

# ZR-8630AV

## MultiZone Audio/Video Receiver



**Eight-Source, Six-Zone, 30W Per Channel  
AM/FM Receiver**



BLENDING TECHNOLOGY AND ARCHITECTURE®

# Congratulations!

Thank you for purchasing the Niles ZR-8630AV Audio/Video MultiZone Receiver, one of the most flexible and convenient audio/video components ever offered. The ZR-8630AV, like all Niles products, is built to the highest standards of quality and reliability. With proper installation and operation, you'll enjoy years of trouble-free use.

Niles manufactures the industry's most complete line of custom installation components and accessories for audio/video systems. For a free full-line catalog write:

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## INTRODUCTION

Niles Audio Corporation has recognized the need for a simple-to-use, cost-effective multi-zone audio/video system that can provide years of listening and viewing pleasure. Our product-development team has produced an innovative multi-zone receiver that incorporates six separate zones of amplifier power, two built-in AM/FM tuners, and connections for six audio/video source components.

The ZR-8630AV Audio/Video MultiZone Receiver is the multi-zone solution for which you have been asking. It allows you to combine keypad modules with infrared sensors and hand-held remotes for total control of a home-entertainment system, providing "one-touch" system-wide control.

Now everyone in the household can be happy: One person can watch a DVD in a bedroom, while another simultaneously listens to the radio by the pool. At the same time, a third person can listen to DSS music in the kitchen, while a fourth watches TV in the den. In addition, source-component IR control of the ZR-8630AV is custom-programmable to provide intuitive operation for a wide range of source components.



**ZR-8630AV MultiZone Audio/Video Receiver**

## FEATURES AND BENEFITS

### **Multi-Zone/Multi-Source**

The ZR-8630AV Audio/Video MultiZone Receiver incorporates matrix preamplifier technology to provide two built-in AM/FM tuners and six audio/video source components to six zones simultaneously. Finally, Dad can relax by watching a DVD in the den while the kids listen to their favorite music by the pool.

### **12-Channel 30W Amplifier for Six Zones of Stereo Sound**

The ZR-8630AV Audio/Video MultiZone Receiver is an integrated solution for multi-zone applications. Six built-in 30W stereo amplifiers provide clear and dynamic sound for six zoned areas. The patented Niles no-strip connectors provide fast and reliable connections to the speaker pairs in the listening zones.

### **Two Built-In AM/FM Tuners**

The ZR-8630AV includes two built-in AM/FM tuners. Both of these high-quality tuners are available to all zones and include direct station access. Also, each tuner is programmable with 10 preset AM stations and 10 preset FM stations, for a total of 40 presets per unit.

### **Central Intelligence**

The design of the ZR-8630AV Audio/Video MultiZone Receiver is a radical departure from that of traditional programmable keypad-controlled multi-zone systems. Instead of redundantly programming each of the individual keypads with IR commands, all IR commands are programmed and stored in the ZR-8630AV. The IntelliPad® Ci keypad modules and Niles IR Sensors connect to the receiver for complete system control. Total system cost is now dramatically reduced due to shorter programming time and the low cost of the modular keypads located in each zone.

### **Quick and Easy Programming with ZR Source Library and Archiving Software**

Manual programming is fast and easy, thanks to push buttons and LED visual prompts that lead you step-by-step through the programming process. Additionally, you can use Niles ZR Source Library and Archiving Software to back up all system programming on your PC and to load pre-programmed Source Library Files.

### **One-Touch Operation with Source-Component Power Synchronization**

One touch of a Master Key or Source Button instructs the ZR-8630AV Audio/Video MultiZone Receiver to perform a sequence of IR commands for complete automation of your distributed A/V system.

The ZR-8630AV provides both video and voltage Sync Inputs that sense whether the connected source components are ON or OFF. The unit issues power commands for these source components only if the source components are actually OFF, turning them on correctly every time. Then the ZR-8630AV selects the proper input for the source component and issues a programmed sequence of IR commands (i.e., Play or Favorite Station).

You can operate a complex mix of audio/video components of various brands with ease and simplicity when using the ZR-8630AV.

### **Elegant and Intuitive User Interfaces**

**The Select™ and Solo™ Master Keypad Modules** - The Select™ and Solo™ Master Keypad Modules are elegant, single-gang control solutions for the ZR-8630AV. Custom-labeled backlit Master Keys provide complete system activation and source selection. The IR version of each Master Keypad Module contains an integrated IR sensor.

**The Numeric™ and Transport™ Accessory Keypad Modules** - The Numeric™ and Transport™ Accessory Keypad Modules can be combined with a Select™ Master Keypad Module in any or all zones. The Numeric™ (but not the Transport™) can be included with a Solo™. The Numeric™ provides direct access to discs, tracks, stations, and channels when operating DSS receivers, CD/DVD changers, and the built-in AM/FM tuners. The Transport™ provides basic source-transport functions such as Play, Stop, and Pause, and cursor keys for on-screen menus.

**The R-8 Remote** - The R-8 Remote is an ergonomic hand-held IR remote control. In zones where Niles Select™ IR or Solo™ IR keypads or IR Sensors have been installed, the R-8 Remote provides system control from anywhere in the zone.

## FEATURES AND BENEFITS

### **System-Wide Operation**

The ZR-8630AV Audio/Video MultiZone Receiver incorporates system-wide control to activate all zones to a particular source component. An ALL OFF command is included for complete system shutdown from any zone in the system.

### **Paging Input for Telephone Systems**

A paging input accommodates telephone systems equipped with a paging output. Audio sensing detects the paging signal and interrupts source components playing in the various zones, enabling the paging signal to play through. If a zone is off during a page, it turns on, enabling the paging signal to play through. Front-panel switches disable this paging feature in any zones where it is not required.

### **12V Control Output**

A control-output connector provides a constant 12V DC trigger signal the moment any zone is activated. This signal can be interfaced to voltage-triggered AC power strips (i.e., Niles AC-3) for the automation of source components that can be activated only by switched AC outlets. Also, individual control-output triggers for zones 4, 5, and 6 provide a constant 12V DC trigger signal for reliable triggering of external amplifiers specified for zones requiring more power.

### **Expandable for Larger Multi-Zone Systems**

Up to three ZR-8630AV units can be combined in a single system, providing up to 18 zones. Source components are connected to all receivers, splitting their audio/video signals with Niles AVDA-3 Audio/Video Distribution Amplifiers.

### **Program Memory Protection**

The ZR-8630AV Audio/Video MultiZone Receiver uses non-volatile memory to store its programming. This safeguards against accidental loss of the programming for the entire life of the product.



# PARTS GUIDE (ZR-8630AV)

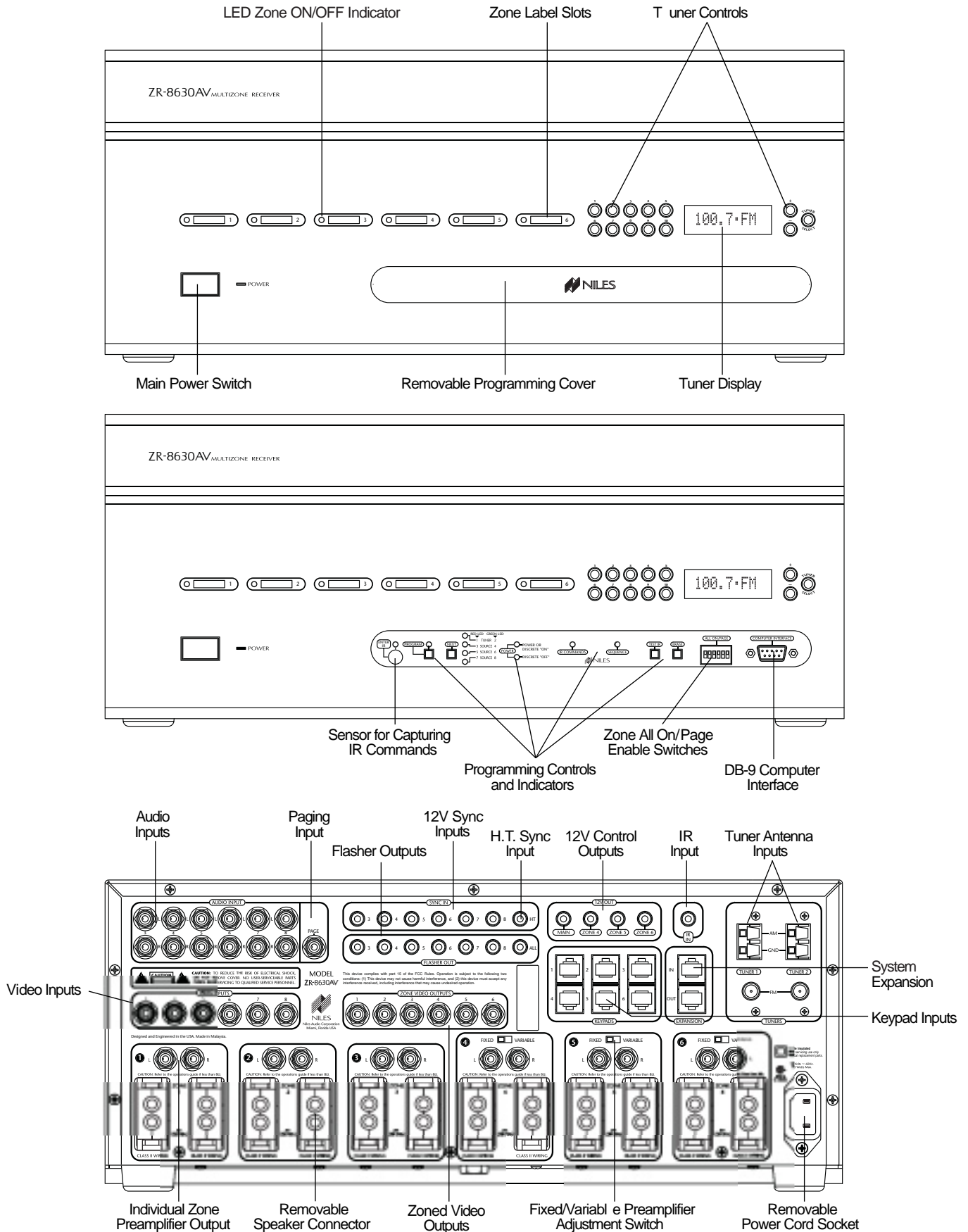


Figure 1

## PARTS GUIDE (ZR-8630AV)

### LED Zone ON/OFF Indicators

Provide individual ON/OFF indication for each zone.

### Zone Label Slots

Coined slot for placing included zone labels for easy identification.

### Tuner Controls

Radio station up/down, radio station preset, and tuner selection buttons.

### Tuner Display

Displays the most recent tuner selected manually on the front panel. Then that tuner displays the most recent station selected on that tuner. Also shown is the reception mode (mono or stereo).

### Removable Programming Cover

Conceals installer-only programming controls.

### Main Power Switch

Turns the main power to the receiver ON and OFF.

**Note:** Equipment is not completely disconnected from the main power source when power switch is in the OFF position.

### Sensor for IR Capture

IR sensor captures IR commands that control the connected source components.

### Programming Controls and Indicators

Push buttons and LED prompts for system and IR programming.

### Zone ALL ON/PAGE Enable Switches

Individual DIP switches enable or disable system-wide All ON commands and the paging feature.

### DB-9 Computer Interface

Connects a laptop computer to back up and download program configurations using ZR Source Library and Archiving Software.

### Sync Inputs

Video Inputs and Voltage Sync Inputs 3, 4, 5, 6, 7, and 8 detect when a source component is ON/OFF for reliable system activation. The HT mini-plug Sync Input senses voltage for determining the ON/OFF status of a Home Theater system that shares source components with the ZR-8630AV.

### Paging Input

A mono RCA input accepts a paging signal from a telephone system.

### Keypad Inputs

Six female RJ-45 jacks for connecting Master Keypad Modules.

### System Expansion

Two female RJ-45 jacks for connecting multiple receivers together in larger multi-zone systems.

### Flasher Outputs

Six 3.5mm jacks provide an output connection for IRC-2P MicroFlashers™, one for each connected source component. A seventh output labeled ALL is designed for the IRC-1P High-Output IR Flasher.

### IR Input

A single 3.5mm jack provides an input connection for IR commands sent from a Home Theater system to control source components shared with a ZR-8630AV.

### 12V Control Outputs

One 3.5mm jack controls source components requiring activation from a switched AC outlet by providing a 12V DC trigger signal for use with voltage-triggered AC power strips (i.e., Niles AC-3). Three zone-specific 3.5mm jacks (for zones 4, 5, and 6) activate external amplifiers that may be specified for those zones by providing a 12V DC trigger signal when the corresponding zone activates.

### Tuner Antenna Inputs

Dual female coaxial F-connectors and spring-loaded, bare-wire jacks provide connections for the included AM and FM antennas, or external antennas.

### Audio Inputs

Six pairs of stereo RCA jacks provide input connections for source components.

### Video Inputs

Six RCA jacks provide composite video input connections for the distribution of audio/video source components.

### Video Outputs

Six RCA jacks provide zoned output connections for TVs and video displays.

### Individual Zone Preamp Output

Six pairs of stereo RCA jacks provide output connections for external amplifiers used instead of, or in conjunction with, the built-in ZR-8630AV amplifiers.

### Fixed/Variable Preamp Output Adjustment Switch

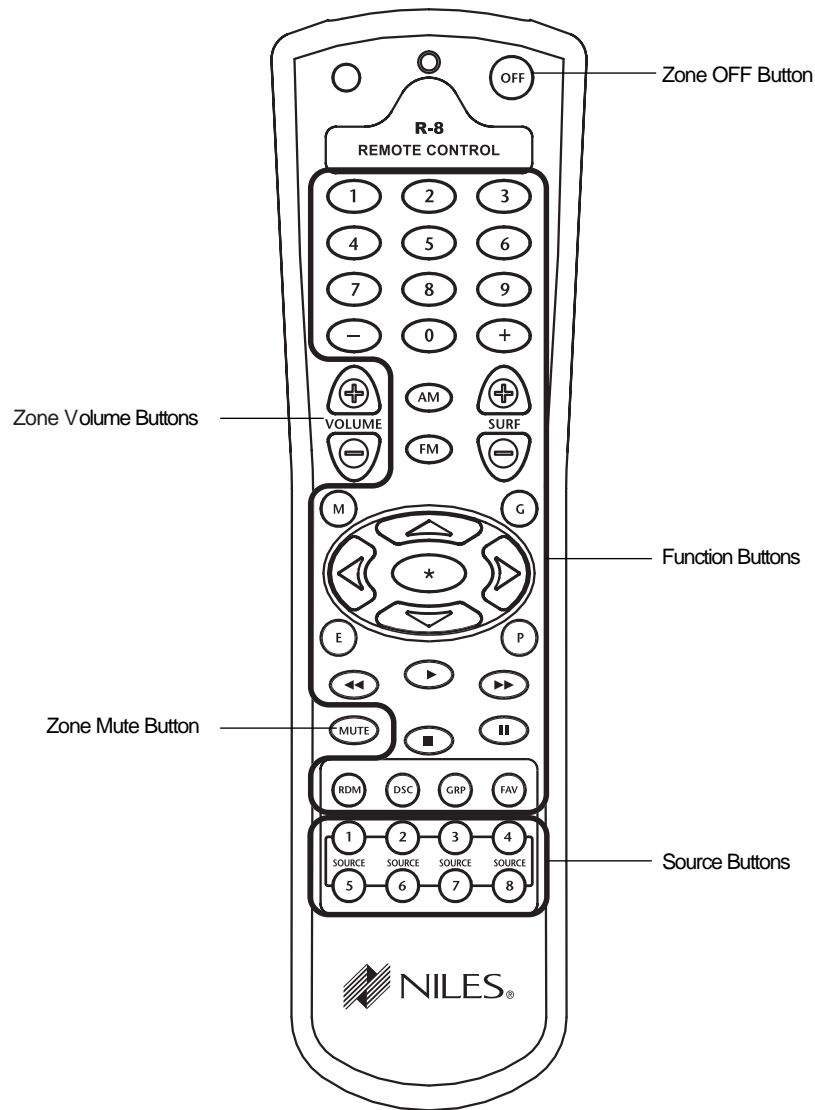
Two-position switches for zones 4, 5, and 6 set the individual preamp outputs to a variable or a fixed signal.

### Removable Speaker Connector

Niles' patented no-strip speaker connector provides connection to speakers in the listening zones.

### Removable Power Cord

An IEC removable power cord provides easy handling during installation.



**Figure 2**

**Source Buttons**

Tap any of these buttons once to turn on the zone and select a source component. Press and hold these buttons to turn on all enabled zones and select the same source component in all zones.

**Zone OFF Button**

Tap this button once to turn OFF your specific zone. Press and hold this button to turn OFF all zones.

**Zone Volume Buttons**

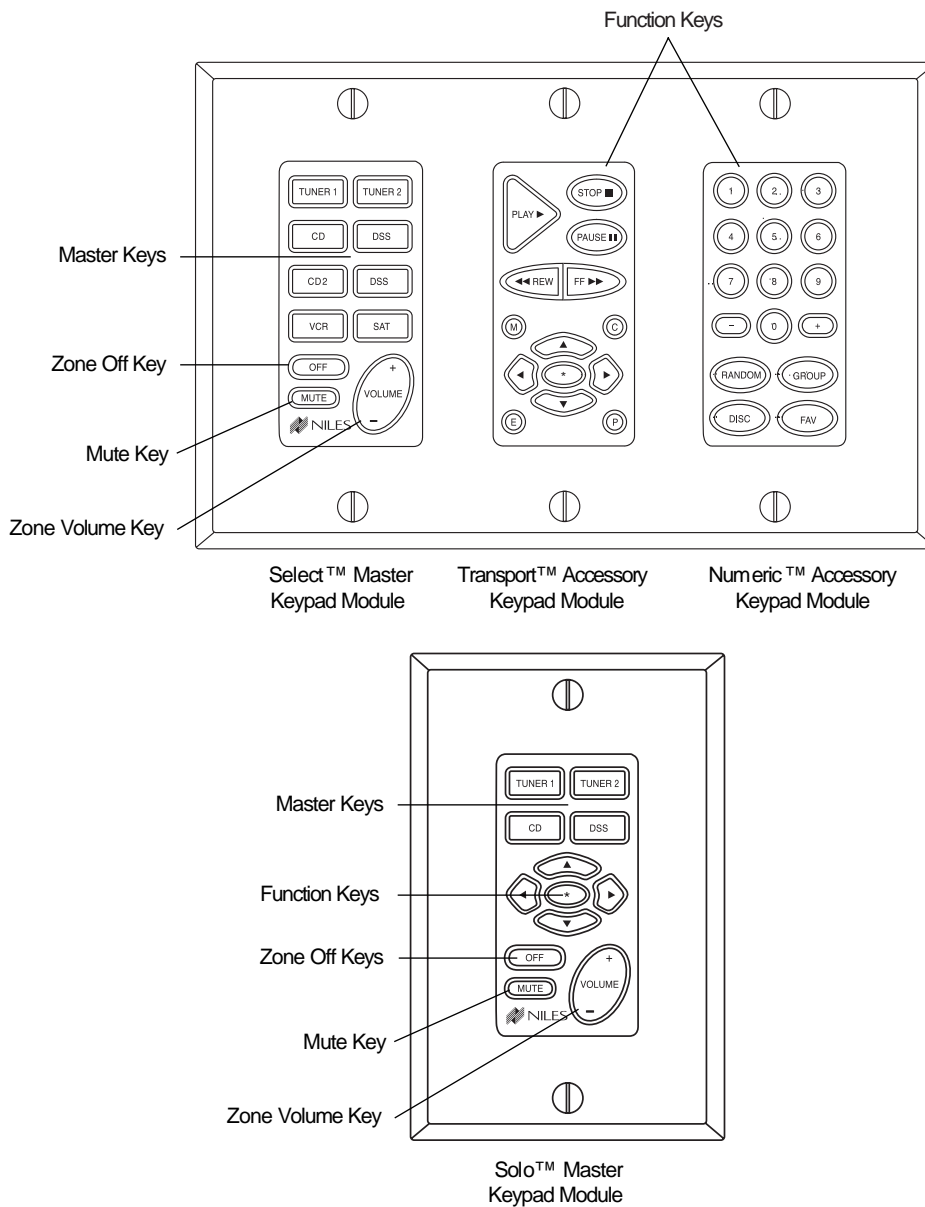
Press and hold these buttons to raise or lower the volume in your specific zone, or to restore sound in a muted zone.

**Zone Mute Button**

Tap this button once to mute the sound in a zone, or to restore the sound in a muted zone.

**Function Buttons**

Press and hold these buttons to issue the individual IR commands programmed to control the selected source components.



**Figure 3**

**NOTE: Select™ and Solo™ Master Keypad Modules with an integrated IR sensor are available. They accept IR commands from the Niles R-8 Remote.**

**Master Keys**

Tap any of these keys once to turn on the zone and select a source component. Press and hold these keys to turn on all enabled zones and select the same source component in all zones.

**Zone OFF Key**

Tap this key once to turn OFF your specific zone. Press and hold to turn OFF all zones.

**Volume Keys**

Press and hold these to raise or lower the volume in your specific zone, or to restore sound in a muted zone.

**Zone Mute Key**

Tap this key once to mute the sound in a zone, or to restore the sound in a muted zone.

**Function Keys**

Press and hold these keys to issue the individual IR commands programmed to control the connected source components.

# SYSTEM CONFIGURATIONS

## CONFIGURATION 1 - SIX ZONES

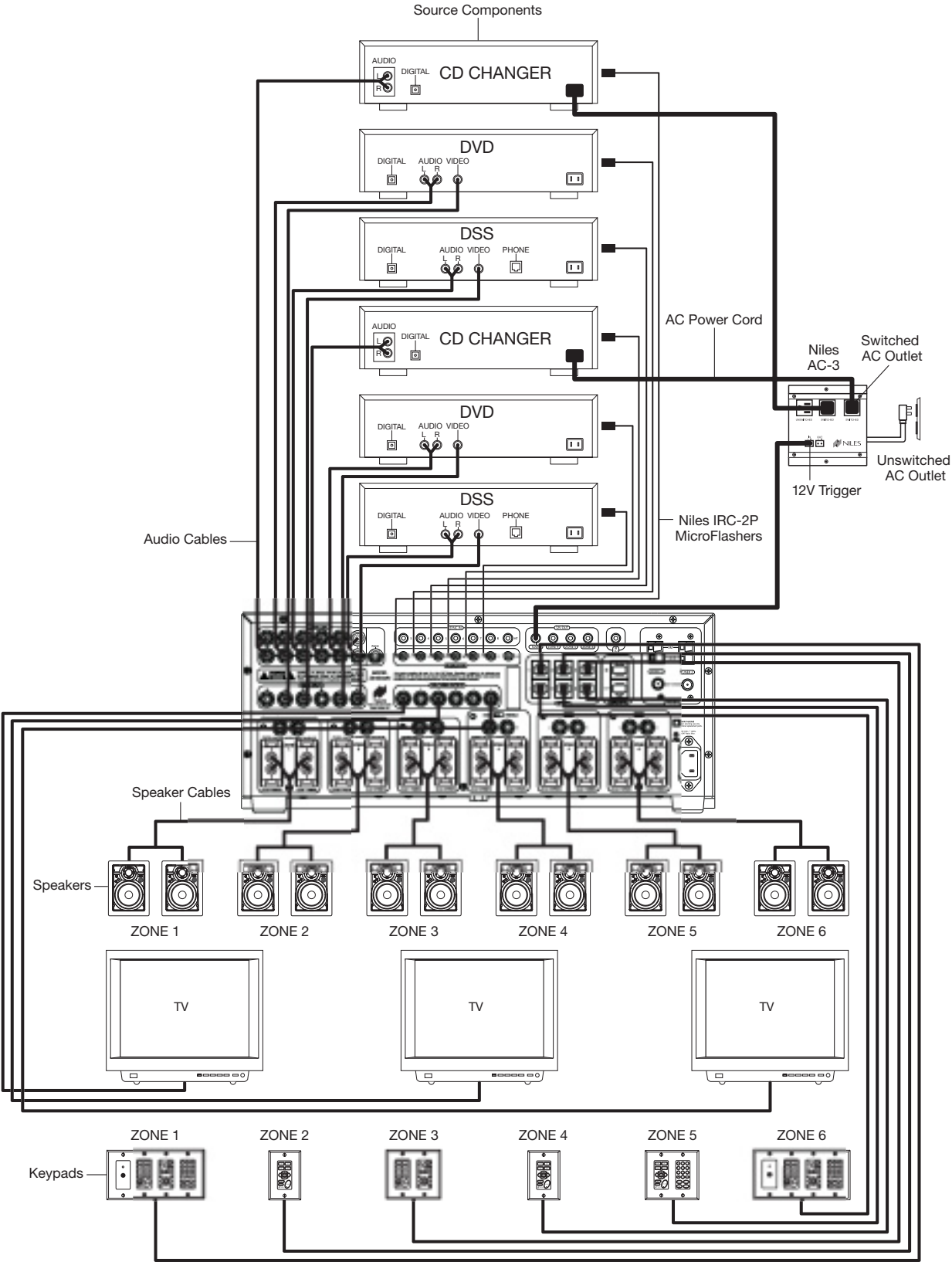


Figure 4

# SYSTEM CONFIGURATIONS

## INTRODUCTION TO ZR-8630AV CONFIGURATIONS

The Niles ZR-8630AV Audio/Video MultiZone Receiver combines with source components and control devices (keypads, remote controls, and IR sensors) to deliver audio and video to multiple zones throughout a home. This section of the manual describes 12 different ways to configure a ZR-8630AV system, beginning with the most basic (Configuration 1). Possible variations from the basic configuration include enlarging the system with additional ZR-8630AV units; expansion of zones and listening areas; and integration of a Home Theater, external amplifiers, and an IR repeating system.

### CONFIGURATION 1 - SIX ZONES

Figure 4 depicts the most basic configuration, in which one Niles ZR-8630AV Audio/Video MultiZone Receiver and six separate components (which can be audio or audio/video) provide sound (with or without video) to six listening zones. Each zone consists of one room with a pair of speakers. In Figure 4, three zones also have TV sets, though the system could accommodate video in all six zones.

For user control, each zone includes a Select™ or Solo™ Master Keypad Module. (These devices are available with or without a built-in IR sensor.) In addition, some zones in Figure 4 have optional Numeric™ and/or Transport™ Accessory Keypad Modules and a separate IR sensor. Jumper cables (included) connect the Accessory Keypad Modules and separate IR sensor to the Master Keypad Module. Use any combination of control devices to provide the desired degree of control in a given zone, with two exceptions: the Select™ and Transport™ cannot mate with the Solo™.

#### Source Components

The ZR-8630AV has RCA audio/video inputs for connecting six external source components. Each of the six listening zones can select from among the six source components, and the two built-in AM/FM tuners.

With this configuration, a user in one zone can listen to and view one source component while another user in a different zone listens to and views a different source component (i.e., the DVD can be selected in Zone 1 while the tuner is selected in Zone 2). Additionally, each of the six zones can be set to an individual volume level. If more than one zone chooses the same source component, they share IR control of that source component.

#### Keypads, IR Sensors, and Remote Controls

Keypads, IR sensors, and remote controls enable users to control the Niles ZR-8630AV Audio/Video MultiZone Receiver and connected source components by issuing source-component IR commands programmed into the ZR-8630AV. To trigger these commands, a user presses a keypad key or remote-control button.

The Select™ or Solo™ Master Keypad Module in each zone connects to the ZR-8630AV through a “home run” of four-pair twisted cable terminating in an RJ-45 connector. Each Select™ and Select™ IR Master Keypad Module can mate with an optional Transport™ and/or Numeric™ Accessory Keypad Module. The Solo™ and Solo™ IR can mate with the Numeric™ but not the Transport™. Jumper cables for these connections are included. (See Connections, Figure 33.)

Adding an IR sensor enables the Niles R-8 Remote to control the ZR-8630AV and the connected source components from anywhere in a sensor-equipped room. Master Keypad Modules are available with a built-in narrow-bandwidth IR sensor that works only with the R-8. In addition, or as an alternative, any zone can include a separate wide-bandwidth IR sensor that connects directly to a Master Keypad Module. Wide-bandwidth sensors work with the R-8 and factory remotes from a wide variety of source components. For separate IR sensors, installed with two-conductor shielded cable rather than four-pair twisted cable, Niles offers a three-wire to RJ-45 adapter. (See the Installation and Accessories sections of this manual for more details.)

## SYSTEM CONFIGURATIONS

In a very large room, you may want to provide a separate IR sensor across the room from a Select™ IR or Solo™ IR Master Keypad Module.

With a separate IR sensor, a source component's actual IR commands (i.e., provided by the component's original remote control or a learning remote control programmed with these IR commands) will control the source components.

**Important Note:** The ZR-8630AV does not provide individual operation of identical source components when using a source component's factory remote through an IR sensor. (See Identical Source Components on page 43 for more details.)

### Source-Component Automation

There are two methods of managing the power ON/OFF of the source components.

1. **Synchronized IR** - In Figure 4, a video signal connected to the ZR-8630AV synchronizes the DSS receiver's power ON/OFF. When the Master Key/Source Button for the DSS is pressed, the ZR-8630AV checks for a video signal at the Sync Input corresponding to the DSS. **The ZR-8630AV issues the power command to turn the DSS ON only when no video signal is present and the DSS is OFF.**

When the Off Key/Button is pressed in a zone, the ZR-8630AV checks to see if any other zones are ON (including the Home Theater Zone sharing sources). The power command for turning the DSS OFF is issued only if that zone is the last zone turning OFF in entire system and a video signal is present at the Sync Input corresponding to the DSS.

**Important Note:** 12V Sync Inputs can detect 12V for use with Niles external sensing devices, (i.e. the LS-1 Light Sensor and the APC-2 Current Sensing Device). See Connections on page 46 for more information.

2. **Latching Power** - In Figure 4, the switched AC outlets of a Niles AC-3 AC turn power to the DVD and CD changer on and off. The 12V Control Output from the ZR-8630AV activates the AC-3 when any of the six zones is ON (including the Home Theater Zone sharing sources). The built-in AM/FM tuners also turn ON when any of the six zones is ON.

Each Master Key on the Master Keypad Module and its respective source component are programmable with a sequence of IR commands. Commands included in the sequence typically are the Play or Channel commands to start a source playing or to select a particular music or radio station after the source has been selected.

### Flasher Outputs

Niles IRC-2P MicroFlashers™ connect to the numbered flasher outputs on the rear panel of the Niles ZR-8630AV. **Flashers send IR commands to the individual source components for control.** To control more than one source component, connect an IRC-1P Flooding Flasher to the Flasher output labeled ALL .

### Video Outputs

Each zone has "home run" RG-6 coaxial cable with 100-percent quad-shielding from the video output to a TV set or other video-display device located in the zone. To avoid video-signal degradation, such runs should not exceed 500 feet (152 meters).

### Speakers

"Home run" speaker cables from the speakers in each zone connect to the built-in zone amplifier. Connections to the ZR-8630AV unit's speaker output terminals employ Niles' patented no-strip speaker connectors.

## SYSTEM CONFIGURATIONS

### CONFIGURATION 2 – ADDING ZONES USING MULTIPLE ZR-8630AV UNITS

If the system requires more than six zones, use more than one ZR-8630AV to create a larger multi-zone/multi-source system. You can combine as many as three ZR-8630AV units to provide up to 18 zones. Designate one ZR-8630AV as the Master and the others as Slaves. (See Installation Settings on page 60 for more details.)

