

NILES AUDIO CORPORATION



ZR-6 MULTIZONE RECEIVER SYSTEM DESIGN GUIDE

INCLUDES:

- ZR-6 MULTIZONE FAMILY PRODUCT OVERVIEWS
- ZR-6 MULTIZONE FAMILY SYSTEM APPLICATIONS
- ZR-6 MULTIZONE FAMILY ACCESSORY APPLICATIONS
- iWARE® APPLICATIONS

ENGINEERED BY





INTRODUCTION

The following information simplifies and optimizes the design and specification of ZR-6 MultiZone systems. You'll become familiar with the ZR-6 system, the benefits it provides, the related accessories, and how it integrates into a variety of applications.

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ZR-6 MULTIZONE SYSTEM DESIGN GUIDE

HOW TO USE THIS SYSTEM DESIGN GUIDE

Each chapter in the System Design Guide is divided into sections to make comprehension easier. Each section contains specific information that is presented with graphic examples to further aid in understanding. Below is a description of what information is contained within each section.

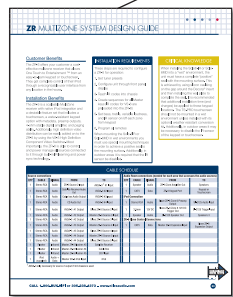
The Overview
section provides basic knowledge about the topic.



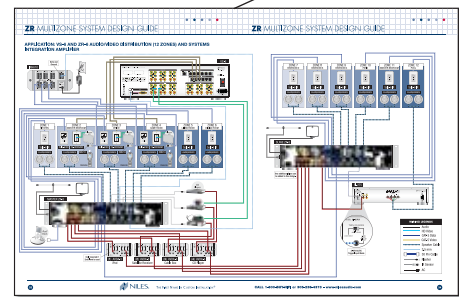
The Application
section provides you with detailed info for a specific application (see below)



The Cable Schedule
section lists all cables used in cabling diagrams (sometimes shown on application page)



The Cable Diagram
section shows all connection points with color coded line connections



Do This First
Installation instructions on what you need to know before you begin

What Does this Application Do?
Description of application

Key Considerations
Important information that you need to consider when planning your design

Installation Requirements
Specific installation details that you need to know

ZR-6 MULTIZONE SYSTEM DESIGN GUIDE
APPLICATION: STAND-ALONE ZR-6 MULTIZONE RECEIVER

DO THIS FIRST Review the ZR-6 Overview

WHAT DOES THIS APPLICATION DO?
This application covers the use of a ZR-6 Multizone Receiver to distribute six audio sources (including a built-in AM/FM tuner) to six zones.

Key Considerations
GLOBAL FEATURES INCLUDE:

- Party Mode** - Press and hold a source button and all pre-configured zones will turn on to play that source.
- Paging** - Allows front and rear door-decked zones from the Miles DCS-1 or paging from a phone system, or both, to be heard through the speakers in pre-configured zones. The zones of the ZR-6 that are on will mute so the door-decked page can be heard. The zones that were off will turn on so the door-decked page can be heard. When the page is completed, zones that were on will automatically begin playing music again and the zones that were off will again turn off.
- Zone Linking** - Zones can be "linked" together so that they always play the same source, while retaining independent source adjustment.
- All Zones Off** - Press and hold the Off button to turn off all zones.

ZONE FEATURES INCLUDE:

- Weather-Resistant Keypads** - The Sub-6R1 and Sub-6M2 keypads are weather-resistant and can be installed in wet areas such as showers, saunas, and outdoors. Both meet the requirements of the IEC 60529 IP-64 standard. When installing in wet areas, special installation techniques are required. See the Critical Knowledge section.
- Volume Turn-On, Source Level, Bass, Treble, and Variable Loudness** - Each zone can have its own custom tailored sound.
- IR Sensor On/Off** - The Sub-6R1 sensor is auto-keeps on but can be turned off. It may be necessary to disable the IR sensor if the keypad is exposed to direct sunlight.

ADDING A SEPARATE IR SENSOR
When adding a separate IR sensor in a zone you must:

- Install TS-Pro as the user interface for the IR controlled zone (TS-Pro has an IR input on back panel or with a Sub-6R1 or Sub-6M2 you must add a separate IR receiver system and route the data and ground to the Global IR input).
- Touch remote zone commands into the IR remote stored from an IR-CD capture station, an Intelli-3 capture station, or a third party remote (not necessary with the TS-Pro).
- Create a sequence to automate the activation of the audio source.

ZONE CONTROL
Light Usage Rooms - Sub-6R1 keypad recommended - Provides basic system control, including One Touch to Entertainment, Volume +/-, Track +/-, Play/Pause/Select, Mute, and Off. The Numeric 12-positions keypad can be added to the Sub-6R1 for more control.
Moderate Usage Rooms - Sub-6M2 keypad recommended - Provides advanced controls, including metadata information from the iPod and iLMDM stations displayed on the LCD screen.
Heavy Usage Rooms - TS-Pro keypad recommended - Provides easy-to-read control through a color touchscreen. Other used buttons are conveniently located just below the touchscreen. Additionally, the TS-Pro can access and control other zones.

Customer Benefits
The ZR-6 offers your customer a cost-effective Multizone receiver that allows One Touch to Entertainment from any location in the house. They get complete control of their iPod through a recognizable user interface from any location in the house.

Installation Benefits
The ZR-6 is a mobile Multizone receiver with native iPod integration and a desirable feature set that includes a touchscreen, a water-resistant keypad with metallic, glowing outputs, 4-color color display, and rugged ability. Most importantly, the ZR-6 is able to control and power manage all sources connected to it through built-in IR learning and power sync technology.

CRITICAL KNOWLEDGE
The ZR-6 can be powered either by direct connection via CAT-5 to a 24V or 24-0, or by an optional 12V DC power supply. The keypad power supply in the ZR-6 will operate regardless of up to a maximum 100% of 3C. Any additional keypads must be connected to a 24V AC with its own power supply. Only 1 active IR sensor is needed. When a room has more than 100% IR sensors should be disabled in at least one keypad.

INSTALLATION REQUIREMENTS
Power supply is required when the Keypad Power Value is exceeded.

NILES The First Step In Custom Installation®

Customer Benefits
What this application does for your customer

Installation Benefits
What the application does for you

Critical Knowledge
These are "must know" details that you need to know



OVERVIEW: ZR-6 MULTIZONE RECEIVER

The ZR-6 is a multizone solution loaded with desirable features such as plug-and-play iPod® integration, metadata display, a built-in AM/FM tuner, One Touch To Entertainment® automation, and optional video distribution—at a price that breaks new ground. It delivers six audio sources, including its AM/FM tuner to six listening zones. If more than six zones are needed, simply add as many as two ZR-6s to create up to an eighteen zone system. The ZR-6's array of control interfaces, which includes a full-color touchscreen, ensures the perfect level of control for every location and every installation.

R-8L HAND-HELD IR LEARNING REMOTE

This versatile remote provides advanced, automated control of all six of the ZR-6's sources, as well as a local TV and an additional local source such as a DVD player or satellite receiver. The R-8L can create IR macros and comes preloaded with a library of IR commands for both the ZR-6 as well as many popular brands of equipment. It also learns IR commands directly from factory remote controls.



ZR-6
FG01433
6 Source, 6 Zone MultiZone Receiver with AM/FM Tuner and Plug-and-Play iPod Integration



ZR-6 MULTIZONE SYSTEM DESIGN GUIDE

OVERVIEW: ZR-6 KEY FEATURES

PLUG-AND-PLAY iPod INTEGRATION

A 30-pin connector provides an install connection for an iPod digital music player as Source 2. All of the iPod commands are already built into the ZR-6.

BUILT-IN AM/FM TUNER

A digital AM/FM tuner with up to 20 preset stations is built into the ZR-6 providing radio reception without the need for additional components, connections, or programming.

4 OHM STABLE DIGITAL AMPLIFIER

The advanced digital power amplifier delivers 50 watts per zone (25 watts per channel) and has the ability to comfortably drive two pairs of 8 ohm speakers per zone.

RS-232 AND DISCRETE IR CONTROL PER ZONE

Control the ZR-6 with third-party systems using RS-232 control protocols and/or infrared commands.

ZONE 4, 5, AND 6 PREAMP OUTPUTS

Connect an external amplifier to provide more power for a large area such as a patio, or for a zone where higher than normal volume levels are desired. The preamp outputs can be switched for fixed or variable levels.

12V CONTROL OUTPUTS (ZONE 4, 5, 6 AND GLOBAL)

Automate power turn-on and turn-off of connected components such as a Niles AC-3 Voltage Triggered AC Power Strip.

PAGING INPUT

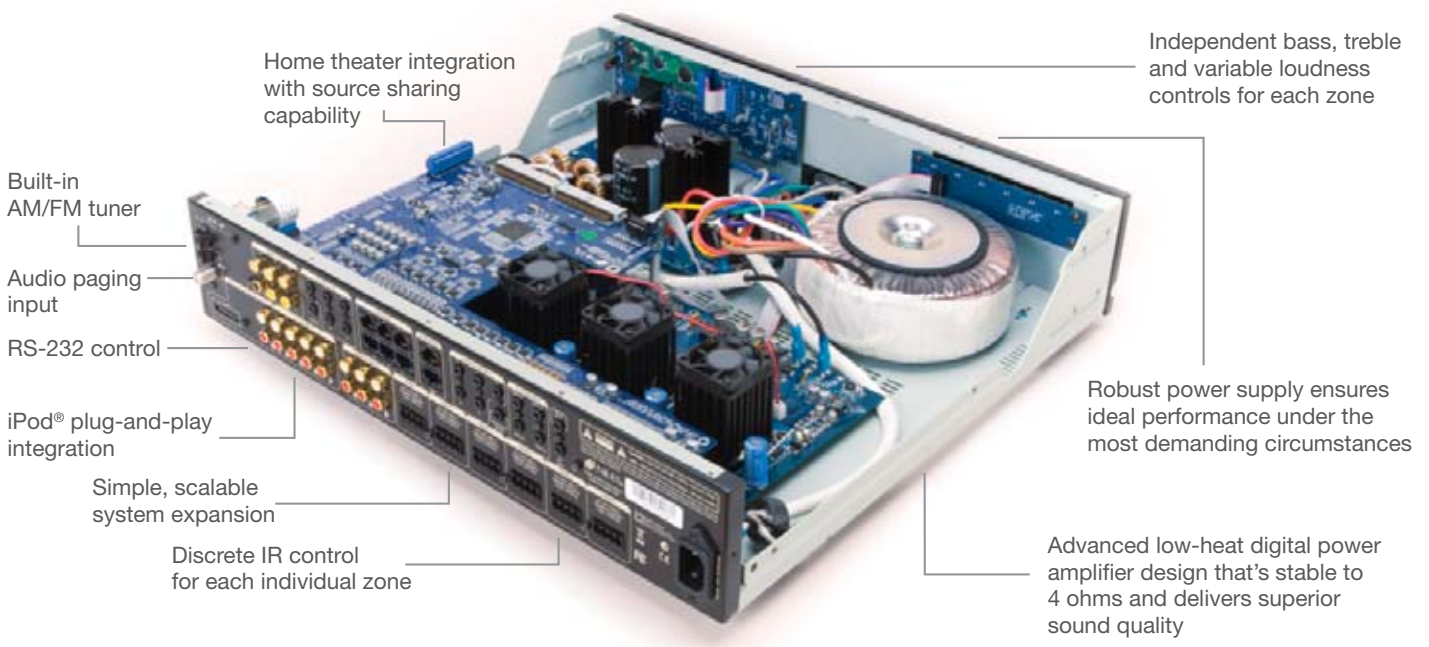
Connect a telephone system and/or doorbell to provide paging throughout the home. Overrides all other inputs and can be configured to work in any number of zones.

PARTY MODE

The Party Mode turns on all zones (or a pre-configured number of zones) to play the same source of music, instantly filling the house with music.

HOME THEATER SYNC

The ZR-6 can share source components with an independent home theater system. When the home theater receiver is on, the ZR-6 will stay active (even if all zones are turned off) and will continue to execute the appropriate 12V and IR functions.





OVERVIEW: ZR-6 KEYPADS AND TOUCHSCREEN

TS-PRO COLOR TOUCHSCREEN CONTROLLER

The TS-Pro is a wall-mount color touchscreen that offers local and whole-house control over audio/video equipment. Designed to be used with the ZR-6, it provides an upgrade solution to the entry level Solo-6IR Keypad and the Solo-6MD Metadata Keypad. Its bright, high-contrast color touchscreen offers a crisp, easy-to-see interface that quickly responds to the press of a finger. Frequently used commands are accessed using the conveniently located hard keys. The large LCD display and intuitive control screens simplify operation, even when accessing advanced source features and functionality. The TS-Pro configures quickly without a computer. Simply connect the TS-Pro to the ZR-6 and all system programming automatically loads into the touchscreen delivering true plug-and-play integration.

SOLO-6MD WEATHER-RESISTANT MASTER KEYPAD WITH BACKLIT LCD AND METADATA DISPLAY

The Solo-6MD's bright, high-contrast LCD display is easy-to-read under any lighting conditions. It displays all the metadata from a connected iPod as well as menus and favorites for the ZR-6's built-in AM/FM tuner. Dedicated AM/FM and iPod keys offer quick direct access to these sources. The weather-resistant design of the Solo-6MD opens up new installation opportunities by enabling you to install the keypad in wet areas within the home such as bathrooms and spas or outdoor areas such as patios. A built-in IR sensor allows convenient control by the R-8L Learning IR Remote or third-party controls.

