



# ZED-2 ZONE SPLITTER INSTALLATION INSTRUCTIONS



## 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 is 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 un-insulated "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.

## **NEXUS AUDIO SYSTEMS ZED-2 INSTALLATION INSTRUCTIONS**

### **INTRODUCTION**

Welcome to Nexus Audio Systems and congratulations on your purchase of the ZED-2 Zone Expansion Device. The ZED-2 connects to the Zone Keypad/Speaker Terminal on a Nexus C-6 Controller or X-1 or X-2 Expansion Controller. The ZED-2 then splits the speaker level and control signals so two adjacent rooms in a zone, or 'sub-zones' such as a Living Room and Dining Room can turn on and off independently, have individual room volume, tone and speaker mute control. The two sub-zones would always be switched to the same source, eliminating the clash of two different sources being played in adjacent rooms. The ZED-2 provides individual sub-zone audio amplification with two built-in 20W/Channel stereo amplifiers.

The ZED-2 can be added to an existing C-6 system with little or no modification to existing wiring. The ZED-2 typically would be installed at the head-end of the system with the C-6 Controller and other components, but can also be installed in a remote location such as a pool house for individual control of pool house and garden speakers, provided that 110VAC is available at the mounting location.

The ZED-2 utilizes the same 'Phantom Control' Technology as the C-6, X-1 and X-2. This allows the greatest flexibility for new and retrofit projects by combining the control signals and speaker level audio signals on the same four wires. While providing additional system flexibility, sub-zone expansion requires no additional programming to the C-6, X-1, X-2 or ZED-2. The system will function the same from any control point whether in a regular zone or sub-zone.

### **PRODUCT OVERVIEW**

- Splits a single C-6, X-1 or X-2 Zone Output into two separate listening areas or 'sub-zones' within that zone
- Provides individual sub-zone power ON/OFF, control of volume, mute and tone controls
- Maintains common source selection in both sub-zones
- 40 watts per room; 20W/channel (20Hz to 20 KHz) @ .1% THD all channels driven
- High current toroidal power supply
- "Phantom Control" over existing or newly installed four-conductor speaker wire
- Dimensions: 9.75"H x 8.7"W (including flanges) x 2.55"D
- 120 VAC 240 Watts
- Comprehensive 5-Year Parts and Labour Warranty