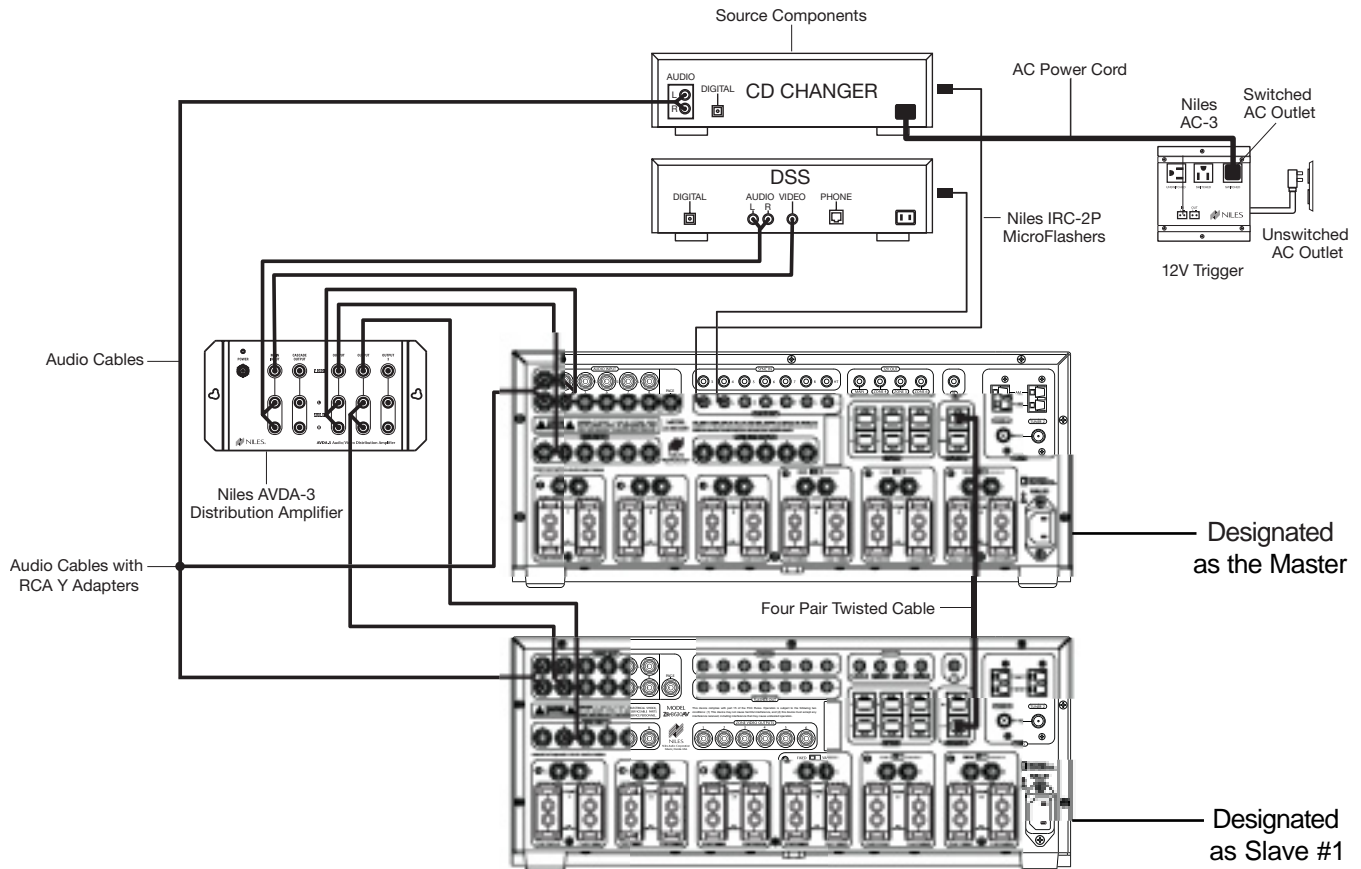


Figure 5

In Figure 5, a four-pair twisted cable connecting the expansion ports of the two ZR-8630AV units facilitates communication between them, allowing all zones provided by both ZR-8630AV units to obtain control of the shared source components (which are always connected to the Master). Also, any zone can issue system-wide commands (i.e. All Zones ON/OFF).

#### Sharing Source Components with Two ZR-8630AV Units

Two Niles ZR-8630AV Audio/Video MultiZone Receivers (Figure 5) share the audio and video signals from the source components. Connect the audio and video signals to both ZR-8630AV units. To make these connections, RCA Y-adapters are acceptable for sharing audio signals, but sharing video signals requires a Niles AVDA-3 Audio/Video Distribution Amplifier.

**Note:** When sharing source components with a third ZR-8630AV (for an 18-zone system) or with a Home Theater system, refer to Configuration 3.

The programming in the master ZR-8630AV accomplishes source-component control (Figure 6). Leave all Slave ZR-8630AV units in the system unprogrammed except for tuner preset stations. Make all Flasher and Sync Input connections for the shared source components to the Master ZR-8630AV. Keypad/Button commands and Zone ON/OFF status are communicated to the Master ZR-8630AV through the System Expansion In/Out connections, providing coordinated control of all source components.



# SYSTEM CONFIGURATIONS

## CONFIGURATION 3 – DISTRIBUTING SOURCE-COMPONENT AUDIO AND VIDEO SIGNALS

When sharing source components with three ZR-8630AV units (see Figure 6) or two ZR-8630AV units and a Home Theater system (see Figure 7), each source—whether audio or video—requires a Niles AVDA-3 Audio/Video Distribution Amplifier.

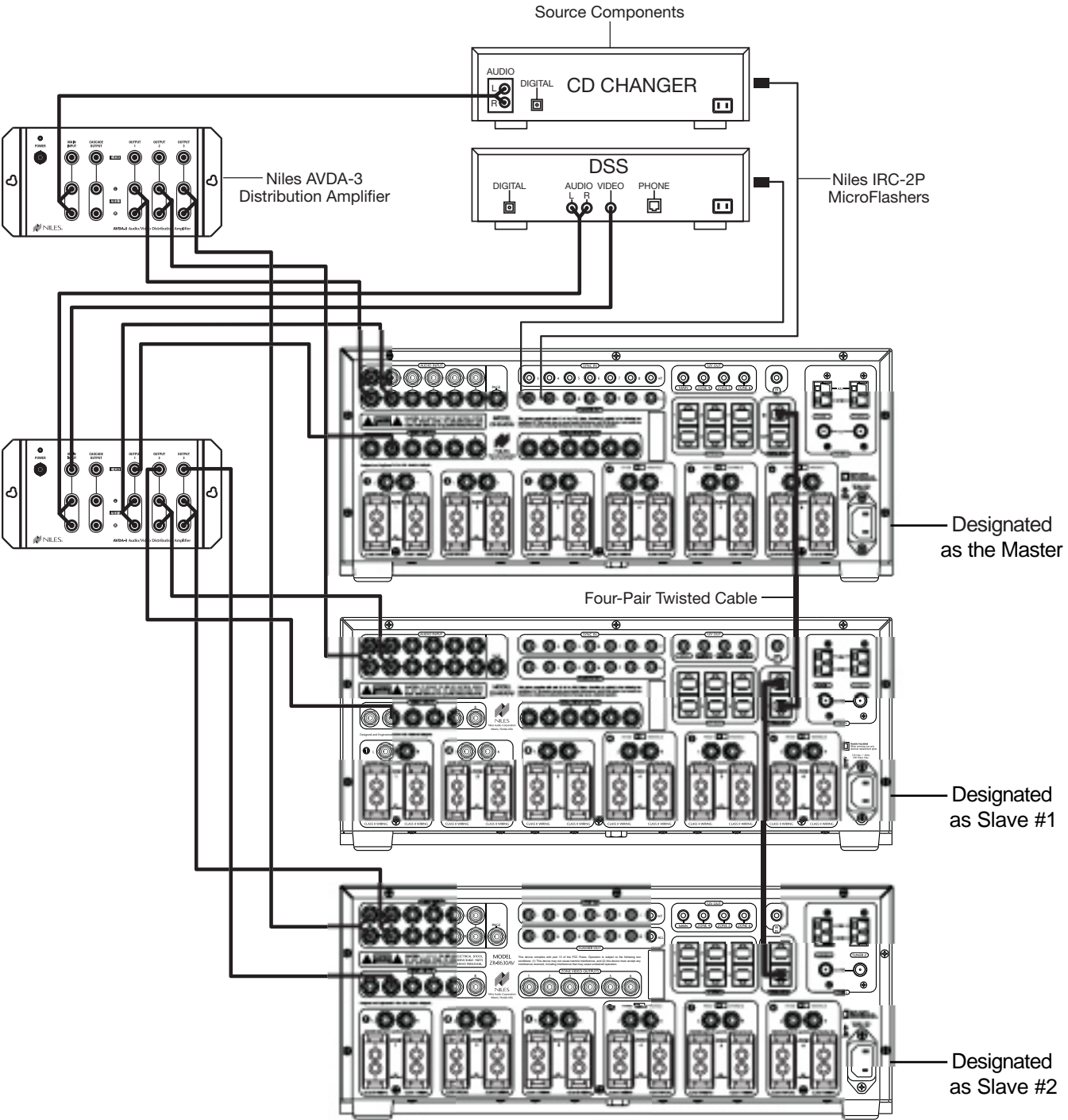


Figure 6

# SYSTEM CONFIGURATIONS

## CONFIGURATION 3 – DISTRIBUTING SOURCE-COMPONENT AUDIO AND VIDEO SIGNALS

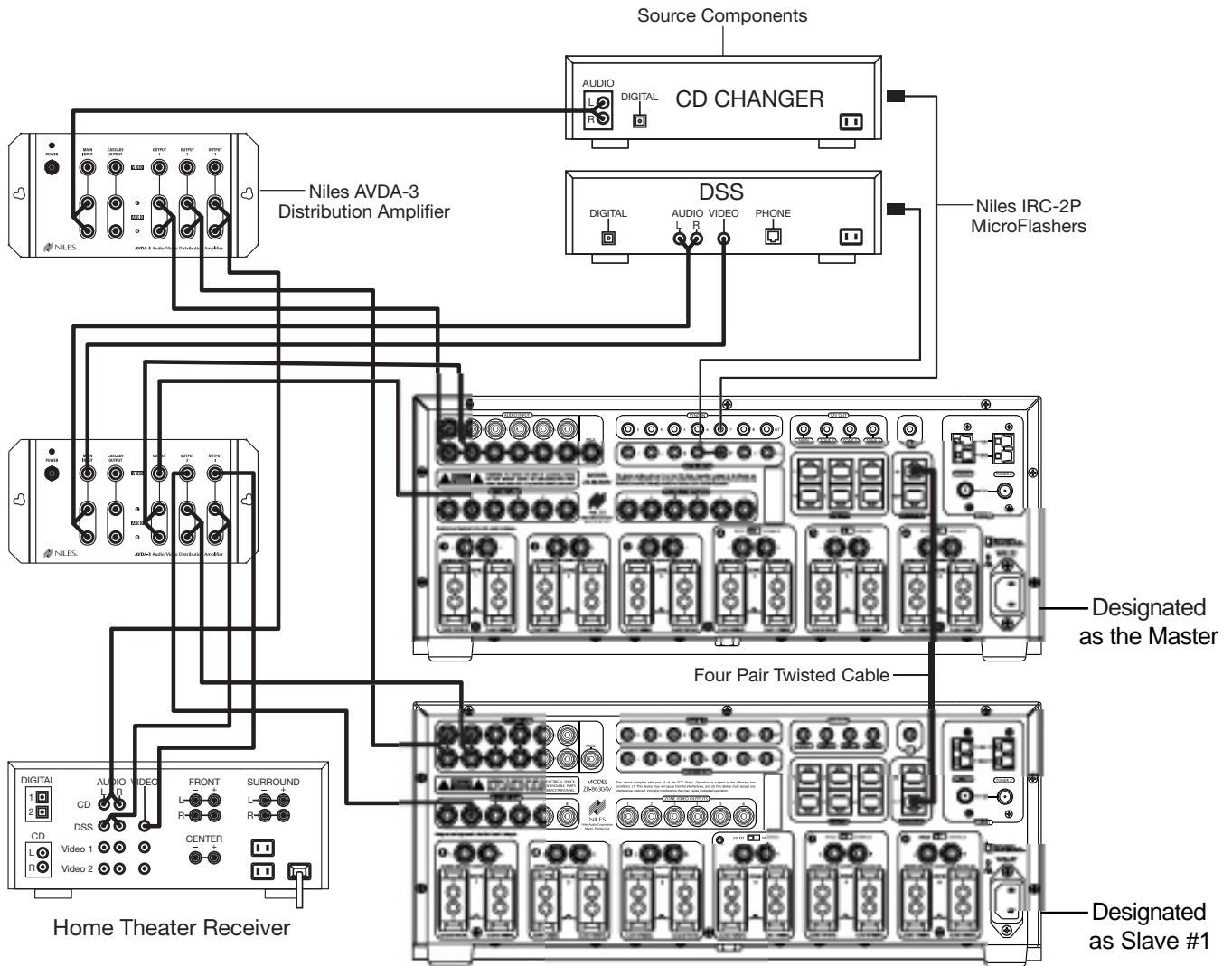


Figure 7

An AVDA-3 can send video to a maximum of three destinations. If you install three ZR-8630AV units with an integrated Home Theater Zone (refer to Figure 8), you may connect the cascade output on each AVDA-3 to the third ZR-8630AV. If a video component has only one composite-video output, look for an S-video or component-video output (if applicable to the Home Theater). If a video component has two composite-video outlets, connect one to the Home Theater and the other to an AVDA-3 for distribution to the three ZR-8630AV units. If neither of those solutions yields suitable results, install two AVDA-3 units per video component.

**Important Note:** An AVDA-3 is required whenever you share source components with a Home Theater receiver that shorts its audio inputs. (Some Home Theater receivers short their audio inputs when their power is off or the input is not currently selected.)

## SYSTEM CONFIGURATIONS

### CONFIGURATION 4 – INTEGRATING AN IR-CONTROLLED HOME THEATER

An IR-controlled Home Theater surround-sound receiver can be integrated to share source components in a system with the ZR-8630AV.

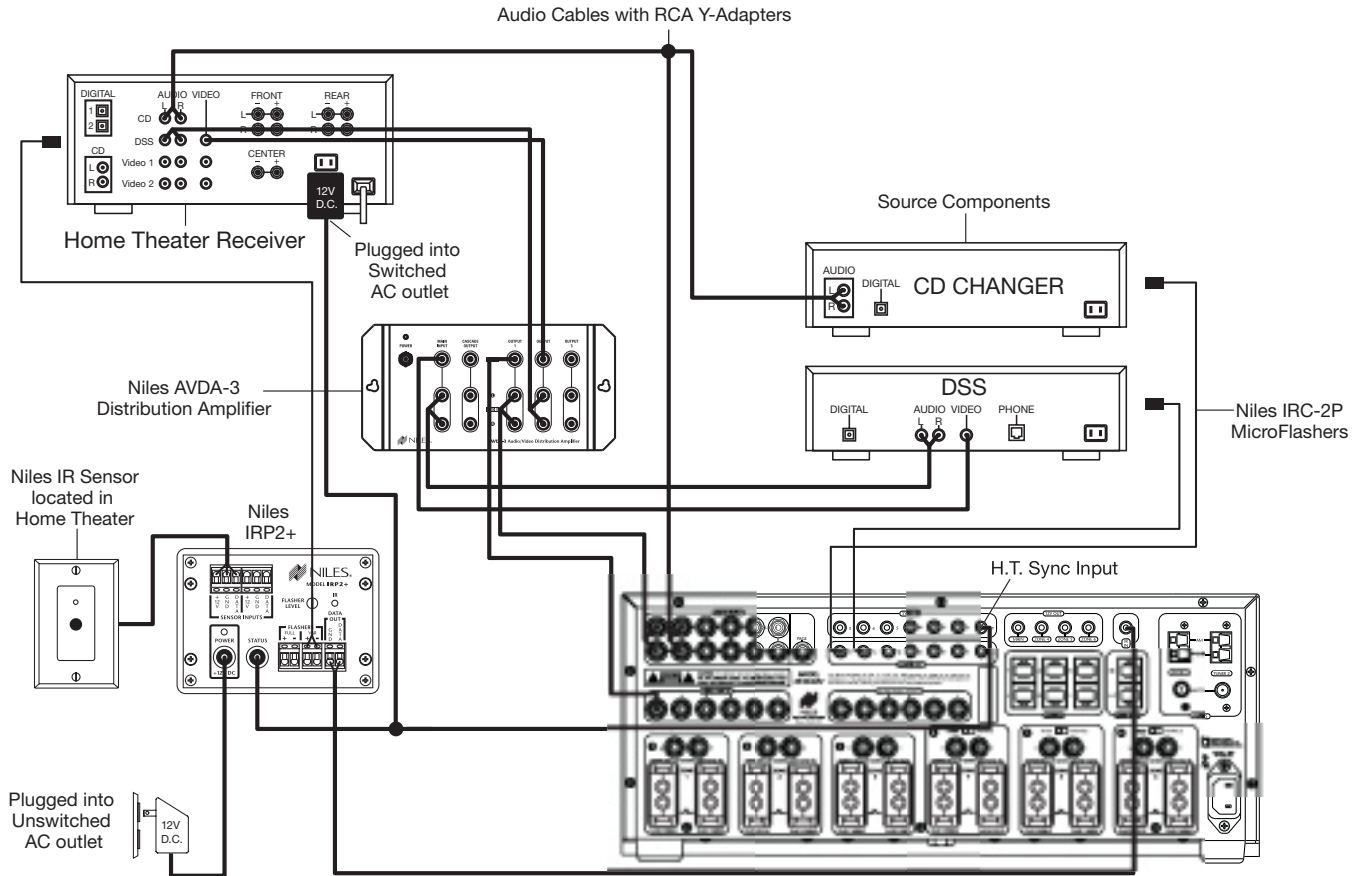


Figure 8

#### Distributing Audio and Video Signals

Connect the audio and video signals for the shared source components to both the ZR-8630AV and the Home Theater receiver (Figure 8). To make these connections, RCA Y-adapters are acceptable for sharing audio signals, but sharing video signals requires a Niles AVDA-3 Audio/Video Distribution Amplifier.

**Important Note:** If the Home Theater Receiver has shorting audio inputs, use a Niles AVDA-3 Distribution Amplifier in place of the RCA Y-adapters (refer to Figure 7).

#### Shared Source-Component Control

Connect the DATA output from the Home Theater IR repeater (Figure 8) to the IR Input of the ZR-8630AV. The Home Theater IR remote control now can control the shared source components.

A 12V Sync signal from the Home Theater to the Home Theater Sync Input informs the ZR-8630AV about the ON/OFF status of the Home Theater, enabling the ZR-8630AV to coordinate control of the shared source component's power ON/OFF.

**Important Note:** When issuing the source component's actual IR commands from the Home Theater remote control, all IR commands pass through to all source-component flasher outputs. Identical brand and model source components cannot operate individually using these commands. (For more information on controlling identical brand and model source components, refer to the Operational Overview on page 34.)

## SYSTEM CONFIGURATIONS

### CONFIGURATION 5 – INTEGRATING A HOME THEATER USING AN INTELLICONTROL®

A Home Theater system controlled by a Niles IntelliControl® can be integrated to share source components in a system with the ZR-8630AV.

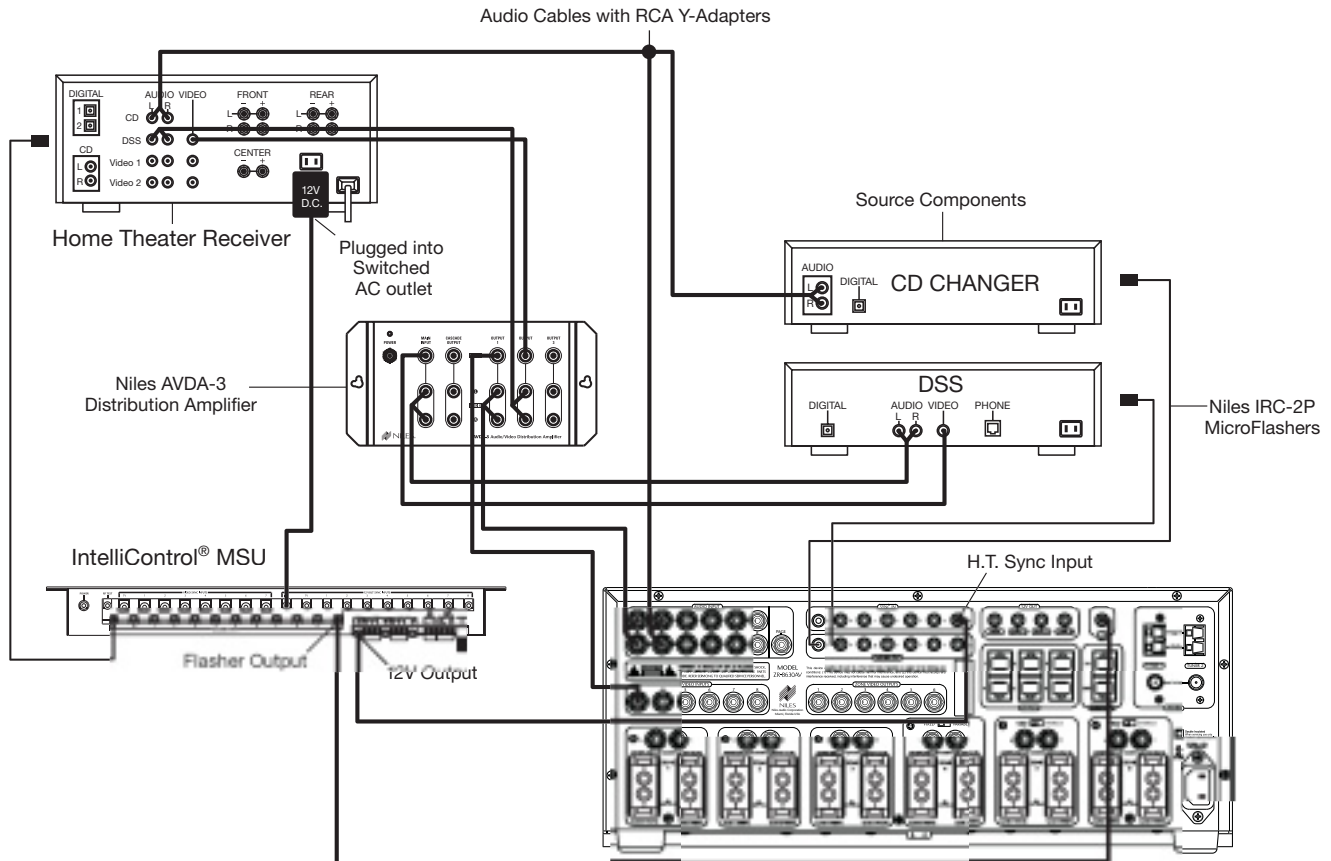


Figure 9

#### Distributing Audio and Video Signals

Connect the audio and video signals for the shared source components to both the ZR-8630AV and the Home Theater receiver (Figure 8). To make these connections, RCA Y-adapters are acceptable for sharing audio signals, but sharing video signals requires a Niles AVDA-3 Audio/Video Distribution Amplifier.

**Important Note:** If the Home Theater Receiver has shorting audio inputs, use a Niles AVDA-3 Distribution Amplifier in place of the RCA Y-adapters. (For more information, see Configuration 3.)

#### Shared Source-Component Control

Connect the flasher output from the IntelliControl® (Figure 9) to the IR Input of the ZR-8630AV. Now the IntelliControl, programmed with Niles R-8 Remote IR commands, can automate and control the shared source components. Teach Niles R-8 IR commands to the IntelliControl using the R-8 Remote. (See Programming Overview for more details.)

A 12V Sync signal from the Home Theater to the Home Theater Sync Input informs the ZR-8630AV about the ON/OFF status of the Home Theater, enabling the ZR-8630AV to coordinate control of the shared source component's power ON/OFF.

**Important Note:** When issuing the source component's actual IR commands from the Home Theater remote control, all IR commands pass through to all source-component flasher outputs. Identical brand and model source components cannot operate individually using these commands. (For more information on controlling identical brand and model source components, refer to the Operation Overview on page 34.)

# SYSTEM CONFIGURATIONS

## CONFIGURATION 6 – MULTIPLE MASTER KEYPAD MODULES IN A ZONE

You can expand the single zone of a Niles ZR-8630AV Audio/Video MultiZone Receiver to contain multiple Master Keypad Modules, providing control from many locations within the zone. Use a Niles IntelliPad® Ci Expander™ to connect multiple keypads in a single zone. By using two Expanders, you can include up to five Master Keypad Modules in a single zone.

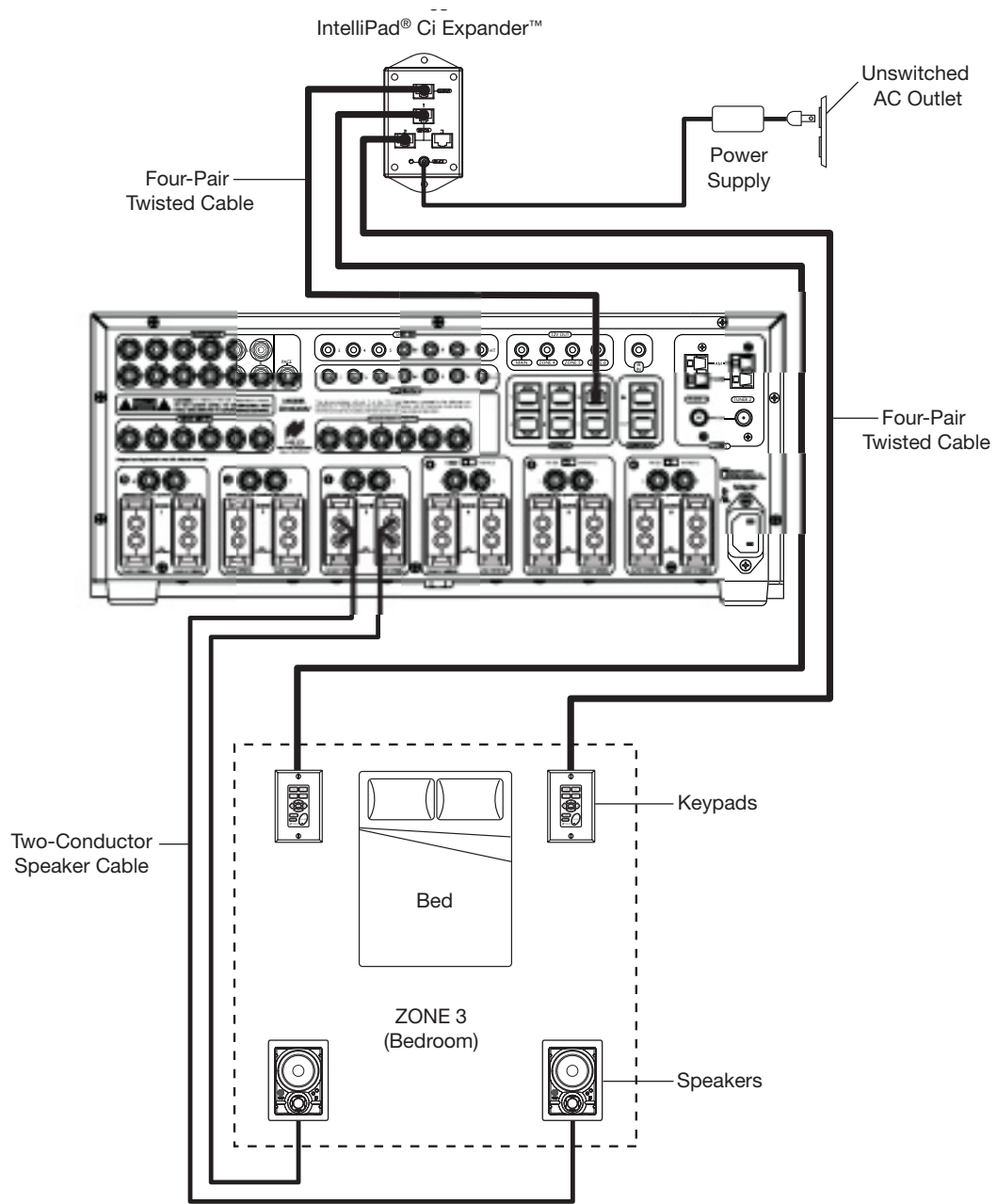


Figure 10

Within a zone, you can use Solo™ and/or Select™ Master Keypad Modules in any combination. All connected keypads in a zone work in tandem (i.e., all control the same zone and display the same Zone ON/OFF, Mute, and Input Select Status), except that Solo™ keypads cannot activate or display the status of sources 5, 6, 7, and 8 because they have only four Master Keys. Activation of these sources in a zone equipped with Solo™ keypads simultaneously lights up their Master Keys 3 and 4. In Figure 10, a Select™ Master Keypad Module is installed on each side of a bed.

## SYSTEM CONFIGURATIONS

### CONFIGURATION 7 – MULTIPLE LISTENING AREAS IN A ZONE

You can set up a single zone of the ZR-8630AV to contain more than one listening area (i.e., an adjacent living room and dining room). Choose this configuration when the speakers in the zone need not play at separate volume levels or be ON/OFF separately.

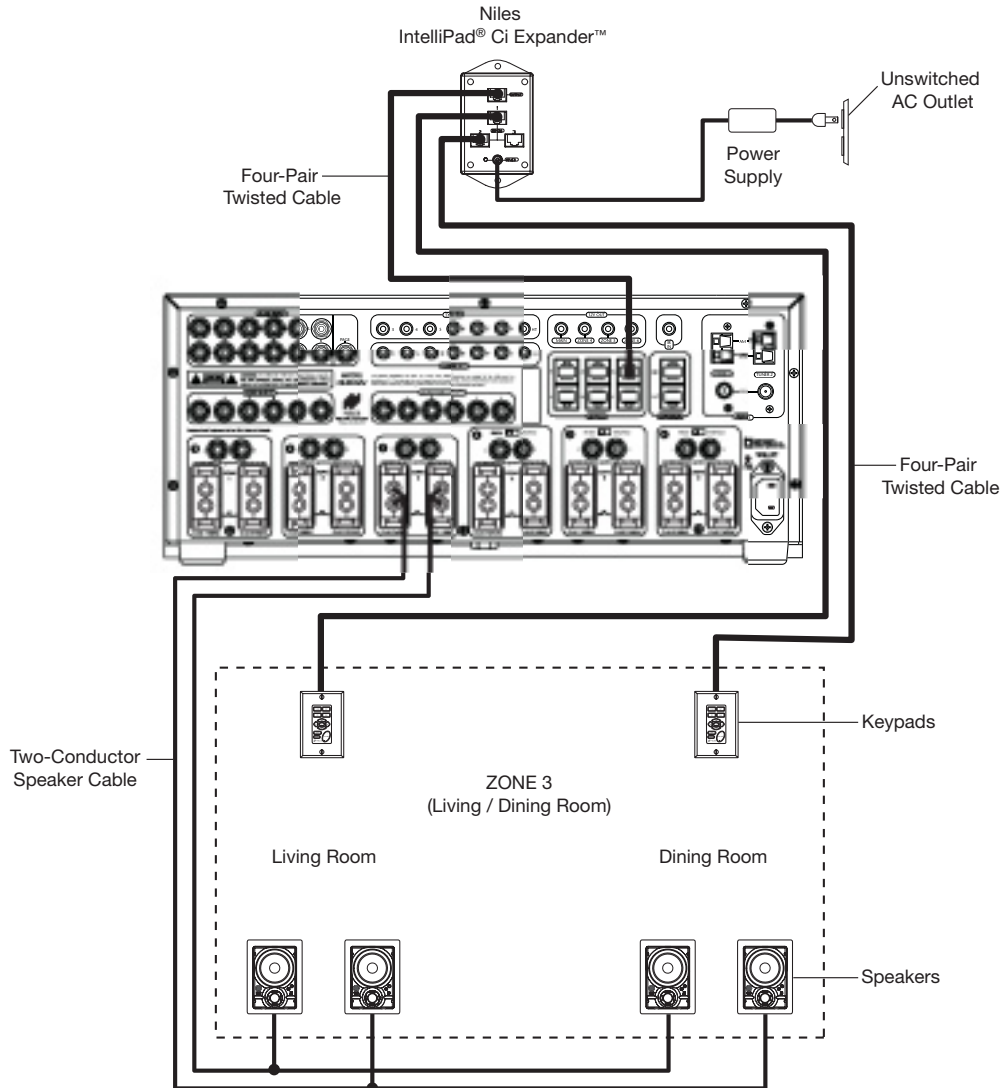


Figure 11

In Figure 11, speaker cable connects to the speaker outputs of Zone 3 and then parallel-connects to the speakers in both the living room and dining room. Each area has a Master Keypad Module. Use a Niles IntelliPad Ci Expander to connect the two Master Keypad Modules in a single zone. All connected keypads in a zone work in tandem (i.e., all control the same zone and display the same Zone ON/OFF, Mute, and Input Select Status).

Within a zone, you can use Master Keypad Modules in any combination. All connected keypads in a zone work in tandem (i.e., all control the same zone and display the same Zone ON/OFF, Mute, and Input Select Status), except that Solo™ and Solo™ IR keypads cannot activate or display the status of sources 5, 6, 7, and 8 because they have only four Master Keys. Activation of these sources in a zone equipped with Solo™ or Solo™ IR keypads simultaneously lights up their Master Keys 3 and 4.

You can add one or two pairs of 8-ohm speakers to a zone in this manner. For zones with more than two pairs of speakers, an external amplifier is necessary.

# SYSTEM CONFIGURATIONS

## CONFIGURATION 8 – EXTERNAL AMPLIFIER IN A ZONE FOR MORE POWER

To provide more power in a zone, use an external amplifier. An RCA preamplifier output connection for each zone of the ZR-8630AV allows you to connect external amplifiers for zones requiring additional power.