SOLO-6IR WEATHER-RESISTANT MASTER KEYPAD

The single-gang Solo-6IR keypad offers convenient control for the ZR-6's built-in tuner and up to 5 additional sources, including an iPod. It simplifies operation for your customer by providing One Touch To Entertainment® automation—a single press is all that's needed to access the entertainment. The Solo-6IR comes with an assortment of laser-etched buttons so it can be labeled to optimally reflect each client's needs. The Solo-6IR's integrated IR sensor can be disabled for use in areas prone to direct sunlight, such as outside by the pool.

NUMERIC-6P

The Numeric-6P provides convenient control of satellite receivers, cable boxes, and CD changers. It is designed to work specifically with the Solo-6IR keypad and mounts along with it into a double-gang J-box (the double-gang wall plate is not supplied).



TS-Pro
FG01451

Solo-6MD
FG01493

Solo-6IR
FG01440

Numeric™-6P
FG01442

Numeric-6P
(used with the Solo-6IR)



ZR-6 MULTIZONE SYSTEM DESIGN GUIDE

OVERVIEW: KEYPADS AND TOUCHSCREEN KEY FEATURES

METADATA DISPLAY

The TS-Pro Touchscreen and Solo-6MD Keypad display metadata from an iPod and the built-in radio for easy and intuitive operation.

WEATHER-RESISTANT KEYPADS

The Numeric-6P, Solo-6IR, and the Solo-6MD keypads can be installed in wet areas such as showers, saunas, and outdoors.

KEYPAD COLOR OPTIONS

The Solo-6IR, Solo-6MD, and TS-Pro keypads include white, light almond, and bone color change kits. The Solo-6MD EX and TS-Pro EX include white, black, and silver color change kits. Additional color change kits are also available for the Solo-6IR. The Solo-6IR UK version fits into a 70mm square box. For more info, visit: www.nilesaudio.com

TS-PRO COLOR TOUCHSCREEN CONTROLLER

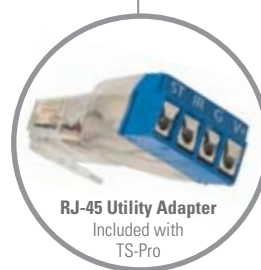
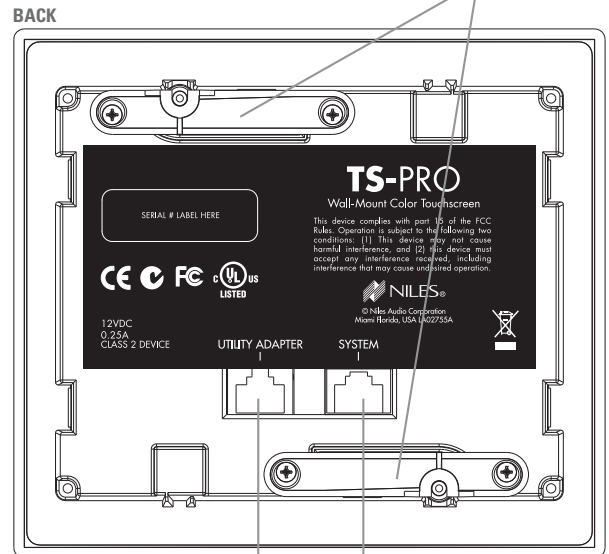
Color touchscreen provides a crisp, easy-to-read interface



Backlit hard keys for easy access to frequently used commands

Screwless wallplate snaps in place for a clean, polished look

Top & bottom dog ears clamp the TS-Pro securely in place



RJ-45 Utility Adapter
Included with TS-Pro

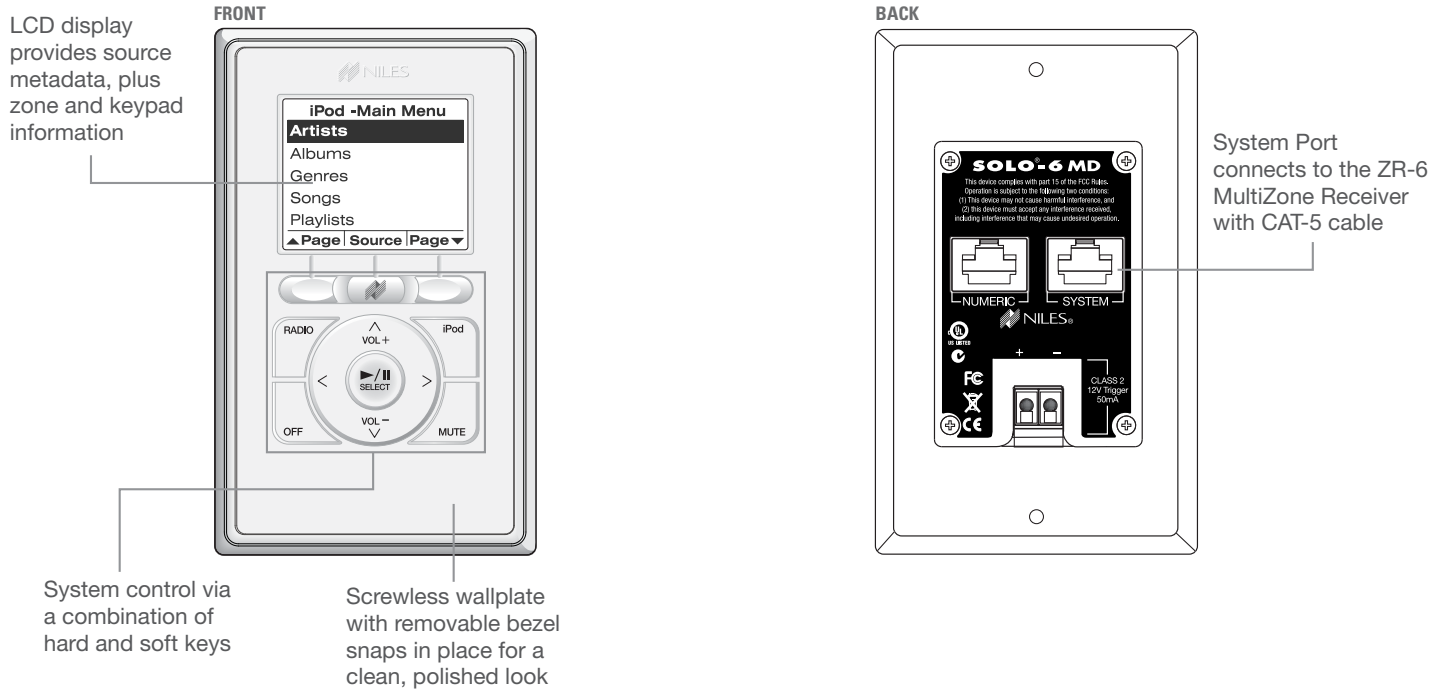
System Port connects to the ZR-6 MultiZone Receiver with CAT-5 cable

The TS-Pro uses an RJ-45 Utility Adapter to connect an external IR sensor

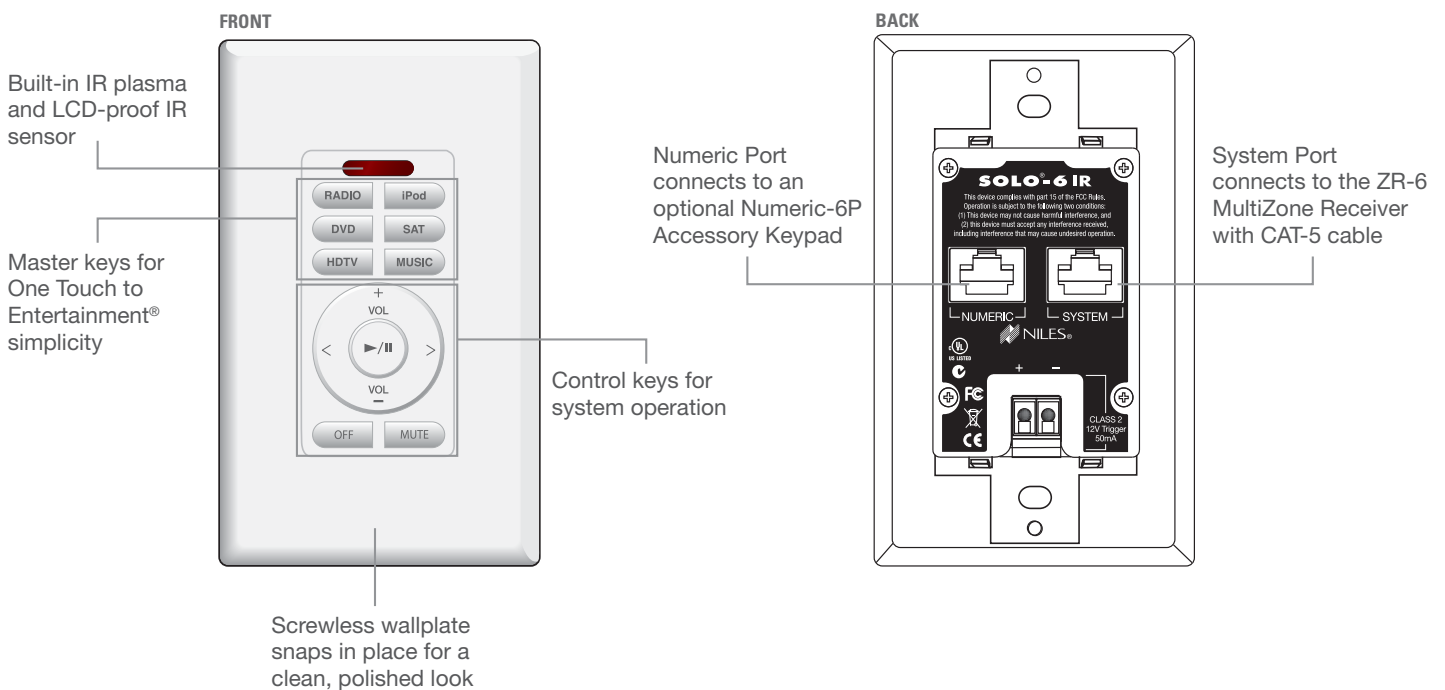


OVERVIEW: KEYPADS AND TOUCHSCREEN KEY FEATURES

SOLO-6MD WEATHER-RESISTANT MASTER KEYPAD



SOLO-6IR WEATHER-RESISTANT MASTER KEYPAD

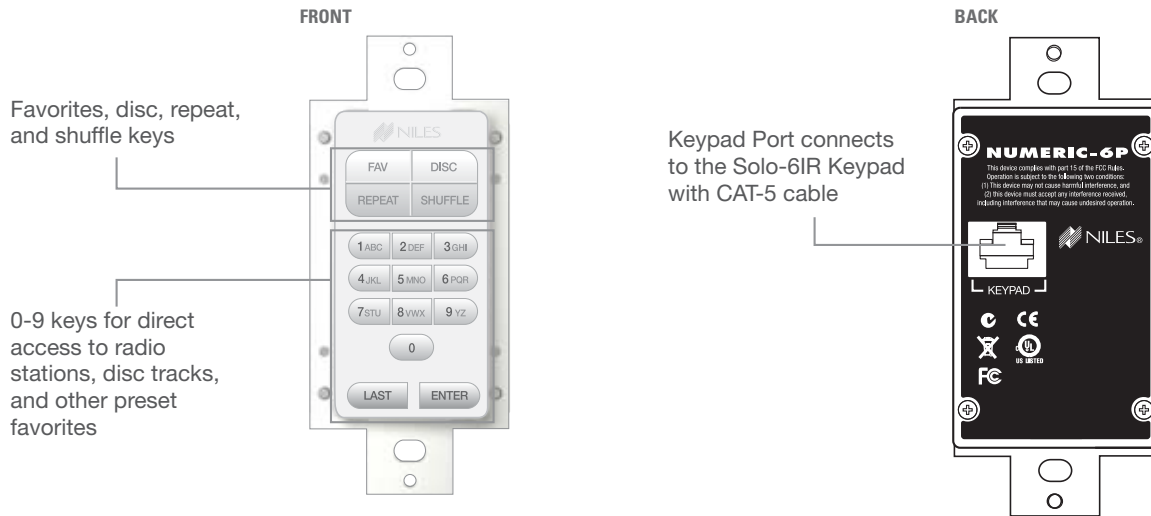




ZR-6 MULTIZONE SYSTEM DESIGN GUIDE

OVERVIEW: KEYPADS AND TOUCHSCREEN KEY FEATURES

NUMERIC-6P WEATHER-RESISTANT ACCESSORY KEYPAD (USED ONLY WITH SOLO-6IR)



APPLICATION: STAND-ALONE ZR-6 MULTIZONE RECEIVER

DO THIS FIRST

Review the ZR-6 Overview

WHAT DOES THIS APPLICATION DO?

This application covers the use of a ZR-6 MultiZone Receiver to distribute six audio sources (including a built-in AM/FM tuner) to six zones.

Key Considerations

GLOBAL FEATURES INCLUDE:

- **Party Mode** – Press-and-hold a source button and all pre-configured zones will turn on to play that source.
- **Paging** – Allows front and rear door doorbell chimes from the Niles DBI-1 or paging from a phone system, or both, to be heard through the speakers in pre-configured zones. The zones of the ZR-6 that are on will mute so the doorbell/page can be heard. The zones that were off will turn on so the doorbell/page can be heard. When the page is completed, zones that were on will automatically begin playing music again and the zones that were off will again turn off.
- **Zone Linking** – Zones can be “linked” together so that they always play the same source, while retaining independent volume adjustment.
- **All Zones Off** – Press-and-hold the Off button to turn off all zones.