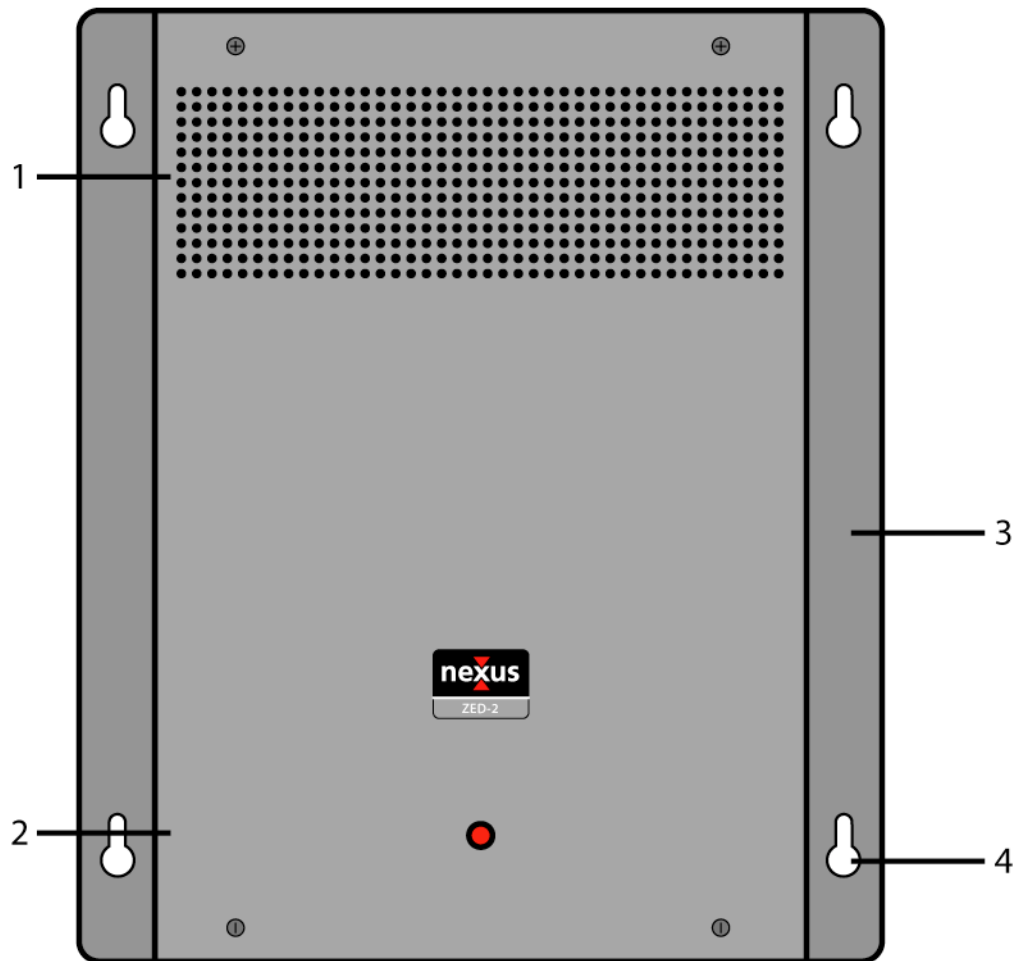


Figure 1. ZED-2 Top Panel

## FEATURES

### Top Panel

1. **Airflow Perforations** - Allow air to flow through the ZED-2 when properly mounted to prevent overheating. Never block the perforations on either side or the top. Blocking these perforations can cause the unit to overheat and may damage the ZED-2. Nexus warranty does not cover improper installation.
2. **Power LED** – Illuminates red when ZED-2 has AC power and power switch is turned ON.
3. **Mounting Flange** – Acts as a mounting bracket and creates a space for airflow behind unit. Never block the space between the back of the ZED-2 and the wall or shelf surface. Doing so can cause the unit to overheat and may damage the ZED-2. Nexus warranty does not cover improper installation
4. **Mounting Flange Keyhole Screw Mount** – Four screw mount keyholes used to secure ZED-2 to a wall or cabinet.