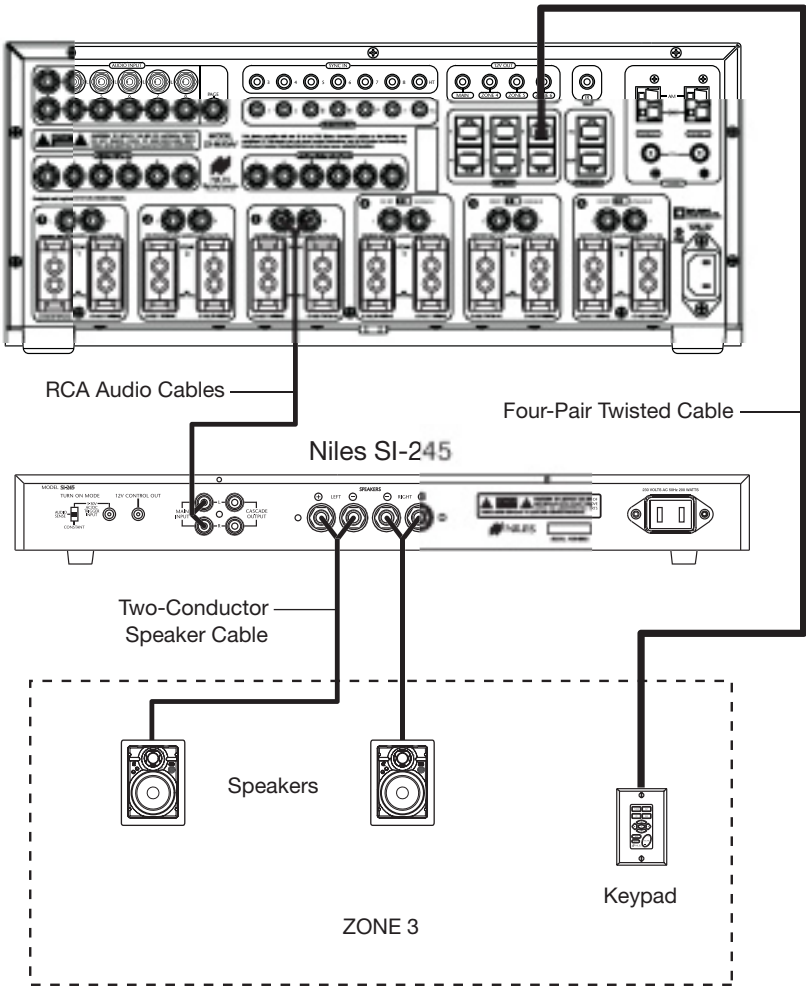


Figure 12

In Figure 12, an external amplifier has been connected to zone 3. Using an amplifier with more than 30W per channel provides the zone with more volume for listening in large rooms and outdoors.

**Important Note:** When using preamplifier outputs in this configuration for zones 4, 5, and 6, set the fixed/variable switch in the variable position.

# SYSTEM CONFIGURATIONS

## CONFIGURATION 9 – EXTERNAL AMPLIFIER IN A ZONE FOR MULTIPLE LISTENING AREAS

You can set up a zone of the ZR-8630AV to contain more than one listening area by adding an external amplifier (i.e., an adjacent living room and dining room area). Choose this configuration when the speakers in the zone need not play at separate volume levels or be on/off separately.

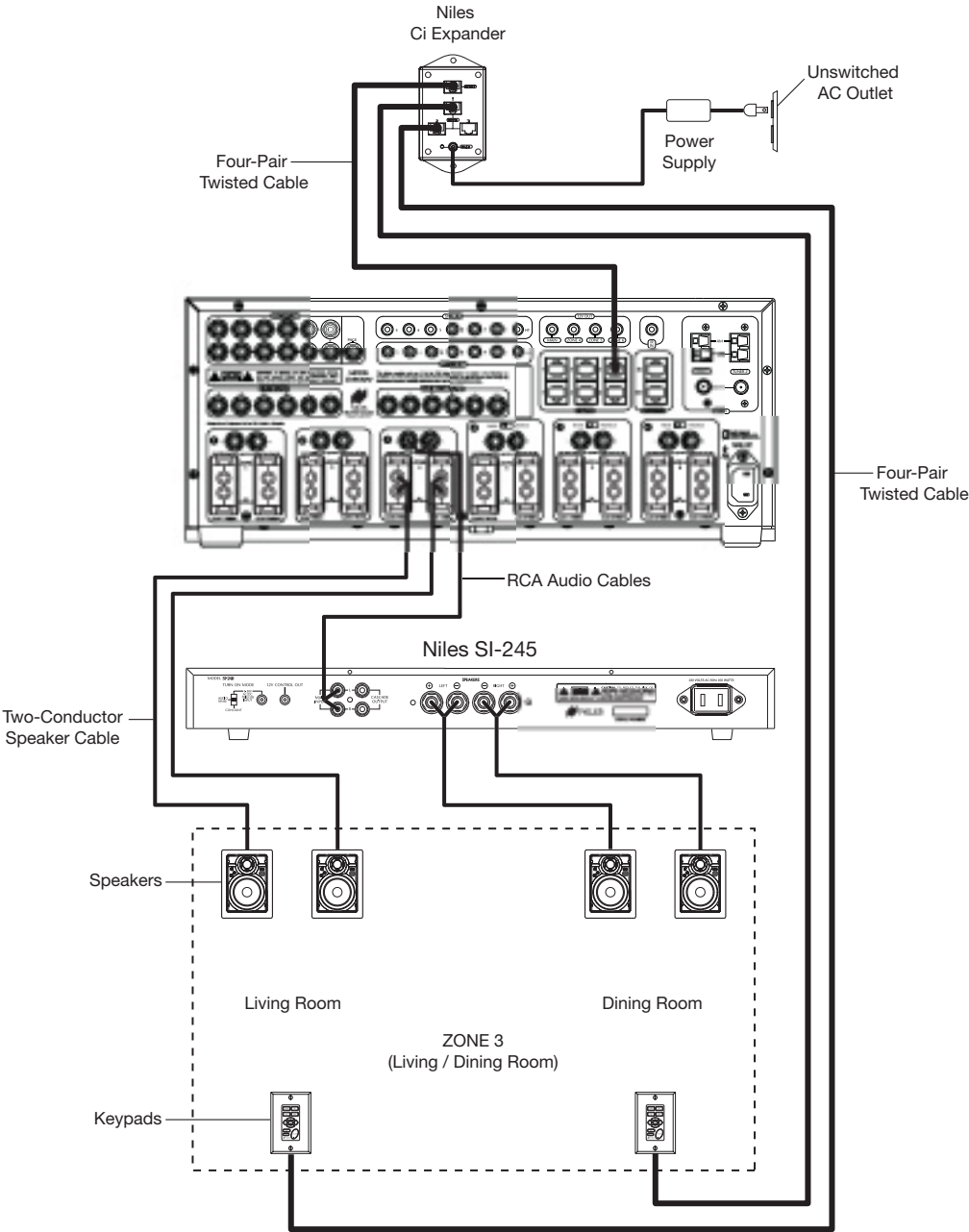


Figure 13

In Figure 13, an external amplifier connects to Zone 3. This enables the zone to have an additional listening area with its own dedicated amplifier. Now, with the internal amplifier of the ZR-8630AV dedicated to one listening area and the external amplifier to the other, the speakers in both areas receive more power.

**Important Note:** When using preamplifier outputs in this configuration for zones 4, 5, and 6, set the fixed/variable switch in the variable position.



## SYSTEM CONFIGURATIONS

### CONFIGURATION 10 – EXTERNAL AMPLIFIER IN A ZONE FOR MULTIPLE ROOMS

The preamplifier output connectors on the ZR-8630AV for zones 4, 5 and 6 have a fixed/variable setting. Use the fixed setting with an external amplifier to divide a zone into individual rooms using conventional Niles impedance-matching volume controls.

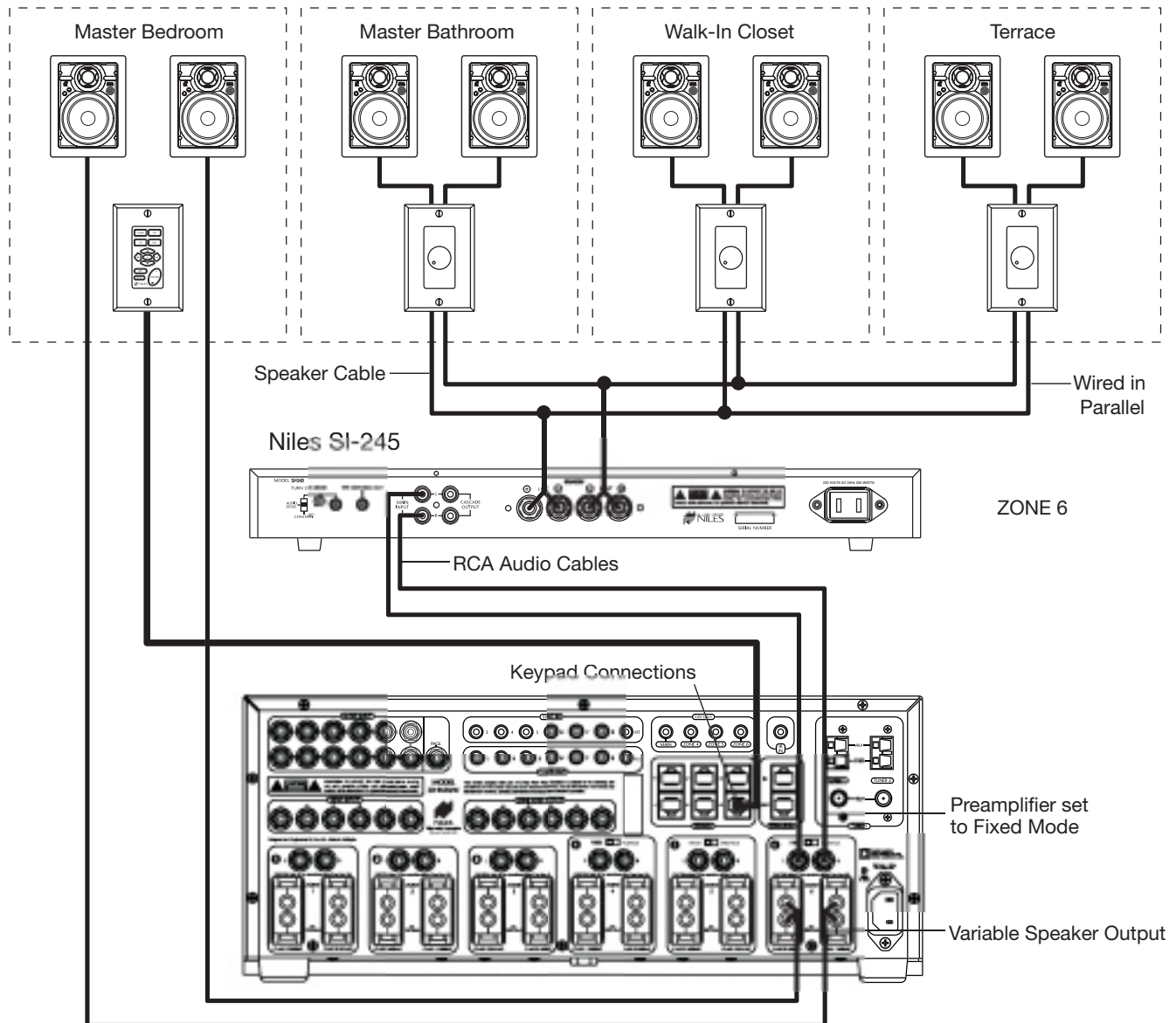


Figure 14

In Figure 14, Zone 6 has been expanded into four rooms. Each room can be ON/OFF individually and be set at a different volume level.

The speakers for the master bedroom connect to the internal zone amplifier of the ZR-8630AV. A Select™ Master Keypad Module in the master bedroom controls ON/OFF, source selection, and source operation for the entire zone. However, the volume and mute buttons on the Select™ Master Keypad Module affect only the speakers in the master bedroom.

Impedance-magnifying volume controls allow individual control of the speakers connected to the external zone amplifier in the master bathroom, the walk-in closet, and the terrace.

# SYSTEM CONFIGURATIONS

## CONFIGURATION 11 – SYSTEM PAGING AND EXTERNAL TELEPHONE SYSTEM

For voice paging through the speakers in the listening zones (see Figure 15), a Paging Input connection on the rear panel of the ZR-8630AV accepts the paging output signal of popular telephone systems. You can adjust the paging volume level in the ZR-8630AV. (See Installation Settings on page 61 for more information.)

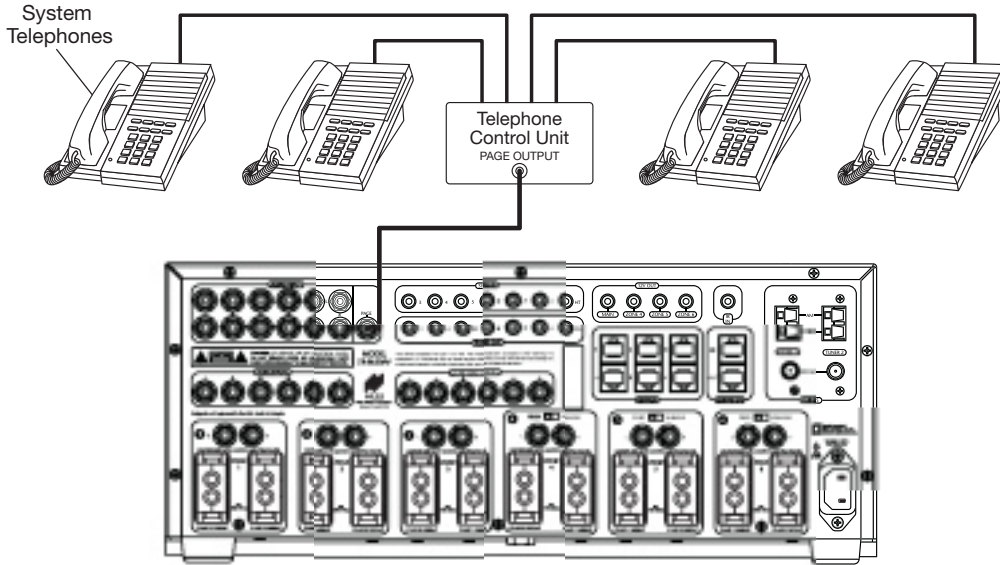


Figure 15

Use a Niles AVDA-3 (see Figure 16) when connecting a telephone system to more than one ZR-8630AV in larger systems.

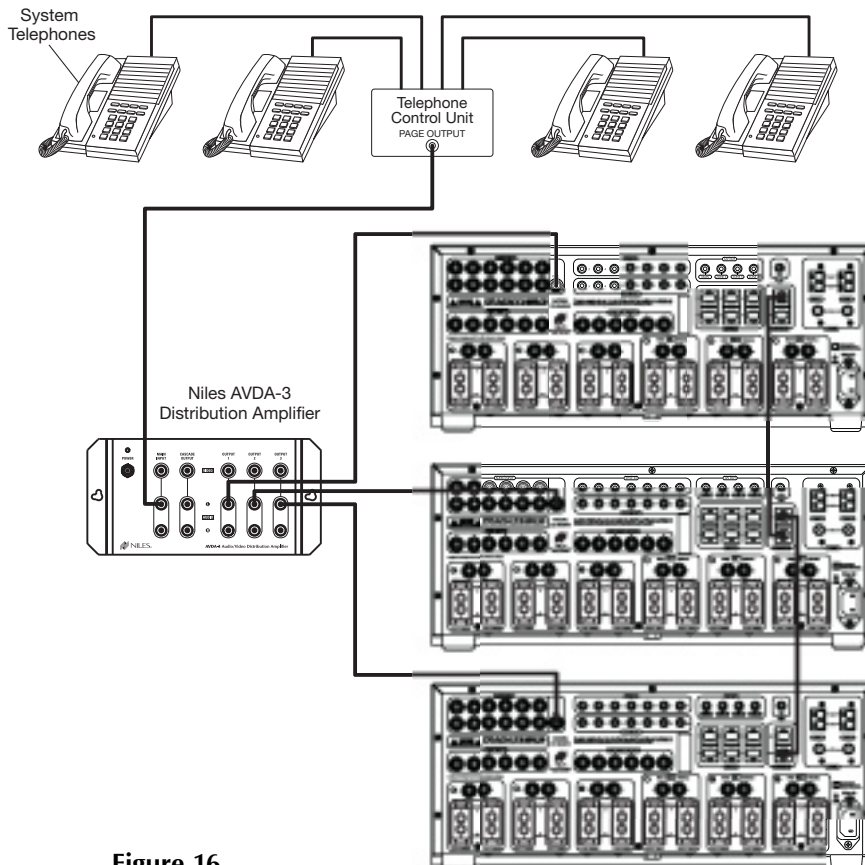


Figure 16

# SYSTEM CONFIGURATIONS

## CONFIGURATION 12 – IR REPEATING FOR CONTROL OF LOCAL COMPONENTS

You can integrate an IR Repeating System into a room connected to the Niles ZR-8630AV (see Figure 17). This enables a single IR Sensor (installed in that room) to control local components with a hand-held IR remote control.

In Figure 17, a Niles IR Sensor connects to a Niles IRP-6+ for control of local components, and to a Niles ZR-8630AV for control of distributed components. When the local system is activated, a Niles SPK-1 Automated Speaker Level A-B Switcher switches the front speakers in the master bedroom from the ZR-8630AV distributed-sound system to the local surround-sound receiver system.

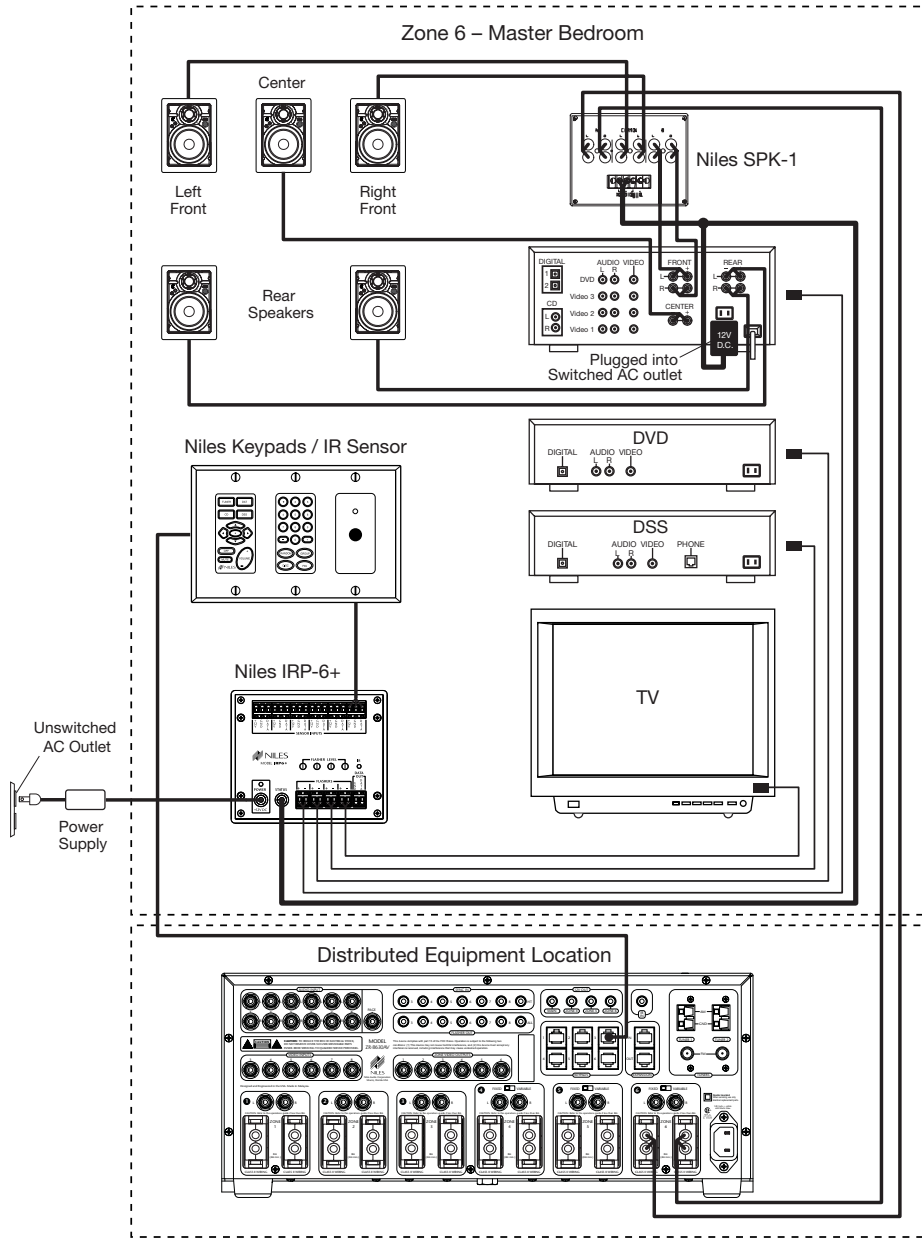


Figure 17

**Important Note:** This configuration does not support the use of an identical brand and type component in both the local and the distributed system (i.e., a Sony CD player in both systems). Individual operation of identical components may not be possible. To prevent IR feedback when using this configuration, you may need the IR blockers included with Niles IRC-2 MicroSensors™.

## COMPONENT COMPATIBILITY

### Infrared Command Compatibility

To determine the compatibility of various equipment brands with the ZR-8630AV, Niles engineers conducted IR control tests on typical A/V source components (i.e., CD, DVD, DSS, cable boxes, etc.) from each brand. All brands listed below passed the test.

Adcom	JVC	Motorola	Rotel
APEX	Kenwood	NAD Electronics	Samsung
B&K	Krell	Nakamichi	Scientific Atlanta
Denon	Lexicon	Niles	Sharp
Echo Star	Lightolier	Onkyo	Sherwood
Escient	Magnavox	Panasonic	Sony
Go Video	Marantz	Parasound	Technics
Harman Kardon	McIntosh	Philips	Toshiba
Hitachi	Meridian	Pioneer	Yamaha
Hughes	Mitsubishi	RCA	Zenith

**Important Note:** Use this list only as a starting point. All components for every brand listed were not available at the time of testing. To avoid unforeseen incompatibilities, Niles recommends always testing components you have not yet used with a ZR-8630AV before specifying them in your installation.

### Testing for a Possible IR Command Conflict

When using a Niles IRC-1P FloodFlasher™ in rare instances the same IR command will operate more than one source component. This prevents the proper operation of another IR-controlled component when the two are installed in the same system because pressing a single remote button causes both components to respond. Although this situation is rare, you should test first to see how components interact when you work with unfamiliar equipment or two products that you have never combined in the same system.

To test for such a conflict, take all the remotes in the system (following the example above with six components, you would need to test all six remotes) and issue every command you intend to program in the keypads. Expose all components to each command, and ensure that only the appropriate component responds.

### Solving the IR Command Conflict if Present

Remember that conflicts of this nature are rare. However, if you find yourself in this situation, contact the manufacturer to ask if they are aware of the problem and if they have a solution. Perhaps they now have a different remote or a chip upgrade for the product.

If the manufacturer does not have a solution, try to resolve the problem by using a Niles IRC-2P MicroFlasher™ instead of IRC-1P FloodFlasher™. In cases where neither solution works, advise the client of the situation and explain that you need to substitute another component.

## SOURCE POWER SYNCHRONIZATION

### WHAT IS SOURCE-POWER SYNCHRONIZATION?

The ZR-8630AV has been designed to keep track of the ON/OFF condition of the six source components connected to the system. This allows automation of source components that use the same IR command for ON and OFF.

For this feature to function as designed, you need synchronization (sync) between the ZR-8630AV and source components that use the same IR command for ON and OFF. This assures the users of the system that the ZR-8630AV will always issue power commands correctly when they press a Master Key or the Off Key.

### Source Components with Separate ON/OFF IR Commands

Synchronization is not required for source components that respond to separate ON and OFF IR commands. When power commands are programmed as separate ON and OFF, the ZR-8630AV will issue ON commands only if sync is not present. Separate OFF commands for source components always are issued when the last zone turns OFF, regardless of sync status.

### Source Components with “Latching Power”

Some source components, such as CD players and tape decks, usually plug into the switched AC outlet of the preamplifier/receiver with which they are installed. These components turn ON as soon as they have power on their AC cord, which occurs when the system’s receiver/preamplifier turns ON. In other words, they “latch” into an ON or OFF state. Because they don’t need an IR command to turn ON or OFF, they don’t need individual synchronization.

Since the ZR-8630AV does not provide a switched AC outlet, the 12V Control Output connected to a voltage-triggered AC power strip (i.e., Niles AC-3) provides perfect control of latching source components. (See Configuration 1 in the Systems Configurations section of this manual for more information.)

## SOURCE-POWER SYNCHRONIZATION

### CHOOSING A SYNCHRONIZATION METHOD

Once you establish that all source components in the system have compatible IR commands, the next step is to choose the appropriate sync method for each component.

There are two ways to detect when a component is ON or OFF: Video or Voltage Sync.

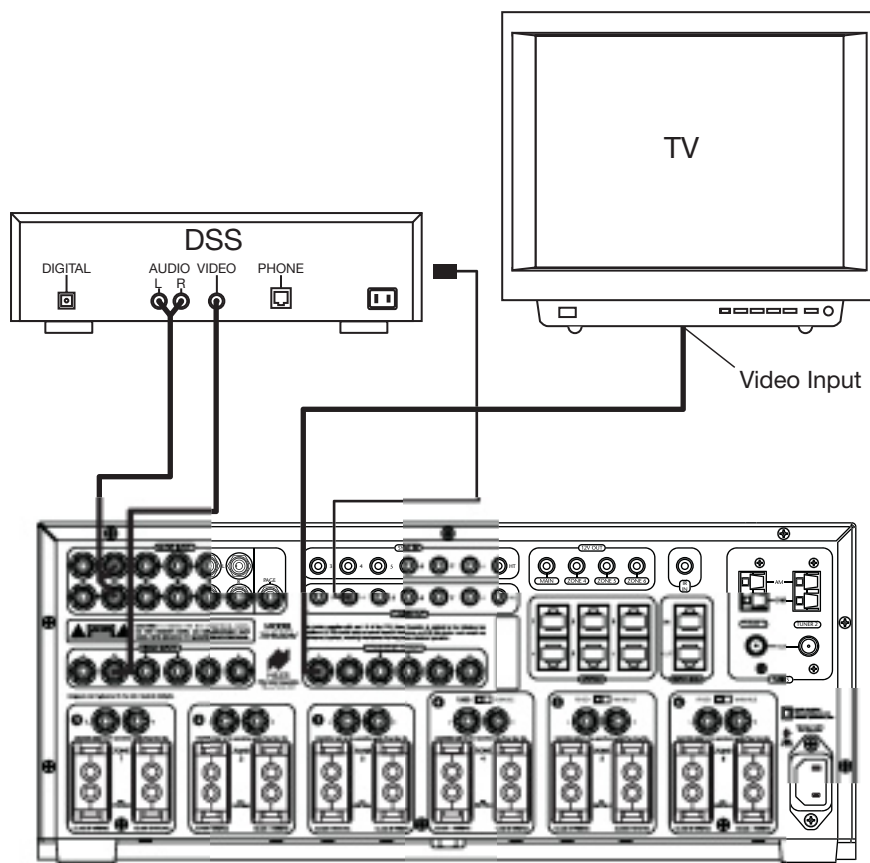


Figure 18

### Video Sync

Video Sync is the easiest and most reliable method of synchronization. Most video sources have a video output active only when the device is ON. This type of video output provides an excellent method for component synchronization. The ZR-8630AV has six composite video inputs that include video sync.

**Important Note:** Some components have a constantly live video signal at their video output even when the source component is turned off. Conversely, some source components do not have a constantly live video signal at their video output even when they are on. Any source component that has either of these attributes cannot use video sync reliably. You must use voltage sync (see next section of this manual) or learn discrete on and off IR commands to automate the power of such source components.

When using voltage sync with a source component that has a video output as described in the previous paragraph, you must turn off the video sync. For instructions, see page 62.

## SOURCE-POWER SYNCHRONIZATION

### Voltage Sync

Voltage Sync also is reliable if you choose and implement it correctly. The voltage sync inputs can detect the control out voltage from a Niles signal-sensing product interfaced to the source component.

### Obtaining Voltage Sync

#### Current Sensing

Current Sensing synchronizes a component by detecting the changes in the AC power draw that occurs with a component when it turns ON and OFF.

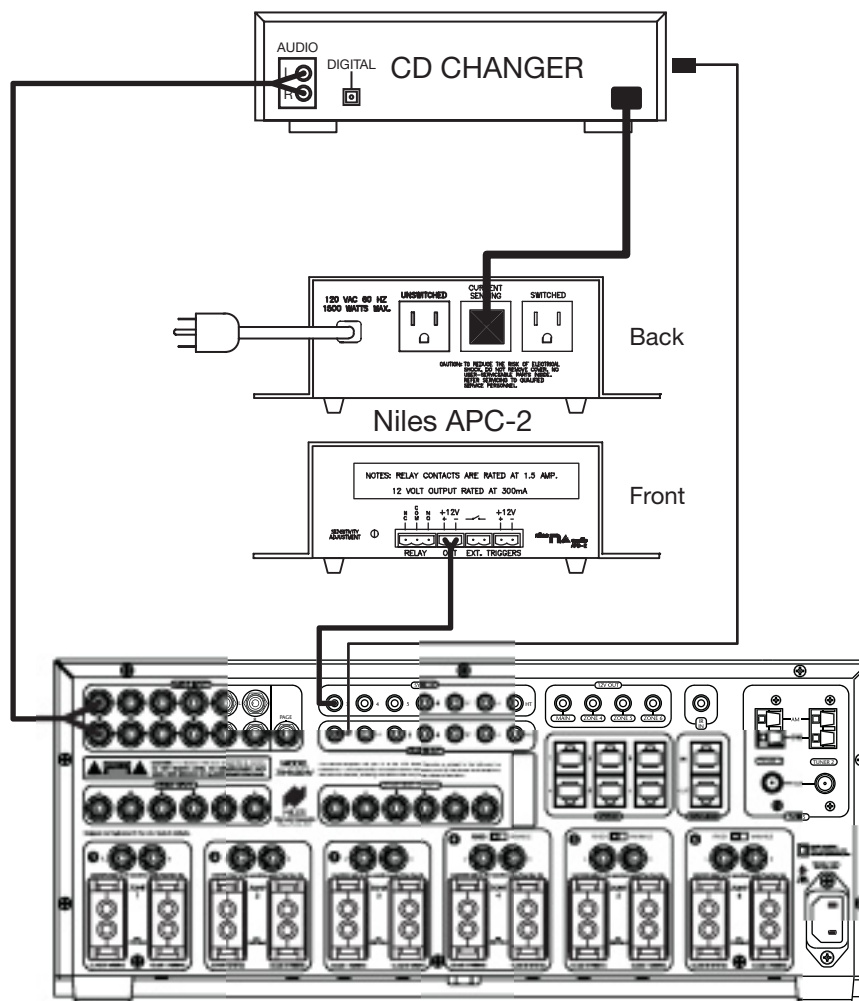


Figure 19

In Figure 19, when a CD changer is turned ON, a Niles APC-2 Current Sensing Switch senses the variation in power consumption and outputs a 12V DC signal. The synchronized CD changer's AC power plug connects to the current-sensing outlet on the APC-2. The APC-2's 12V DC output connects to the ZR-8630AV unit's 12V Sync Input dedicated to the CD changer using a Niles 10' accessory cable with bare wire to mini-plug (FG00724, see Accessories for more details).

The Niles APC-2 requires a minimum change of 30W for reliable current sensing. If the component does not have a 30W change in current draw when turning ON (i.e., DSS receivers and most VCRs and CD players), consider the last method, Light Sensing.

## SOURCE-POWER SYNCHRONIZATION

### Light Sensing

Using a light sensor (LS-1) to synchronize your components is usually your last choice, simply because the other choices are more reliable. The Niles LS-1 Light Sensor can synchronize a component by sensing changes in light. The 12V output of the LS-1 connects to the ZR-8630AV unit's 12V Sync Input dedicated for that component. This connection requires a mini-plug to RCA adapter. (See Connections for more information.)

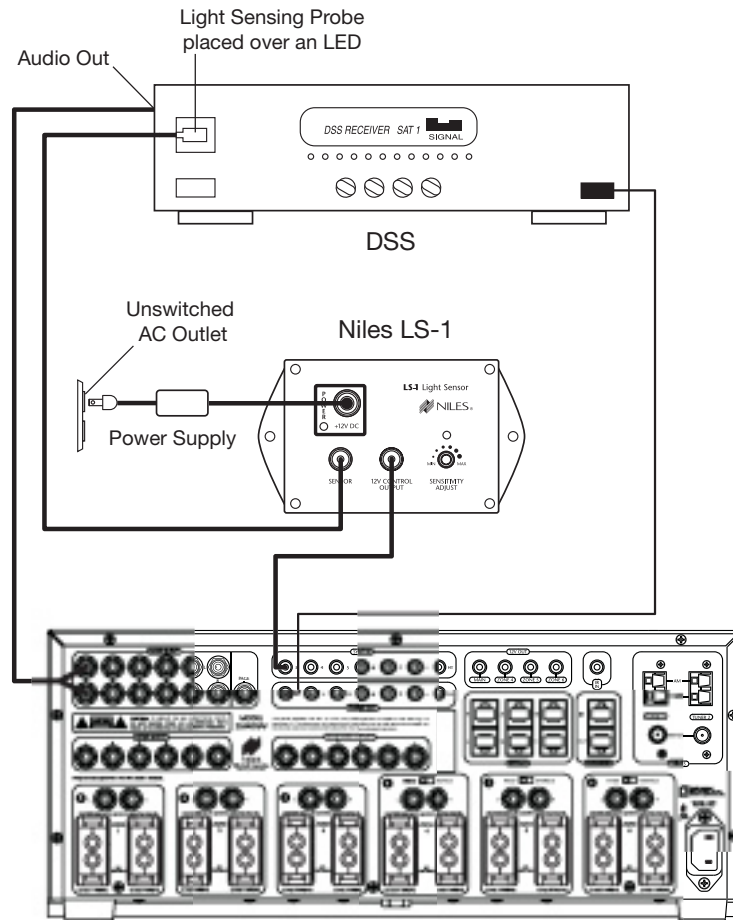


Figure 20

In Figure 20, a Niles LS-1 Light Sensor senses changes in brightness of a DSS's front-panel LED and outputs a 12V DC signal when the LED is brightest. A blocking cover prevents ambient light from falsely triggering the LS-1.