ZONE FEATURES INCLUDE:

- **Weather-Resistant Keypads** – The Solo-6IR and Solo-6MD keypads are weather-resistant and can be installed in wet areas such as showers, saunas, and outdoors. Both meet the requirements of the IEC 60529 IP-54 standard. When installing in wet areas, special installation techniques are required. See the Critical Knowledge section.
- **Volume Turn-On, Source Level, Bass, Treble, and Variable Loudness** – Each zone can have its own custom tailored sound.
- **IR Sensor On/Off** – The built-in IR sensor in each keypad can be turned off. It may be necessary to disable the IR sensor if the keypad is exposed to direct sunlight.

ADDING A SEPARATE IR SENSOR

When adding a separate IR sensor in a zone you must:

- Install TS-Pro as the user-interface for the IR controlled zone (TS-Pro has an IR input on back panel) or with a Solo-6IR or Solo-6MD you must add a separate IR repeater system and route the data and ground to the Global IR input
- Teach discrete zone commands into the R-8L remote control from an IR-CS capture station, an IntelliFile®3 capture station, or a third party remote
- Create a sequence to automate the activation of the audio sources

ZONE CONTROL

Light Usage Rooms: Solo-6IR keypad recommended – Provides basic system control, including One Touch to Entertainment, Volume +/-, Track +/-, Play/Pause/Select, Mute, and Off. The Numeric™ accessory keypad can be added to the Solo-6IR for more control.

Moderate Usage Rooms: Solo-6MD keypad recommended – Provides advanced control, including metadata information from the iPod and AM/FM stations displayed on the LCD screen.

Heavy Usage Rooms: TS-Pro keypad recommended – Provides easy-to-read control through a color touchscreen. Often-used buttons are conveniently located just below the touchscreen. Additionally, the TS-Pro can access and control other zones.

Customer Benefits

The ZR-6 offers your customer a cost-effective MultiZone receiver that allows One Touch to Entertainment from an easy-to-learn keypad or touchscreen. They get complete control of their iPod through a recognizable user interface from any location in the house.

Installation Benefits

The ZR-6 is a scalable MultiZone receiver with native iPod integration and a desirable feature set that includes a touchscreen, a water-resistant keypad option with metadata, preamp outputs, 4-ohm stable digital amplifier, and paging ability. Most importantly, the ZR-6 is able to control and power manage all sources connected to it through built-in IR learning and power sync technology.



INSTALLATION REQUIREMENTS

All CAT-5 wiring must be terminated using the T568A wiring convention. The following steps are required to configure a ZR-6 for operation:

1. Set tuner presets
2. Configure unit through front panel display
3. Teach IR codes into chassis
4. Create sequences for all Master keys (IR codes for VS-6 are preloaded into the ZR-6)
5. Set source level, turn-on volume options, bass, treble, variable loudness, and IR sensor on/off in each zone from keypad
6. Program all remotes

CRITICAL KNOWLEDGE

When installing the Solo-6IR or Solo-6MD into a “wet” environment, the unit must have a complete “positive” seal with the mounting surface. This is achieved by using silicone caulking on the gap around the plate and the Decora® style insert and then installing the wall plate to complete the seal. It is recommended that additional installation time be applied to these keypad locations. It may be necessary to disable the IR sensor if the keypad is exposed to direct sunlight. The TS-Pro touchscreen should not be mounted in a wet environment.

Whenever an iPod is connected to a ZR-6, the Input 2 RCA jacks become an iPod cascade output. These are used to route the iPod audio signal to any additional Slave chassis.

The ZR-6 can **ONLY** be used with the SmartDock2 and ES2. Please check the iWARE® 2 iPod Compatibility Chart in the *Additional Documents* section at: www.nilesaudio.com/techsupport/

ZR-6 MULTIZONE SYSTEM DESIGN GUIDE

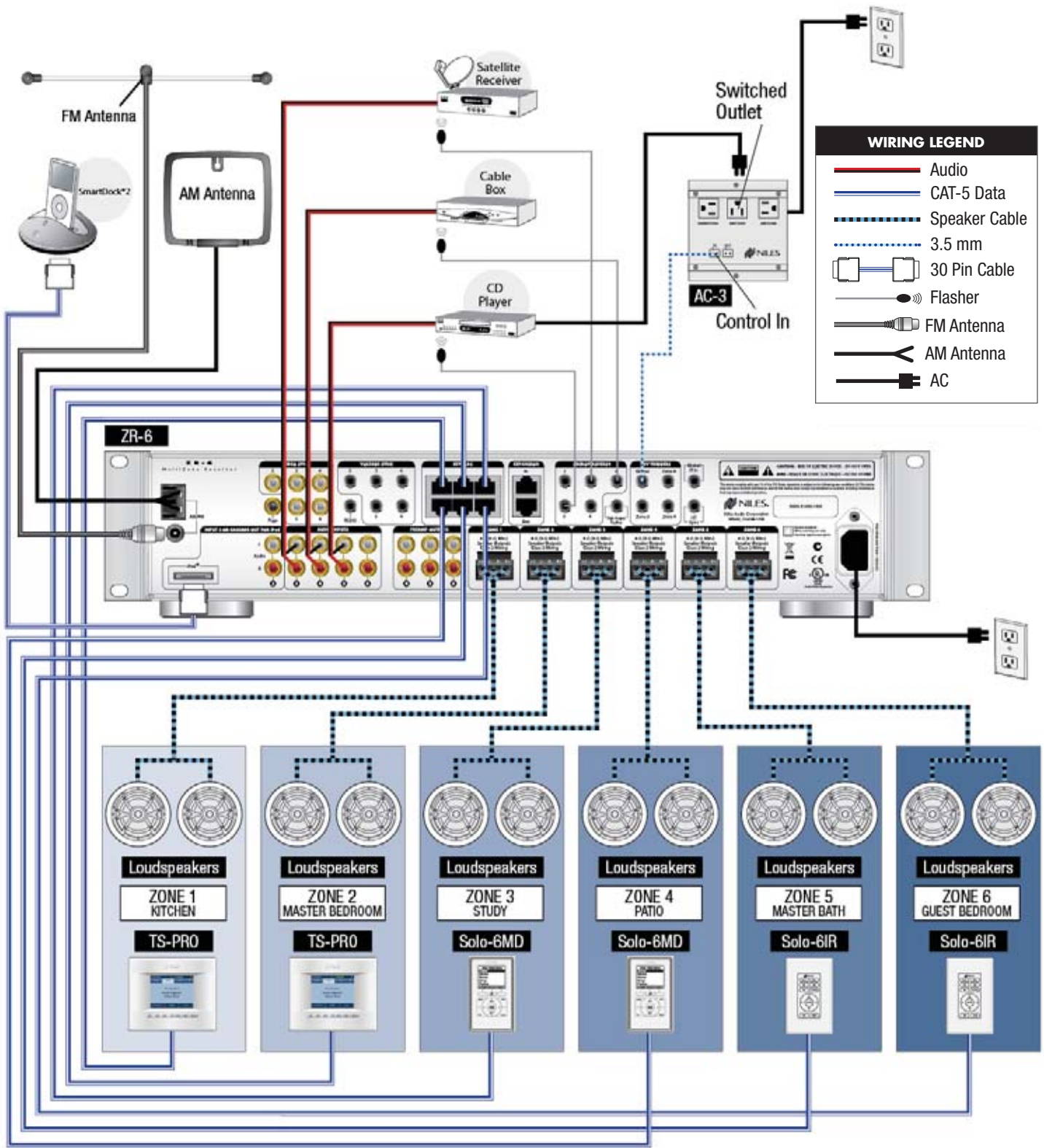


CABLE SCHEDULE

Source connections					Audio Room connections (needed for each area that accesses the audio sources)				
QTY	CABLE	SIGNAL	FROM	TO	QTY	CABLE	SIGNAL	FROM	TO
1	Stereo RCA	Audio	Satellite Receiver Audio Output	Master ZR-6 Source 3 Input	1	Speaker	Audio	ZR-6 Zone Amplifier Output	Speakers
1	Stereo RCA	Audio	Cable Box Audio Output	Master ZR-6 Source 4 Input	1	CAT-5	Data	ZR-6 Keypad Port	Keypad or Touchscreen
1	Stereo RCA	Audio	CD Audio Output	Master ZR-6 Source 5 Input	1	3.5 mm	12V DC	ZR-6 Global 12V Trigger	AC-3 Trigger Input
1	Flasher	Infrared	Master ZR-6 Flasher #3	Satellite Receiver					
1	Flasher	Infrared	Master ZR-6 Flasher #4	Cable Box					
1	Flasher	Infrared	Master ZR-6 Flasher #5	CD Player					
1	iPod (supplied)	Audio + Data	Master ZR-6 iPod Input	iPod or SmartDock2					

ZR-6 MULTIZONE SYSTEM DESIGN GUIDE

APPLICATION: STAND-ALONE ZR-6 MULTIZONE RECEIVER



APPLICATION: ZR-6 MULTIZONE SYSTEM WITH A SECOND CHASSIS (12 ZONES) AND A SYSTEMS INTEGRATION AMPLIFIER FOR OUTSIDE ZONE

DO THIS FIRST

Review the ZR-6 Overview

WHAT DOES THIS APPLICATION DO?

This application covers the use of a ZR-6 to distribute audio to 12 zones, as well as using a Systems Integration Amplifier to power an outdoor zone.

Key Considerations

GLOBAL FEATURES INCLUDE:

- **Party Mode** – Press-and-hold a source button and all pre-configured zones will turn on to play that source.
- **Paging** – Allows front and rear door doorbell chimes from the Niles DBI-1 or paging from a phone system, or both, to be heard through the speakers in pre-configured zones. The zones of the ZR-6 that are on will mute so the doorbell/page can be heard. The zones that were off will turn on so the doorbell/page can be heard. When the page is completed, zones that were on will automatically begin playing music again and the zones that were off will again turn off.
- **Zone Linking** – Zones can be “linked” together so that they always play the same source, while retaining independent volume adjustment. Only one linked group per chassis.
- **All Zones Off** – Press-and-hold the Off button to turn off all zones.

ZONE FEATURES INCLUDE:

- **Weather-Resistant Keypads** – The Solo-6IR and Solo-6MD keypads are weather-resistant and can be installed in wet areas such as showers, saunas, and outdoors. Both meet the requirements of the IEC 60529 IP-54 standard. When installing in wet areas, special installation techniques are required. See the Critical Knowledge section.

- **Volume Turn-On, Source Level, Bass, Treble, and Variable Loudness** – Each zone can have its own custom tailored sound.

- **IR Sensor On/Off** – The built-in IR sensor in each keypad can be turned off. It may be necessary to disable the IR sensor if the keypad is exposed to direct sunlight.

POWERING OUTDOOR AREAS

The amplifier power of the ZR-6 is sufficient for indoor applications, but outdoor applications may require a more powerful amplifier. A Niles Systems Integration Amplifier is recommended when more power is needed. The ZR-6 has preamp outputs for zones 4, 5, and 6. Each one provides an audio signal to the amplifier that can be switched between variable level (volume level controlled by keypad) or fixed level (volume level controlled by a separate volume control).

ADDING A SEPARATE IR SENSOR

When adding a separate IR sensor in a zone you must:

- Install TS-Pro as the user-interface for the IR controlled zone (TS-Pro has an IR input on back panel) or with a Solo-6IR or Solo-6MD you must add a separate IR repeater system and route the data and ground to the Global IR input
- Teach discrete zone commands into the R-8L remote control from an IR-CS capture station, an IntelliFile 3 capture station, or a third party remote (not necessary with the TS-Pro)
- Create a sequence to automate the activation of the audio sources

ZONE CONTROL

Light Usage Rooms: Solo-6IR keypad recommended – Provides basic system control, including One Touch to Entertainment, Volume +/-, Track +/-, Play/Pause/Select, Mute, and Off. The Numeric accessory keypad can be added to the Solo-6IR for more control.

Moderate Usage Rooms: Solo-6MD keypad recommended – Provides advanced control, including metadata information from digital sources and AM/FM stations displayed on the LCD screen.

Heavy Usage Rooms: TS-Pro keypad recommended – Provides easy-to-read control through a color touchscreen. Often-used buttons are conveniently located just below the touchscreen. Additionally, the TS-Pro can access and control other zones.

MULTI-CHASSIS CONFIGURATION

When using two or three ZR-6s you have access to these features and capabilities:

- Global features such as Party Mode, All Zones Off, and Zone Linking
- Individual tuners for each chassis (six zones)
- All other sources are shared between the chassis (maximum of 5)

SHARING SOURCES WITH AVDA-3

Shared sources must be connected to each ZR-6 chassis. If the source does not have multiple audio outputs, a Niles AVDA-3 Distribution Amplifier must be used. An AVDA-3 is always required when an iPod is shared between more than two ZR-6 chassis.

ZR-6 MULTIZONE SYSTEM DESIGN GUIDE



Customer Benefits

The ZR-6 offers your customer a cost-effective MultiZone receiver that allows One Touch to Entertainment from an easy-to-learn keypad or touchscreen. They get complete control of their iPod through a recognizable user interface from any location in the house.

Installation Benefits

The ZR-6 is a scalable MultiZone Receiver with native iPod integration and a desirable feature set that includes a touchscreen, a water-resistant keypad option with metadata, preamp outputs, 4-ohm stable digital amplifier, and paging ability. Additionally, high definition video distribution can be easily added on to the ZR-6 by using the VS-6 High Definition Component Video Switcher. Most importantly, the ZR-6 is able to control and power manage all sources connected to it through built-in IR learning and power sync technology.