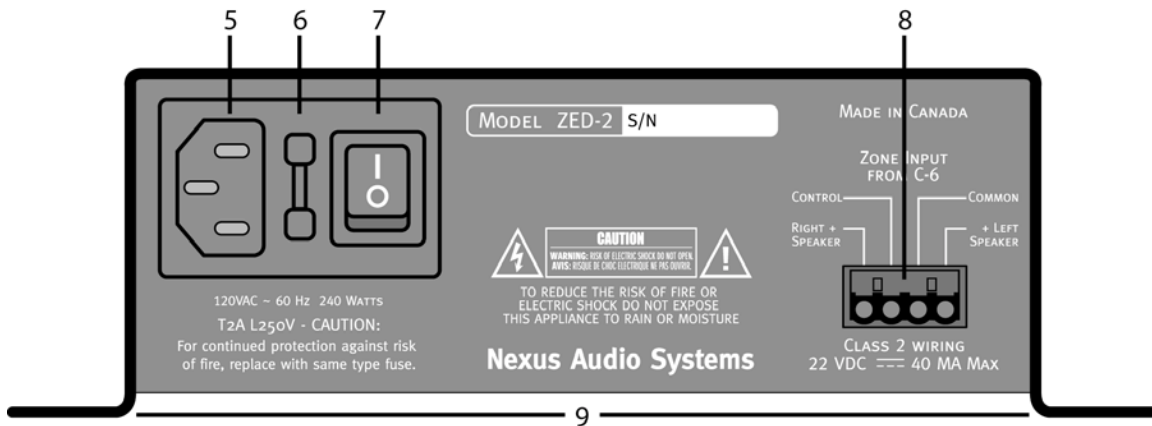


Figure 2. ZED-2 End Panel

### End Panel

5. **AC Power** – Standard IEC 3-conductor AC line cord receptacle.
6. **AC Fuse – T2A L250**
7. **Main Power Switch** – Turns AC power to the ZED-2 ON/OFF.
8. **Keypad/Speaker Input Terminal** – One plug-in four terminal screw connector for connecting the zone output from a C-6, X-1 or X-2 Controller.  
**WARNING:** THESE ARE NOT TYPICAL SPEAKER TERMINALS. IMPROPER CONNECTION CAN CAUSE DAMAGE TO THE CONTROLLER, THE ZED-2, THE KEYPADS AND SPEAKERS. SEE SECTION: 'CONNECTIONS AND SETUP' BEFORE MAKING ANY CONNECTIONS OR TURNING ON THE MAIN POWER. NEXUS WARRANTY DOES NOT COVER DAMAGE CAUSED BY IMPROPER CONNECTIONS.
9. **Mounting Flange** - Acts as a mounting bracket and creates a space for airflow behind unit. Never block the space between the back of the ZED-2 and the wall or shelf surface. Doing so can cause the unit to overheat and may damage the ZED-2.

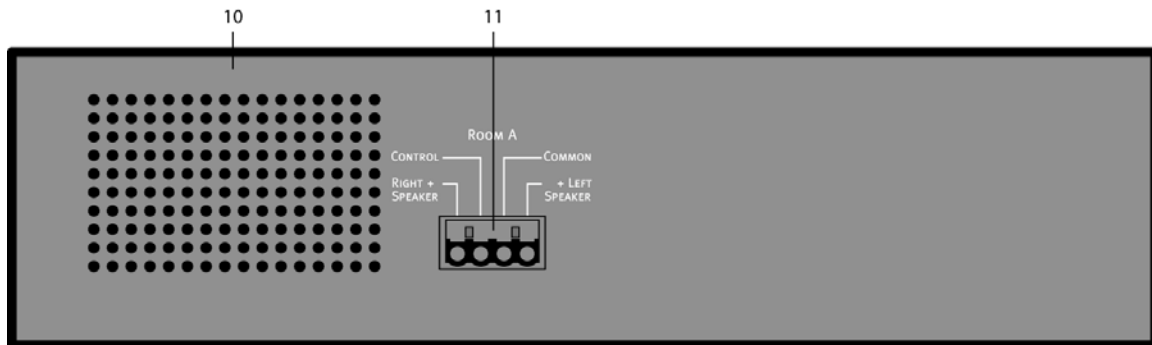


Figure 3. ZED-2 Side Panel

### Side Panel

10. **Airflow perforations** – Allow air to flow through the ZED-2 when properly mounted to prevent overheating. Never block the perforations on either side or the top. Blocking these perforations can cause the unit to overheat and may damage the ZED-2.
11. **Speaker/Keypad Output Terminal** – One plug-in four terminal screw connectors for connecting Keypads/Speakers to the ZED-2. (One terminal on each side panel.)  
**WARNING:** THESE ARE NOT TYPICAL SPEAKER TERMINALS. IMPROPER CONNECTION OF SPEAKERS OR KEYPADS CAN CAUSE DAMAGE TO THE ZED-2, THE KEYPADS AND SPEAKERS. CHECK ALL CONNECTIONS BEFORE TURNING ON. WARRANTY DOES NOT COVER DAMAGE CAUSED BY IMPROPER CONNECTIONS.