An unused optical digital output located on the rear panel of a digital source component also can provide a light source for sync using the LS-1.

### SOURCE AND HOME THEATER SYNC STATUS

The LEDs in the hidden programming panel display sync status (the presence or absence of a valid sync signal) of source components and the Home Theater associated with the Master ZR-8630AV. These LEDs illuminate only while the ZR-8630AV receives a valid sync signal during normal operation mode. (See table on page 33.) Use these status LEDs during system troubleshooting. If the synchronization is correct, manually turning ON/OFF synchronized source components and the integrated Home Theater will turn ON/OFF the respective component's status LED.



## SOURCE-POWER SYNCHRONIZATION

### LED Sync Status

LED	Source	Red	Green	Yellow
1/2 (Tuner LED)	If Home Theater has sync	X		
3/4	3 has sync	X		
3/4	4 has sync		X	
3/4	3 & 4 have sync			X
5/6	5 has sync	X		
5/6	6 has sync		X	
5/6	5 & 6 have sync			X
7/8	7 has sync	X		
7/8	8 has sync		X	
7/8	7 & 8 have sync			X

Source-power sync ensures that a source component always turns ON when users need it on and that all the components turn OFF when users turn the system off.

#### Source Components that Require Power Synchronization

Source components that use the same IR command for ON and OFF need to be synchronized. The power button for these source components sends the same IR command to turn the source components ON if they are OFF, and to turn them OFF if they are ON. Synchronizing these source components with the ZR-8630AV is necessary so it knows not to send an ON command if the source components already are ON. (If it did, the source components would turn OFF, which is not the desired result.) Conversely, synchronization keeps the ZR-8630AV from issuing a “power” command when the OFF Key is pressed, if the source components are already OFF.

The ZR-8630AV has six Sync Inputs—one for each of the source components. It allows synchronization by means of voltage and video signals. (See Choosing a Synchronization Method on page 30 for more information on how to synchronize components.)

#### Source Components that Do Not Require Synchronization

Two types of components do not require synchronization: those with separate ON and OFF IR commands, and those with “latching power.”

# OPERATIONAL OVERVIEW

## MASTER KEYS/SOURCE BUTTONS

The Master Keys available on the Select™ and Solo™ Master Keypad Modules and the Source Buttons on the hand-held R-8 Remote (Figure 21) provide “one-touch activation” of the ZR-8630AV and source components.

The Master Keys on the Master Keypad Modules are equipped with backlighting LEDs for indicating Zone ON/OFF, Zone Mute, and Zone Input Selection status.

The Source Buttons on the R-8 Remote correspond to the Master Keys on the Select™ Master Keypad Module (Master Key 1 = Tuner 1, Master Key 2 = Tuner 2, Master Key 3 = Source Button 3, Master Key 4 = Source Button 4, etc.).

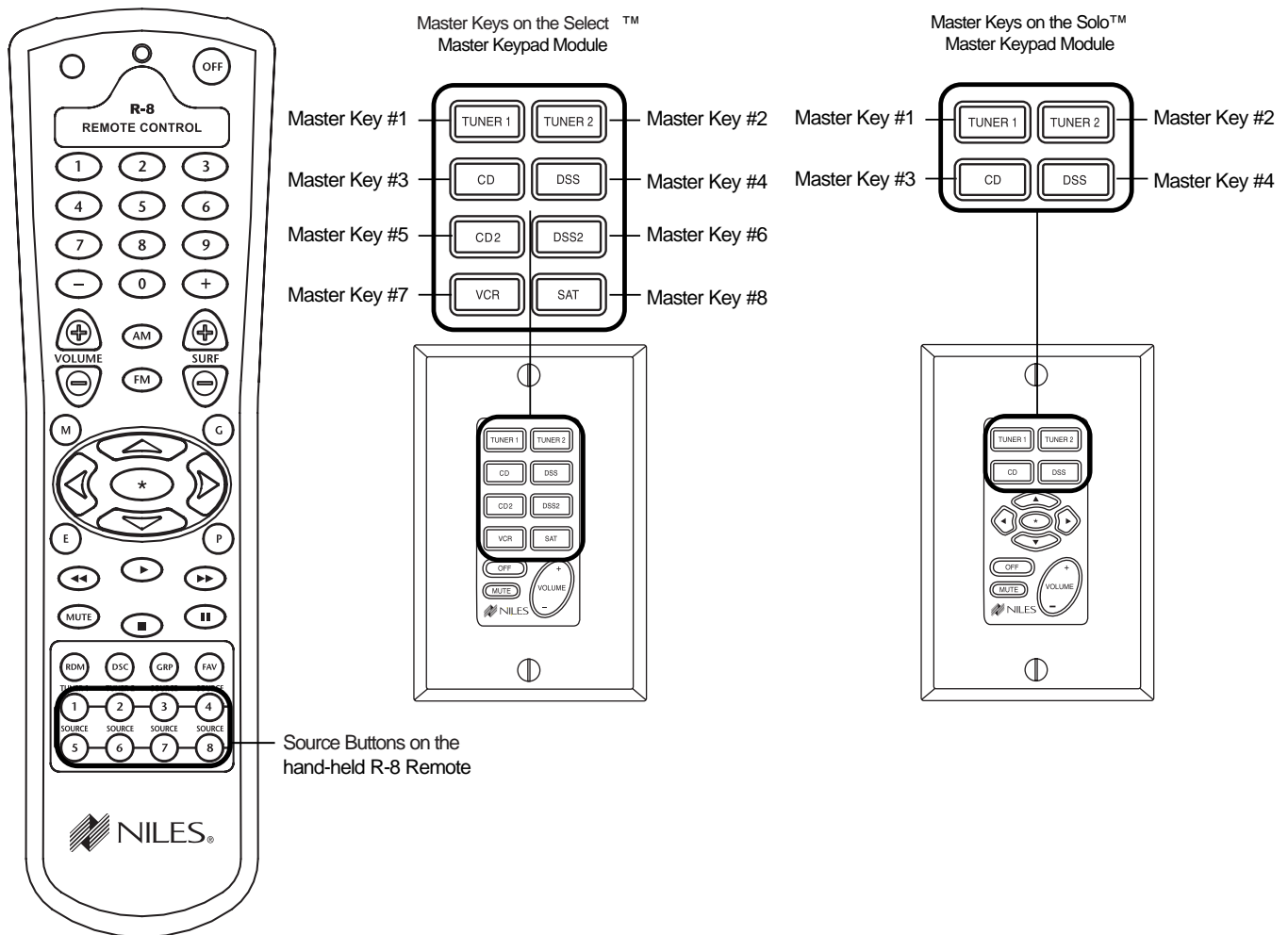


Figure 21

The eight available Master Keys and their corresponding Source Buttons are individually programmable. Once programmed, they operate the system identically in each zone. Master Keys 1 through 4 on the Select™ and Solo™ Master Keypad Modules should be labeled the same in each zone.

## OPERATIONAL OVERVIEW

### Master Key/Source Button Events

When you press a Master Key on a Master Keypad Module or a Source Button on the hand-held R-8 Remote, as many as four events occur.

The first two events are factory-programmed: Event 1 activates the zone in which you are located. Event 2 selects the proper source input corresponding to the Master Key or Source Button you press (1 = Tuner 1, 2 = Tuner 2, 3 = Input 3, 4 = Input 4, etc.).

Two installer-programmable events are available for Master Keys and Source Buttons 3 through 8: Event 3 is the Source ON Event, and Event 4 is the Sequence Event.

Because no power command is required for the internal tuners of the ZR-8630AV, Master Keys 1 and 2 and the Tuner Source Buttons are programmable only with the Sequence Event.

Master Key/ Source Button	Event 1 (Zone ON)	Event 2 (Input)	Event 3 (Source ON)	Event 4 (Sequence)
<b>Master Key 1 or Tuner 1 Source Button</b>	Turns Zone On (Factory Programmed)	Selects Tuner 1 (Factory Programmed)	Not Available	Installer Programmed
<b>Master Key 2 or Tuner 2 Source Button</b>	Turns Zone On (Factory Programmed)	Selects Tuner 2 (Factory Programmed)	Not Available	Installer Programmed
<b>Master Key 3 or Source Button 3</b>	Turns Zone On (Factory Programmed)	Selects Input 3 (Factory Programmed)	Installer Programmed	Installer Programmed
<b>Master Key 4 or Source Button 4</b>	Turns Zone On (Factory Programmed)	Selects Input 4 (Factory Programmed)	Installer Programmed	Installer Programmed
<b>Master Key 5 or Source Button 5</b>	Turns Zone On (Factory Programmed)	Selects Input 5 (Factory Programmed)	Installer Programmed	Installer Programmed
<b>Master Key 6 or Source Button 6</b>	Turns Zone On (Factory Programmed)	Selects Input 6 (Factory Programmed)	Installer Programmed	Installer Programmed
<b>Master Key 7 or Source Button 7</b>	Turns Zone On (Factory Programmed)	Selects Input 7 (Factory Programmed)	Installer Programmed	Installer Programmed
<b>Master Key 8 or Source Button 8</b>	Turns Zone On (Factory Programmed)	Selects Input 8 (Factory Programmed)	Installer Programmed	Installer Programmed

#### Event 1

Pressing a Master Key or a Source Button turns a ZONE ON. Pressing and holding a Master Key/Source Button turns all zones on to that source. (The zone must be enabled with a DIP switch. See Installation Settings for more details.) When a zone is on, the selected Master Key illuminates green.

#### Event 2

Pressing or pressing and holding a Master Key/Source Button selects the proper input programmed for that Master Key/Source Button. The internal tuner 1 is the source for Master Key 1 on the Master Keypad Modules and the Tuner 1 Source Button on the R-8 Remote. The internal tuner 2 is the source for Master Key 2 on the Master Keypad Modules and the Tuner 2 Source Button on the R-8 Remote. Master Keys/Source Buttons 3 through 8 are for the corresponding external audio inputs.

#### Event 3

Pressing a Master Key/Source Button turns ON IR-activated source components (i.e., DSS, VCR). The Source ON event occurs only for Master Keys/Source Buttons 3 through 8. **Power commands for each Master Key/Source Button are programmed individually and occur conditionally, synchronized by the corresponding sync inputs.**

#### Event 4

This event is **executed last**. The sequence typically includes play, group, file, or channel commands for an associated source component. You can program the sequence for Master Keys/Source Buttons 3 through 8 with the IR commands taught to their respective function keys, and with programmed time delays. You can program the sequences for the Tuner Source Keys with the tuners' direct access or preset access commands. (Source-in-Use Indication affects this event. See page 45.)

# OPERATIONAL OVERVIEW

## MASTER KEY/SOURCE BUTTON OPERATION

The Master Key/Source Buttons have two methods for operating the system:

### Single-Zone Operation

A single tap of a Master Key/Source Button in a zone turns that zone ON, and illuminates its Master Key GREEN. A zone turns ON to its last volume setting, unless you program a maximum turn ON volume into the ZR-8630AV. (See Installation Settings for more information.)

### System-Wide Operation

A press and hold of a Master Key/Source Button in any zone turns on all zones set to ALL ON/PAGE enabled. (You can enable or disable this setting individually for each zone on front-panel programming DIP switches.) All zones enabled for ALL ON/PAGE select the source associated with the Master Key/Source Button that you pressed and held, and that same Master Key LED illuminates GREEN on all enabled keypads. You may adjust the ALL ON volume in the ZR-8630AV. (See Installation Settings for more information.)

**Note:** In a system with multiple ZR-8630AV units, selecting a radio station in one zone with a press and hold of the Tuner 1 Master Key (Master Key #1) or the Tuner 2 Master Key (Master Key #2) automatically selects that station in all zones

## OFF KEY/BUTTON

The OFF Key on the Select™ and Solo™ Master Keypad Modules and the OFF Button on the hand-held R-8 Remote provide “one-touch” system deactivation. When you finish listening or watching in a zone, a single press of the OFF Key/Button deactivates the zone.

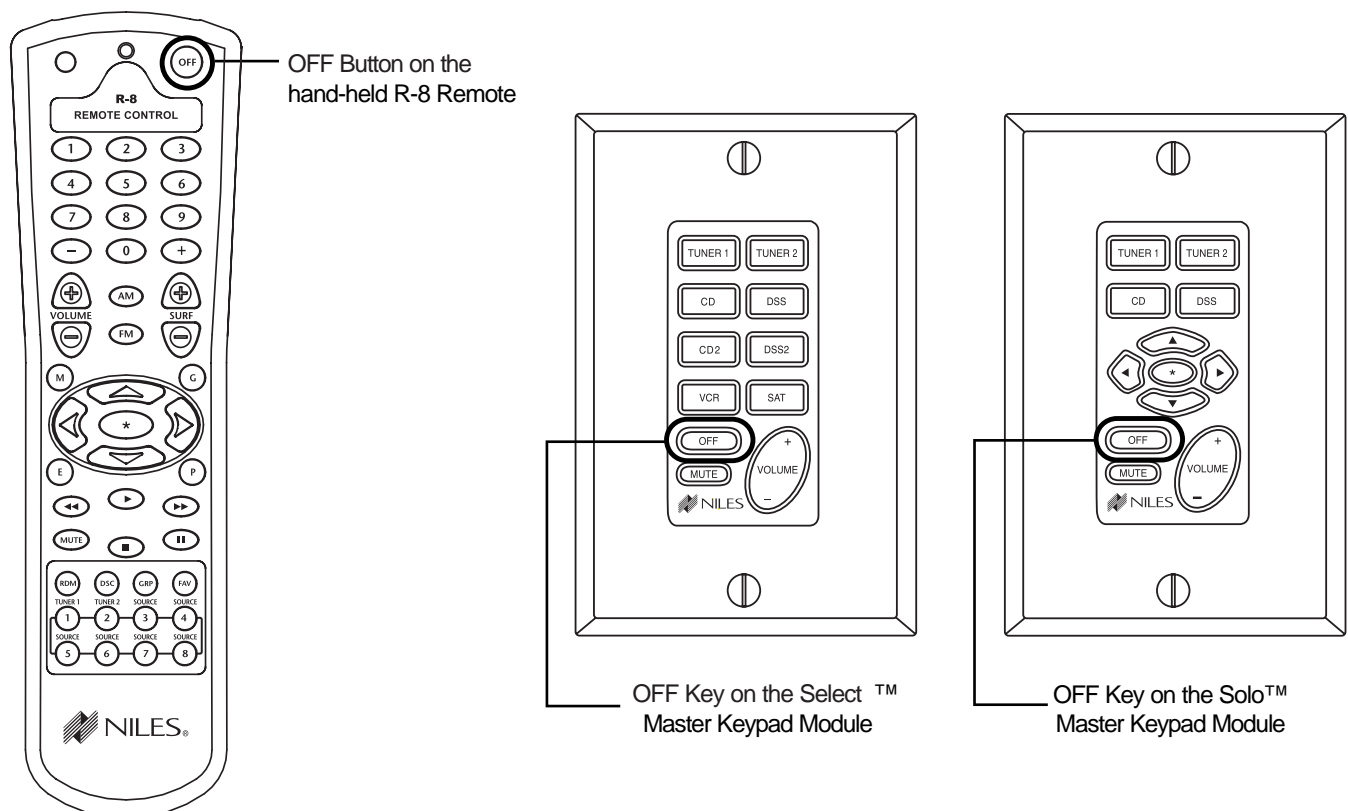


Figure 22

## OPERATIONAL OVERVIEW

### OFF Key Events

Whenever you press the OFF Key/Button, any zone or zones that are on will turn OFF.

In addition, if the zone turning OFF was the last zone ON in the system (including the Home Theater Zone sharing source components), pressing the OFF Key/Button also turns OFF the source components. This event requires no programming. It deactivates the source components by reversing the programming for the Master Key Source ON events.

Master Key/ Source Button	Event 1 (Zone OFF)	Event 2 (Source OFF)
OFF Key	Factory Programmed	Programmed Automatically

The Zone OFF Event is factory programmed. The Source OFF Event is automatically programmed to reverse the programming of the Master Key/Source Buttons that turn the source components ON. **IR commands are issued conditionally based on system and component power synchronization and the ON/OFF status of other zones in the system and the Home Theater.**

### OFF KEY/BUTTON OPERATION

The OFF Key/Button has two methods of operation.

#### Single-Zone OFF

Tap the OFF Key/Button once in a zone that is ON to turn the zone OFF. The Master Key LED that was illuminated turns OFF.

#### System-Wide OFF

Press and hold the OFF Key/Button to turn all zones OFF. All Master Key LEDs in all zones turn OFF.

## OPERATIONAL OVERVIEW

### VOLUME KEYS/BUTTONS

The Volume Keys on the Select™ and Solo™ Master Keypad Modules and the Volume Buttons on the hand-held R-8 Remote adjusts the volume for individual zones.

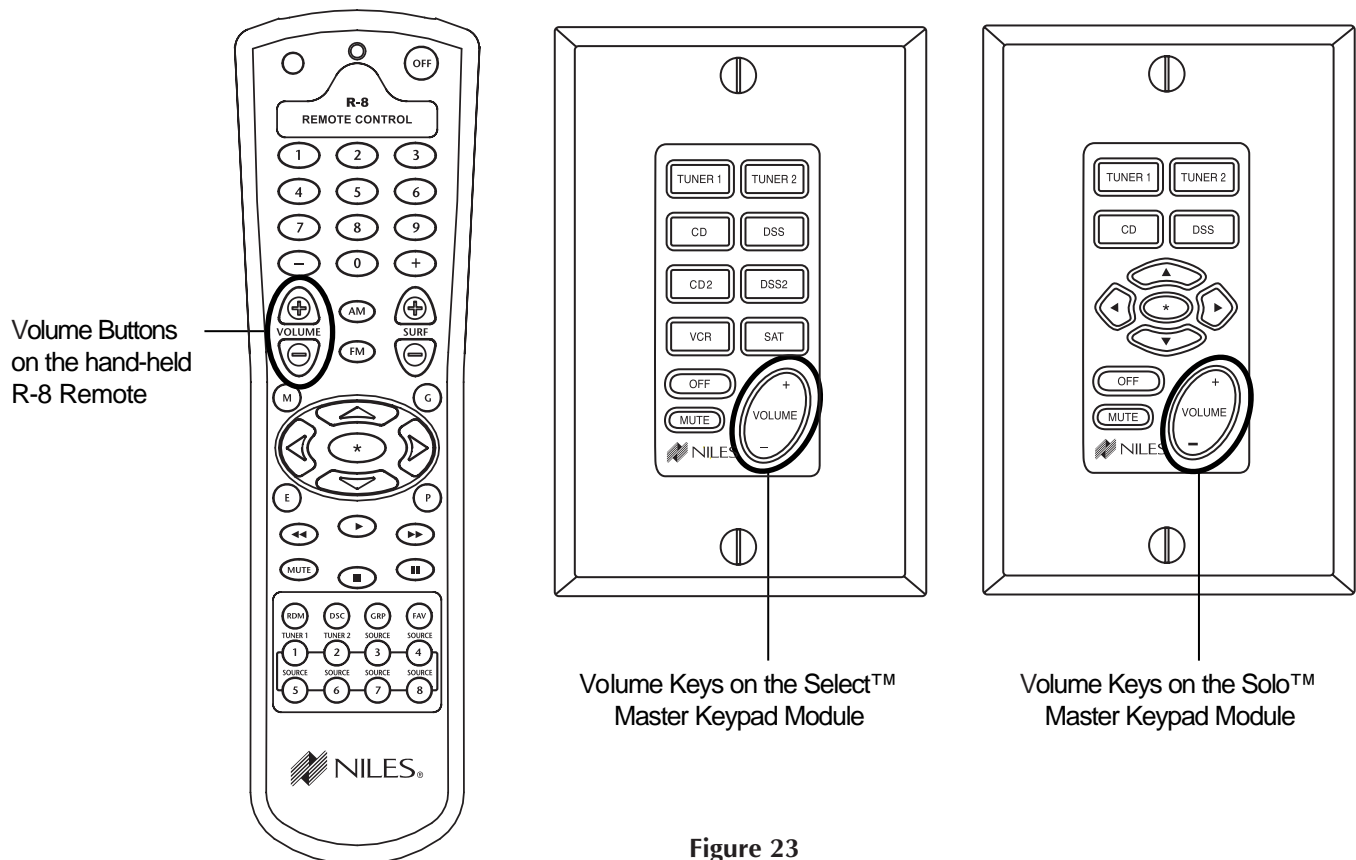


Figure 23

### Volume Keys/Buttons Operation

To raise or lower the speaker output and the preamplifier output for the zone in which you are located, press the Volume + or the Volume - Keys/Buttons (The volume keys/buttons don't affect zone preamplifier outputs set to the fixed output mode. See Installation Settings, page 61.)

## OPERATIONAL OVERVIEW

### MUTE KEY/BUTTON

The Mute Key on the Select™ and Solo™ Master Keypad Modules and the Mute Button on the hand-held R-8 Remote MUTE or UNMUTE the sound in an individual zone.

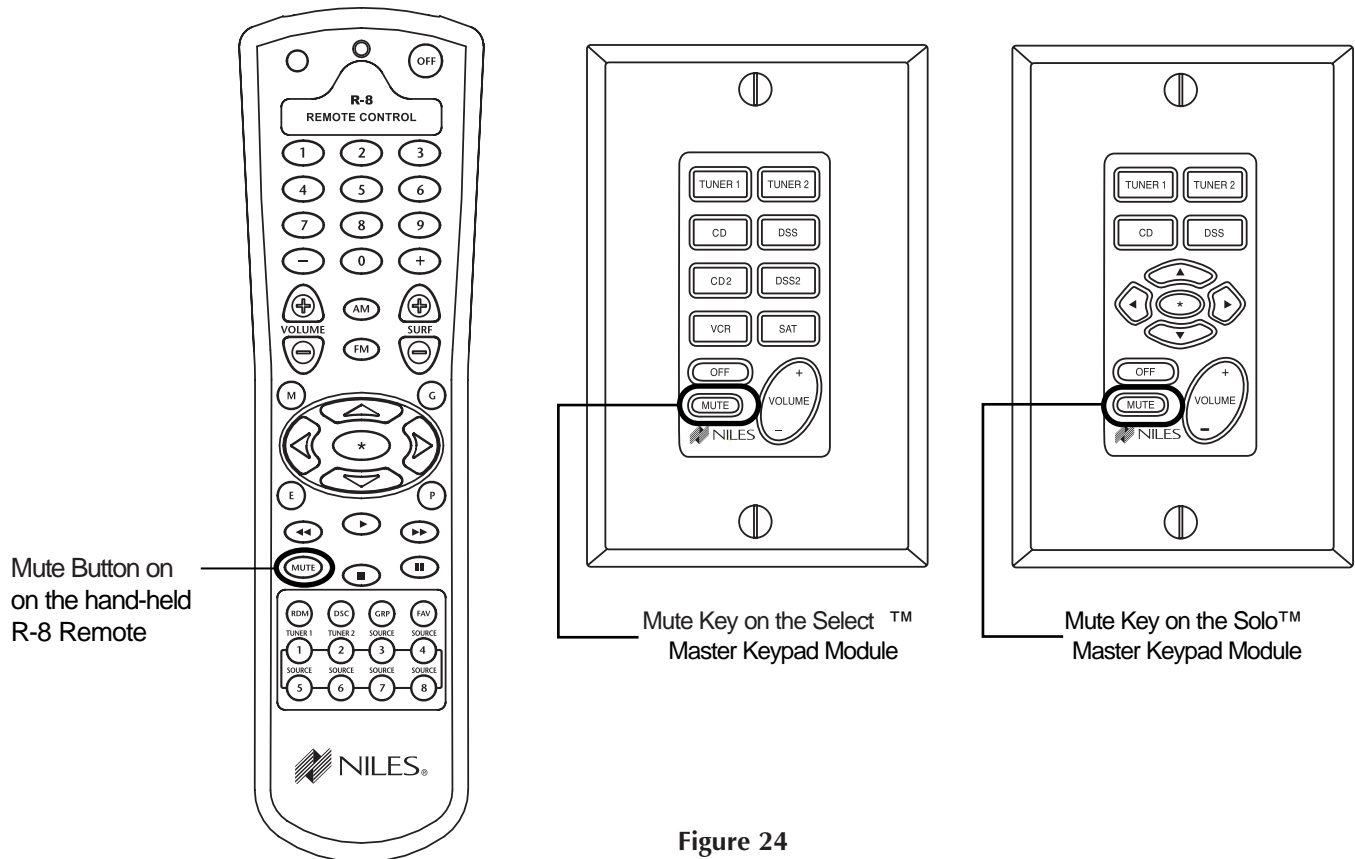


Figure 24

### Mute Key/Button Operation

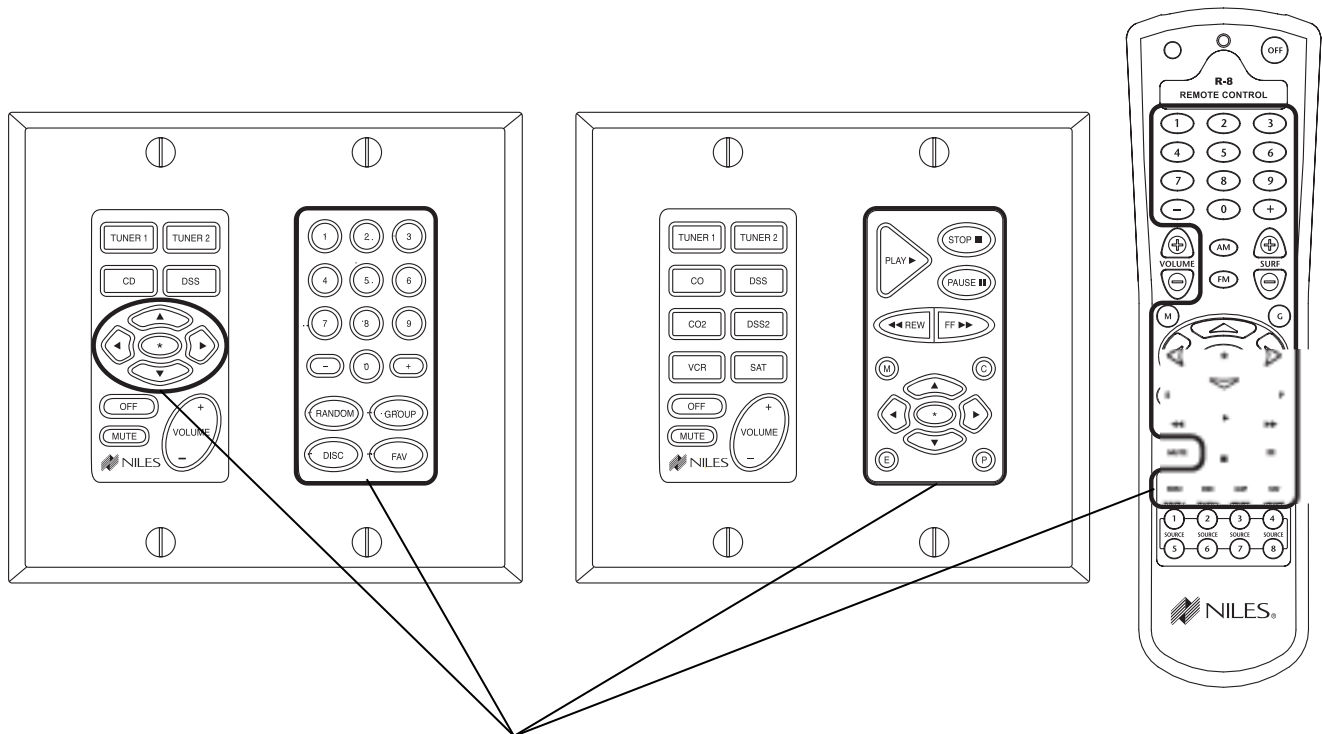
In a zone using the speaker output or the preamplifier output set to variable, pressing the Mute Key/Button mutes and unmutes the sound for that zone only. The ZR-8630AV still considers a MUTED zone to be ON, and does not turn off the source component. The Master Key for the selected source lights GREEN while the zone is ON and unmuted, and RED while the zone is ON and MUTED. If a zone has more than one Master Keypad Module installed using an Expander, all Master Keypads in that zone indicate identical system status (i.e., Zone ON/OFF, Zone Mute, and Zone Input Selection status), and operate the zone in tandem.

**Important Note:** The MUTE command only affects the preamplifier output for a zone set to fixed output mode when one zone is on and either of the tuners is on. (Zones 4, 5, and 6 can be set to fixed output mode.)

## OPERATIONAL OVERVIEW

### FUNCTION KEYS/BUTTONS

The Solo™ Master Keypad Module, the Numeric™ and Transport™ Accessory Keypad Modules, and the hand-held R-8 Remote include various function keys for control of the built-in tuners and the connected source components. Figure 25 illustrates the function keys available for each of the control devices.



Function Keys on the Solo™ Master Keypad Module and the Numeric™ and Transport™ Accessory Modules; and Function Buttons on the hand-held R-8 Remote

Figure 25

### Function Key/Button Operation for Connected Source Components

When you press the Master Key/Source Button for a source component, the ZR-8630AV activates a zone and selects that source component. The individual function keys/buttons in that zone then issue the IR commands that have been programmed for the source component you selected.



# OPERATIONAL OVERVIEW

## Function Key/Button Operation for the Built-in Tuners

The commands for operation of the built-in tuners from the function keys/buttons are pre-programmed. Figure 26 depicts the available commands for the tuners, their function key/button location, and a description of how they control the tuners.

Pre-Programmed Tuner Commands		
Key/Button	Command	
*	AM/FM	Shifts tuning band between AM and FM
Arrow Up	Next Preset	Scrolls the preset stations, 10 AM and 10 FM
Arrow Down	Last Preset	
Arrow Right	Seek Up	Next tunable station is selected in the currently chosen tuning band, AM or FM
Arrow Left	Seek Down	
Surf +	Next Preset	Scrolls the preset stations, 10 AM and 10 FM
Surf -	Last Preset	
AM	AM	Direct access to AM and FM
FM	FM	
1	1	Number commands for accessing stations directly or by preset number
2	2	
3	3	
4	4	
5	5	
6	6	
7	7	
8	8	
9	9	
0	0	
-	Last Preset	Scrolls the preset stations, 10 AM and 10 FM
+	Next Preset	
Fav	Preset Call	Enables number commands to call preset stations

Figure 26

When you select a Tuner Master Key/Source Button in a zone, the pre-programmed tuner commands become available from their designated Function Keys/Buttons. You can access radio stations from pre-set memory, or directly.

# OPERATIONAL OVERVIEW

## FRONT-PANEL TUNER OPERATION

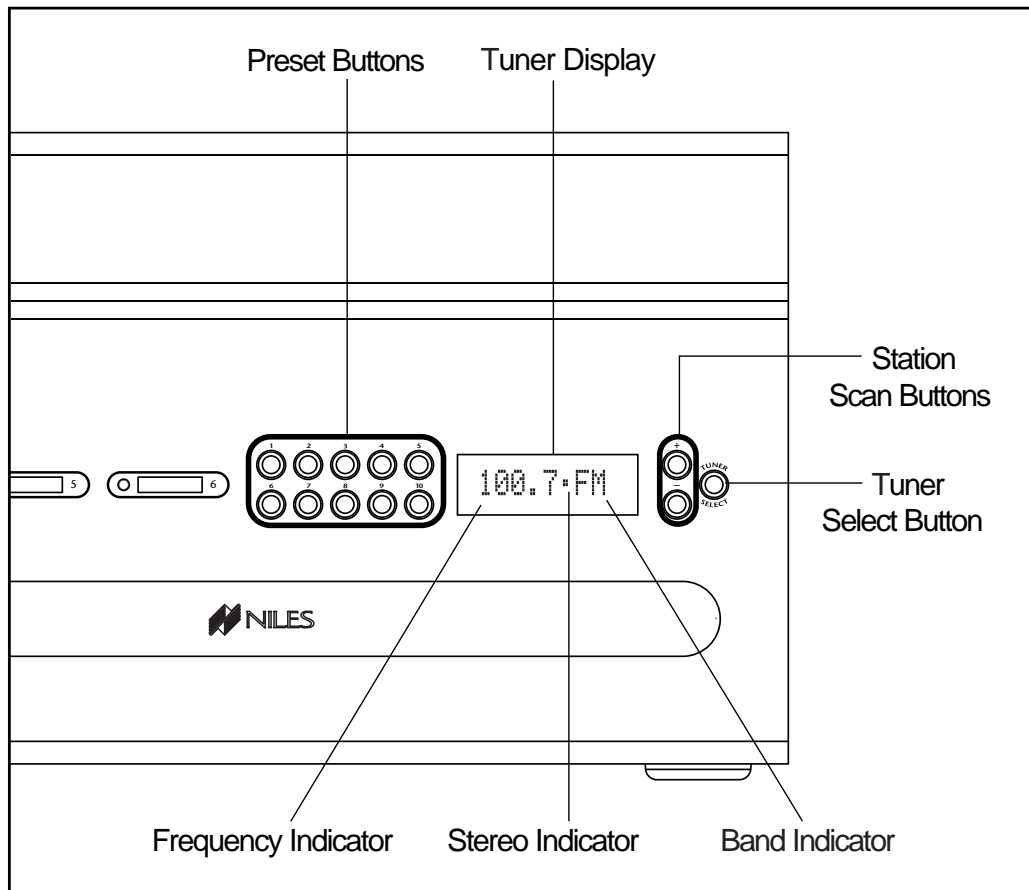


Figure 27

### Tuner Display

When you press the Tuner Select button, the green Tuner Window displays the selected tuner and band (FM 1, AM 1, FM 2, or AM 2). After three seconds, the Tuner Window displays the station frequency and band (AM or FM). If the tuner is receiving a stereo signal, the Stereo Indicator appears. To view tuner/band information while the frequency indicator display is on, tap the Tuner Select button once to revert to the tuner and band display.