INSTALLATION REQUIREMENTS

All CAT-5 wiring must be terminated using the T568A wiring convention. The following steps are required to configure a ZR-6 for operation:

1. Set tuner presets
2. Configure unit through front panel display
3. Teach IR codes into chassis
4. Create sequences for all Master keys (IR codes for VS-6 are preloaded into the ZR-6)
5. Set bass, treble, variable loudness, and IR sensor on/off in each zone from keypad
6. Program all remotes

CRITICAL KNOWLEDGE

When installing the Solo-6IR or Solo-6MD into a "wet" environment, the unit must have a complete "positive" seal with the mounting surface. This is achieved by using silicone caulking on the gap around the plate and the Decora® style insert and then installing the wall plate to complete the seal. It is recommended that additional installation time be applied to these keypad locations. It may be necessary to disable the IR sensor if the keypad is exposed to direct sunlight. The TS-Pro touchscreen should not be mounted in a wet environment.

Whenever an iPod is connected to a ZR-6, the Input 2 RCA jacks become an iPod cascade output. These are used to route the iPod audio signal to any additional Slave chassis.

The ZR-6 can **ONLY** be used with the SmartDock2 and ES2. Please check the iWARE® 2 iPod Compatibility Chart in the *Additional Documents* section at: www.nilesaudio.com/techsupport/

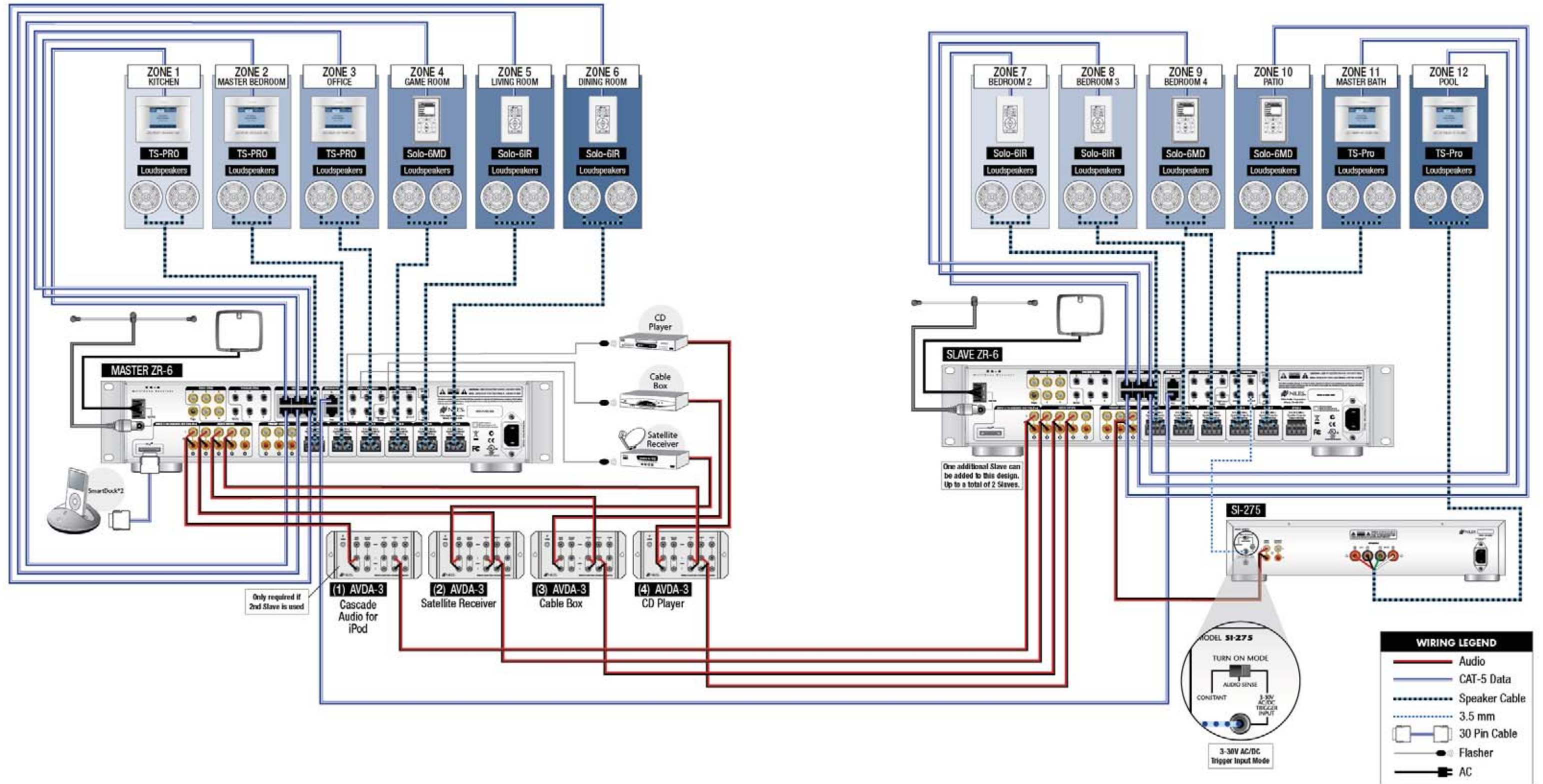
CABLE SCHEDULE

Source connections					Audio Room connections (needed for each area that accesses the audio sources)				
QTY	CABLE	SIGNAL	FROM	TO	QTY	CABLE	SIGNAL	FROM	TO
1	Stereo RCA	Audio	ZR-6 Source 2 Input	AVDA-3 ¹ #1 Input	1	Speaker	Audio	ZR-6 Zone Amplifier Output	Speakers
1	Stereo RCA	Audio	Satellite Receiver Audio Output	AVDA-3 #2 Input	1	CAT-5	Data	ZR-6 Keypad Port	Keypad or Touchscreen
1	Stereo RCA	Audio	Cable Box Audio Output	AVDA-3 #3 Input	Systems Integration Amplifier Connections				
1	Stereo RCA	Audio	CD Audio Output	AVDA-3 #4 Input	1	Stereo RCA	Audio	Slave ZR-6 Zone 6 Preamp Output	SI-275 Audio Input
1	Stereo RCA	Audio	AVDA-3 #1 Output	Slave ZR-6 Source 2 Input	1	3.5mm	12V DC	Slave ZR-6 Zone 6 12V DC Trigger Output	SI-275 Trigger Input
1	Stereo RCA	Audio	AVDA-3 #2 Output	Master ZR-6 Source 3 Input	1	Speaker	Audio	SI-275 Speaker Output	Speakers
1	Stereo RCA	Audio	AVDA-3 #2 Output	Slave ZR-6 Source 3 Input	ZR-6 Slave Control Connections				
1	Stereo RCA	Audio	AVDA-3 #3 Output	Master ZR-6 Source 4 Input	1	CAT-5	Data	Master ZR-6 Expansion Input	Slave ZR-6 Expansion Output
1	Stereo RCA	Audio	AVDA-3 #3 Output	Slave ZR-6 Source 4 Input					
1	Stereo RCA	Audio	AVDA-3 #4 Output	Master ZR-6 Source 5 Input					
1	Stereo RCA	Audio	AVDA-3 #4 Output	Slave ZR-6 Source 5 Input					
1	Flasher	Infrared	Master ZR-6 Flasher #3	Satellite Receiver					
1	Flasher	Infrared	Master ZR-6 Flasher #4	Cable Box					
1	Flasher	Infrared	Master ZR-6 Flasher #5	CD Player					
1	iPod (supplied)	Audio + Data	Master ZR-6 iPod Input	iPod					

¹ AVDA-3 only necessary for source 2 output if 3rd chassis is used



APPLICATION: ZR-6 MULTIZONE SYSTEM WITH A SECOND CHASSIS (12 ZONES) AND A SYSTEMS INTEGRATION AMPLIFIER FOR OUTSIDE ZONE



APPLICATION: ZR-6 MULTIZONE RECEIVER INTEGRATED WITH A HOME THEATER SYSTEM

DO THIS FIRST

Review the ZR-6 Overview

WHAT DOES THIS APPLICATION DO?

This application covers the integration of a ZR-6 MultiZone Receiver and a home theater receiver with shared sources between the two.

Key Considerations

GLOBAL FEATURES INCLUDE:

- **Party Mode** – Press-and-hold a source button and all pre-configured zones will turn on to play that source.
- **Paging** – Allows front and rear door doorbell chimes from the Niles DBI-1 or paging from a phone system, or both, to be heard through the speakers in pre-configured zones. The zones of the ZR-6 that are on will mute so the doorbell/page can be heard. The zones that were off will turn on so the doorbell/page can be heard. When the page is completed, zones that were on will automatically begin playing music again and the zones that were off will again turn off.
- **Zone Linking** – Zones can be “linked” together so that they always play the same source, while retaining independent volume adjustment.
- **All Zones Off** – Press-and-hold the Off button to turn off all zones.

ZONE FEATURES INCLUDE:

- **Weather-Resistant Keypads** – The Solo-6IR and Solo-6MD keypads are weather-resistant and can be installed in wet areas such as showers, saunas, and outdoors. Both meet the requirements of the IEC 60529 IP-54 standard. When installing in wet areas, special installation techniques are required. See the Critical Knowledge section.
- **Volume Turn-On, Source Level, Bass, Treble, and Variable Loudness** – Each zone can have its own custom tailored sound.
- **IR Sensor On/Off** – The built-in IR sensor in each keypad can be turned off. It may be necessary to disable the

IR sensor if the keypad is exposed to direct sunlight.

ADDING A SEPARATE IR SENSOR

When adding a separate IR sensor in a zone you must:

- Install TS-Pro as the user-interface for the IR controlled zone (TS-Pro has an IR input on back panel) or with a Solo-6IR or Solo-6MD you must add a separate IR repeater system and route the data and ground to the Global IR input
- Teach discrete zone commands into the R-8L remote control from an IR-CS capture station, an IntelliFile 3 capture station, or a third party remote (not necessary with the TS-Pro)
- Create a sequence to automate the activation of the audio sources

ZONE CONTROL

Light Usage Rooms: Solo-6IR keypad recommended – Provides basic system control, including One Touch to Entertainment, Volume +/-, Track +/-, Play/Pause/Select, Mute, and Off. The Numeric accessory keypad can be added to the Solo-6IR for more control.

Moderate Usage Rooms: Solo-6MD keypad recommended – Provides advanced control, including metadata information from the iPod and AM/FM stations displayed on the LCD screen.

Heavy Usage Rooms: TS-Pro keypad recommended – Provides easy-to-read control through a color touchscreen. Often-used buttons are conveniently located just below the touchscreen. Additionally, the TS-Pro can access and control other zones.

SHARING SOURCES WITH AVDA-3

Shared sources must be connected to the ZR-6 chassis and the home theater receiver. If the source does not have multiple audio outputs, a Niles AVDA-3 distribution amplifier must be used.

SOURCE DEVICE CONTROL

Niles IR MicroFlashers® are attached to each source and then connected to the ZR-6 MultiZone Receiver. To route the source IR commands from both the home theater controller and the ZR-6, an optional Niles HT-MSU Home Theater Main System Unit (FG01343) is connected to the Global IR Control Input of the ZR-6.

HOME THEATER SYNC

Connect the ZR-6's HT Sync to a 12V output on the home theater receiver or the Niles HT-MSU to let the ZR-6 know when the home theater receiver is active. The ZR-6 will not go into standby or turn off any source until all zones are off and this voltage is eliminated

Customer Benefits

One set of source components is all that's needed for both the home theater and the ZR-6 MultiZone Receiver. As long as the home theater receiver is on, the source components will remain on, even if all of the ZR-6's zones are turned off.

Installation Benefits

The ZR-6 gives the installer the ability to manage source power by the ZR-6 MultiZone Receiver.