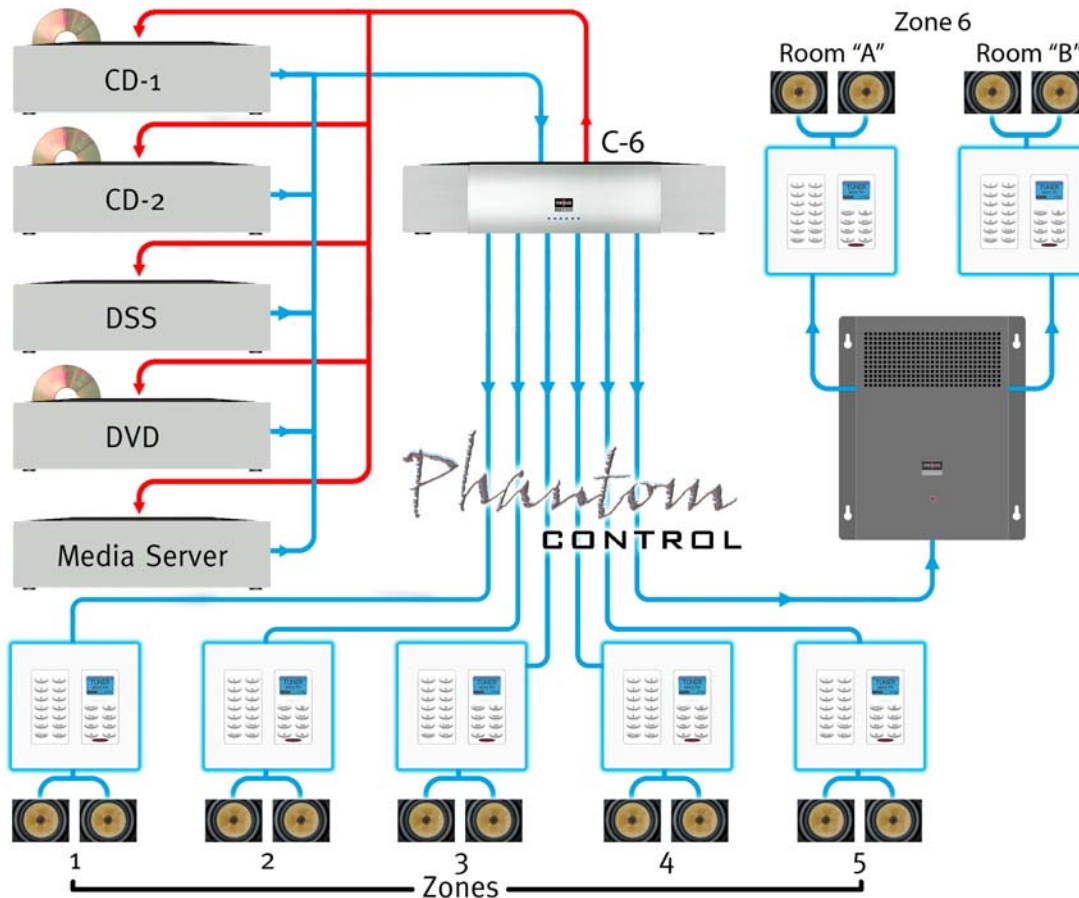


Figure 4. Typical ZED-2 Application

## INSTALLATION

### ZED-2 Location

The ZED-2 would typically be located at the head end of a multi-zone system with a Nexus C-6 Multi-Room Controller and other components. It can be located almost anywhere along the wiring of a C-6, X-1 or X-2 Zone Output if space does not allow installation at the head end provided proper AC power is available. In some installations, locating the ZED-2 closer to the speakers in a remote zone on a particularly long run of wire can help create a more efficient system, by reducing the length of wire from the ZED-2 amplifier outputs to the speakers.

### Ventilation

The ZED-2 must be placed in a location that allows adequate airflow. Leave at least six inches above and below the unit to allow air to flow freely through the airflow perforations on the top, bottom and sides. Blocking the airflow perforations can inhibit airflow and possibly damage the unit. The mounting flanges create a space for air to flow around the back of the unit and this space should always be left open as well. Additionally, care should be taken in 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.

## **Mounting**

The ZED-2 ideally should be mounted in a vertical position on an equipment room wall or cabinet sidewall. This will allow air to flow freely around the unit to help prevent overheating. The airflow perforations should never be blocked. If mounted horizontally (on a shelf) nothing should be placed on top of the unit and the airflow perforations and the space created by the mounting flanges should always remain unblocked.

## **WIRING**

The wire requirement and connection from a C-6 Controller to a ZED-2 is the same 'Phantom Control' configuration used between a C-6 and a K-8 or K-22 Keypad. The Phantom Control feature combines speaker level audio, control signals and power for the keypads on the four-conductor wire connecting the C-6 to the ZED-2 and the wires connecting the ZED-2 to K-8 or K-22 Keypads. Extra precaution must be taken in connecting wires to maintain proper polarity to avoid damaging the ZED-2 or the keypads.