### Tuner Select Button

Use the Tuner Select button to cycle through the two tuners' AM and FM bands in the following sequence: FM 1, AM 1, FM 2, AM 2, and return to FM 1.

### Station Scan Buttons

A single tap of the Station Scan buttons changes the tuner by one frequency step. Keep tapping the Station Scan buttons to search the selected tuner and band for the next tunable station (+ searches upward in frequency, - searches downward in frequency).

### Preset Buttons

The Preset buttons are used to store preset stations in the memory. (Refer to Tuner Preset Programming Steps for more details.) Also, they call up memorized preset stations with a single tap (supports 10 presets for the AM band and 10 for the FM band on each tuner, for a total of 40 presets).

## OPERATIONAL OVERVIEW

### IDENTICAL SOURCE COMPONENTS

The ZR-8630AV provides individual control of identical source components (i.e., two DSS receivers of the same brand and model) by routing the individual source component IR commands with which it has been programmed to specific Flasher Outputs. These programmed IR commands go to the individual Flasher Outputs based on the source components for which they were programmed. The table below designates where IR commands go when a zone is selected to one of the six source components.

		FLASHER OUTPUTS					
Selected Source	Flasher 3	Flasher 4	Flasher 5	Flasher 6	Flasher 7	Flasher 8	Flasher ALL
Source 3	X						X
Source 4		X					X
Source 5			X				X
Source 6				X			X
Source 7					X		X
Source 8						X	X

**Important Note:** Operation of an identical source component is not possible using its actual IR commands in a zone installed with an IR Sensor (i.e., using the source component's original remote control or a learning remote control programmed with these IR commands). Identical source components can be operated from a zone with a Select™ IR or Solo™ IR, or an external IR Sensor using Niles hand-held R-8 Remote IR commands. (See Programming Overview, page 53, for more information.)

### SHARED SOURCE COMPONENTS

Source components (i.e., DVD player, CD changer, DSS receiver) used with a ZR-8630AV, can be “shared” with multiple ZR-8630AV units and/or a Home Theater system. (Refer to System Configurations 2, 3, 4, and 5 for more details.) The ZR-8630AV provides coordinated control of these “shared” source components from all zones of all ZR-8630AV units and the Home Theater.

A source component in a ZR-8630AV Audio/Video MultiZone System is considered “shared” when its audio or video signal connect to more than one ZR-8630AV, or to a ZR-8630AV and a Home Theater system. (Refer to System Configuration 2 and System Configuration 3 for more details.)

### OPERATING A SYSTEM WITH MULTIPLE ZR-8630AV UNITS

Operating a system with multiple ZR-8630AV units is the same as operating a system with only one ZR-8630AV. Select™ or Solo™ Master Keypad Modules in each zone independently operate the zone to which they are dedicated (i.e., zone ON/OFF, Volume Up/Down, Mute). When a user in a zone from any ZR-8630AV presses a key/button, the programmed ZR-8630AV issues the IR commands required for the shared source components (i.e., Power ON/OFF, Play, Stop, and Channel Up). See the Programming Section of this manual for specific details on programming.

**Important Note:** The built-in AM/FM tuners in each of the ZR-8630AV units are not “sharable” between each other or with the Home Theater. The six zones provided by each of the ZR-8630AV units listen to and control their own built-in AM/FM tuners. (See the Programming section of this manual for more details on tuner programming.)

# OPERATIONAL OVERVIEW

## OPERATING A SYSTEM INTEGRATED WITH A HOME THEATER

### Operation from the Stereo Zones Provided by the ZR-8630AV

User operation from the zones provided by ZR-8630AV units are not affected when integrating a Home Theater to share source components. (See System Configurations 4 and 5.) Select™ and Solo™ Master Keypad Modules in each zone independently operate the zone to which they are dedicated (i.e., Zone ON/OFF, Volume Up/Down, Mute). When a user in a zone from any ZR-8630AV presses a key/button, the programmed ZR-8630AV issues the IR commands required for the shared source components (i.e., Power ON/OFF, Play, Stop, and Channel Up). See the Programming Section of this manual for specific details on programming.

### Operation from the Home Theater Zone

A Home Theater can be integrated to share source components with a ZR-8630AV using one of three methods. How the Home Theater will operate depends on which method is chosen. The three methods of integration are listed below, along with a description of the Home Theater operation they provide.

#### **Method 1. Integrated Home Theater using 12V Home Theater Sync and IR Repeating**

The Home Theater IR Remote (programmed with the actual IR commands of the shared source components) sends IR commands to the shared source components through the IR Input on the rear panel of the ZR-8630AV. This gives control of the shared source components to users in the Home Theater. All IR commands for shared source components pass through to all seven of the Flasher Outputs on the rear panel of the ZR-8630AV. Only discrete power ON and transport commands for the shared source components should be issued.

**Important Note:** Because all of the actual IR commands for shared components pass through to all seven of the Flasher Outputs simultaneously, this method cannot operate identical source components individually. Also, when using this method, reliable activation of shared source components that use a single IR command for power ON/OFF is not possible. (Refer to Method 2 for operating identical shared source components and components with a single IR command for power ON/OFF.)

When the Home Theater turns ON, it provides a 12V Status signal connected to the Home Theater Sync Input on the rear panel of the ZR-8630AV. This provides the ON/OFF status of the Home Theater to the ZR-8630AV.

The moment a valid Home Theater Sync signal is present at the ZR-8630AV, the ZR-8630AV unit's 12V control output sends a turn-on trigger for a voltage-triggered AC power strip (i.e., Niles AC-3), activating latching source components.

When the Home Theater is turned OFF, the ZR-8630AV checks itself and any other ZR-8630AV units in the system to see if any zones are still ON. If all zones are OFF, the 12V control output shuts OFF, turning OFF the latching source components, and issues power OFF IR commands for turning OFF the IR-controlled shared source components.

#### **Method 2. Integrated Home Theater using 12V Home Theater Sync and Niles R-8 Commands**

The Home Theater IR Remote (programmed with the Niles R-8 IR commands) sends IR commands to the ZR-8630AV through the IR Input on the rear panel. This gives control of the shared source components to users in the Home Theater.

All of the actual IR commands for shared source components are programmed into the ZR-8630AV. When it receives a Niles IR command, the ZR-8630AV sends corresponding programmed-source IR commands to the Flasher Output dedicated to the shared source component that is selected (i.e., Source 3 = Flasher 3, Source 4 = Flasher 4, etc.). This method can operate identical source components individually.

**Important Note:** Shared source components that are unique in the system can have their actual IR commands programmed into the Home Theater remote and issued for simple IR repeating with this method.

When the Home Theater turns ON, it provides a 12V Status signal that connects to the Home Theater Sync Input on the rear panel of the ZR-8630AV. This 12V Status signal provides the ON/OFF status of the Home Theater to the ZR-8630AV.

## OPERATIONAL OVERVIEW

The moment a valid Home Theater Sync signal is present at the ZR-8630AV, the ZR-8630AV unit's 12V control output sends a turn-on trigger for a voltage-triggered AC power strip (i.e., Niles AC-3), activating latching source components.

When the Home Theater is turned OFF, the ZR-8630AV checks itself and any other ZR-8630AV units in the system to see if any zones are still ON. If all zones are OFF, the 12V control output shuts OFF, turning OFF the latching source components, and issues power OFF IR commands for turning OFF the IR-controlled shared source components.

### **Method 3. Integrated Home Theater without 12V Home Theater Sync and using Niles R-8 Commands**

The Home Theater IR Remote (programmed with the Niles R-8 IR commands) sends IR commands to the ZR-8630AV through the IR Input on the rear panel. This gives control of the shared source components to users in the Home Theater.

All the actual IR commands for shared source components are programmed into the ZR-8630AV. When it receives a Niles IR command, the ZR-8630AV sends the corresponding programmed source IR commands to the Flasher Output dedicated to the shared source component that is selected (i.e., Source 3 = Flasher 3, Source 4 = Flasher 4, etc.). This method operates identical source components individually.

**Important Note:** Shared source components that are unique in the system may have their actual IR commands programmed into the Home Theater remote and issued for simple IR repeating using this method.

**When the Home Theater is turned OFF, the Home Theater Remote sends a Niles OFF command to the ZR-8630AV.** The ZR-8630AV then checks all zones for all ZR-8630AV units in the system. If all zones are OFF, the 12V Control Output shuts OFF, turning OFF the latching source components. Also, if the Source Sync status of the shared source components requires a power OFF IR command, the ZR-8630AV issues one.

### **SYSTEM-BUSY INDICATION**

The ZR-8630AV has a built-in system-busy indication mode that is displayed on the Master Key LEDs of the Select™ and Solo™ Master Keypad Modules. If the ZR-8630AV receives simultaneous commands from two different users, each located in a separate zone, the Master Key LED for the user who does not get the expected response will blink quickly RED three times, alerting that user to reissue the command.

**Important Note:** The system also indicates that it is busy while it executes IR commands and delays in a Master Key sequence.

### **SOURCE-IN-USE INDICATION**

The ZR-8630AV has a built-in source-in-use indication mode that is displayed on the Master Key LEDs of the Select™ IR and Solo™ IR Master Keypad Modules. When a source being used in one zone is selected by a user in another zone, the system:

- Will select the source.
- *Will not* execute the Master Key Sequence.
- Will alert the second user that the source already is in use. The Master Key LED for that source will blink quickly YELLOW five times before lighting GREEN.

Any subsequent press will operate the system normally.

**Important Note:** Select™ and Solo™ Master Keypad Modules without IR do not support the source-in-use indication. If you have *any* of these keypads in your system, we recommend that you turn this feature OFF. Master and Slave ZR-8630AV units in a system all must have the same source-in-use setting. For details, see page 62.

### **PAGING INDICATION**

The ZR-8630AV has a built-in paging-indication mode that is displayed on a Master Key LED of the Select™ and Solo™ Master Keypad Modules. If the ZR-8630AV sends a page to a zone, the Master Key LED in that zone will blink slowly GREEN. When the page ends, the Master Key LED resumes its last state (ON or OFF).

**Important Note:** Paging takes priority over all system functions until the page ends.

# INSTALLATION

## PLACEMENT

Place the ZR-8630AV on a flat, level surface such as a table or shelf, with its weight equally distributed on each of its four feet. Placing the weight of the amplifier on the rear or front panel for even an instant will result in damage to the amplifier's connectors and controls.

Like any high-fidelity component, the ZR-8630AV will last much longer if it has adequate ventilation for proper cooling. When you install the ZR-8630AV in a cabinet, either open the rear of the cabinet to admit fresh air for proper cooling (see Figure 28), or install two small "boxer fans" to provide continuous airflow in and out of the cabinet (see Figure 29). Place the ZR-8630AV so it has at least seven inches (18 centimeters) of free air space above it. If the amplifier is on a carpeted surface, place a board under its feet. Do not block the ventilation holes on the top and bottom of the ZR-8630AV.

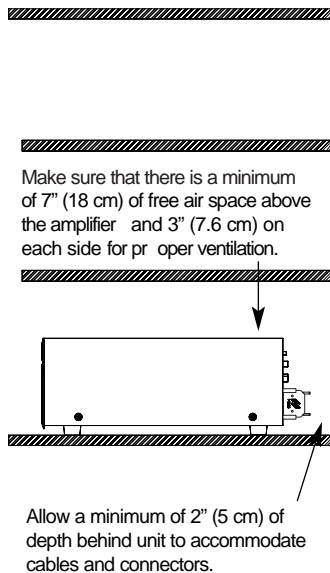
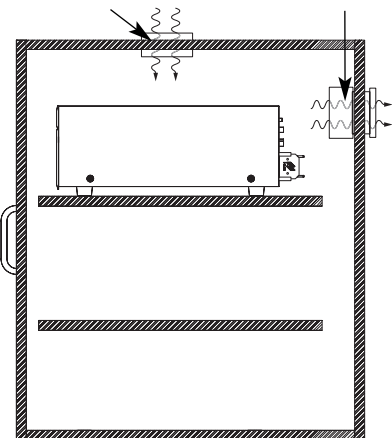


Figure 28

**CAUTION!** When using low-impedance speaker loads (less than 8 ohms Nominal) refer to Figure 29 for proper placement.

Boxer Fan (55 CFM/1.6 m<sup>3</sup>M) directly centered 7" (18 cm) on top of the ZR-8630AV.

Boxer Fan (55 CFM/1.6 m<sup>3</sup>M) directly centered 2" (5 cm) behind the ZR-8630AV.



If the cabinet rear is not open to fresh air or if you're using low-impedance loads, install two "boxer fans" to provide continuous air flow into and out of the cabinet.

Figure 29

# CONNECTIONS

## CONNECTING SPEAKER WIRE TO THE NILES NO-STRIP CONNECTOR

The ZR-8630AV features an award-winning, patented no-strip speaker-wire connector. Follow the steps below to connect the speaker wires to the connector and the connector to the ZR-8630AV.

1. Separate the speaker wire so at least two inches (five centimeters) of each conductor is free.
2. Open the no-strip connector by applying pressure to the red and black levers until you hear an audible "click."
3. Insert the negative (-) unstripped wire fully into the speaker-wire hole next to the BLACK lever and the positive (+) unstripped wire into the speaker-wire hole next to the RED lever. Squeeze the RED and BLACK levers until you hear an audible "click," indicating that the connector has locked onto the wire. (See Figure 30-A.)
4. Insert the no-strip connector into the corresponding zoned speaker-output socket on the rear panel of the ZR-8630AV. Push it down until it locks in place. The connector fits the socket in only one position. If the terminal does not insert completely, reverse the connector 180 degrees and re-insert. (See Figure 30-B.)

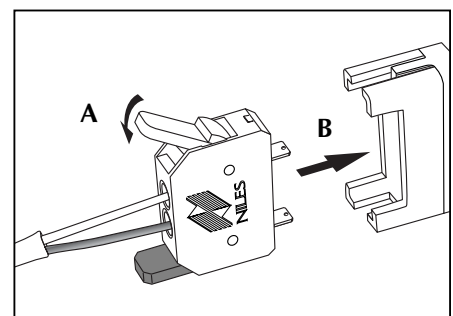


Figure 30

# CONNECTIONS

## TERMINATING FOUR-PAIR TWISTED CABLE

The Select™ and Solo™ Master Keypad Modules, the Expander, and the ZR-8630AV unit's system-expansion connections require a four-pair twisted cable with a one-to-one wiring configuration. To maintain consistency throughout all IntelliPad® Ci installations, we recommend the color-coding pattern described in Figure 31, but you may adopt a different color-coding pattern if you use it consistently throughout the system. **IMPORTANT:** use VW-1 rated wire for connection to KEYPADS and 12V OUT terminals.

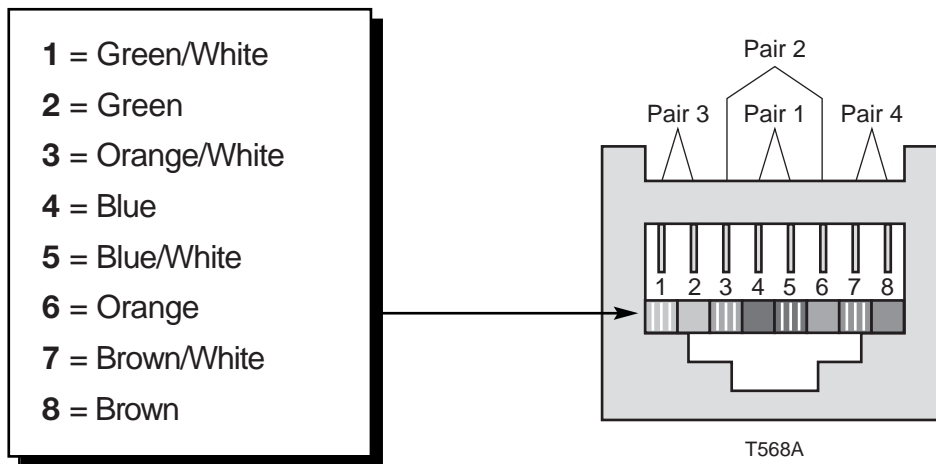


Figure 31

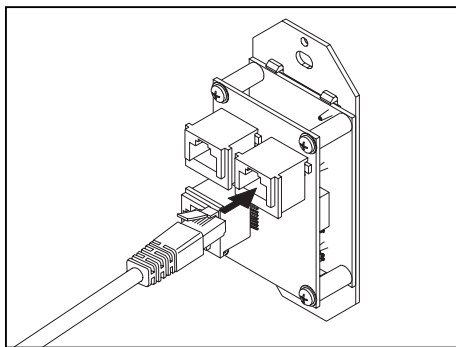


Figure 32

## CONNECTING THE MASTER KEYPADS TO THE HOME RUN OF FOUR-PAIR TWISTED CABLE

Terminate the home run of four-pair twisted cable with a male RJ-45 connector. Plug it into the rear-panel SYSTEM jack on the Select™, Select™ IR, Solo™, or Solo™ IR Master Keypad Module (see Figure 32).

## CONNECTING ACCESSORY KEYPADS

Jumper cables (included) mate each Master Keypad Module with an optional Accessory Keypad Module. (See Figure 33.) The Select™ Master Keypad Module mates with both accessory modules; the Solo™ mates only with the Numeric™.

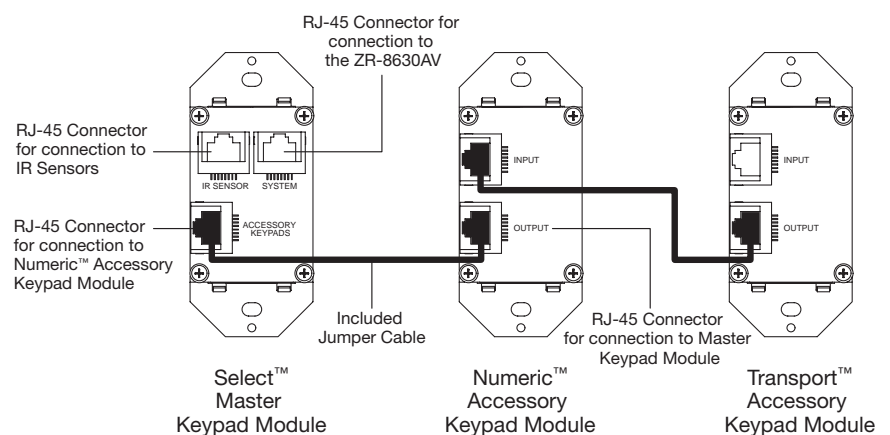


Figure 33

# CONNECTIONS

## CONNECTING IR SENSORS

You can connect an IR sensor to a Select™, Select™ IR, Solo™, or Solo™ IR Master Keypad Module in one of two ways: directly with a four-pair twisted cable (see Figures 34 and 35), or with a three-wire to RJ-45 adapter (FG00852) available from Niles for IR sensors installed with two-conductor shielded cable. (See Figure 36 and the Accessories Section of this manual.) Use VW-1 rated wire.

### Connecting a Sensor using Four-Pair Twisted Cable

In Figure 34, one end of the four-pair twisted cable connects with bare wire to the IR sensor. The other end terminates with a male RJ-45 connector and plugs into the Select™ or Solo™ Master Keypad Module. Figure 34 shows the correct wires to use for such connections.

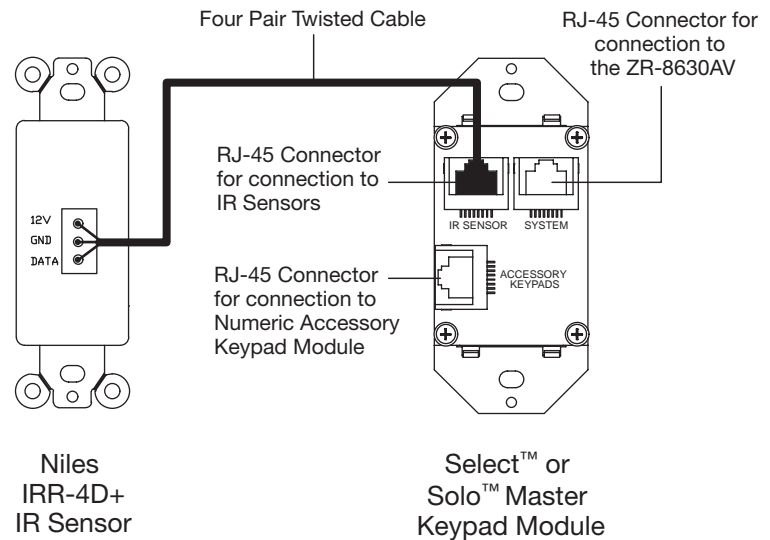


Figure 34

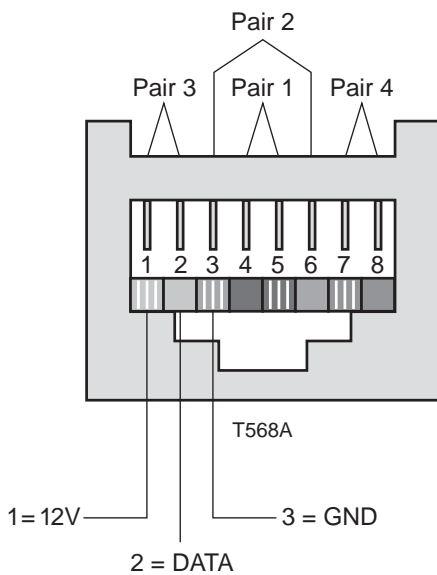


Figure 35

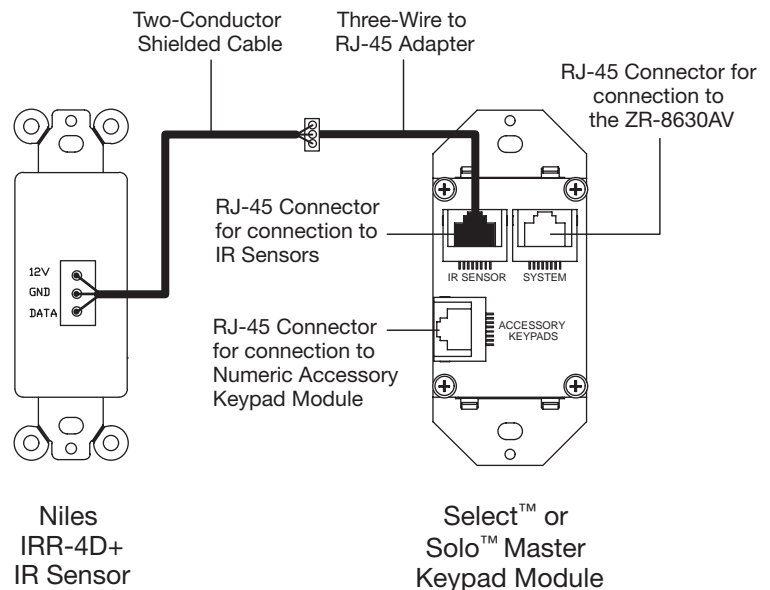


Figure 36

### Connecting a Sensor Installed with Two-Conductor Shielded Cable

An IR sensor installed with two-conductor shielded cable requires the Niles three-wire to RJ-45 adapter (FG00852, see Accessories) for proper connection to a Select™ or Solo™ Master Keypad Module (see Figure 36). The IR sensor connects to the two-conductor shielded cable with bare-wire, screwdown terminals. (Refer to the IR Sensors Installation Guide for more information). The two-conductor shielded cable then connects to the adapter's bare-wire, screwdown terminal, matching 12V, GND, and Data respectively.



# CONNECTIONS

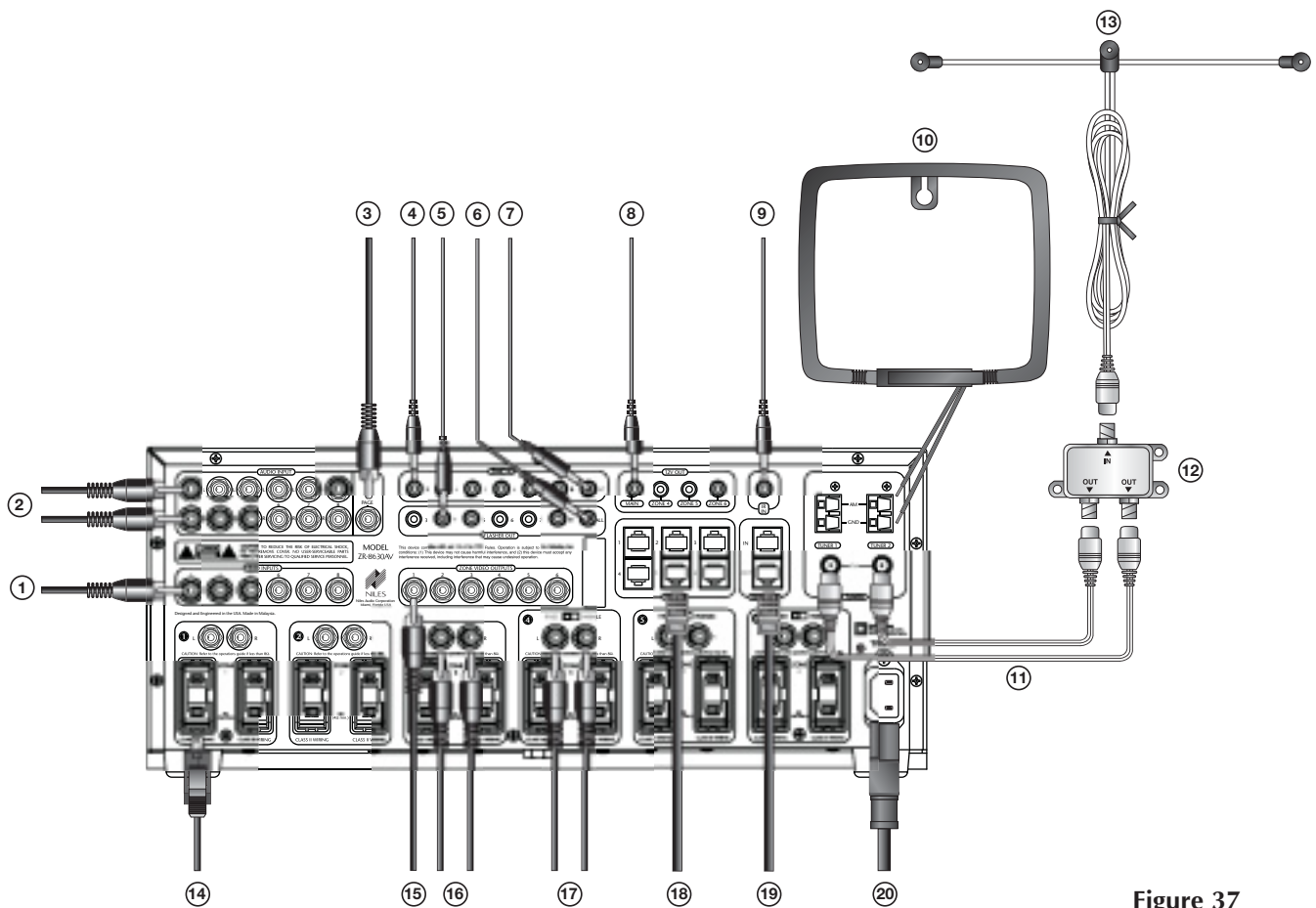


Figure 37

## SOURCE-COMPONENT AUDIO/VIDEO SIGNALS AND VIDEO SYNCHRONIZATION

### ① Video Output from Source Components to the ZR-8630AV

Connect six external composite video sources with male-to-male RCA video cables. This connection enables the ZR-8630AV to know a component's ON/OFF status by the presence/absence of a video signal.

### ② Audio Output from Source Components to the ZR-8630AV

Connect the six external audio sources with male-to-male RCA audio cables.

## TELEPHONE PAGING

### ③ Paging Output from Telephone System to the ZR-8630AV Page Input

Connect the paging output of a telephone system to the ZR-8630AV with a male-to-male RCA audio cable.

## SOURCE-COMPONENT POWER SYNCHRONIZATION SIGNALS

### ④ Separate 12V Synchronization from a Source Component to a ZR-8630AV Sync Input

When you obtain a 12V sync signal from a source component (refer to the Source Power Synchronization section of this manual for more information), a Niles Accessory Cable (FG00724) provides proper connection to any of the six Source Sync Inputs.

## IR FLASHERS

### ⑤ Low-Output Flasher to the Flasher Outputs

Connect the mini-plug end of a Niles Low-Output MicroFlasher™, Model IRC-2P (FG00726), into the Flasher Outputs 3-8. Peel back the tape to attach the Micro-Flasher portion of the IRC-2P directly over the IR sensor of the corresponding source component (Source 3 for Flasher 3, etc.).

# CONNECTIONS

## ⑥ High-Output Flasher to the Flasher Outputs

Connect the mini-plug end of a Niles High-Output Flasher, Model IRC-1P (FG00932), to the Flasher Output labeled ALL. Strategically position the IRC-1P to provide IR transmission to all source components. It adheres with a Velcro mounting system (included).

## SOURCE-COMPONENT HOME THEATER SYNCHRONIZATION SIGNALS

### ⑦ 12V Home Theater Sync to Home Theater Sync Input

Connect the 12V Home Theater sync signal to the Home Theater sync input with a mini-plug.

## 12V CONTROL SIGNALS

### ⑧ 12V Control Outputs to Voltage-Triggered Devices

The 12V control outputs, Main, and Zones 4, 5, and 6 connect to the trigger input of a voltage-activated device (i.e., Niles AC-3) with the mini-plug end of a Niles Accessory Cable (FG00724).

## HOME THEATER CONTROL SYSTEM

### ⑨ IR Output from a Home Theater Control System to the IR Input

Connect a Home Theater Control System to the IR Input of the ZR-8630AV with the mini-plug end of a Niles Accessory Cable (FG00724).

## AM/FM ANTENNAS

### ⑩ AM Loop Antennas

Connect the bare-wire ends of the AM Loop Antennas (included) to the spring-loaded AM and GND terminals on the ZR-8630AV. Then position and mount the antennas for proper reception.

### ⑪ Coaxial Cables to FM Antenna Assembly

Connect the F-connectors on the two male-to-male coaxial cables (included) to the two female coaxial F-connectors on the ZR-8630AV, and to the signal splitter's two female coaxial F-connectors (labeled OUT).

### ⑫ Signal Splitter

The signal splitter divides the signal from the FM Dipole Antenna to supply both FM tuners in the ZR-8630AV.

### ⑬ FM Dipole Antenna

Connect the male coaxial F-connector of the FM Dipole Antenna (included) to the signal splitter's single female coaxial F-connector (labeled IN). Then position and mount the antenna for proper reception.

## SPEAKERS

### ⑭ Zones 1-6

Use Niles no-strip connectors to attach wires from the ZR-8630AV to the speakers in the listening zones.

### ⑮ Zone Video Outputs

Six RCA jacks provide zoned output connections for TVs and video displays.

## PREAMPLIFIER ZONE OUTPUTS

### ⑯ Zones 1-6 (4-6 set to Variable Mode)

For more power in a zone, connect Individual Zone Preamplifier Outputs 1-6 to an external amplifier with male-to-male RCA audio cables. (See System Configurations 8 and 9 for more details.)

### ⑰ Zones 4-6 Set to Fixed Mode

For more rooms/power in a zone, connect Individual Zone Preamplifier Outputs 4-6 (set to fixed output mode) to an external amplifier with male-to-male RCA audio cables. (See Configuration 10 for more details.)

## KEYPAD MODULES

### ⑱ Keypads to Keypad Inputs for Zones 1-6

Connect the keypads to the zoned keypad inputs with four-pair twisted cable terminated with male RJ-45 plugs. (See page 47, Terminating Four-Pair Twisted Cable, for more information.)