ZR-6 MULTIZONE SYSTEM DESIGN GUIDE

INSTALLATION REQUIREMENTS

1. Connect the ZR-6's HT Sync to a 12V output on the home theater receiver, the Niles HT-MSU, or a third party controller to let the ZR-6 know when the home theater receiver is active.
2. The ZR-6 will not go into standby or turn off any source until all zones are off and this voltage is eliminated

CRITICAL KNOWLEDGE

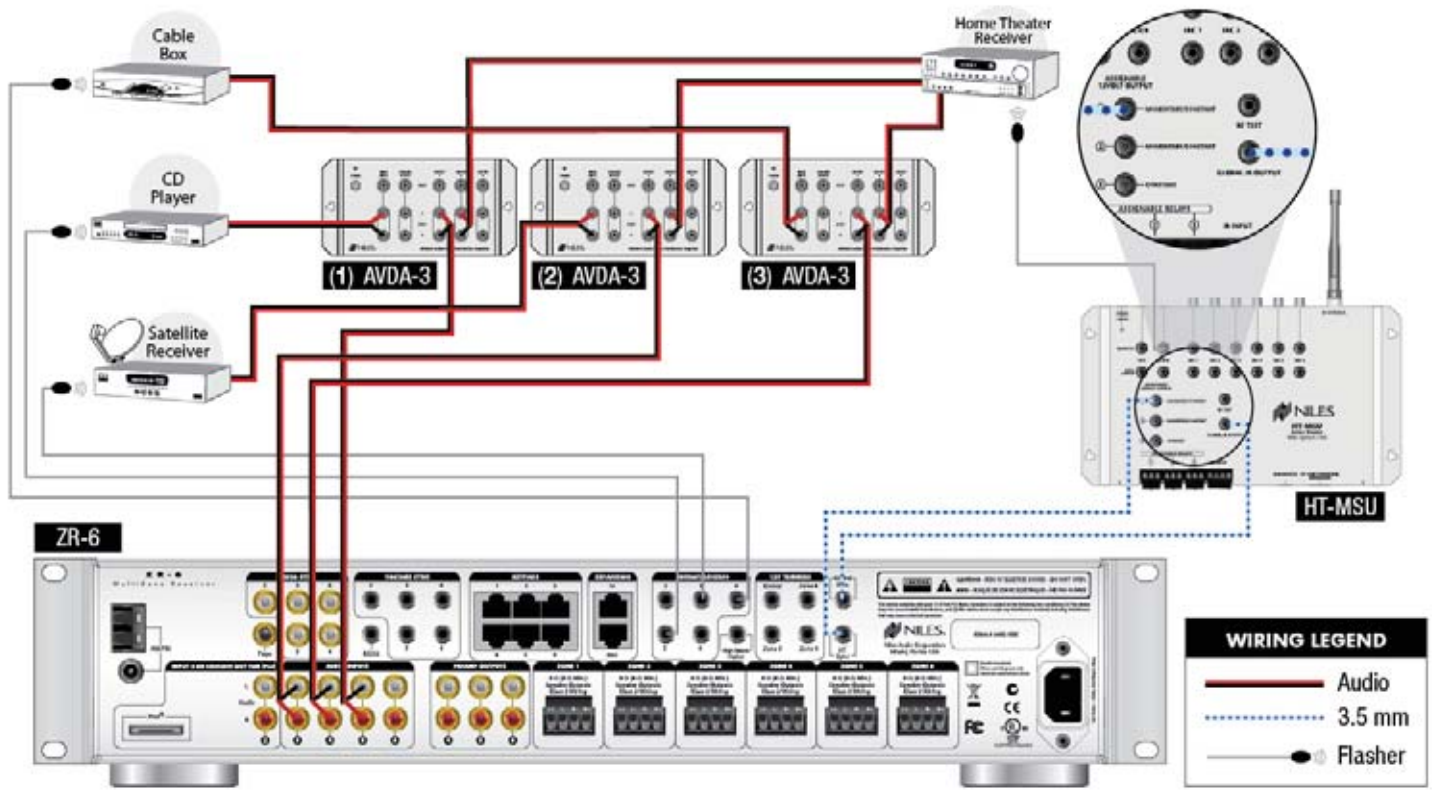
For source component power management, the ZR-6's HT Sync can be connected to the 12V output of a:

1. Home theater receiver
2. Niles HT-MSU
3. Third-party system controller

CABLE SCHEDULE

Source connections					Source connections (continued)				
QTY	CABLE	SIGNAL	FROM	TO	QTY	CABLE	SIGNAL	FROM	TO
1	Stereo RCA	Audio	CD Audio Output	AVDA-3 #1 Input	1	Stereo RCA	Audio	AVDA-3 #3 Output	Home Theater Receiver CD Input
1	Stereo RCA	Audio	Satellite Receiver Audio Output	AVDA-3 #2 Input	1	Flasher	Infrared	ZR-6 Flasher #3	Satellite Receiver
1	Stereo RCA	Audio	Cable Box Audio Output	AVDA-3 #3 Input	1	Flasher	Infrared	ZR-6 Flasher #4	Cable Box
1	Stereo RCA	Audio	AVDA-3 #1 Output	ZR-6 Source 3 Input	1	Flasher	Infrared	ZR-6 Flasher #5	CD Player
1	Stereo RCA	Audio	AVDA-3 #1 Output	Home Theater Receiver DBS Input	Connections to Home Theater Remote System (HT-MSU shown in diagram)				
1	Stereo RCA	Audio	AVDA-3 #2 Output	ZR-6 Source 4 Input	1	3.5mm	12V DC	HT-MSU 12V DC Trigger #1 Output	ZR-6 Home Theater Sync input
1	Stereo RCA	Audio	AVDA-3 #2 Output	Home Theater Receiver TV Input	1	3.5mm	IR	HT-MSU Global IR Output	Global IR Input
1	Stereo RCA	Audio	AVDA-3 #3 Output	ZR-6 Source 5 Input					

APPLICATION: ZR-6 MULTIZONE RECEIVER INTEGRATED WITH A HOME THEATER SYSTEM



OVERVIEW: VS-6 HIGH DEFINITION COMPONENT VIDEO SWITCHER

The VS-6 High Definition Component Video Switcher distributes up to six high definition component video inputs to six zones. The VS-6 was designed to easily integrate with the ZR-6 MultiZone System and is controlled by discrete IR commands that are already built into the ZR-6. Together, the ZR-6 and VS-6 become a formidable combination that lets you create a system that distributes both audio and video, centralizing gear and eliminating “component clutter” throughout the home.

The VS-6 is able to route high definition video over traditional component video cables, or over cost-effective CAT-5 cable using the VS-6’s balanced component video outputs. This provides you with flexibility in the design and installation of the system, as well as keeping down the costs to the customer.



VS-6
FG01429
6 Source, 6 Zone Component
Video Switcher

ZR-6 MULTIZONE SYSTEM DESIGN GUIDE

OVERVIEW: VS-6 KEY FEATURES

INTEGRATE AND DISTRIBUTE HD VIDEO

When a VS-6 is integrated with a ZR-6 audio system, you can distribute high definition video and audio to any or all of the ZR-6's zones. This combination delivers up to four high definition video sources to up to six zones. Five video sources can be distributed if no iPod is connected.

BUILT-IN CAT-5 BALUNS

The VS-6 enables you to use cost-efficient CAT-5 cable to distribute high definition video. The VS-6 has a balanced component video output for each zone. At the other end of the CAT-5 cable, a Niles balun (either wall mount or component style) is used to connect to the TV using a short length of basic component video cable.

LOCAL TV AUTOMATION

In order to turn the local TV on and off in a zone, a Niles R-8L or any learning IR remote must be used.

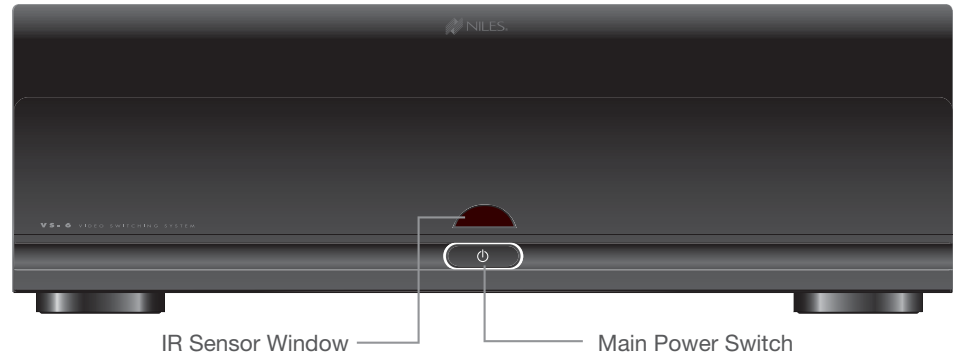
CASCADE COMPONENT VIDEO OUTPUTS

The VS-6 is equipped with six buffered component video outputs that allow it to share video sources with a home theater system or additional VS-6 High Definition Component Video Switchers. Three VS-6s can be combined with three ZR-6s.

CENTRALLY LOCATES GEAR

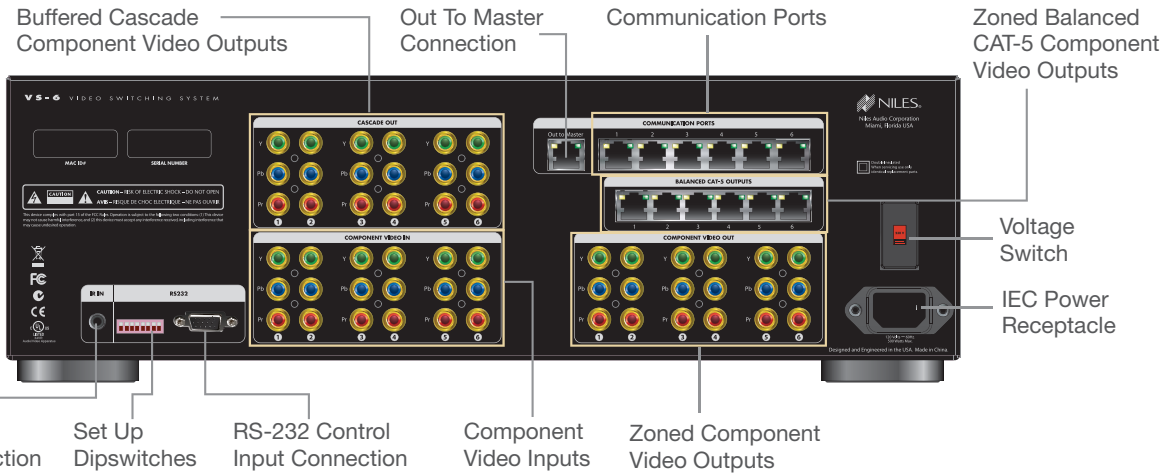
By centrally locating gear, your customer can access sources such as DVRs and Blu-ray players from any location in a house. A customer can begin watching a movie in their home theater and finish watching it in their bedroom.

FRONT PANEL



IR Sensor Window Main Power Switch

REAR PANEL



Buffered Cascade Component Video Outputs Out To Master Connection Communication Ports Zoned Balanced CAT-5 Component Video Outputs
 IR Control Input Connection Set Up Dipswitches RS-232 Control Input Connection Component Video Inputs Zoned Component Video Outputs
 Voltage Switch IEC Power Receptacle

APPLICATION: VS-6/ZR-6 AUDIO/VIDEO DISTRIBUTION (SIX ZONES)

DO THIS FIRST

Review the VS-6 and ZR-6 Overviews

WHAT DOES THIS APPLICATION DO?

This application covers a ZR-6 used with a VS-6 to distribute audio and high definition video to six zones.

Key Considerations

GLOBAL FEATURES INCLUDE:

- **Party Mode** – Press-and-hold a source button and all pre-configured zones will turn on to play that source.
- **Paging** – Allows front and rear door doorbell chimes from the Niles DBI-1 or paging from a phone system, or both, to be heard through the speakers in pre-configured zones. The zones of the ZR-6 that are on will mute so the doorbell/page can be heard. The zones that were off will turn on so the doorbell/page can be heard. When the page is completed, zones that were on will automatically begin playing music again and the zones that were off will again turn off.
- **Zone Linking** – Zones can be “linked” together so that they always play the same source, while retaining independent volume adjustment.
- **All Zones Off** – Press-and-hold the Off button to turn off all zones.

ZONE FEATURES INCLUDE:

- **Weather-Resistant Keypads** – The Solo-6IR and Solo-6MD keypads are weather-resistant and can be installed in wet areas such as showers, saunas, and outdoors. Both meet the requirements of the IEC 60529 IP-54 standard. When installing in wet areas, special installation techniques are required. See the Critical Knowledge section.
- **Volume Turn-On, Source Level, Bass, Treble, and Variable Loudness** – Each zone can have its own custom tailored sound.
- **IR Sensor On/Off** – The built-in IR sensor in each keypad or touchscreen can be turned off. It may be necessary

to disable the IR sensor if the keypad is exposed to direct sunlight.

ADDING A SEPARATE IR SENSOR

When adding a separate IR sensor in a zone you must:

- Install TS-Pro as the user-interface for the IR controlled zone (TS-Pro has an IR input on back panel) or with a Solo-6IR or Solo-6MD you must add a separate IR repeater system and route the data and ground to the Global IR input
- Teach discrete zone commands into the R-8L remote control from an IR-CS capture station, an IntelliFile 3 capture station, or a third party remote (not necessary with the TS-Pro)
- Create a sequence to automate the activation of the audio sources

ZONE CONTROL

Light Usage Rooms: Solo-6IR keypad recommended – Provides basic system control, including One Touch to Entertainment, Volume +/-, Track +/-, Play/Pause/Select, Mute, and Off. The Numeric accessory keypad can be added to the Solo-6IR for more control..

Moderate Usage Rooms: Solo-6MD keypad recommended – Provides advanced control, including metadata information from an iPod and AM/FM stations displayed on the LCD screen.

Heavy Usage Rooms: TS-Pro keypad recommended – Provides easy-to-read control through a color touchscreen. Often-used buttons are conveniently located near the touchscreen. Additionally, the TS-Pro can access and control other zones.

HD VIDEO INTEGRATION AND CONTROL

When the VS-6 High Definition Component Video Switcher is combined with the ZR-6 you now have the ability to distribute up to five centralized sources such as a DVR, media center PC, or Blu-ray DVD player to up to six zones. Five video sources can be distributed if no iPod is connected. The VS-6 features both component and CAT-5 outputs for distribution. When using the CAT-5 outputs, a C5-HDDA or C5-HDDAWM must be installed into each video zone. Finally, when designing a system using the VS-6 it is required that an R-8L or a learning IR remote control be sold as the primary control of video sources. When programmed correctly, the remote will issue the IR commands to turn on the TV and the audio/video distribution system.

Customer Benefits

The ZR-6/VS-6 combination offers your customer a cost-effective MultiZone system that distributes both high definition video and audio throughout the home. By centralizing components into one area, your customers eliminate “gear clutter” in every room while gaining access to video programming throughout their home with a simple press of a button.

Installation Benefits

The VS-6 High Definition Component Video Switcher is easily integrated with the ZR-6 MultiZone Receiver. The VS-6 is controlled by an R-8L or any learning IR remote control.