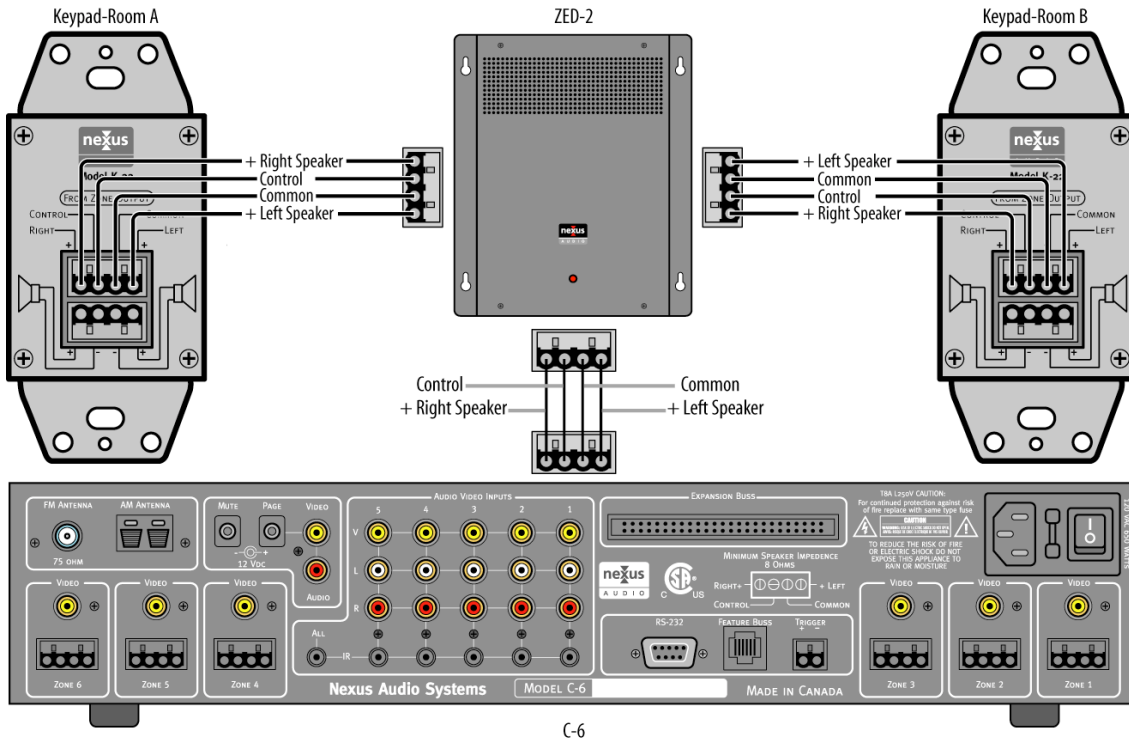
### **Sub-Zone Wiring**

**C-6 to ZED-2** - Use four conductor wire to connect the C-6 Controller to the ZED-2. 16AWG stranded up to 75'; 14AWG stranded up to 100'. Non-shielded preferred.

**Keypads/Speakers** - Pull four conductor wire in home-runs directly from each keypad location to the ZED-2. Pull two-conductor wire of the same gauge from the keypad location to each of the speakers in a sub-zone. 16AWG stranded up to 75'; 14AWG stranded up to 100'. Non-shielded preferred.

**NOTE:** Min load: 8 ohms per zone. Do not load more than one pair of 8 ohm speakers per sub-zone. This can cause the unit to go into protection and may possibly blow fuses.

## CONNECTIONS AND SETUP



**Figure 5. Typical Sub-Zone Keypad Wiring**

### C-6 to ZED-2

As described in the section on Wiring, the Speaker/Keypad Terminals are specially configured for Phantom Control that combines speaker level audio signals, keypad control signals and power for the keypads all on the same wire. Special care must be used when connecting the ZED-2 to a C-6, X-1 or X-2.

1. Using four conductor stranded wire, strip approximately ¼" of insulation from each conductor. Twist the strands until tight.
2. Connect the bare wires to the plug-in four terminal screw connectors included with the ZED-2 accessories. Be sure to maintain proper polarity on the LEFT+, CONTROL, COMMON and RIGHT+ terminals for each zone output. Be sure there are no loose strands sticking out that could cause a short.
3. Plug connector into the Speaker/Keypad Input terminal on the end panel of the ZED-2 and plug the other end into the appropriate C-6, X-1 or X-2 Zone Speaker/Keypad output terminal.