## SYSTEM EXPANSION

### ⑲ System Expansion Input to System Expansion Output

Connect multiple ZR-8630AV units with four-pair twisted cable, terminated with male RJ-45 plugs, using the system-expansion input and output terminals. Make connections from the input of one ZR-8630AV to the output of another, and so on. (See page 47, Terminating Four-Pair Twisted Cable, for more information.)

## AC POWER

### ⑳ Removable AC Power Cord

Connect the removable AC power cord (included with the ZR-8630AV) to the power-cord socket and to an AC power outlet.

# CONNECTIONS

## CONNECTING AN IR SENSOR FOR LOCAL SYSTEM CONTROL

IR sensors installed in zones for hand-held IR remote control of the ZR-8630AV and its source components also can control local components (i.e., a TV, DSS, DVD, and a surround-sound system located in the master bedroom zone as shown in figure 38).

Connect the IR sensor normally to the Master Keypad Module to control the ZR-8630AV and its source components. In addition, connect the IR sensor to a local IR repeating system (DATA and GND connections only) to control local components.

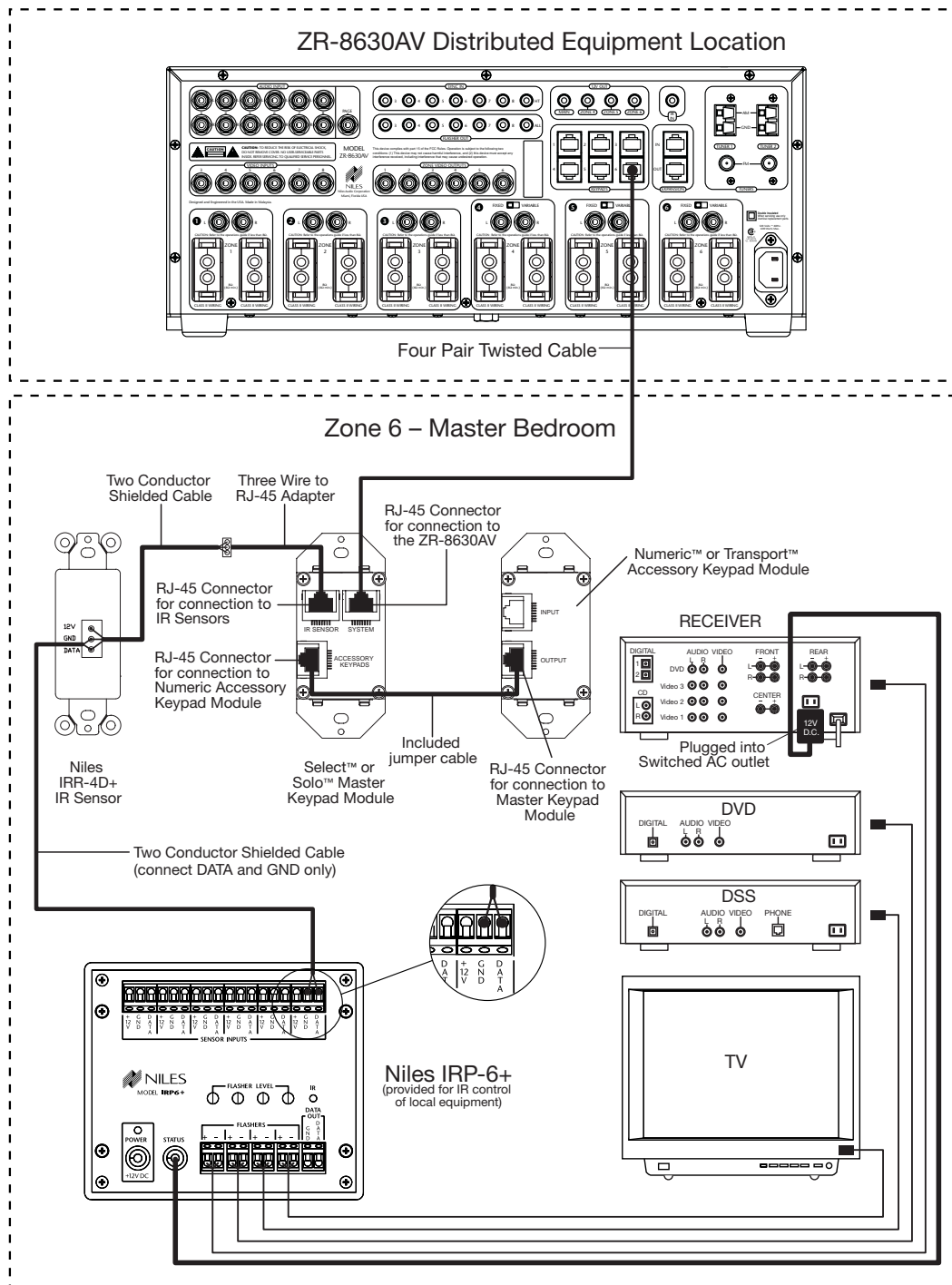


Figure 38

## CONNECTIONS

### CONNECTING AN A/B AMPLIFIER SWITCH FOR LOCAL SYSTEM SELECTION

Connect a Niles SPK-1 Voltage-Triggered Speaker Level A/B Switcher (FG00240) to both the ZR-8630AV and a local system to provide sound from each system to the same speakers in a single zone. When the local system is on, it connects to the speakers. When the local system is off, the Niles ZR-8630AV connects to the speakers by default.

In Figure 39, the Zoned Speaker Output of the ZR-8630AV connects to the "A" side of the SPK-1. The Main Speaker Output of the local system connects to the "B" side of the SPK-1. In addition, a 12V DC power adapter (Niles FG00665) plugs into a switched AC outlet of the local system to activate the SPK-1.

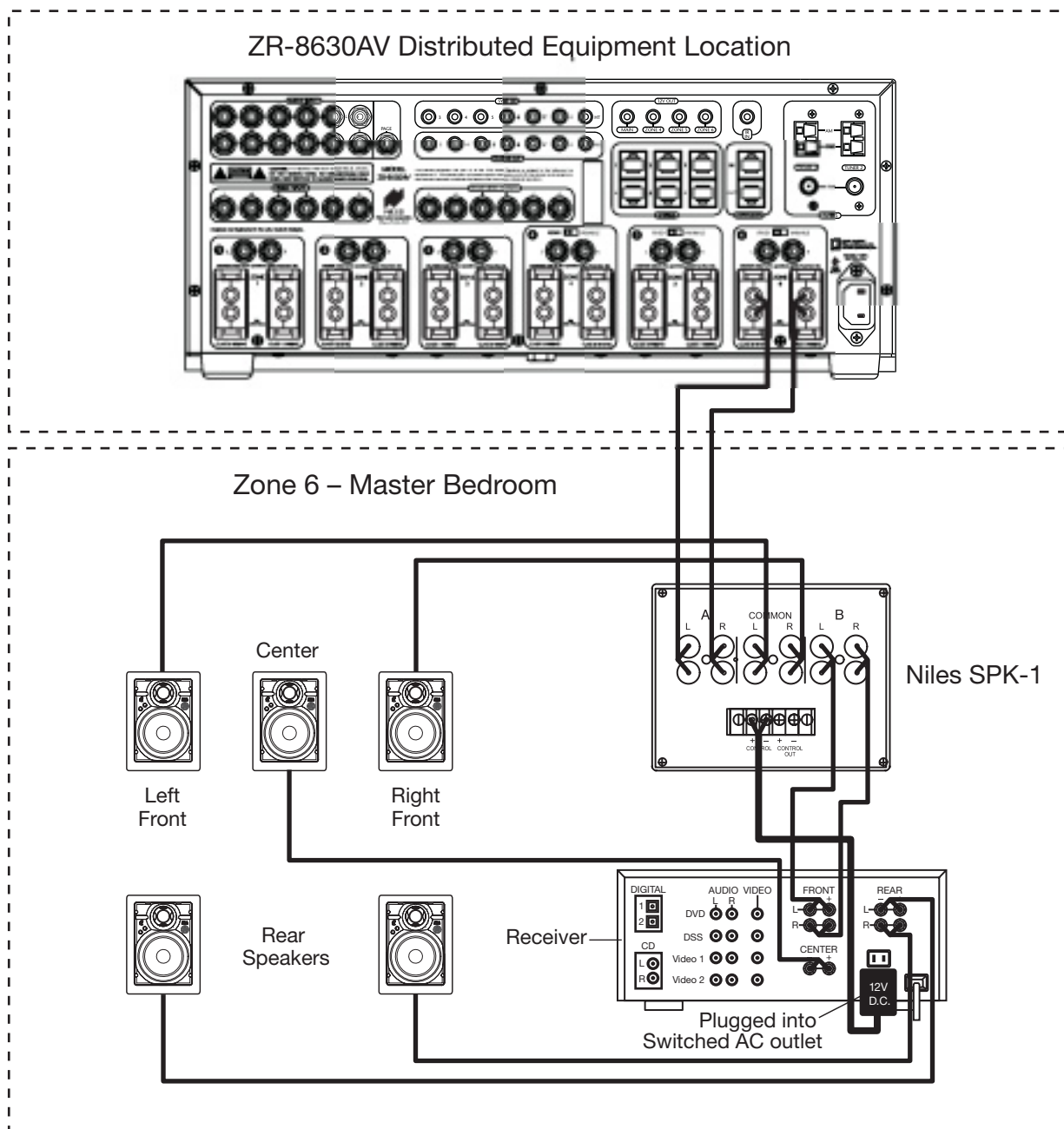


Figure 39

# PROGRAMMING OVERVIEW

## INSTALLER PROGRAMMING PANEL

Use the hidden programming controls on the front panel of the ZR-8630AV to program into its memory the IR commands for control of external source components. (See Figure 40).

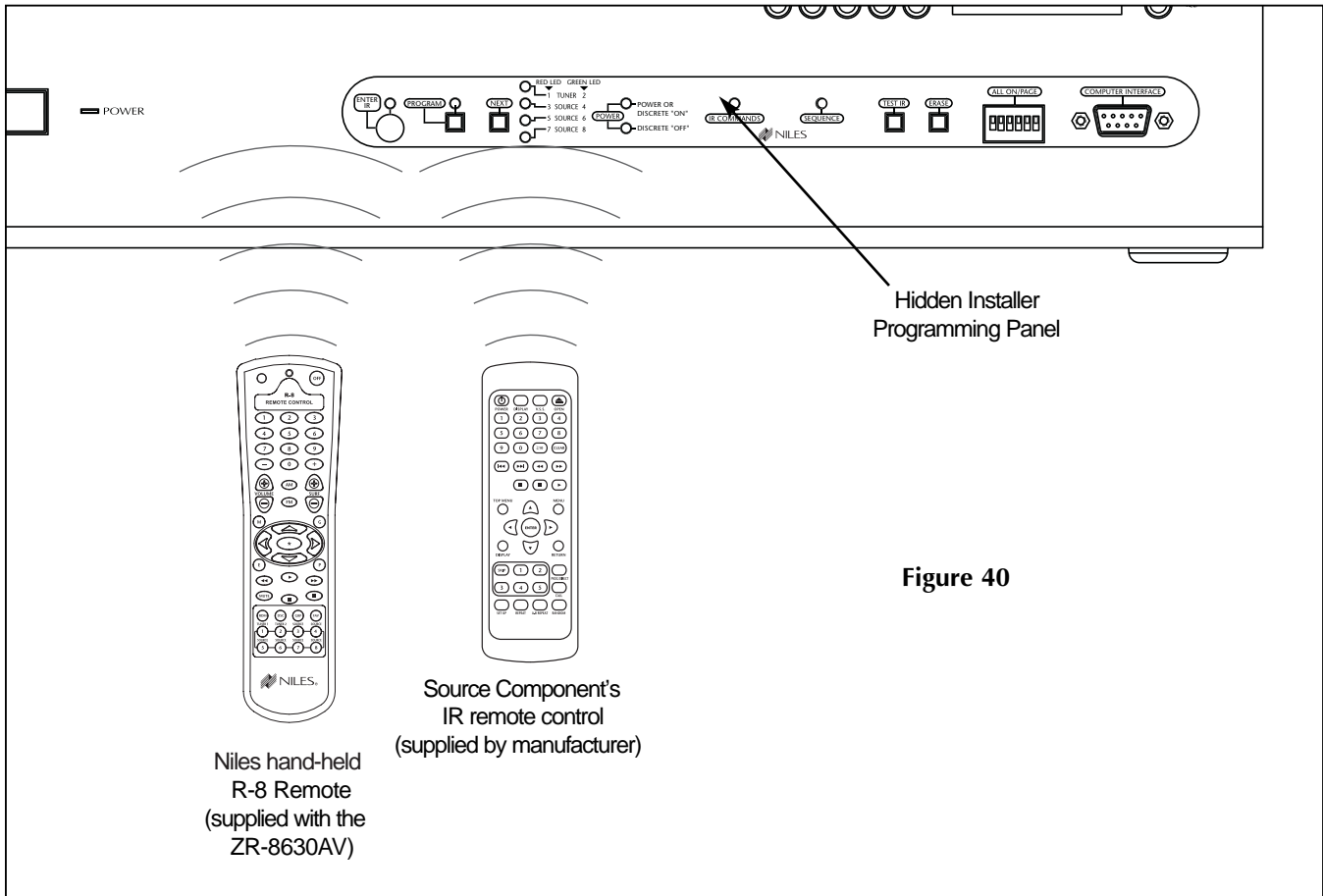


Figure 40

To program, use the hidden panel's push buttons and LED prompts, and send IR commands with the Niles R-8 remote and the remotes supplied with the source components. For complete information on the ZR-8630AV unit's step-by-step programming procedure, see the Programming Steps section of this manual.

## PROGRAMMING SOFTWARE

The ZR Source Library and Archiving Software, available on the Internet at [www.nilesaudio.com/techsupport](http://www.nilesaudio.com/techsupport), automates programming. Manually program a source component's IR commands into a ZR-8630AV, then transfer that source to the Source Library, where it will be available for future use. With the software's archiving feature, you can capture and store in a laptop the entire configuration of a ZR-8630AV, and download a stored configuration from a laptop into a ZR-8630AV.

## PROGRAMMING DOCUMENTATION

You must document the ZR-8630AV unit's programming before you do the actual programming. Documenting helps you to program quickly and accurately, and retains the configuration for future reference. This manual includes programming worksheets (see the Programming Worksheet section) to document all system configuration programming, including IR commands and sequences.

**Important Note:** If you will need additional sheets, make photocopies of the blank worksheets. Use a pencil when documenting.

# PROGRAMMING OVERVIEW

## ZR-8630AV Programming Worksheet

Each ZR-8630AV requires a Tuner and Zone Label Programming Worksheet. Figure 41 shows the programming information that you should include.

### 1 JOB TITLE

Mr. Smith

Document the customer's name.

### 2 SYSTEM DESIGNER

Joe Installer

Document the system designer's name.

### 3 UNIT MODE AND ZONE LABELS (CHOOSE ONLY ONE: A, B OR C)

(A) MASTER    Kitchen    Patio    Jacuzzi    Exercise    Bedroom    Terrace

1                      2                      3                      4                      5                      6

(B) SLAVE 1                   

7                      8                      9                      10                      11                      12

(C) SLAVE 2                   

13                      14                      15                      16                      17                      18

Document the Master, Slave 1, or Slave 2 setting. Document the labels used for the Zone Label slots.

### 4 TUNER 1 PRESETS

AM			FM		
1	620	6 1070	1	93.9	6 103.5
2	830	7 1090	2	94.9	7 104.7
3	910	8 1110	3	96.5	8 105.1
4	1010	9 1140	4	100.7	9 106.5
5	1050	10 1160	5	102.3	10 107.9

Document the AM and FM presets stored in the tuner 1 and tuner 2 memory.

### 5 TUNER 2 PRESETS

AM			FM		
1	620	6 1070	1	93.9	6 103.5
2	830	7 1090	2	94.9	7 104.7
3	910	8 1110	3	96.5	8 105.1
4	1010	9 1140	4	100.7	9 106.5
5	1050	10 1160	5	102.3	10 107.9

### 6 TUNER 1 SEQUENCE

STEP	TUNER COMMAND	STEP	TUNER COMMAND
1	FM	6	
2	Fav	7	
3	1	8	
4		9	
5		10	

Document the tuner sequence.

### 7 TUNER 2 SEQUENCE

STEP	TUNER COMMAND	STEP	TUNER COMMAND
1	FM	6	
2	Fav	7	
3	1	8	
4		9	
5		10	

### 8 ALL ON/PAGE

ZONE	ALL ON / PAGE
1	<input type="checkbox"/>
2	<input type="checkbox"/>
3	<input type="checkbox"/>
4	<input type="checkbox"/>
5	<input type="checkbox"/>
6	<input type="checkbox"/>

DIP switches on the front panel determine which zones respond to the ALL-ON and PAGE features.

Check the ones that have been enabled to the ALL-ON/PAGE feature.

### 9 INSTALLATION SETTINGS

SOURCE-IN-USE INDICATION  
 ON     OFF

ON VOLUME \_\_\_\_\_

MAX VOLUME \_\_\_\_\_

PAGE VOLUME \_\_\_\_\_

Note: Volume Settings affect all Zones.

Document the status of the source-in-use indication, and the numeric value for each volume setting.

### 10 PREAMP OUTPUTS

\*Zones 1-3 are variable only.

AMP	FIXED / VARIABLE
1	*
2	*
3	*
4	<input type="checkbox"/> / <input type="checkbox"/>
5	<input type="checkbox"/> / <input type="checkbox"/>
6	<input type="checkbox"/> / <input type="checkbox"/>

Document the amplifier to which the preamp outputs are connected, and the mode selected (i.e., fixed or variable for zones 4, 5, and 6).

Figure 41

# PROGRAMMING OVERVIEW

## ZR-8630AV Source-Component Programming Worksheet

Fill out a separate Source-Component Programming Worksheet for each of the six source components in the system, providing the programming information detailed in Figures 42, 43, and 44.

<b>1 JOB TITLE</b> <div style="border: 1px solid black; padding: 5px; text-align: center; font-size: 1.2em;">Mr. Smith</div> <p style="text-align: center; margin-top: 5px;">↑ Document the customer's name.</p>	<b>2 SYSTEM DESIGNER</b> <div style="border: 1px solid black; padding: 5px; text-align: center; font-size: 1.2em;">Joe Installer</div> <p style="text-align: center; margin-top: 5px;">↑ Document the system designer's name.</p>
---	--

<b>3 CHOOSE MASTER KEY</b>	
<b>MASTER KEY NUMBER (3-8):</b> <u>  3  </u> <p style="text-align: center; margin-top: 10px;">↙ Document the number of the Master Key.</p>	<b>MASTER KEY LABEL:</b> <u>  DVD  </u> <p style="text-align: center; margin-top: 10px;">↘ Document the label used for the Master Key (i.e., source component, music category, or DSS/Radio Station, etc.).</p>

Document the brand and model number of the source component associated with the Master Key .

<b>4 PROGRAM SOURCE COMPONENT POWER</b>			
<b>COMPONENT</b>			
<b>BRAND:</b> <u>  Denon  </u>		<b>MODEL:</b> <u>  DVD-2800  </u>	
<b>COMPONENT SYNC</b>		<b>POWER PROGRAMMING</b>	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<b>If Yes, SYNC TYPE:</b> <input checked="" type="checkbox"/> Video <input type="checkbox"/> 12V	<input checked="" type="checkbox"/> Single "Power" IR Command <input type="checkbox"/> Two Separate ON and OFF IR Commands <input type="checkbox"/> Latching Power	

↑

Document if the source-component is connected to a sync input. If yes, document the sync type.

↑

Document the type of activation the source component requires.

Figure 42

# PROGRAMMING OVERVIEW

## Function Keys/Buttons Programming

Figure 43 depicts the section of the Programming Worksheet that corresponds to the source-component function key/button programming. For each programmed source component, fill out a worksheet that states what IR commands you will program and assign to each function key/button.

5 PROGRAM FUNCTION KEY IR COMMANDS			
FUNCTION KEY/BUTTON	SOURCE IR COMMAND	FUNCTION KEY/BUTTON	SOURCE IR COMMAND
Play	Play	FM	
Stop	Stop	1	1
Pause	Pause	2	2
Rewind <<	Rewind	3	3
FF>>	Fast Forward	4	4
*	Pause	5	5
Arrow Up		6	6
Arrow Down		7	7
Arrow Right	Next Chapter	8	8
Arrow Left	Last Chapter	9	9
M		0	0
G		-	
E		+	
P		Random	Random
Surf +	Next Chapter	Group	
Surf -	Last Chapter	Disc	
AM		Fav	

Document the IR commands in their function key/button locations.

Figure 43

## Sequence Programming

Figure 44 depicts the section of the Programming Worksheet that corresponds to the sequence programming. For each programmed source component, fill out a worksheet that states what individual IR commands and delays you will program and assign to the Master Key Sequence. List these IR commands and delays in the order in which they need to occur.

6 PROGRAM SEQUENCE					
STEP	SOURCE IR COMMAND or DELAY	FUNCTION KEY/BUTTON or DELAY TIME	STEP	SOURCE IR COMMAND or DELAY	FUNCTION KEY/BUTTON or DELAY TIME
1	Play	Play	6		
2			7		
3			8		
4			9		
5			10		

Document the IR commands and delays in the sequence.

Figure 44



# PROGRAMMING OVERVIEW

## PROGRAMMING A LEARNING REMOTE FOR ZONE OPERATION

You can teach the IR commands of the Niles R-8 Remote to learning remote controls to operate an individual zone. These IR commands operate the ZR-8630AV and its associated source components from any zone equipped with a Select™ or Solo™ Master Keypad Module or an external IR sensor.

**Important Note:** IR sensors alone cannot control a zone. They operate only in conjunction with a Select™ or Solo™ Master Keypad Module.

The commands you will teach from the Niles R-8 Remote to the learning remote are stored in the following buttons:

1. Source buttons for Tuner 1, Tuner 2, and source components 3 through 8. These activate the system, turn the zones on, and select the desired source. The Tuner buttons always select their respective built-in tuners.
2. Function buttons to issue the IR commands for each of the individual source components.
3. Volume and mute buttons to control the volume in a zone.
4. The Off button to turn off the zones.

To teach these commands to the learning remote that you will use in the zone, set it to the learning mode, choose the appropriate key on the learning remote, and then issue the appropriate command from the Niles R-8 Remote. Repeat these steps for the remaining commands you wish to use.

To test the commands, set the Niles remote aside, and try the commands on your learning remote. If you captured them correctly, you will be operating the system and all the source components as you would using the Niles R-8 Remote.

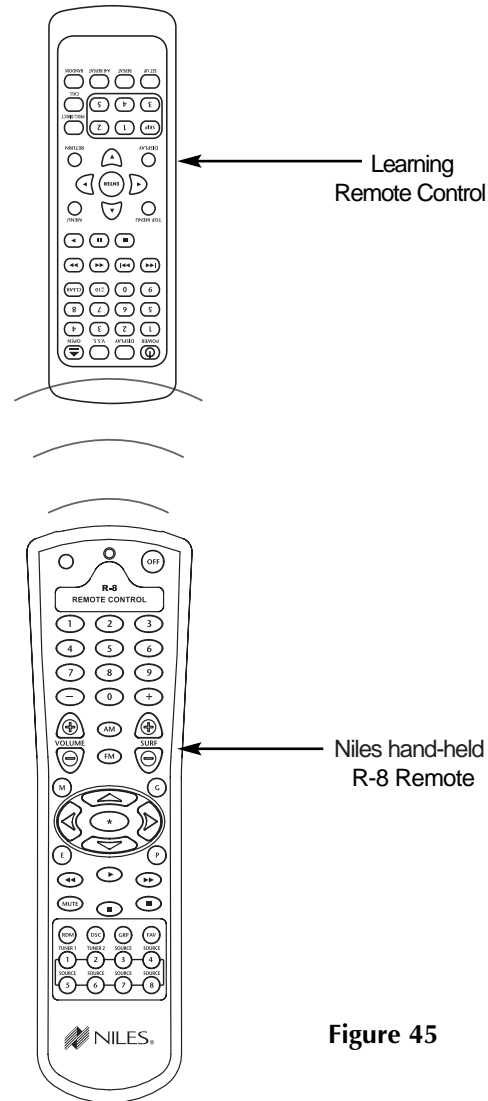


Figure 45

## PROGRAMMING A HOME THEATER REMOTE CONTROL TO OPERATE SOURCE COMPONENTS SHARED WITH A ZR-8630AV

You can program a learning remote control operating a home theater system to operate source components shared with the ZR-8630AV. (See System Configurations 4 and 5.)

You may program the learning remote control with the source component's factory IR commands using the ZR-8630AV unit's IR repeating feature (see Method 1), or with the Niles R-8 Remote Control IR commands (see Methods 2 and 3):

## PROGRAMMING OVERVIEW

### Method #1—Controlling Shared Source Components with IR Repeating and 12V Home Theater Status

IR Repeating allows you to program the source components by programming the actual IR commands from a source component's included remote control into the Home Theater learning remote control. Connect an IR output of the IR repeating or control system for the Home Theater to the IR Input of the Master ZR-8630AV. All the IR commands sent from the Home Theater then pass through to all IR Flashers connected to the ZR-8630AV to control source components.

**Important Note:** If you have source components that require an IR command to turn on and their included remote controls don't issue separate ON and OFF IR commands, or if you have two or more shared source components identical in brand and model, refer to Method #2.

Program all of the IR commands of the Home Theater learning remote control in the standard way, using the actual remote controls for the shared source components, with **one** exception. Don't teach the OFF IR command for the shared source components to the learning remote operating the home theater. Teach only the ON IR commands. Program the OFF IR commands for the shared source components into the ZR-8630AV, which is responsible for turning these components OFF when all ZR-8630AV zones and the home theater are OFF.

Method #1 requires a 12V DC system status signal from the Home Theater system to the Home Theater Sync Input of the Master ZR-8630AV. This allows the ZR-8630AV to "know" whether the Home Theater is actually ON or OFF and provide the source components' OFF commands at the appropriate time.

Sharing source components in this way does not affect the IR programming for the Home Theater receiver/processor.

### Method #2—Controlling Shared Source Components with Niles R-8 Commands and 12V Home Theater Status

A second method of programming a Home Theater remote control is available when the shared source components are identical and/or they have a single power ON/OFF IR command. With this method, teach the Niles R-8 Remote Control IR commands to the Home Theater learning remote, rather than the IR commands from the shared source components' remote controls.

Teach the Home Theater learning remote control the R-8 IR commands from Source Buttons 3 through 8, and all other commands except Tuner1, Tuner 2, Volume +, Volume -, Mute, and OFF. Sending a Niles Source Button IR command from the Home Theater tells the ZR-8630AV that the Home Theater is turning on and which source it is selecting. Synchronized source components corresponding to a pressed source button then turn ON, if they aren't ON already. Finally, the ZR-8630AV issues the programmed sequence for that source component.

After the Master ZR-8630AV receives a Source Button IR command and it knows which source is selected, it will respond to Function Key/Button IR commands from the Home Theater by issuing the programmed IR commands for that source component.

Using this method, identical shared source components operate individually by means of the IR routing feature of the ZR-8630AV. (See Identical Source Components in the Operational Overview Section.)

Method #2 requires a 12V DC system status signal from the Home Theater system to the Home Theater Sync Input of the Master ZR-8630AV. This allows the ZR-8630AV to "know" whether the home theater is actually ON or OFF and provide the source components' OFF commands at the appropriate time.

Sharing source components in this way does not affect the IR programming for the Home Theater receiver/processor.

**Important Note:** Teaching the Niles OFF command to the Home Theater learning remote control isn't necessary with Method #2. As in Method #1, when the Home Theater turns off, its 12V signal ceases, telling the ZR-8630AV that the Home Theater turned off. Then the ZR-8630AV checks to see if any of its other zones are active before it turns off the shared source components.

## PROGRAMMING OVERVIEW

### **Method #3 – Controlling Shared Source Components with Niles R-8 Commands and without 12V Home Theater Status**

A third method of programming is available in situations where the Home Theater does not provide a 12V DC status signal. With this method, you must teach some of the Niles R-8 Remote Control IR commands to the Home Theater learning remote.

The minimum requirement is to program the learning remote with Niles commands from Source Buttons 3 through 8, and the OFF Button IR commands. Whenever the Master ZR-8630AV receives a source-button IR command from the Home Theater, it will turn on the source component, if needed. Also, it will know that the Home Theater Zone is turning on and what source component is selected. Whenever the Master ZR-8630AV receives an OFF Button IR command from the Home Theater, it will know that the Home Theater is turning OFF.

To operate the shared source components, determine whether Method #1 or Method #2 is the most appropriate way for your system to operate. With Method #3, program the Home Theater's learning remote with either the components' IR commands or with Niles Function Key/Button commands.

**Important Note:** When using Method #3, you must teach the Niles OFF IR command to the Home Theater learning remote control and issue it every time you turn off the Home Theater. When the ZR-8630AV receives the OFF IR command, it “knows” that the Home Theater turned off. Then it checks to see if any of its other zones are active before it turns off the shared source components.