INSTALLATION REQUIREMENTS

All CAT-5 wiring must be terminated using the T568A wiring convention. The following steps are required to configure a ZR-6 for operation:

1. Set tuner presets
2. Configure unit through front panel display
3. Teach IR codes into chassis
4. Create sequences for all Master keys
5. Set source level, turn-on volume options, bass, treble, variable loudness, and IR sensor on/off each zone from keypad
6. Program all remotes (remotes must be programmed with IR sequences to control the ZR-6 and the local TV). The ZR-6 controls the VS-6 automatically. All connections on the VS-6 must match the source inputs and zone outputs on the ZR-6. Example: a DVD connected to source 3 on the VS-6 would also connect to source 3 on the ZR-6, and the zone 4 video output of the VS-6 must match the zone 4 audio output of the ZR-6.

CRITICAL KNOWLEDGE

Always specify a secondary remote control for all audio/video zones.

When installing the Solo-6IR or Solo-6MD into a “wet” environment, the unit must have a complete “positive” seal with the mounting surface. This is achieved by using silicone caulking on the gap around the plate and the Decora® insert and then installing the wall plate to complete the seal. It is recommended that additional installation time be applied to these keypad locations.

It may be necessary to disable the IR sensor if the keypad is exposed to direct sunlight. When using an external IR sensor with a Solo-6IR or Solo-6MD you must use an IR Main System Unit! This is not necessary when a TS-Pro is in the zone because it has a rear panel IR sensor input.

Whenever an iPod is connected to a ZR-6, the Input 2 RCA jacks become an iPod cascade output. These are used to route the iPod audio signal to any additional Slave chassis.

The ZR-6 can **ONLY** be used with the SmartDock2 and ES2. Please check the iWARE® 2 iPod Compatibility Chart in the *Additional Documents* section at: www.nilesaudio.com/techsupport/

ZR-6 MULTIZONE SYSTEM DESIGN GUIDE

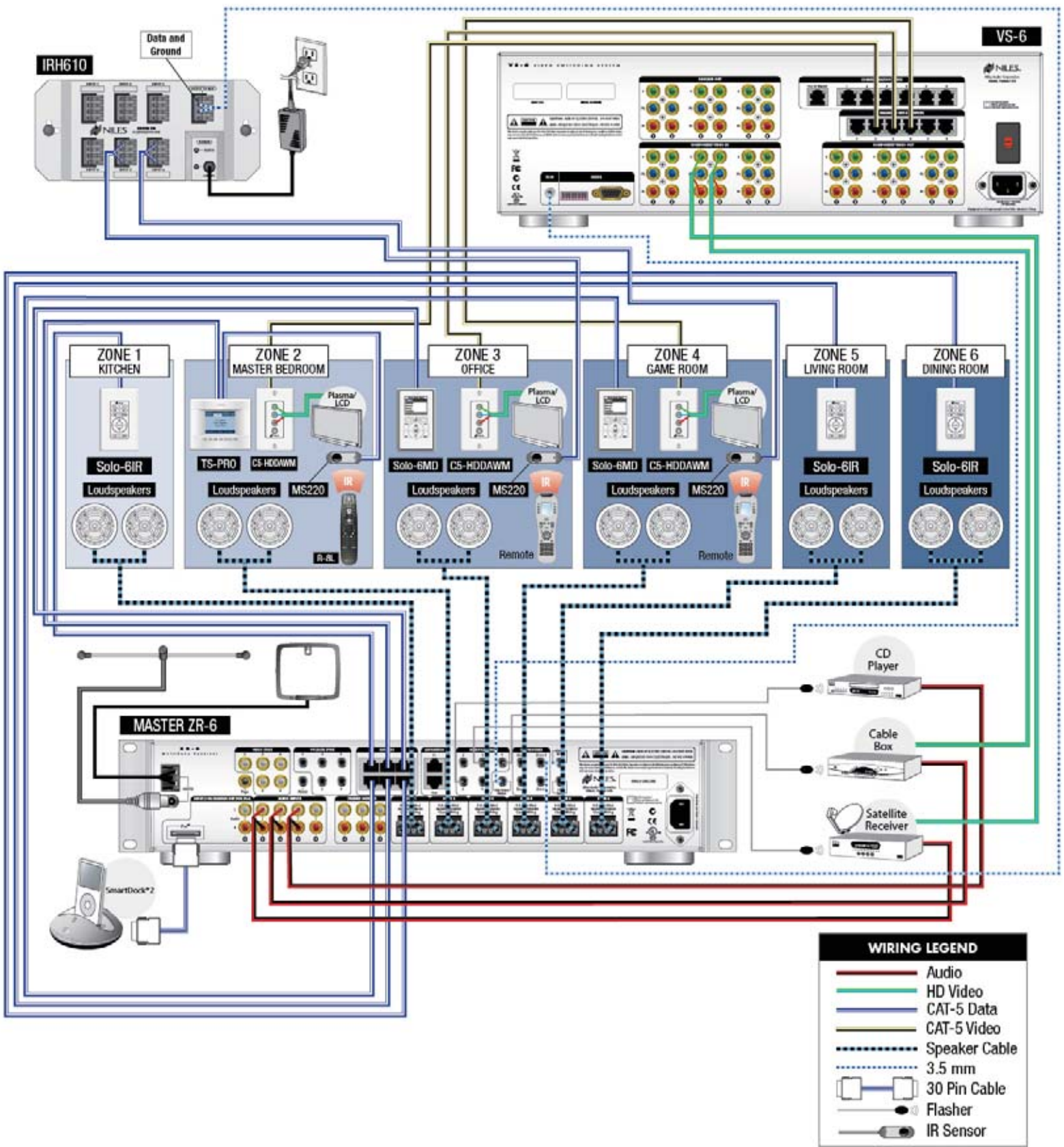


CABLE SCHEDULE									
Source connections					Audio Room connections (needed for each area that accesses the audio sources)				
QTY	CABLE	SIGNAL	FROM	TO	QTY	CABLE	SIGNAL	FROM	TO
1	Stereo RCA	Audio	Satellite Receiver Audio Output	ZR-6 Source 3 Input	1	Speaker	Audio	ZR-6 Zone Amplifier Output	Speakers
1	Stereo RCA	Audio	Cable Box Audio Output	ZR-6 Source 4 Input	1	CAT-5	Data	ZR-6 Keypad Port	Keypad or Touchscreen
1	Stereo RCA	Audio	CD Audio Output	ZR-6 Source 5 Input	IR Connections				
1	Component	Video	Satellite Receiver Video Output	VS-6 2 Source #3 Input	1	3.5mm	Infrared	IRH-610 Data Output	Master ZR-6 Global IR Input
1	Component	Video	Cable Box Video Output	VS-6 Source #4 Input	1	Flasher	Infrared	ZR-6 Flasher #3	Satellite Receiver
1	iPod (supplied)	Audio + Data	ZR-6 iPod Input	iPod	1	Flasher	Infrared	ZR-6 Flasher #4	Cable Box
A/V Room connections (needed for each area that accesses the A/V sources)					1	Flasher	Infrared	ZR-6 Flasher #5	CD Player
1	Speaker	Audio	ZR-6 Zone Amplifier Output	Speakers	1	3.5mm	Infrared	ZR-6 High Output Flasher	VS-6 IR Input
1	CAT-5	Data	ZR-6 Keypad Port	Keypad or Touchscreen					
1	CAT-5	Video	VS-6 Zone Video Output	C5-HDDAWM Balun					
1	Component	Video	C5-HDDAWM Balun Video Out	Television					
1	CAT-5	Infrared	IRH-610 Sensor Input	MS220 IR Sensor ¹					

¹ IR Sensor can be directly connected to the TS-Pro. IRH-610 is only required for IR Sensors in zones with Solo-6IR or Solo-6MD keypads.

ZR-6 MULTIZONE SYSTEM DESIGN GUIDE

APPLICATION: VS-6/ZR-6 AUDIO/VIDEO DISTRIBUTION (SIX ZONES)



WIRING LEGEND	
	Audio
	HD Video
	CAT-5 Data
	CAT-5 Video
	Speaker Cable
	3.5 mm
	30 Pin Cable
	Flasher
	IR Sensor

APPLICATION: VS-6/ZR-6 AUDIO/VIDEO DISTRIBUTION (12 ZONES) AND SYSTEMS INTEGRATION AMPLIFIER

DO THIS FIRST

Review the VS-6 and ZR-6 Overviews

WHAT DOES THIS APPLICATION DO?

This application covers two ZR-6 receivers used with a VS-6 to distribute audio and high definition video to 12 zones.

Key Considerations

GLOBAL FEATURES INCLUDE:

- **Party Mode** – Press-and-hold a source button and all pre-configured zones will turn on to play that source.
- **Paging** – Allows front and rear door doorbell chimes from the Niles DBI-1 or paging from a phone system, or both, to be heard through the speakers in pre-configured zones. The zones of the ZR-6 that are on will mute so the doorbell/page can be heard. The zones that were off will turn on so the doorbell/page can be heard. When the page is completed, zones that were on will automatically begin playing music again and the zones that were off will again turn off.
- **Zone Linking** – Zones can be “linked” together so that they always play the same source, while retaining independent volume adjustment.
- **All Zones Off** – Press-and-hold the Off button to turn off all zones.

ZONE FEATURES INCLUDE:

- **Weather-Resistant Keypads** – The Solo-6IR and Solo-6MD keypads are weather-resistant and can be installed in wet areas such as showers, saunas, and outdoors. Both meet the requirements of the IEC 60529 IP-54 standard. When installing in wet areas, special installation techniques are required. See the Critical Knowledge section.
- **Volume Turn-On, Source Level, Bass, Treble, and Variable Loudness** – Each zone can have its own custom tailored sound.
- **IR Sensor On/Off** – The built-in IR sensor in each keypad can be turned off. It may be necessary to disable the IR sensor if the keypad is exposed to direct sunlight.

POWERING OUTDOOR AREAS

The amplifier power of the ZR-6 is sufficient for indoor applications, but outdoor applications may require a more powerful amplifier. A Niles Systems Integration Amplifier is recommended when more power is needed. The ZR-6 has preamp outputs for zones 4, 5, and 6. Each one provides an audio signal to the amplifier that can be switched between variable level (volume level controlled by keypad) or fixed level (volume level controlled by a separate volume control).

ADDING A SEPARATE IR SENSOR

When adding a separate IR sensor in a zone you must:

- Install TS-Pro as the user-interface for the IR controlled zone (TS-Pro has an IR input on back panel) or with a Solo-6IR or Solo-6MD you must add a separate IR repeater system and route the data and ground to the Global IR input
- Teach discrete zone commands into the R-8L remote control from an IR-CS capture station, an IntelliFile3 capture station, or a third party remote (not necessary with the TS-Pro)
- Create a sequence to automate the activation of the audio sources

ZONE CONTROL

Light Usage Rooms: Solo-6IR keypad recommended – Provides basic system control, including One Touch to Entertainment, Volume +/-, Track +/-, Play/Pause/Select, Mute, and Off. The Numeric accessory keypad can be added to the Solo-6IR for more control.

Moderate Usage Rooms: Solo-6MD keypad recommended – Provides advanced control, including metadata information from an iPod and AM/FM stations displayed on the LCD screen.

Heavy Usage Rooms: TS-Pro keypad recommended – Provides easy-to-read control through a color touchscreen. Often-used buttons are conveniently located near the touchscreen. Additionally, the TS-Pro can access and control other zones.

MULTI-CHASSIS CONFIGURATION

When using two or three ZR-6s you have access to these features and capabilities

- Global features such as Party Mode, All Zones Off, and Zone Linking
- Individual tuners for each chassis (six zones)
- All other sources are shared between the chassis

SHARING SOURCES WITH AVDA-3

Shared sources must be connected to each ZR-6 chassis. If the source does not have multiple audio outputs, a Niles AVDA-3 distribution amplifier must be used. An AVDA-3 is always required when an iPod is shared between more than two ZR-6 chassis.

HD VIDEO INTEGRATION AND CONTROL

When the VS-6 High Definition Component Video Switcher is combined with the ZR-6 you now have the ability to distribute up to five centralized sources such as DVRs, media center PCs, or Blu-ray DVD players to up to six zones. The VS-6 features both component and CAT-5 outputs for distribution. When using the CAT-5 outputs, a Niles C5-HDDA or C5-HDDAWM must be sold into each video zone. Finally, when designing a system using the VS-6 it is required that an R-8L or a learning IR remote control be sold as the primary control of video sources. When programmed correctly, the remote will issue the IR commands to turn on the TV and the audio/video distribution system.

ZR-6 MULTIZONE SYSTEM DESIGN GUIDE

Customer Benefits

The ZR-6/VS-6 combination offers your customer a cost-effective MultiZone system that distributes both high definition video and audio throughout the home. By centralizing components into one area, your customers eliminate “gear clutter” in every room while gaining access to video programming throughout their home with a simple press of a button.

Installation Benefits

The VS-6 High Definition Component Video Switcher is easily integrated with the ZR-6 MultiZone Receiver. The VS-6 is controlled by an R-8L or any learning IR remote control.

INSTALLATION REQUIREMENTS

All CAT-5 wiring must be terminated using the T568 wiring convention. These steps are required to configure a ZR-6 for operation:

1. Set tuner presets
2. Configure unit through front panel display
3. Teach IR codes into chassis
4. Create sequences for all Master keys
5. Set bass, treble, variable loudness, and IR sensor on/off each zone from keypad
6. Program all remotes (remotes must be programmed with IR sequences to control the ZR-6 and the local TV). The ZR-6 controls the VS-6 automatically. All connections on the VS-6 must match the source inputs and zone outputs on the ZR-6. Example: a DVD connected to source 3 on the VS-6 would also connect to source 3 on the ZR-6, and the zone 4 video output of the VS-6 must match the zone 4 audio output of the ZR-6.

