	a)Confirm that source is ON. b)Confirm source line audio out is connected to the appropriate source input on C-4.4 Controller. c)Confirm source is playing.
No Audio In Zone	a) Confirm speakers are connected. b) Confirm Zone is ON. c) Confirm Zone volume is turned up.
No Audio in Expansion Zones	a) Check connection of source line level audio outputs to Y Adapters and Y Adapters to Controller's line level audio inputs. b) See Troubleshooting sections: 'No Audio From Source' and 'No Audio In Zone'.
Infrared Control	
IR Commands are not getting routed to specific Source Components	a) Confirm emitters are plugged into the specific IR output jack for the device being controlled. (Input 1, emitter jack 1 etc.) b) Confirm emitter is attached over the IR eye of the device being controlled and is connected to the proper C-4.4 Controller IR Output. c) Confirm IR commands are programmed to the Controller for the selected device.
No IR output from emitters in an Expanded System (Two C-4.4 Controllers)	a) Confirm Source IR Outs from Master and Slave Controllers are connected in parallel. b) Confirm same source IR Out from Master and Slave Controller are connected in parallel. (Master IR Out 1/Slave IR Out 1, etc)
RC-4 Remote does not Control Source Components	a) Confirm IR commands have been properly programmed by source. b) Confirm the IR Enable/Disable DIP switch on the back of the keypad is set to OFF (allow IR control).
Source does not respond to IR Command output by C-4.4 Controller	a) Confirm IR emitter is attached over the IR eye of the device being controlled and connected to the proper C-4.4 Controller IR Output. b) Check to be sure proper IR command has been programmed to a button.
RS-232 Control	
C-4.4 does not Respond to RS-232 Commands from control device	a) Confirm control device is ON. b) Confirm pin-out of RS-232 cable. c) Confirm control device is properly configured to send/receive. d) Confirm command strings are properly entered in control device. e) See Instructions section: RS-232 Protocol.

SPECIFICATIONS

Amplifier

Output Power	20 watts per channel (20Hz to 20 KHz).1% THD all zones driven.
Input Sensitivity	.750mV
Input Voltage (max.)	5V

IR

IR Modulation Frequency Bandwidth:	38 KHz-56 KHz (IR Pass-Through)
IR Modulation Frequency Bandwidth:	25 KHz-70 KHz (Learned IR)
Keypad IR Sensor Range:	30'

General

Source Inputs:	4 stereo audio line level inputs
Expansion:	Up to 8 Zones using two C-4.4 Controllers
RS-232:	9600 Baud, Asynchronous, 8 Data Bits, 1 Stop Bit, No Parity, No Handshake
12V Trigger Output:	12VDC @ 100mA
12V Audio Mute Input:	32VDC
Power Requirements:	120VAC
Power Consumption:	300 Watts
Keypad Connections:	4 RJ45 Terminals, TIA568A configuration
IR Outputs:	1 common; 4 source specific
Dimensions:	17"W x 3 7/8"H x 14"D (including feet and connections.)
Weight:	15 lbs

WARRANTY
Limited Warranty (North America)
  Nexus Audio Systems Inc. (Nexus Audio) Warrant the product designated herein to be free of manufacturing defects in material and workmanship, subject to the conditions set forth below for a period of 5 years, from the date of purchase by the original registered purchaser.

Conditions
  1. This Warranty is void and inapplicable if the product has been used or handled other than in accordance with the instructions in the Owners Manual, abused or misused, damaged by accident or neglect in being transported.
  2. This Warranty is void if the product is altered or otherwise repaired or tampered with by anyone other than Nexus Audio Systems Inc. or an authorized Nexus Audio Systems Inc. repair professional or center, as designated by Nexus Audio.
  3. A returned product is to be delivered to Nexus Audio with a Nexus Audio assigned Return Authorization Number. In addition, the returned product is to be accompanied by a written description of the defect and proof of purchase.
  4. Nexus Audio Systems Inc reserves the right to modify the design and specifications of any product at anytime, without obligation to advise the purchaser of previously manufactured products and to change the prices of any product without notice to any person.
  5. In the sole discretion of Nexus Audio, warranty work may not be undertaken without evidence of purchaser registration by way of the original warranty card filing.

Exclusions
  1. This Warranty is valid for specified Nexus Audio product and the assigned serial number for the duration specified in this certificate.
  2. This certificate does not extend to any incidental or consequential costs or damages to the purchaser.
  3. This Warranty shall provide the original purchaser with specific legal rights, which may vary from State to State in the United States and Province to Province in Canada.
  4. This Warranty is a Limited Warranty as defined by the Federal Trade Commission (Magnuson-Moss Warranty Act) in the United States and as defined by Industry Canada (Competition Act) in Canada.

Warrantor:
  Inquiries regarding the above Limited Warranty may be sent to:

  Nexus Audio Systems Inc.
  20 Hamilton Road
  Barrie, Ontario Canada L4N 8Y5

  Canada and US Toll Free: 866-303-2629
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