**1 JOB TITLE**

---

**2 SYSTEM DESIGNER**

---

**3 UNIT MODE AND ZONE LABELS (CHOOSE ONLY ONE: A, B OR C)**

(A) MASTER

1	2	3	4	5	6
---	---	---	---	---	---

(B) SLAVE 1

7	8	9	10	11	12
---	---	---	----	----	----

(C) SLAVE 2

13	14	15	16	17	18
----	----	----	----	----	----

**4 TUNER 1 PRESETS**

AM		FM	
1	6	1	6
2	7	2	7
3	8	3	8
4	9	4	9
5	10	5	10

**5 TUNER 2 PRESETS**

AM		FM	
1	6	1	6
2	7	2	7
3	8	3	8
4	9	4	9
5	10	5	10

**6 TUNER 1 SEQUENCE**

STEP	TUNER COMMAND	STEP	TUNER COMMAND
1		6	
2		7	
3		8	
4		9	
5		10	

**7 TUNER 2 SEQUENCE**

STEP	TUNER COMMAND	STEP	TUNER COMMAND
1		6	
2		7	
3		8	
4		9	
5		10	

**8 ALL ON/PAGE**

ZONE	ALL ON / PAGE
1	<input type="checkbox"/>
2	<input type="checkbox"/>
3	<input type="checkbox"/>
4	<input type="checkbox"/>
5	<input type="checkbox"/>
6	<input type="checkbox"/>

**9 INSTALLATION SETTINGS**

**SOURCE-IN-USE INDICATION**

ON     OFF

ON VOLUME \_\_\_\_\_

MAX VOLUME \_\_\_\_\_

PAGE VOLUME \_\_\_\_\_

**Note:** Volume Settings affect all Zones.

**10 PREAMP OUTPUTS** \*Zones 1-3 are variable only.

AMP	FIXED/VARIABLE
1	*
2	*
3	*
4	<input type="checkbox"/> / <input type="checkbox"/>
5	<input type="checkbox"/> / <input type="checkbox"/>
6	<input type="checkbox"/> / <input type="checkbox"/>

**1 JOB TITLE**

---

**2 SYSTEM DESIGNER**

---

**3 UNIT MODE AND ZONE LABELS (CHOOSE ONLY ONE: A, B OR C)**

(A) MASTER

1	2	3	4	5	6
---	---	---	---	---	---

(B) SLAVE 1

7	8	9	10	11	12
---	---	---	----	----	----

(C) SLAVE 2

13	14	15	16	17	18
----	----	----	----	----	----

**4 TUNER 1 PRESETS**

AM		FM	
1	6	1	6
2	7	2	7
3	8	3	8
4	9	4	9
5	10	5	10

**5 TUNER 2 PRESETS**

AM		FM	
1	6	1	6
2	7	2	7
3	8	3	8
4	9	4	9
5	10	5	10

**6 TUNER 1 SEQUENCE**

STEP	TUNER COMMAND	STEP	TUNER COMMAND
1		6	
2		7	
3		8	
4		9	
5		10	

**7 TUNER 2 SEQUENCE**

STEP	TUNER COMMAND	STEP	TUNER COMMAND
1		6	
2		7	
3		8	
4		9	
5		10	

**8 ALL ON/PAGE**

ZONE	ALL ON / PAGE
1	<input type="checkbox"/>
2	<input type="checkbox"/>
3	<input type="checkbox"/>
4	<input type="checkbox"/>
5	<input type="checkbox"/>
6	<input type="checkbox"/>

**9 INSTALLATION SETTINGS**

**SOURCE-IN-USE INDICATION**

ON     OFF

ON VOLUME \_\_\_\_\_

MAX VOLUME \_\_\_\_\_

PAGE VOLUME \_\_\_\_\_

**Note:** Volume Settings affect all Zones.

**10 PREAMP OUTPUTS** \*Zones 1-3 are variable only.

AMP	FIXED/VARIABLE
1	*
2	*
3	*
4	<input type="checkbox"/> / <input type="checkbox"/>
5	<input type="checkbox"/> / <input type="checkbox"/>
6	<input type="checkbox"/> / <input type="checkbox"/>

**1 JOB TITLE**

---

**2 SYSTEM DESIGNER**

---

**3 UNIT MODE AND ZONE LABELS (CHOOSE ONLY ONE: A, B OR C)**

(A) MASTER

1	2	3	4	5	6
---	---	---	---	---	---

(B) SLAVE 1

7	8	9	10	11	12
---	---	---	----	----	----

(C) SLAVE 2

13	14	15	16	17	18
----	----	----	----	----	----

**4 TUNER 1 PRESETS**

AM		FM	
1	6	1	6
2	7	2	7
3	8	3	8
4	9	4	9
5	10	5	10

**5 TUNER 2 PRESETS**

AM		FM	
1	6	1	6
2	7	2	7
3	8	3	8
4	9	4	9
5	10	5	10

**6 TUNER 1 SEQUENCE**

STEP	TUNER COMMAND	STEP	TUNER COMMAND
1		6	
2		7	
3		8	
4		9	
5		10	

**7 TUNER 2 SEQUENCE**

STEP	TUNER COMMAND	STEP	TUNER COMMAND
1		6	
2		7	
3		8	
4		9	
5		10	

**8 ALL ON/PAGE**

ZONE	ALL ON / PAGE
1	<input type="checkbox"/>
2	<input type="checkbox"/>
3	<input type="checkbox"/>
4	<input type="checkbox"/>
5	<input type="checkbox"/>
6	<input type="checkbox"/>

**9 INSTALLATION SETTINGS**

**SOURCE-IN-USE INDICATION**

ON     OFF

ON VOLUME \_\_\_\_\_

MAX VOLUME \_\_\_\_\_

PAGE VOLUME \_\_\_\_\_

**Note:** Volume Settings affect all Zones.

**10 PREAMP OUTPUTS** \*Zones 1-3 are variable only.

AMP	FIXED/VARIABLE
1	*
2	*
3	*
4	<input type="checkbox"/> / <input type="checkbox"/>
5	<input type="checkbox"/> / <input type="checkbox"/>
6	<input type="checkbox"/> / <input type="checkbox"/>

**1 JOB TITLE**

---

**2 SYSTEM DESIGNER**

---

**3 UNIT MODE AND ZONE LABELS (CHOOSE ONLY ONE: A, B OR C)**

(A) MASTER

1	2	3	4	5	6
---	---	---	---	---	---

(B) SLAVE 1

7	8	9	10	11	12
---	---	---	----	----	----

(C) SLAVE 2

13	14	15	16	17	18
----	----	----	----	----	----

**4 TUNER 1 PRESETS**

AM		FM	
1	6	1	6
2	7	2	7
3	8	3	8
4	9	4	9
5	10	5	10

**5 TUNER 2 PRESETS**

AM		FM	
1	6	1	6
2	7	2	7
3	8	3	8
4	9	4	9
5	10	5	10

**6 TUNER 1 SEQUENCE**

STEP	TUNER COMMAND	STEP	TUNER COMMAND
1		6	
2		7	
3		8	
4		9	
5		10	

**7 TUNER 2 SEQUENCE**

STEP	TUNER COMMAND	STEP	TUNER COMMAND
1		6	
2		7	
3		8	
4		9	
5		10	

**8 ALL ON/PAGE**

ZONE	ALL ON / PAGE
1	<input type="checkbox"/>
2	<input type="checkbox"/>
3	<input type="checkbox"/>
4	<input type="checkbox"/>
5	<input type="checkbox"/>
6	<input type="checkbox"/>

**9 INSTALLATION SETTINGS**

**SOURCE-IN-USE INDICATION**

ON     OFF

ON VOLUME \_\_\_\_\_

MAX VOLUME \_\_\_\_\_

PAGE VOLUME \_\_\_\_\_

**Note:** Volume Settings affect all Zones.

**10 PREAMP OUTPUTS** \*Zones 1-3 are variable only.

AMP	FIXED/VARIABLE
1	*
2	*
3	*
4	<input type="checkbox"/> / <input type="checkbox"/>
5	<input type="checkbox"/> / <input type="checkbox"/>
6	<input type="checkbox"/> / <input type="checkbox"/>

# ZR-8630AV SOURCE COMPONENT PROGRAMMING WORKSHEET



**1 JOB TITLE**  
 \_\_\_\_\_

**2 SYSTEM DESIGNER**  
 \_\_\_\_\_

**3 CHOOSE MASTER KEY**

MASTER KEY NUMBER (3-8): \_\_\_\_\_ MASTER KEY LABEL: \_\_\_\_\_

**4 PROGRAM SOURCE COMPONENT POWER**

**COMPONENT**

BRAND: \_\_\_\_\_ MODEL: \_\_\_\_\_

COMPONENT SYNC		POWER PROGRAMMING	
<input type="checkbox"/> Yes	<input type="checkbox"/> No	If Yes, SYNC TYPE: <input type="checkbox"/> Video <input type="checkbox"/> 12V	<input type="checkbox"/> Single "Power" IR Command <input type="checkbox"/> Two Separate ON and OFF IR Commands <input type="checkbox"/> Latching Power

**5 PROGRAM FUNCTION KEY IR COMMANDS**

FUNCTION KEY/BUTTON	SOURCE IR COMMAND	FUNCTION KEY/BUTTON	SOURCE IR COMMAND
Play		FM	
Stop		1	
Pause		2	
Rewind <<		3	
FF>>		4	
*		5	
Arrow Up		6	
Arrow Down		7	
Arrow Right		8	
Arrow Left		9	
M		0	
G		-	
E		+	
P		Random	
Surf +		Group	
Surf -		Disc	
AM		Fav	

**6 PROGRAM SEQUENCE**

STEP	SOURCE IR COMMAND or DELAY	FUNCTION KEY/BUTTON or DELAY TIME	STEP	SOURCE IR COMMAND or DELAY	FUNCTION KEY/BUTTON or DELAY TIME
1			6		
2			7		
3			8		
4			9		
5			10		



# ZR-8630AV SOURCE COMPONENT PROGRAMMING WORKSHEET



**1 JOB TITLE**  
 \_\_\_\_\_

**2 SYSTEM DESIGNER**  
 \_\_\_\_\_

**3 CHOOSE MASTER KEY**

MASTER KEY NUMBER (3-8): \_\_\_\_\_ MASTER KEY LABEL: \_\_\_\_\_

**4 PROGRAM SOURCE COMPONENT POWER**

**COMPONENT**

BRAND: \_\_\_\_\_ MODEL: \_\_\_\_\_

COMPONENT SYNC		POWER PROGRAMMING	
<input type="checkbox"/> Yes	<input type="checkbox"/> No	If Yes, SYNC TYPE: <input type="checkbox"/> Video <input type="checkbox"/> 12V	<input type="checkbox"/> Single "Power" IR Command <input type="checkbox"/> Two Separate ON and OFF IR Commands <input type="checkbox"/> Latching Power

**5 PROGRAM FUNCTION KEY IR COMMANDS**

FUNCTION KEY/BUTTON	SOURCE IR COMMAND	FUNCTION KEY/BUTTON	SOURCE IR COMMAND
Play		FM	
Stop		1	
Pause		2	
Rewind <<		3	
FF>>		4	
*		5	
Arrow Up		6	
Arrow Down		7	
Arrow Right		8	
Arrow Left		9	
M		0	
G		-	
E		+	
P		Random	
Surf +		Group	
Surf -		Disc	
AM		Fav	

**6 PROGRAM SEQUENCE**

STEP	SOURCE IR COMMAND or DELAY	FUNCTION KEY/BUTTON or DELAY TIME	STEP	SOURCE IR COMMAND or DELAY	FUNCTION KEY/BUTTON or DELAY TIME
1			6		
2			7		
3			8		
4			9		
5			10		

# ZR-8630AV SOURCE COMPONENT PROGRAMMING WORKSHEET



**1 JOB TITLE**  
\_\_\_\_\_

**2 SYSTEM DESIGNER**  
\_\_\_\_\_

**3 CHOOSE MASTER KEY**

MASTER KEY NUMBER (3-8): \_\_\_\_\_ MASTER KEY LABEL: \_\_\_\_\_

**4 PROGRAM SOURCE COMPONENT POWER**

**COMPONENT**

BRAND: \_\_\_\_\_ MODEL: \_\_\_\_\_

COMPONENT SYNC		POWER PROGRAMMING	
<input type="checkbox"/> Yes	<input type="checkbox"/> No	If Yes, SYNC TYPE: <input type="checkbox"/> Video <input type="checkbox"/> 12V	<input type="checkbox"/> Single "Power" IR Command <input type="checkbox"/> Two Separate ON and OFF IR Commands <input type="checkbox"/> Latching Power

**5 PROGRAM FUNCTION KEY IR COMMANDS**

FUNCTION KEY/BUTTON	SOURCE IR COMMAND	FUNCTION KEY/BUTTON	SOURCE IR COMMAND
Play		FM	
Stop		1	
Pause		2	
Rewind <<		3	
FF>>		4	
*		5	
Arrow Up		6	
Arrow Down		7	
Arrow Right		8	
Arrow Left		9	
M		0	
G		-	
E		+	
P		Random	
Surf +		Group	
Surf -		Disc	
AM		Fav	

**6 PROGRAM SEQUENCE**

STEP	SOURCE IR COMMAND or DELAY	FUNCTION KEY/BUTTON or DELAY TIME	STEP	SOURCE IR COMMAND or DELAY	FUNCTION KEY/BUTTON or DELAY TIME
1			6		
2			7		
3			8		
4			9		
5			10		

# ZR-8630AV SOURCE COMPONENT PROGRAMMING WORKSHEET



**1 JOB TITLE**  
 \_\_\_\_\_

**2 SYSTEM DESIGNER**  
 \_\_\_\_\_

**3 CHOOSE MASTER KEY**

MASTER KEY NUMBER (3-8): \_\_\_\_\_ MASTER KEY LABEL: \_\_\_\_\_

**4 PROGRAM SOURCE COMPONENT POWER**

**COMPONENT**

BRAND: \_\_\_\_\_ MODEL: \_\_\_\_\_

COMPONENT SYNC		POWER PROGRAMMING	
<input type="checkbox"/> Yes	<input type="checkbox"/> No	If Yes, SYNC TYPE: <input type="checkbox"/> Video <input type="checkbox"/> 12V	<input type="checkbox"/> Single "Power" IR Command <input type="checkbox"/> Two Separate ON and OFF IR Commands <input type="checkbox"/> Latching Power

**5 PROGRAM FUNCTION KEY IR COMMANDS**

FUNCTION KEY/BUTTON	SOURCE IR COMMAND	FUNCTION KEY/BUTTON	SOURCE IR COMMAND
Play		FM	
Stop		1	
Pause		2	
Rewind <<		3	
FF>>		4	
*		5	
Arrow Up		6	
Arrow Down		7	
Arrow Right		8	
Arrow Left		9	
M		0	
G		-	
E		+	
P		Random	
Surf +		Group	
Surf -		Disc	
AM		Fav	

**6 PROGRAM SEQUENCE**

STEP	SOURCE IR COMMAND or DELAY	FUNCTION KEY/BUTTON or DELAY TIME	STEP	SOURCE IR COMMAND or DELAY	FUNCTION KEY/BUTTON or DELAY TIME
1			6		
2			7		
3			8		
4			9		
5			10		

## INSTALLATION SETTINGS

### ALL ON/PAGE DIP SWITCH SETTINGS

The numbers of the six ALL ON/PAGE switches on the hidden programming panel of the ZR-8630AV correspond to the unit's zone numbers. (See Figure 46.)

The switches enable (Up) or disable (Down) the individual zone to respond to ALL ON commands and incoming audio pages.

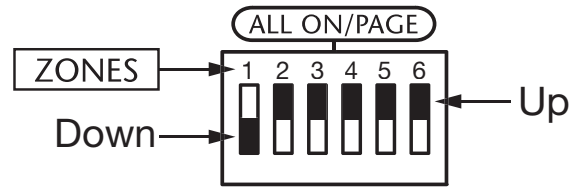


Figure 46

### FIXED/VARIABLE PREAMPLIFIER SWITCH

Zones 4, 5, and 6 include a fixed/variable preamplifier switch (see Figure 47) on the rear panel of the ZR-8630AV. Set the switch for these zones to Variable or Fixed based on the configuration of the speakers in the zone. (See Configurations 8, 9, and 10 for more details.)

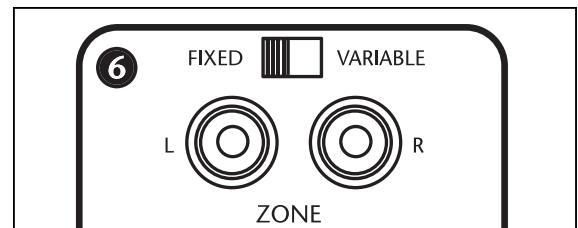


Figure 47

### PROGRAMMING MASTER/SLAVE MODE

The factory default mode of the ZR-8630AV MultiZone Receiver is Master, but you can program it to function as Slave 1 or Slave 2 in expanded systems. (See System Configuration 2.) To change the mode of any unit:

1. Turn the ZR-8630AV OFF.
2. Depress the PROGRAM button.
3. While keeping the PROGRAM button depressed, turn the ZR-8630AV ON.
4. The ZR-8630AV then identifies its version by displaying a Ver #.## message (i.e., Ver 1.01) on the LCD display panel for two seconds.
5. The ZR-8630AV then displays a new mode, either Master, Slave 1, or Slave 2. Which mode it selects depends on the previous setting. If the previous mode was Master, it will display Slave 1. If the previous mode was Slave 1, it will display Slave 2. If the previous mode was Slave 2, it will display Master.
6. Release the PROGRAM button. Now the unit is set to a new mode.
7. Repeat Steps 1 through 6 until the ZR-8630AV is in the desired mode.

### INSTALLING ZONE LABELS

Pre-printed zone/room labels included with each ZR-8630AV fit in the Zone Label Slots (see Figure 48) to identify each of the six zones. To install these labels:

1. Remove the appropriate label for Zone 1 from the pre-printed sheet.
2. Affix the label in Zone Label Slot #1.
3. Repeat steps 1 and 2 for Zones 2 through 6.

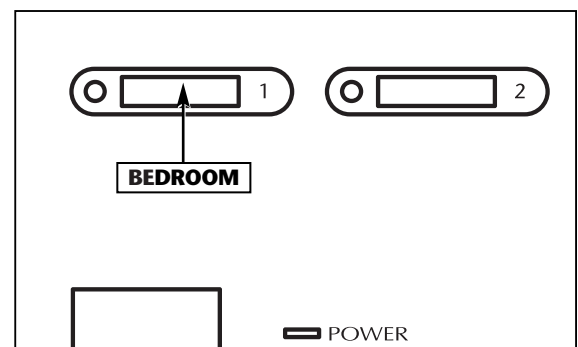


Figure 48

# INSTALLATION SETTINGS

## VOLUME SETTINGS

The ZR-8630AV has three useful volume features with customizable settings:

### Maximum Turn ON and Source Change Volume Level

Maximum Turn ON and Source Change Volume prevents a zone from playing too loudly when it turns on or if its selected source changes.

When a zone turns ON individually, it always turns ON to its last volume setting—unless the last volume setting is greater than the Maximum Turn ON and Source Change Volume level set in the memory of the ZR-8630AV. In that case, it turns ON to the Maximum Turn ON and Source Change Volume level.

When a zone selects a new source, the volume setting does not change—unless the zone's current volume setting is greater than the Maximum Turn ON and Source Change Volume level. In that case, it changes to the Maximum Turn ON and Source Change Volume level.

The range for Maximum Turn ON and Source Change Volume is 30 through 63. The factory default is 45. To adjust it up or down, see Changing Volume Settings below.

### ALL ON Volume Level

In response to a system-wide ON command, zones that are OFF turn ON to the ALL ON Volume Level set in the memory of the ZR-8630AV. Volume levels in zones that already are ON don't change during a system-wide ON command. The range for ALL ON Volume Level is 1 through 63. The factory default is 22. To adjust it up or down, see Changing Volume Settings below.

### Page Volume Level

When a page occurs, all zones broadcast it at the Page Volume Level set in the memory of the ZR-8630AV. The range for PAGE Volume Level is 1 through 63. The factory default is 35. To adjust it up or down, see Changing Volume Settings below.

## Changing Volume Settings

1. Turn the ZR-8630AV ON.
2. Press and hold the PROGRAM button for two seconds, until the LCD display shows "PGM MODE."
3. Press the Tuner Select button.  
The LCD display shows "MxVol #" (for Maximum Turn ON and Source Change Volume Level).
4. Press the Station Scan + button to increase MxVol or press the Station Scan - button to decrease MxVol.
5. Press the Tuner Select button or NEXT button to advance to "OnVol #" (for ALL ON Volume Level) and repeat Step 4 to adjust.
6. Press the Tuner Select button or NEXT button to advance to "PgVol #" (for Page Volume Level) and repeat Step 4 to adjust.
7. Tap the PROGRAM button to exit programming.

# INSTALLATION SETTINGS

## SOURCE-IN-USE SETTING

The ZR-8630AV comes from the factory with the source-in-use indication mode (see page 45) set to ON. If you install the ZR-8630AV with keypads that don't recognize this functionality, you must turn it OFF:

1. Turn the ZR-8630AV ON.
2. Press and hold the PROGRAM button for two seconds, until the LCD display shows "PGM MODE."
3. Press the Tuner Select button repeatedly until the LCD display shows "SrcU ON."
4. Press the Station Scan + button or Station Scan - button to toggle the setting to "SrcU OFF." To turn it back ON, press the Station Scan + button or Station Scan - button again. The ZR-8630AV remembers the most recent setting.
5. Tap the PROGRAM button to exit programming.

## VIDEO SYNC SELECTION

The ZR-8630AV comes from the factory with the video sync set to ON. You must turn video sync OFF under certain circumstances. See page 30 for details.

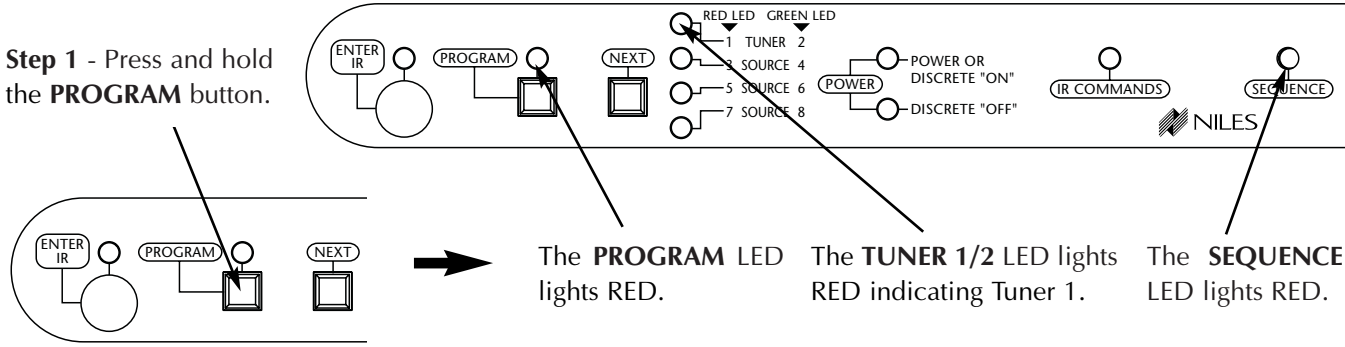
To make your video sync selection, source by source:

1. Turn the ZR-8630AV ON.
2. Press and hold the PROGRAM button for two seconds, until the LCD display shows "PGM MODE."
3. Release the PROGRAM button. The LCD display shows "PGM TNR1."
4. Press the Tuner Select button repeatedly until the LCD display shows "VS 3 ON."
5. Press the Station Scan + button or Station Scan - button to toggle the setting to "VS 3 OFF." To turn it back ON, press the Station Scan + button or Station Scan - button again. The ZR-8630AV remembers the most recent setting.
6. Press the Tuner Select button to advance to the next source-component number:  
"VS 4 ON", "VS 5 ON", "VS 6 ON", "VS 7 ON", and "VS 8 ON"
7. Repeat Steps 4 and 5 for each source-component number in Step 5.
8. Tap the PROGRAM button to exit programming.

**Note:** This procedure does not affect the distribution of the video signal, only its use for synchronization purposes.

# SYSTEM PROGRAMMING STEPS

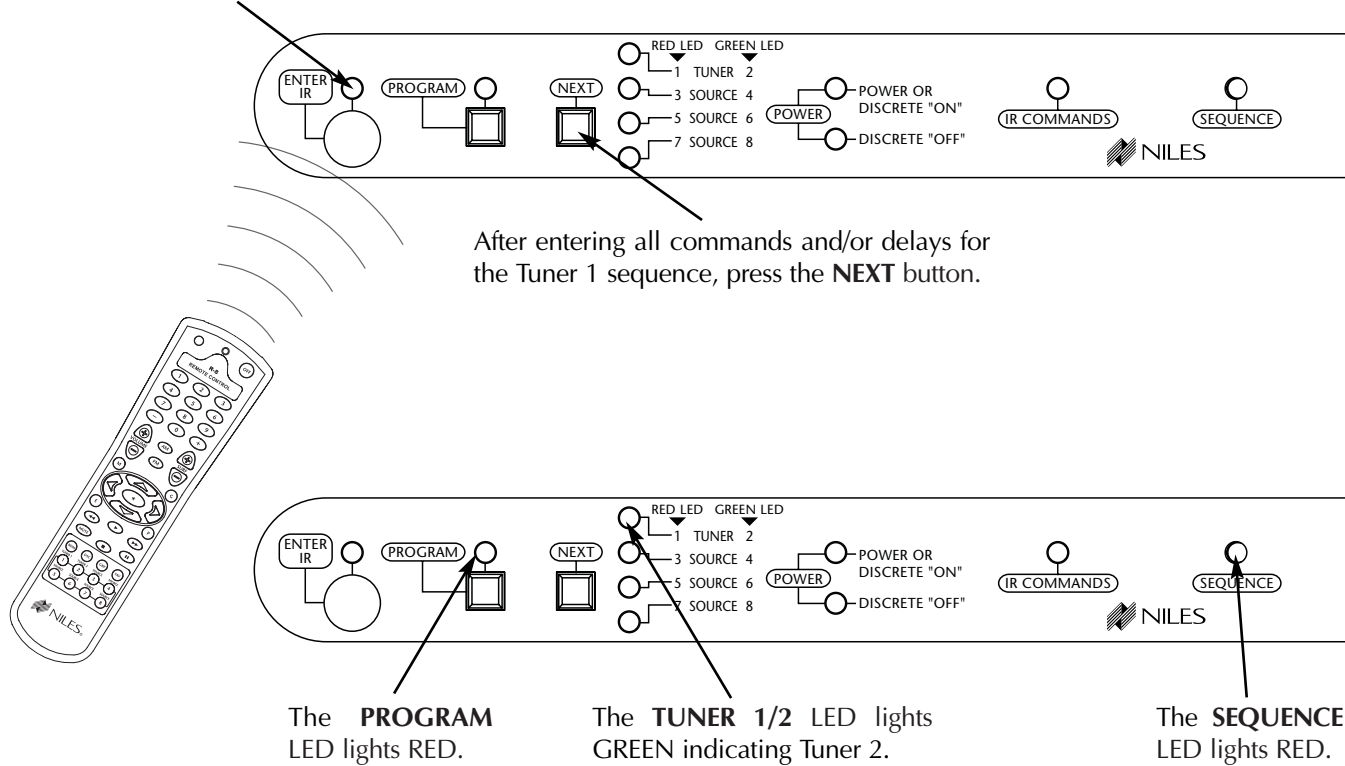
## PROGRAMMING IR COMMANDS



**Step 2 - To program a sequence for Tuner 1, press the keys on the Niles R-8 Remote that correspond to the commands you wish to include in the sequence. Otherwise, press the NEXT button and skip to Step 3.**

Enter commands and delays from the ZR-8630AV Programming Worksheet in the order you wish them to occur. The sequence may include as many as 64 commands and/or delays. To include a delay, use the Volume + key (1 second) or Volume - key (.5 second).

The **ENTER IR** LED blinks when it receives a command.

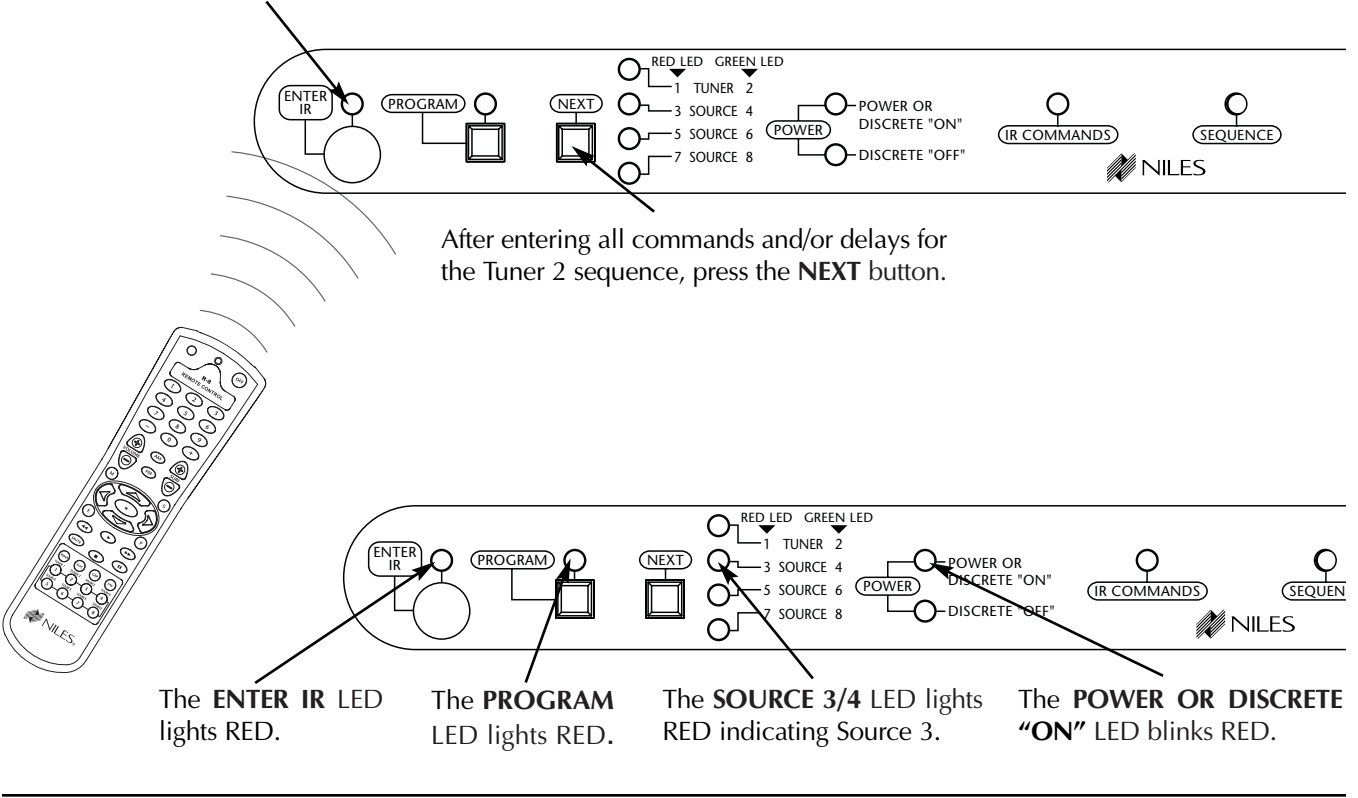


# SYSTEM PROGRAMMING STEPS

**Step 3** - To program a sequence for Tuner 2, press the keys on the Niles R-8 Remote that correspond to the commands you wish to include in the sequence. Otherwise, press the **NEXT** button and skip to **Step 4**.

Enter commands and delays from the ZR-8630AV Programming Worksheet in the order you wish them to occur. The sequence may include as many as 64 commands and/or delays. To include a delay, use the Volume + key (1 second) or Volume - key (.5 second).

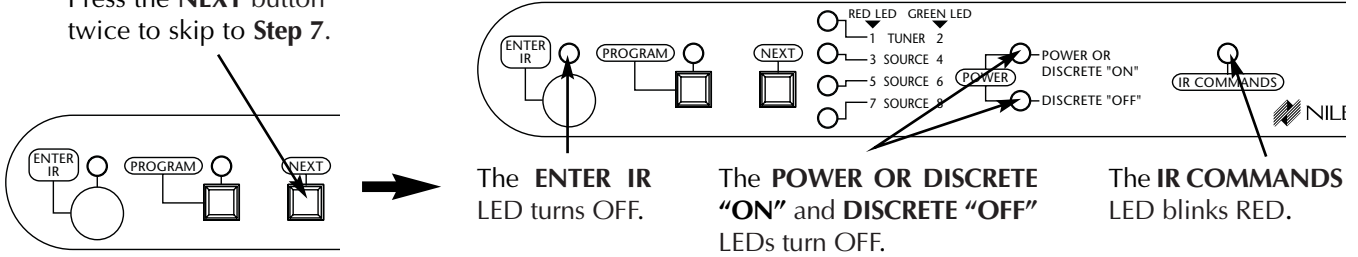
The **ENTER IR** LED blinks when it receives a command.



**Step 4** - If the component connected as Source 3 has IR commands for turning on and off, skip to **Step 5**.

If the component connected as Source 3 turns on with a switched outlet or remains on continually, press the **NEXT** button twice and skip to **Step 7**.

Press the **NEXT** button twice to skip to **Step 7**.

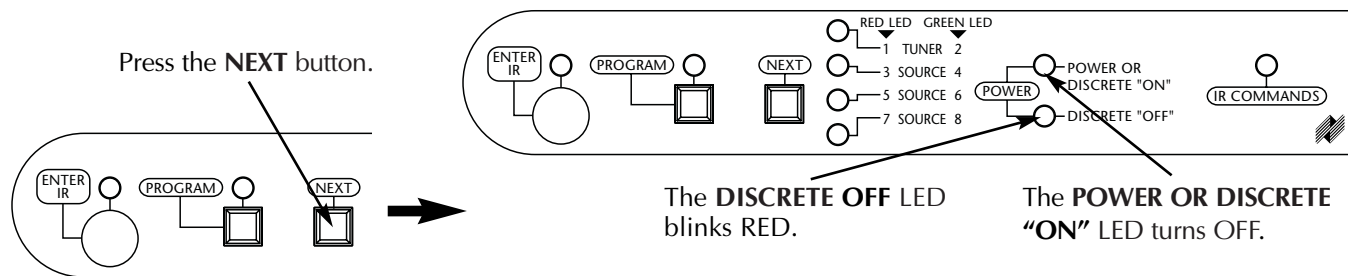
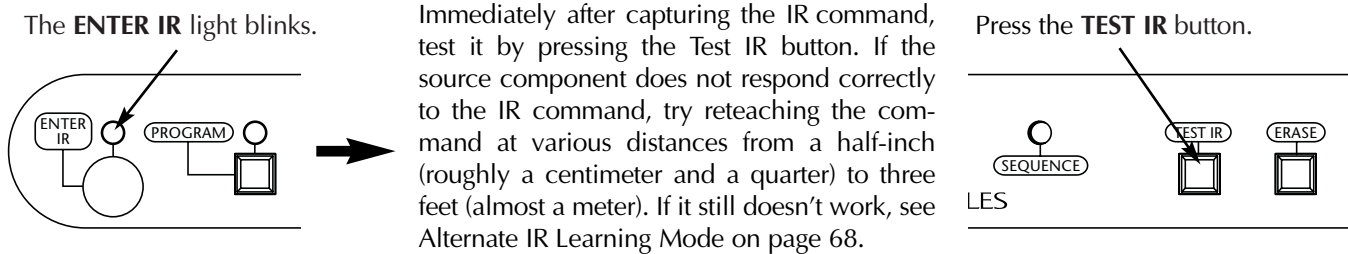




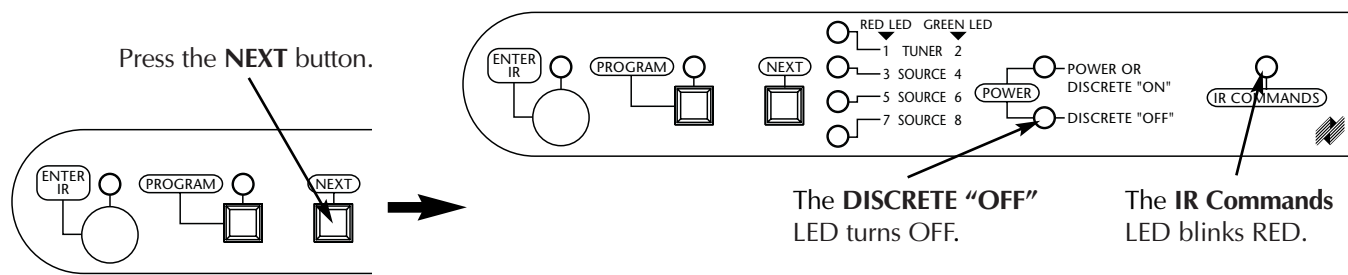
# SYSTEM PROGRAMMING STEPS

**Step 5a** - For a component connected as Source 3 that has IR commands for turning power ON and OFF:

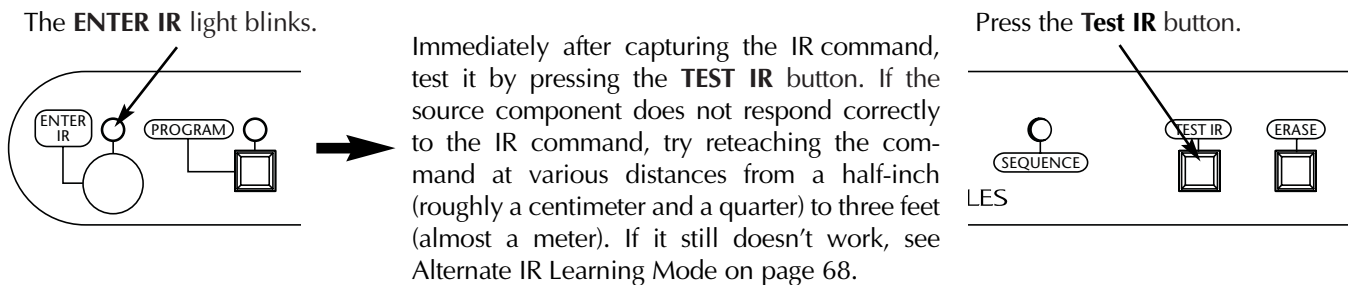
Determine whether the component has a single power IR command for ON and OFF, or separate commands for discrete ON and discrete OFF. With the source component's remote control, teach either the single power command or the discrete ON command.