CRITICAL KNOWLEDGE

Always specify a secondary remote control for all audio/video zones.

When installing the Solo-6IR or Solo-6MD into a “wet” environment, the unit must have a complete “positive” seal with the mounting surface. This is achieved by using silicone caulking on the gap around the plate and the Decora® insert and then installing the wall plate to complete the seal. It is recommended that additional installation time (and charges) be applied to these keypad locations. It may be necessary to disable the IR sensor if the keypad is exposed to direct sunlight.

Whenever an iPod is connected to a ZR-6, the Input 2 RCA jacks become an iPod cascade output. These are used to route the iPod audio signal to any additional Slave chassis.

The ZR-6 can **ONLY** be used with the SmartDock2 and ES2. Please check the iWARE® 2 iPod Compatibility Chart in the *Additional Documents* section at: www.nilesaudio.com/techsupport/

CABLE SCHEDULE

Source connections					A/V Room connections (needed for each area that accesses the A/V sources)				
QTY	CABLE	SIGNAL	FROM	TO	QTY	CABLE	SIGNAL	FROM	TO
1	Stereo RCA	Audio	ZR-6 Source 2 Input	AVDA-3 ¹ #1 Input	1	Speaker	Audio	ZR-6 Zone Amplifier Output	Speakers
1	Stereo RCA	Audio	Satellite Receiver Audio Output	AVDA-3 #2 Input	1	CAT-5	Data	ZR-6 Keypad Port	Keypad or Touchscreen
1	Stereo RCA	Audio	Cable Box Audio Output	AVDA-3 #3 Input	1	CAT-5	Video	VS-6 Zone Video Output	C5-HDDAWM Balun
1	Stereo RCA	Audio	CD Audio Output	AVDA-3 #4 Input	1	Component	Video	C5-HDDAWM Balun Video Out	Television
1	Component	Video	Satellite Receiver Video Output	VS-6 ² Source #2 Input	1	CAT-5	Infrared	IRH-610 Sensor Input	MS220 IR Sensor ⁴
1	Component	Video	Cable Box Video Output	VS-6 ² Source #3 Input	Audio Room connections (needed for each area that accesses the audio sources)				
1	Stereo RCA	Audio	AVDA-3 #1 Output	Slave ZR-6 Source 2 Input	1	Speaker	Audio	ZR-6 Zone Amplifier Output	Speakers
1	Stereo RCA	Audio	AVDA-3 #2 Output	Master ZR-6 Source 3 Input	1	CAT-5	Data	ZR-6 Keypad Port	Keypad or Touchscreen
1	Stereo RCA	Audio	AVDA-3 #2 Output	Slave ZR-6 Source 3 Input	IR & ZR-6 Slave Control Connections				
1	Stereo RCA	Audio	AVDA-3 #3 Output	Master ZR-6 Source 4 Input	1	3.5mm	Infrared	IRH-610 Data Output	Master ZR-6 Global IR Input
1	Stereo RCA	Audio	AVDA-3 #3 Output	Slave ZR-6 Source 4 Input	1	Flasher	Infrared	Master ZR-6 Flasher #3	Satellite Receiver
1	Stereo RCA	Audio	AVDA-3 #4 Output	Master ZR-6 Source 5 Input	1	Flasher	Infrared	Master ZR-6 Flasher #4	Cable Box
1	Stereo RCA	Audio	AVDA-3 #4 Output	Slave ZR-6 Source 5 Input	1	Flasher	Infrared	Master ZR-6 Flasher #5	CD Player
1	Stereo RCA	Audio	AVDA-3 #4 Output	Slave ZR-6 Source 5 Input	1	3.5mm	Infrared	Master ZR-6 Flasher #6	VS-6 IR Input
Systems Integration Amplifier Connections					1	CAT-5	Data	Master ZR-6 Expansion Input	Slave ZR-6 Expansion Output
1	Stereo RCA	Audio	Slave ZR-6 Zone 6 Preamp Output	SI-275 Audio Input	iPod Connection				
1	3.5mm	12V DC	Slave ZR-6 Zone 6 12V DC Trigger Output	SI-275 Trigger Input	1	iPod (supplied)	Audio + Data	Master ZR-6 iPod Input	iPod
1	Speaker	Audio	SI-275 Speaker Output	Speakers ³					

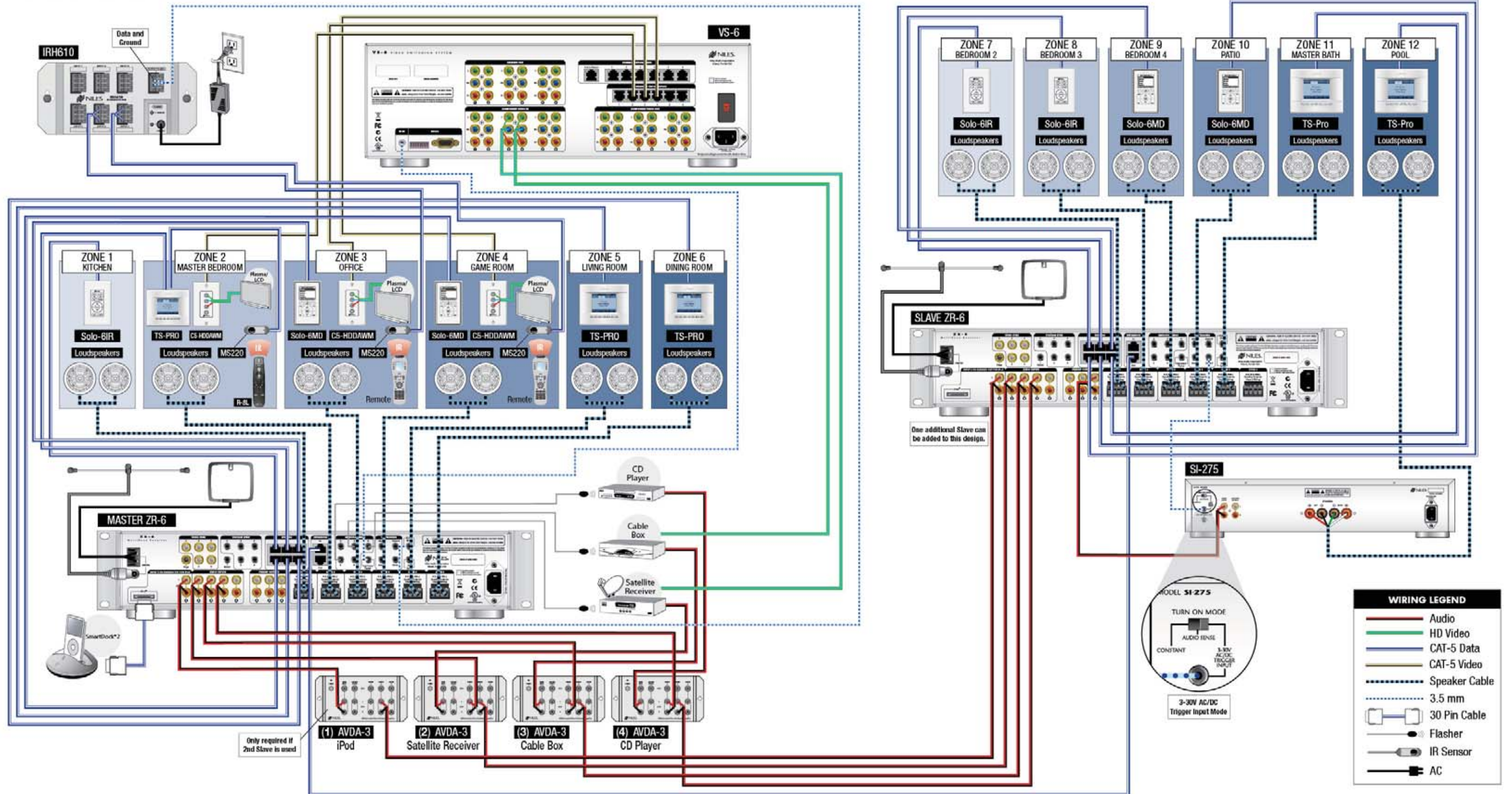
¹ Source 2 output is used to route iPod audio signal to slave ZR-6 chassis. This AVDA-3 is only required if a 2nd slave receiver is included.

² The inputs used on the VS-6 must match the inputs used on the master ZR-6 chassis.

³ Up to 3 pairs of 8 ohm speakers can be connected to the SI-2125 amplifier.

⁴ IR Sensor can be directly connected to the TS-Pro. IRH-610 is only required for IR Sensors in zones with Solo-6IR or Solo-6MD keypads.

APPLICATION: VS-6 AND ZR-6 AUDIO/VIDEO DISTRIBUTION (12 ZONES) AND SYSTEMS INTEGRATION AMPLIFIER



OVERVIEW: DBI-1 DOORBELL INTERFACE

The DBI-1 Doorbell Interface (FG01034) provides doorbell chimes that play throughout the home when installed with a Niles ZR MultiZone system. It is equipped with four different doorbell sounds, a user recorded sound option, and the ability to play different sounds for the front and rear doors. Also included is an audio input that can be connected to the audio output of any standard telephone paging system. The ZR-4 and ZR-6 can be configured to play the DBI-1's doorbell sounds and telephone system pages through all, or any number of zones which are selected during configuration of the ZR MultiZone Receiver.

CUSTOMIZED DOORBELL SOUNDS

The DBI-1 includes four different doorbell sounds: two versions of the standard doorbell chime sound plus two versions of the Westminster chime. Chime selection is made via four DIP switches. Also, the delay time between when a chime is triggered and when the sound is actually generated is adjustable from zero to four seconds via a similar set of DIP switches. If you prefer, a custom chime sound can be created. An audio source (microphone mixer, CD player, preamplifier, etc.) can be connected to the DBI-1's audio input and then recorded to the digital memory.

DUAL DOORBELL TRIGGERS

The two doorbell inputs, one for the front door and the other for the rear, are connected using simple two-conductor wire. They can be triggered either by contact closure or by 3V-30V voltage.

AUDIO PAGING INPUT

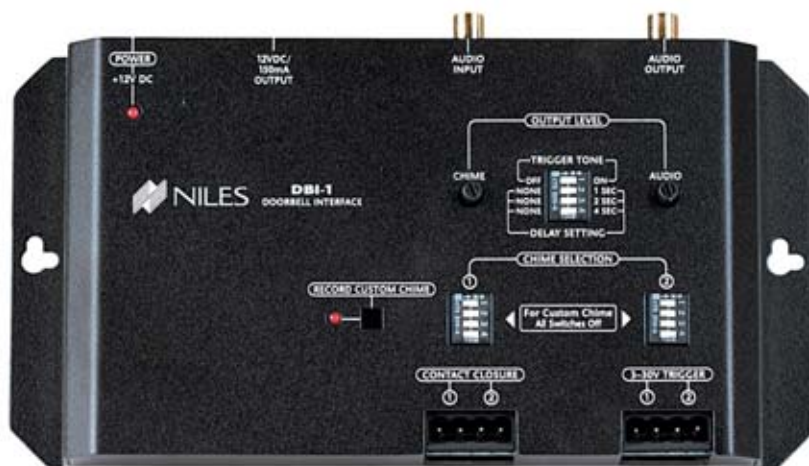
An audio input is supplied to connect to the audio output of a telephone paging system. To ensure that their volume levels are the same, the DBI-1 is equipped with separate adjustable output level controls for both the chimes and the telephone system page.

AUDIO PAGING OUTPUT

Use a standard audio cable with male RCA plugs to connect the DBI-1 to the paging input of a ZR MultiZone Receiver.

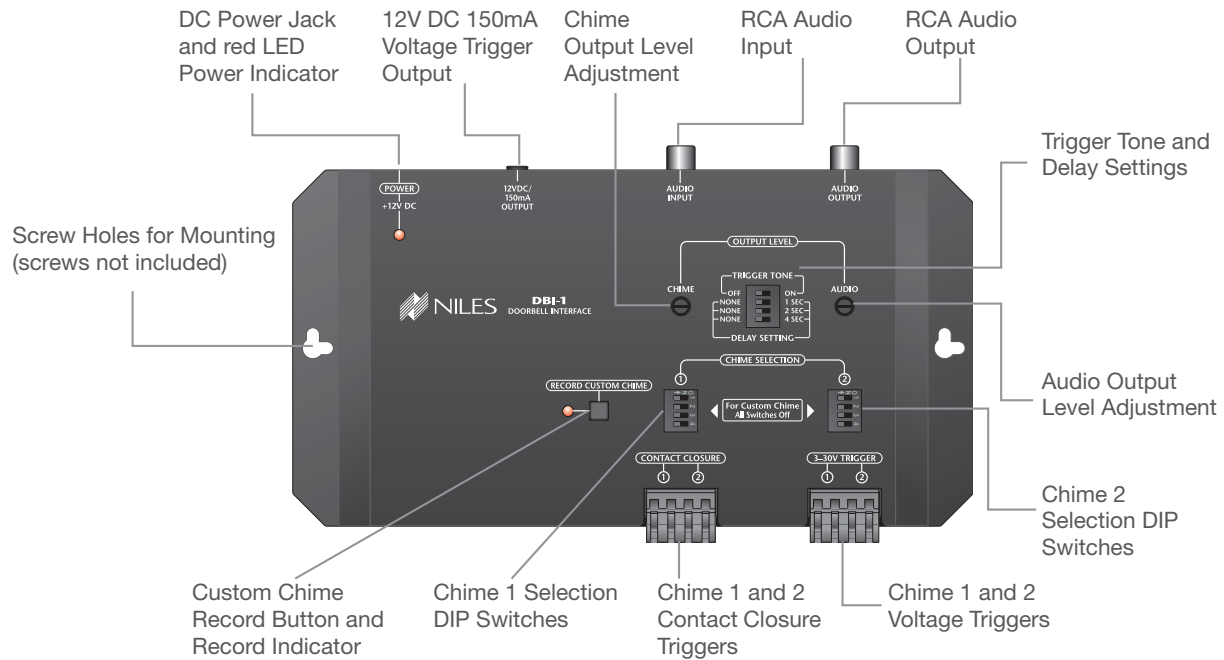
CHIME AND AUDIO LEVEL ADJUSTMENTS

The sound volume for the chimes and the audio paging are adjustable so they can be set to the same output level.