## **Keypads**

As described in the section on Wiring, the Speaker/Keypad Terminals are specially configured for Phantom Control that combines speaker level audio signals, keypad control signals and power for the keypads all on the same wire. Special care must be used in making the Speaker/Keypad connections.

1. Using four conductor stranded wire, strip approximately ¼” of insulation from each conductor. Twist the strands until tight.
2. Connect the bare wires to the plug-in four terminal screw connectors included with the ZED-2 accessories. Be sure to maintain proper polarity on the LEFT+, CONTROL, COMMON and RIGHT+ terminals for each zone output. Be sure there are no loose strands sticking out that could cause a short.
3. Plug connector into the Speaker/Keypad Input terminal on the back of the Keypad and plug the other end into one of the two sub-zone output terminals on the ZED-2. Repeat for both sub-zones.

## **Speakers**

The Speaker Output Terminals output speaker level audio only and use a standard speaker connection configuration.

1. Using two conductor stranded wire, strip approximately ¼” of insulation from each conductor. Twist the strands until tight.
2. Connect the bare wires to the plug-in four terminal screw connectors included with the ZED-2 accessories. Be sure to maintain proper polarity from the L+, L-, R- and R+ terminals for each speaker pair output. Be sure there is no loose strands sticking out that could cause a short.
3. Plug connector into the Speaker Output terminal on the back of the Keypad. Connect the other end to the appropriate sub-zone speaker terminals. Be sure to maintain proper polarity and be sure speaker connections are tight. Repeat for both sub-zones.

## **PROGRAMMING**

There is no additional programming required for sub-zone configuration using a ZED-2. All programming of the keypads and IR command recognition for the R-1 Remote is done at the C-6 Controller as described in the C-6 Installation Instructions.

**NOTE:** The ZED-2 automatically sends an ON command to a C-6 that lets the controller know when a sub-zone has been activated. The ZED-2 will then send a preset volume level to the C-6 to set proper audio level to the ZED-2. When the last sub-zone is turned OFF, the ZED-2 sends a Zone OFF command to the C-6 to turn the zone OFF. These are all automatic functions of the ZED-2 and no additional programming or setup is required.

## **OPERATING SUB-ZONES FROM THE ZED-2**

System operation will be the same for sub-zones connected to a ZED-2 as regular zones connected to a C-6, X-1 or X-2 with one exception. The K-8 and K-22 Keypads and R-1 Remote will function the same in a zone or sub-zone. See 'Operating Instructions' in the C-6 Installation Instructions for additional information.

The exception to standard operation is that in 'Zone Sharing' while both sub-zones will share the same source, the two sub-zones will maintain independent ON/OFF, volume, mute and tone controls.

## TROUBLESHOOTING

<b>PROBLEM</b>	<b>SOLUTION</b>
<b>Power</b>	
System will not Power up	a) ZED-2 must be plugged into an unswitched AC outlet. b) Power cord must be plugged into ZED-2
Keypads will not power up	Check connections and polarity of control and common wires from ZED-2 to Keypads.
<b>Keypads</b>	
Keypads do not show source names	a) Check C-6 Controller Setup Menu 'Naming Keypads' b) See Instructions Programming section: Naming Keypads
<b>Audio</b>	
No Audio From Source	a) Is source ON? b) Is source line audio out connected to appropriate source input on C-6 Controller? c) Is source playing?
No Audio In Zone	a) Are speakers connected? b) Is Zone ON? c) Is Zone volume turned up?

**SEE ALSO: TROUBLESHOOTING SECTION IN THE C-6 INSTALLATION INSTRUCTIONS**

## SPECIFICATIONS

Output Power

20 watts per channel (20Hz to 20 KHz)  
@ .1%THD both zones driven.

Power Requirements:

120VAC

Power Consumption:

240 Watts

Dimensions:

9.75"H x 8.7"W (including flanges) x 2.55"D

Weight:

6.7 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:

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Barrie, Ontario Canada L4N 8Y5

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