**Step 5b** - If you taught a single power command, press the **NEXT** button once and skip to **STEP 7**.

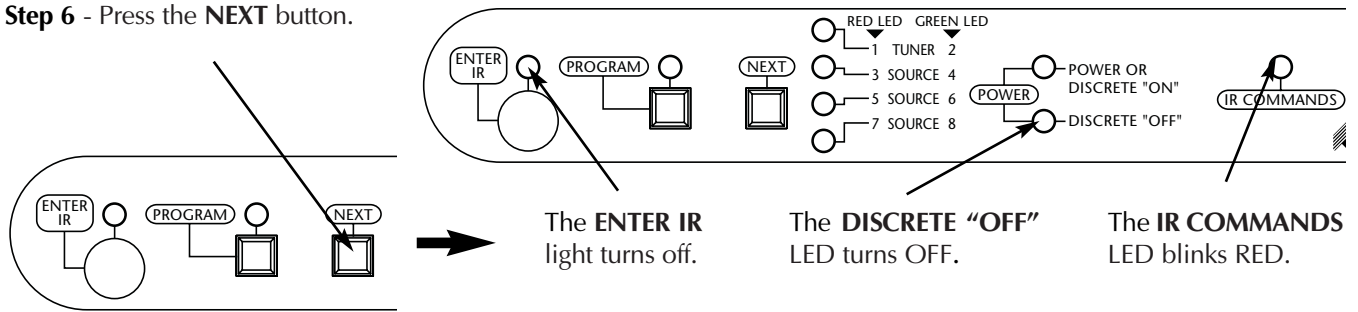


**Step 5c** - If you taught a discrete **ON** command, now teach the discrete **OFF** command.

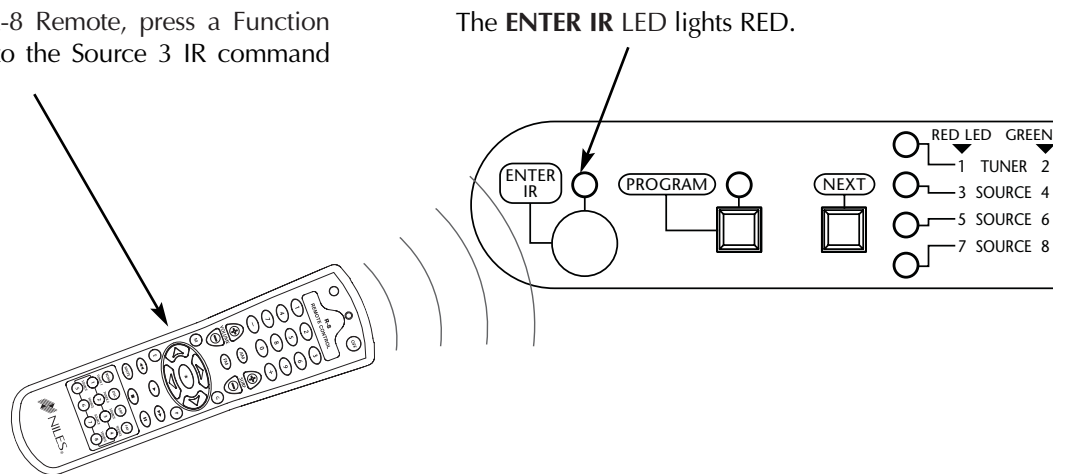


## SYSTEM PROGRAMMING STEPS

**Step 6** - Press the **NEXT** button.



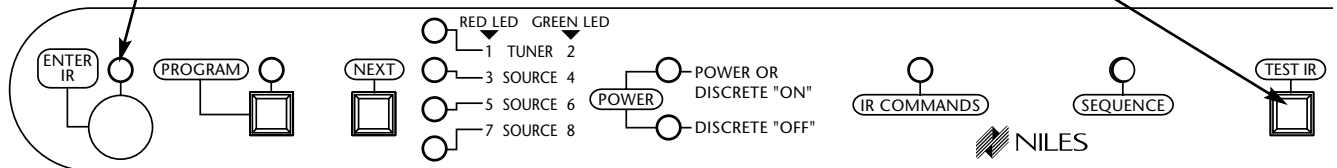
**Step 7** - On the Niles R-8 Remote, press a Function Button that corresponds to the Source 3 IR command you wish to teach.



**Step 8** - Teach the Source 3 IR command.

The **ENTER IR** LED turns OFF.

Immediately after capturing the IR command, test it by pressing the **TEST IR** button.



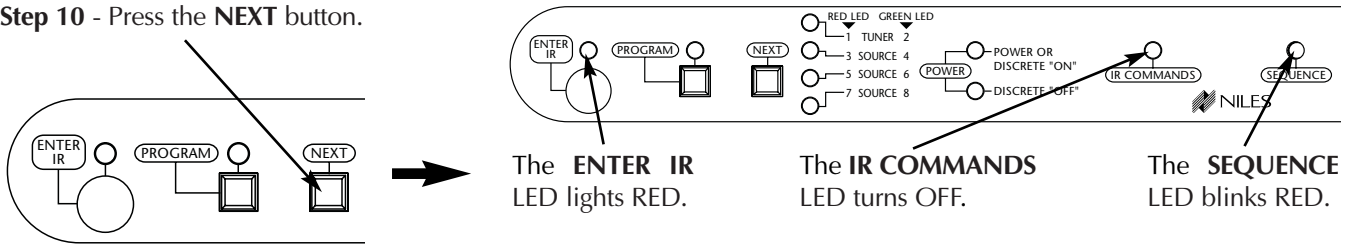
If the source component does not respond correctly to the IR command, press again the same Function Button on the Niles R-8 Remote.

The **ENTER IR** LED lights RED. Reteach the command and test again. If the source component still does not respond correctly, try reteaching the command at various distances from a half-inch (roughly a centimeter and a quarter) to three feet (almost a meter). If it still doesn't work, see Alternate IR Learning Mode on page 68.

**Step 9** - Repeat **Steps 7 and 8** until you have taught all commands for Source 3.

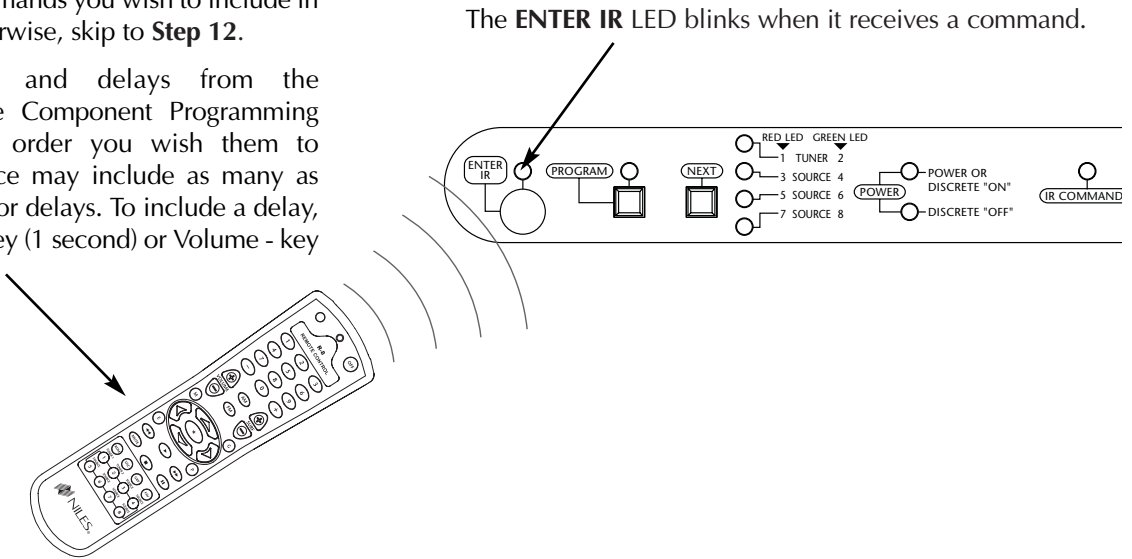
# SYSTEM PROGRAMMING STEPS

**Step 10** - Press the **NEXT** button.

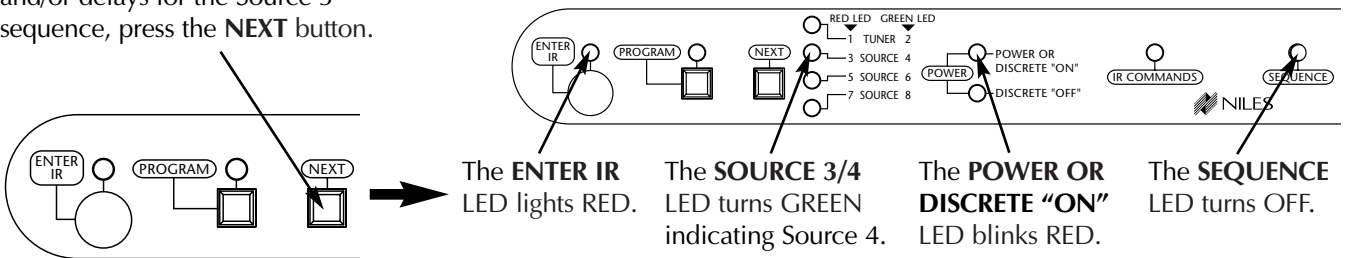


**Step 11** - To program a sequence for Source 3, press the keys on the Niles R-8 Remote that correspond to the commands you wish to include in the sequence. Otherwise, skip to **Step 12**.

Enter commands and delays from the ZR-8630AV Source Component Programming Worksheet in the order you wish them to occur. The sequence may include as many as 64 commands and/or delays. To include a delay, use the Volume + key (1 second) or Volume - key (.5 second).

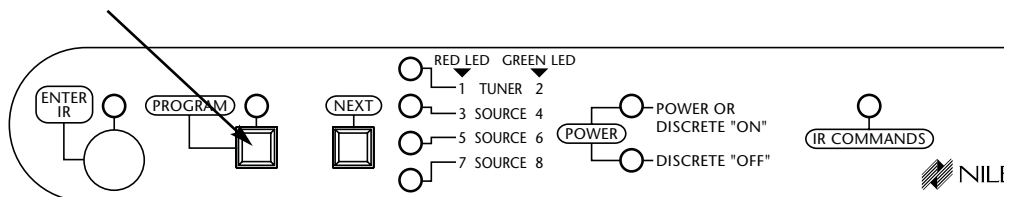


**Step 12** - After entering all commands and/or delays for the Source 3 sequence, press the **NEXT** button.



**Step 13** - To program Sources 4 through 8, follow **Steps 4 through 11** above. Remember that the **SOURCE #/#** LED is RED for odd-numbered sources and GREEN for even-numbered sources.

**Step 14** - To exit the programming mode, tap the **PROGRAM** button.



## SYSTEM PROGRAMMING STEPS

### ALTERNATE IR LEARNING MODE

The ZR-8630AV has two IR learning modes:

1. **Learn IR** is the factory default IR learning mode, which should work for most remote controls.
2. **LearnAlt.** is an alternate IR learning mode configured specifically to interpret IR commands from remotes with unusual operating characteristics and those without a modulated IR carrier frequency.

If a source component does not respond correctly when you test an IR command that you taught in the Learn IR mode:

- Leave the programming mode and determine whether the source component works in normal operation.
- Check the batteries in the remote control.
- Reteach the command at various distances from a half-inch (roughly a centimeter and a quarter) to three feet (almost a meter).

Finally, if nothing else works, change the IR learning mode to LearnAlt.:

1. Turn the ZR-8630AV ON.
2. Press and hold the PROGRAM button for two seconds, until the LCD display shows "PGM MODE
3. Press the Tuner Select button repeatedly until the LCD display shows "Learn IR."
4. Press the Station Scan + button or Station Scan - button to toggle the setting to "LearnAlt." To reset it manually to "Learn IR" press the Station Scan + button or Station Scan - button again.
5. Tap the PROGRAM button to exit programming. This automatically resets the IR learning mode to "Learn IR."

**Important Note:** After using LearnAlt. to teach a source component's IR commands to the ZR-8630AV, manually reset the IR learning mode to Learn IR before teaching the next source component. If you leave the setting in LearnAlt., the ZR-8630AV won't capture the IR commands of most remotes.

## PROGRAM EDITING STEPS

### SOURCE-POWER EDITING

To edit the power commands for the source components:

**Step 1** - Press and hold the **PROGRAM** button.

The **PROGRAM** LED lights, the **TUNER 1/2** LED lights, the **SEQUENCE** LED blinks, and the **ENTER IR** LED is on.

**Edit Power for Source 3:** Tap the **NEXT** button twice.

The **SOURCE 3/4** LED is RED, and the **POWER OR DISCRETE "ON"** LED blinks.

Skip to Step 2.

**Edit Power for Source 4:** Tap the **NEXT** button until the **SOURCE 3/4** LED is GREEN and the **POWER OR DISCRETE "ON"** LED blinks.

Skip to Step 2.

**Edit Power for Source 5:** Tap the **NEXT** button until the **SOURCE 5/6** LED is RED and the **POWER OR DISCRETE "ON"** LED blinks.

Skip to Step 2.

**Edit Power for Source 6:** Tap the **NEXT** button until the **SOURCE 5/6** LED is GREEN and the **POWER OR DISCRETE "ON"** LED blinks.

Skip to Step 2.

**Edit Power for Source 7:** Tap the **NEXT** button until the **SOURCE 7/8** LED is RED and the **POWER OR DISCRETE "ON"** LED blinks.

Skip to Step 2.

**Edit Power for Source 8:** Tap the **NEXT** button until the **SOURCE 7/8** LED is GREEN and the **POWER OR DISCRETE "ON"** LED blinks.

Skip to Step 2.

**Step 2** - If the component has a single power IR command for both ON and OFF, teach the power IR command by pressing the power button on the component's factory remote.

**or**

If the component has discrete ON and OFF commands, teach the discrete ON command by pressing the ON button on the source component's remote control. The **ENTER IR** LED blinks.

**Step 3** - Immediately after capturing the IR command, test it by pressing the **TEST IR** button. If the source component does not respond correctly to the IR command, try reteaching the command at various distances from a half-inch (roughly a centimeter and a quarter) to three feet (almost a meter).

**Step 4** - Tap the **NEXT** button. The **POWER ON** LED turns off and the **DISCRETE OFF** LED blinks RED.

**Step 5** - If the component has a single power command for both ON and OFF, press the **NEXT** button again and continue to program the system.

**or**

If the component has a discrete ON and OFF command, teach the discrete OFF command. The **ENTER IR** LED blinks.

**Step 6** - Immediately after capturing the IR command, test it by pressing the **TEST IR** button. If the source component does not respond correctly to the IR command, try reteaching the command at various distances from a half-inch (roughly a centimeter and a quarter) to three feet (almost a meter).

**Step 7** - Tap the **PROGRAM** button to exit programming.

### IR COMMAND EDITING

To edit the individual IR commands for control of the source components:

**Step 1** - Press and hold the **PROGRAM** button.

The **PROGRAM** LED lights, the **TUNER 1/2** LED lights, the **SEQUENCE** LED blinks, and the **ENTER IR** LED is on.

**Edit IR Commands for Source 3:** Tap the **NEXT** button until the **SOURCE 3/4** LED is RED, and the **IR COMMANDS** LED blinks.

Skip to Step 2.

**Edit IR Commands for Source 4:** Tap the **NEXT** button until the **SOURCE 3/4** LED is GREEN, and the **IR COMMANDS** LED blinks.

Skip to Step 2.

**Edit IR Commands for Source 5:** Tap the **NEXT** button until the **SOURCE 5/6** LED is RED, and the **IR COMMANDS** LED blinks.

Skip to Step 2.

## PROGRAM EDITING STEPS

**Edit IR Commands for Source 6:** Tap the **NEXT** button until the **SOURCE 5/6** LED is GREEN, and the **IR COMMANDS** LED blinks.

Skip to Step 2.

**Edit IR Commands for Source 7:** Tap the **NEXT** button until the **SOURCE 7/8** LED is RED, and the **IR COMMANDS** LED blinks.

Skip to Step 2.

**Edit IR Commands for Source 8:** Tap the **NEXT** button until the **SOURCE 7/8** LED is GREEN, and the **IR COMMANDS** LED blinks.

Skip to Step 2.

**Step 2** - Press a Function Button on the Niles R-8 Remote that corresponds to the source-component IR command you wish to teach. The **ENTER IR** LED lights red.

**Step 3** - Using the source component's factory remote, teach the IR command. The **ENTER IR** LED turns off.

**Step 4** - Immediately after capturing the IR command, test it by pressing the **TEST IR** button. If the source component does not respond correctly to the IR command, try reteaching the command at various distances from a half-inch (roughly a centimeter and a quarter) to three feet (almost a meter).

**Step 5** - Repeat all steps until you have taught all of the source-component IR commands.

**Step 6** - Tap the **PROGRAM** button to exit programming.

---

### SEQUENCE EDITING

To program the control sequences for the source components:

**Step 1** - Press and hold the **PROGRAM** button.

The **PROGRAM** LED lights, the **TUNER 1/2** LED lights, the **SEQUENCE** LED blinks, and the **ENTER IR** LED is on.

**Edit a sequence for Source 3:** Tap the **NEXT** button until the **SOURCE 3/4** LED is RED, and the **SEQUENCE** LED blinks.

Skip to Step 2.

**Edit a sequence for Source 4:** Tap the **NEXT** button until the **SOURCE 3/4** LED is GREEN, and the **SEQUENCE** LED blinks.

Skip to Step 2.

**Edit a sequence for Source 5:** Tap the **NEXT** button until the **SOURCE 5/6** LED is RED, and the **SEQUENCE** LED blinks.

Skip to Step 2.

**Edit a sequence for Source 6:** Tap the **NEXT** button until the **SOURCE 5/6** LED is GREEN, and the

**SEQUENCE** LED blinks.

Skip to Step 2.

**Edit a sequence for Source 7:** Tap the **NEXT** button until the **SOURCE 7/8** LED is RED, and the **SEQUENCE** LED blinks.

Skip to Step 2.

**Edit a sequence for Source 8:** Tap the **NEXT** button until the **SOURCE 7/8** LED is GREEN, and the **SEQUENCE** LED blinks.

Skip to Step 2.

**Step 2** - Press the keys on the Niles R-8 Remote that correspond to the commands you wish to include in the sequence.

Enter commands and delays in the order you wish them to occur. The sequence may include as many as 64 commands and/or delays. To include a delay, use the Volume + key (1 second) or Volume - key (.5 second). The **ENTER IR** LED blinks when it receives a command.

**Step 3** - Tap the **PROGRAM** button to exit programming.

## PROGRAM EDITING STEPS

### STORING TUNER PRESETS

**Step 1-** With the **BAND SHIFT** Button, select the desired tuner (Tuner 1 or Tuner 2) and band (AM or FM). The cycle is FM 1, AM 1, FM 2, AM 2.

**Step 2** - Locate the desired station for preset using the **STATION SCAN** Buttons.

**Step 3** - Press and hold the **PRESET** Button where you wish to store the desired station. The station display blinks when the station is stored to the **PRESET** Button.

---

### PROGRAM ERASING

#### Erasing Individual IR Commands

**Step 1.** Follow the same steps as you would to program the IR command that you wish to erase.

**Step 2.** When the **ENTER IR** LED lights (prompting you to teach an IR command), tap the **ERASE** button instead. This erases the previously stored command.

**Step 3.** Continue programming, or tap the **PROGRAM** button to exit the programming mode.

#### Erasing Individual Sequences

**Step 1.** Follow the same steps as you would to program the sequence that you wish to erase.

**Step 2.** When the **ENTER IR** LED lights (prompting you to enter the IR commands and/or delays for the sequence), press and hold the **ERASE** button instead. This erases the previously stored sequence.

**Step 3.** Continue programming, or tap the **PROGRAM** button to exit the programming mode.

#### Erasing all IR Commands and Sequence Programming for Only One Source

**Step 1.** During normal programming, and while the LED for the source you wish to erase is lit, press and hold the **PROGRAM** and **ERASE** buttons until the **POWER OR DISCRETE "ON"** LED, the **IR COMMANDS** LED, and the **SEQUENCE** LED all blink.

**Step 2.** Release the **PROGRAM** and **ERASE** buttons to erase all programming for the selected source.

**Step 3.** Continue programming, or tap the **PROGRAM** button to exit the programming mode.

#### Erasing All Programming

**Step 1.** During normal programming, press and hold the **PROGRAM**, **NEXT**, and **ERASE** buttons until the **PROGRAM** LED, the **POWER OR DISCRETE "ON"** LED, the **IR COMMANDS** LED, and the **SEQUENCE** LED all blink.

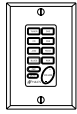
**Step 2.** Release the **PROGRAM**, **NEXT**, and **ERASE** buttons to erase all programming for the entire system.

**Step 3.** Continue programming, or tap the **PROGRAM** button to exit the programming mode.

# ZR-8630AV SYSTEM ACCESSORIES

## Select™ Eight Master Keys

STOCK # FG00808



Provides advanced system control, including system activation, source selection and control, and volume adjustment.

## Select™ IR Eight Master Keys

STOCK # FG00935



Provides advanced system control, including system activation, source selection and control, and volume adjustment. Includes interference-resistant narrow-band integrated IR sensor.

## Solo™ Four Master Keys

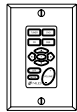
STOCK # FG00807



Provides system activation, source selection and control, basic source transport and menu control, and volume adjustment.

## Solo™ IR Four Master Keys

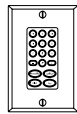
STOCK # FG00936



Provides system activation, source selection and control, basic source transport and menu control, and volume adjustment. Includes interference-resistant narrow-band integrated IR sensor.

## Numeric™ Accessory Keypad Module

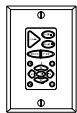
STOCK # FG00809



Provides direct channel access for DSS receivers and direct track/disc access for CD and DVD changers.

## Transport™ Accessory Keypad Module

STOCK # FG00810



Provides source transport, menu, and advanced control. Works with the Select(tm) Master Keypad.

## R-8 Accessory Remote

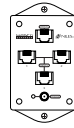
STOCK # FG00939



Additional remote control for operation from zones installed with Select(tm) IR keypads, Solo(tm) IR keypads, and Niles IR Sensors.

## Expander™ Master Keypad Connection Accessory

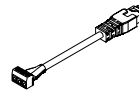
STOCK # FG00853



Increases the number of Select™ and/or Solo™ Master Keypad Modules that can be connected to a single zone of the ZR-8630AV.

## IntelliPad® Ci Adapter Cable

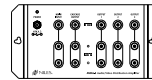
STOCK # FG00852



Provides easy connection of IR sensors to the Select™ or Solo™ Master Keypad when using two-conductor shielded cable.

## AVDA-3 Audio/Video Distribution Amplifier

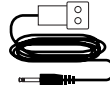
STOCK # FG00814



Source-level audio and base-band video distribution amplifier. Includes a stereo audio and video input, distributed to three audio/video outputs.

## IRC-1P FloodFlasher™

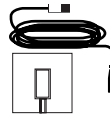
STOCK # FG00932



IR FloodFlasher™. Connects with a 3.5mm mono mini-plug; 10' cable. Includes Velcro mounting system.

## IRC-2P MicroFlasher™

STOCK # FG00726



IR MicroFlasher™. Connects with a 3.5mm mono mini-plug; 10' cable. Includes light blocker.

## Zone/Room Labels

STOCK # LA01021A



Zone/Room identification labels to place in the label slots for each zone of the ZR-8630AV.

## IntelliPad® Ci Master Keypad Labels

STOCK # LA00978A



Additional Master Keypad identification labels to customize a Select™ or Solo™ Master Keypad Module.

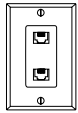


## ZR-8630AV SYSTEM ACCESSORIES *continued*

### NET-2D Computer Network Convenience Outlets

**Color/Stock#**

Almond	FG00858
Bone	FG00840
White	FG00842



Two eight-wire (RJ-45) modular jacks for computer network or IntelliPad® Ci Master™ Keypad connections. Decora®-style faceplate.

### NET-2S Computer Network Convenience Outlets

**Color/Stock#**

Almond	FG00859
Bone	FG00843
White	FG00844



Two eight-wire (RJ-45) modular jacks for computer network or IntelliPad® Ci Master™ Keypad connections. Standard-style faceplate.

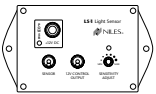
**Special Note:** RJ-45 jacks and the faceplates that make up the network convenience outlets are available separately in our Jobsite® System.

## SYNC ACCESSORIES

Many of the components in your system should have their power status “synced” to the ZR-8630AV. The following accessories either sense a component’s ON/OFF status or actually turn components ON/OFF.

### LS-1 Light Sensor

**STOCK #**  
FG00728



Senses the brightness of a component’s front-panel display and outputs a 12V DC sync signal when the display is brightest.

### IPC-6 Programmable AC Power Controller

**STOCK #**  
FG00272

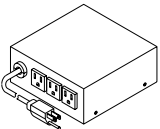
Six-outlet microprocessor-controlled power-management system with on/off sequencing.



\*Rack-mount panel available. Stock# FG00669

### APC-2 Current-Sensing Outlet Switcher

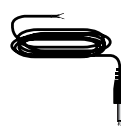
**STOCK #**  
FG00254



Current-sensing outlet. Provides 12V DC sync connection via an accessory cable to the ZR-8630AV.

### 10' Bare-Wire to Mini-Plug Accessory Cable

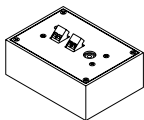
**STOCK #**  
FG00724



Sends sync signals to the 12V sync inputs of the ZR-8630AV. Connects with a 3.5mm mono mini-plug and flying leads.

### OTI-512 Opto-Isolated Voltage Trigger

**STOCK #**  
FG00319



Converts any voltage between 3V and 30V (AC or DC) to 12V DC sync. Useful in combination with an accessory cable with Proceed™, Fosgate™, Citation™, and Synthesis™ preamps.

### 10' Mini-plug to Mini-Plug Accessory Cable

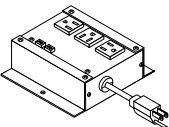
**STOCK #**  
FG00933



Sends sync signals to the 12V sync inputs of the ZR-8630AV. Connects with a 3.5mm mono mini-plug on each end.

### AC-3 Voltage-Triggered AC Power Strip

**STOCK #**  
FG00242



AC power strip with two voltage-triggered AC outlets and one unswitched AC outlet.

### 12V DC/200mA Wall Adapter

**STOCK #**  
FG00665



Provides a 12V DC sync signal to the ZR-8630AV when plugged into a component’s switched outlet.

# TROUBLESHOOTING

## TROUBLESHOOTING THE ZR-8630AV

Problem	Troubleshooting
The receiver has no lights on.	<p>Inspect the AC power cord. Be sure it is inserted firmly into the power-cord socket of the receiver.</p> <p>Check the AC power outlet. If possible, plug the ZR-8630AV into an unswitched AC outlet. If the unit is plugged into a switched AC outlet, verify that the outlet is switched on and is providing power.</p> <p>If you've checked the cord and the outlet, and you still have no lights, call Niles for service.</p>
The LCD Display shows error E1, E2, E3, E4, E5, E6.	<p>Errors E1 through E6 mean that an internal problem exists and the ZR-8630AV requires service.</p>
The LCD Display shows error E7.	<p>Error E7 means one or more of the front-panel control or programming buttons is stuck in the depressed position.</p> <p>Check each button by pressing and releasing it.</p>
The LCD Display shows error E8.	<p>In an expanded system, one or more of the ZR-8630AV units is not set to the proper Master/Slave mode.</p> <p>Refer to the Installation Settings of this manual for proper setup.</p>

## SYSTEM INSTALLATION TROUBLESHOOTING

Problem	Troubleshooting
The keypad is connected, but no lights come on.	<p>Test the keypad cable with an appropriate cable tester.</p>
There is no IR control of the source components.	<p>The sensors may be receiving some interference. Check the Status LED.</p> <p>When using the Niles I RR-4D+ Wall Mount or the Niles TIR-1+ Tabletop IR Sensors, the Status LED should be illuminating GREEN when the zone is ON. The Status LED should be off when the zone is OFF, and it should be RED when it is receiving a command.</p> <p>When using the Niles MS-1 or MS-2 IR Sensors, the Status LED should be off when the zone is ON. It should only illuminate GREEN when receiving an actual IR command.</p> <p>If the LEDs stay constantly RED (or GREEN when using MS-1 or MS-2), that is a sign of interference. Identify the source of interference and remove it, or move the sensor to a place where it doesn't have interference. Sources of interference may include dimmer switches, fan-motor switches, televisions (especially plasma televisions), and sunlight.</p>
Some IR commands work for a source and some don't.	<p>You may have captured some IR commands incorrectly. To avoid this, test all IR commands with the IR test feature as you capture them.</p>

# SPECIFICATIONS

## ZR-8630AV Audio/Video MultiZone Receiver

### AMPLIFIER SECTION

Continuous Average Power Output (FTC)

All Channels: 30W per channel min. RMS at 8 ohms, any two channels driven from 20Hz to 20kHz with no more than .05% THD.

37W per channel min. RMS at 4 ohms, any two channels driven from 20Hz to 20kHz with no more than .1% THD.

Frequency Response: 10Hz to 50kHz +/- 3dB

Input Sensitivity: 160mV for 1W output, 860mV for full output (30W) with volume control set to maximum.

Input Impedance: 20k ohms

Signal Noise Ratio: ≥ 93dB

### TUNER SECTION

USA/Canada	CE
<b>FM</b> Frequency Range: 87.5-108MHz IHF Sensitivity: ≤ 20dBu (19kHz LPF ON THD = 3%) IF Rejection: ≥ 60dB Image Rejection: ≥ 30dB Carrier Leak: ≥ 50dB Selectivity: ≥ 60dB (+/- 400kHz) Usable Sensitivity: ≤ 25dBu (S/N = 50dB) S/N Ratio: ≥ 60dB Separation: ≥ 25dB AM Rejection: ≥ 40dB	<b>FM</b> Frequency Range: 87.5-108MHz IHF Sensitivity: ≤ 20dBu (19kHz LPF ON THD = 3%) IF Rejection: ≥ 60dB Image Rejection: ≥ 60dB Carrier Leak: ≥ 55dB Selectivity: ≥ 60dB (+/- 400kHz) Usable Sensitivity: ≤ 25dBu (S/N = 50dB) S/N Ratio: ≥ 60dB Separation: ≥ 30dB AM Rejection: ≥ 40dB
<b>AM (USA/CANADA)</b> Frequency Range: 530-1710kHz IF Rejection: ≥ 45dB Image Rejection: ≥ 30dB Selectivity: ≥ 18dB (+/- 10kHz) Usable Sensitivity: ≤ 61dBu (S/N = 20dB) S/N Ratio: ≥ 43dB	<b>AM</b> Frequency Range: 522-1611kHz IF Rejection: ≥ 45dB Image Rejection: ≥ 30dB Selectivity: ≥ 20dB (+/- 10kHz) Usable Sensitivity: ≤ 61dBu (S/N = 20dB) S/N Ratio: ≥ 43dB

### GENERAL

Power Supply: AC 120V, 60Hz	Power Consumption: 500W Maximum
Dimensions: 17" wide x 7-1/8" high (including feet) x 16" deep	Weight: 40 lbs

### REMOTE CONTROL

Transmitter: Infrared	Signal Range: Approx. 9m, 30'
Power Supply: Two "AA" batteries (1.5V x 2)	

### VIDEO

Input Impedance: 75 ohms	Output Impedance: 75 ohms
Output Level: 1Vpp	Video Bandwidth: DC to 6MHz min. +/- 3dB







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