DBI-1
FG01034
Doorbell Interface

ZR-6 MULTIZONE SYSTEM DESIGN GUIDE



Features

- Provides doorbell chimes to Niles MultiZone controllers
- Four selectable preprogrammed chimes and one user recorded sound option
- Two doorbell inputs, front and rear, triggered by voltage and contact closure via screwless two piece connector
- Separate level adjustments provided for chime and page pass through
- One gold-plated mono audio sensing input jack
- One gold-plated mono audio output jack
- UL-listed in-line power supply with universal voltage capability

Specifications

- Dimensions: 7-7/8" wide x 1-1/8" high x 4-1/8" deep (20cm wide x 2.9cm high x 10.5cm deep)



APPLICATION: DBI-1 DOORBELL INTERFACE

DO THIS FIRST

Review the DBI-1 overview section

WHAT DOES THIS APPLICATION DO?

This application covers the use of a DBI-1 to add doorbell chimes to a ZR-4 or ZR-6 MultiZone Receiver system.

Key Considerations

The DBI-1 has two doorbell contact closures that can activate one of the five available chimes (four built-in and one recordable). The unit includes voltage on the first doorbell to allow a lighted switch and independent level adjustments for the built-in and recordable chimes, as well as adjustable delays.

The unit also features 3-30V DC input triggers, and also provides a 12V DC output when triggered.

Although the DBI-1 has an audio input and output, it is not required for paging through ZR-4 or ZR-6 from a phone system.

Finally, the DBI-1 can be located at the doorbell cabling home run location, and its audio output run through a CAT-5 back to the ZR-4 or ZR-6 MultiZone Receiver using two C5-A2 baluns and/or a C5-A2WM wall mounted balun.

Customer Benefits

The DBI-1 allows the doorbell to be heard from multiple locations within a house instead of one location, making it easier to hear. Also, the built-in chimes are more distinguished than the basic doorbell chime found in many houses, which many customers prefer. Finally, a custom door chime can be recorded into the unit if so desired.

Installation Benefits

This easy add-on to any ZR-4 or ZR-6 system requires very little wiring and adds a desirable feature to a MultiZone system. Additionally, it adds a feature that is difficult for competitors to replicate, which makes your system design hard to copy.

CRITICAL KNOWLEDGE

The DBI-1 is capable of powering a single lighted doorbell. Please consult the installation guide for more details on how to wire and set up this feature.

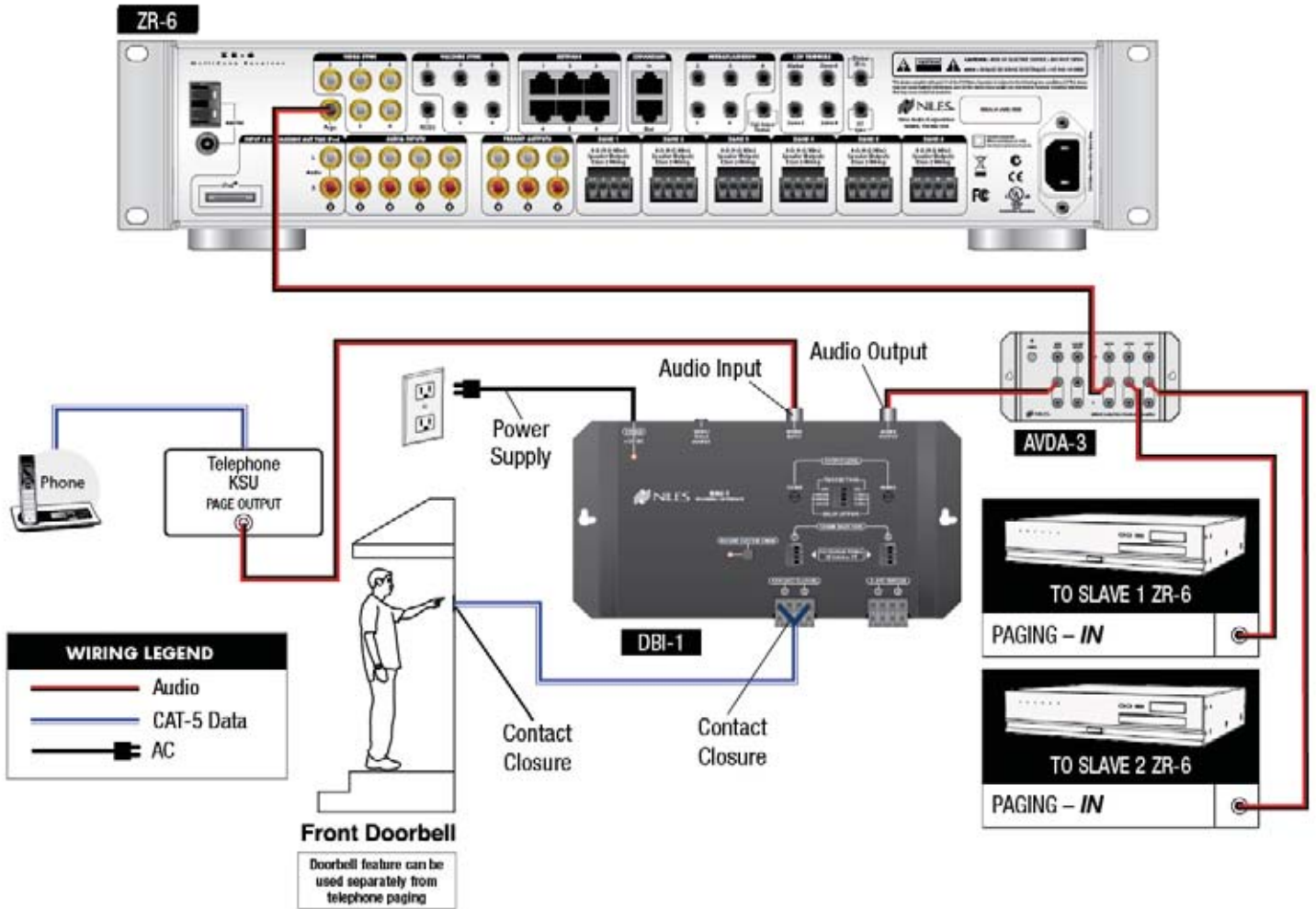
CABLE SCHEDULE

Door Bell Interface Connections					Doorbell Interface Connections <i>(continued)</i>				
QTY	CABLE	SIGNAL	FROM	TO	QTY	CABLE	SIGNAL	FROM	TO
1	Mono RCA	Audio	Telephone KSU Page Output	DBI-1 Audio Input	1	Mono RCA	Audio	AVDA-3 Audio Output	MultiZone Receiver #2 Page Input
1	Mono RCA	Audio	DBI-1 Audio Output	AVDA-3 ¹ Audio Input	1	Mono RCA	Audio	AVDA-3 Audio Output	MultiZone Receiver #3 Page Input
1	Mono RCA	Audio	AVDA-3 Audio Output	MultiZone Receiver #1 Page Input	1	CAT-5	Trigger	Doorbell	DBI-1 Contact Closure #1

¹AVDA-3 is only required if multiple chassis are being used.

ZR-6 MULTIZONE SYSTEM DESIGN GUIDE

APPLICATION: DBI-1 DOORBELL INTERFACE





OVERVIEW: ZR-KE KEYPAD EXPANDER

The ZR-KE is a ZR system accessory that allows the connection of multiple keypads and/or touchscreens per zone. It is used to enhance system control in larger living rooms, dining rooms, master bedrooms, master bathrooms, and outdoor areas. The ZR-KE enables the connection of only two keypads per zone when used with the ZR-4, or three keypads and/or touchscreens per zone when used with the ZR-6.

EASY INSTALLATION

An RJ-45 terminated CAT-5 cable from the ZR MultiZone Receiver connects to the input of the ZR-KE. The keypads and/or touchscreens are then connected to the outputs of the ZR-KE with CAT-5 cable. One ZR-KE can be used for each zone, including any slave zones in systems that have been expanded with multiple receivers.

CALCULATION TABLE FOR KPV			ZR-4	ZR-6
Solo-4IR	=	1 Point	Each Zone can power up to two keypads maximum	Powers up to a total KPV of 30 points*
Solo-6IR	=	1 Point		
Numeric-6P	=	1 Point		
Solo-6MD	=	3 Points		
TS-Pro	=	5 Points		

EXCEEDING THESE KPV VALUES WILL AFFECT THE RELIABILITY OF THE MULTIZONE RECEIVER AND/OR THE KEYPADS

Any keypad connected to a ZR-KE utilizing external power is not included in the KPV calculation.

POWERING THE ZR-KE

The ZR-KE is powered directly from the ZR Receiver's Keypad Port. But there is a limit to how much power the ZR Receiver is capable of supplying. When a large number of keypads are used in a system, additional power may be required. An optional power supply (Niles Universal Wall Adapter FG01035) connects to the ZR-KE to provide this additional power. To determine if a ZR-KE requires an additional power supply, use the provided Calculation Table For KPV (Keypad Power Value).

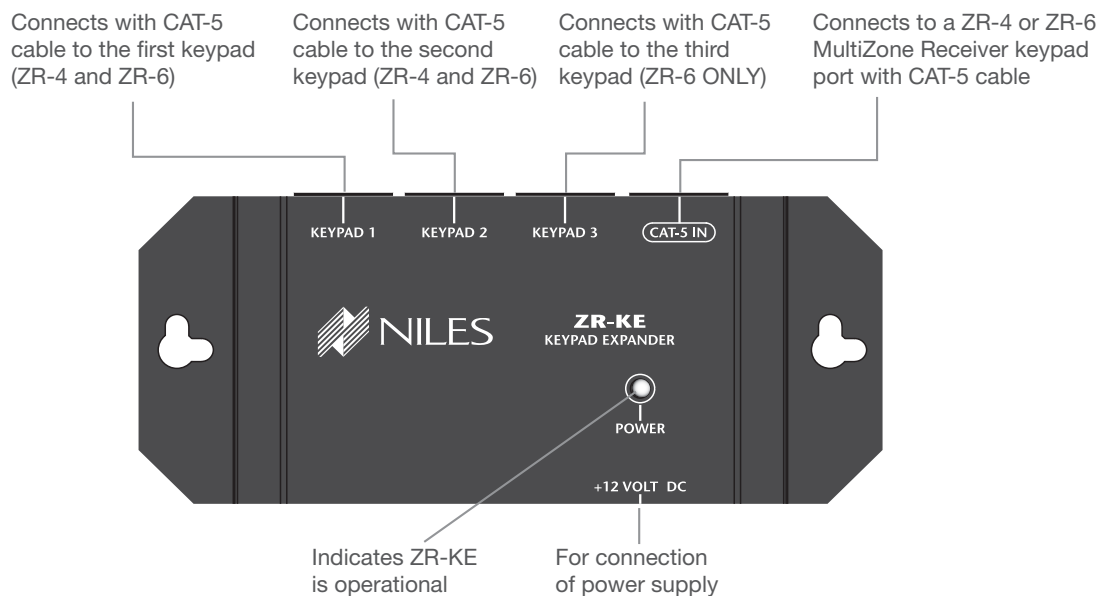
KPV Example: a ZR-6 system with the following keypads and touchscreens:

- Kitchen** – One TS-Pro (5 Points)
- Dining** – One Solo-6IR (1 Point)
- Master Bedroom** - Two TS-Pro's (10 Points)
- Master Bathroom** - Two Solo-6MDs (6 Points)
- Pool** - Three Solo-6MDs (9 Points)

The KPV of this system is 31 points. The ZR-6 powers up to a total KPV of 30 points, therefore an external power supply is required (preferably on the zone with the highest KPV)



ZR-KE
FG01494
Keypad expander for ZR-4 and ZR-6 MultiZone System Receiver



Features

- With the ZR-4, allows you to add an additional keypad in any of the ZR-4 zones
- With the ZR-6, allows you to add up to two additional Solo-6 IR, Solo-6 MD, and/or TS-Pro keypads in any of the ZR-6 zones
- Ideal for enhancing system control in larger living rooms, dining rooms, dens and outdoor areas
- Single input and three outputs (two outputs can be used with the ZR-4, three outputs with the ZR-6)

Specifications

- Dimensions: 4-3/4" wide x 1-1/4" high x 2" deep (12cm wide x 3.2cm high x 5.1cm deep)



APPLICATION: ADDING ADDITIONAL KEYPADS USING THE ZR-KE

DO THIS FIRST

Review the ZR-KE overview section

WHAT DOES THIS APPLICATION DO?

This application covers the use of a ZR-KE to add additional keypads to a zone on the ZR-4, or additional keypads and/or touchscreens on a zone of the ZR-6.

Key Considerations

Each Niles MultiZone receiver has limitations on how many keypads it can accommodate. The rules for each model are shown below.

ZR-4 – No more than 2 keypads per zone per chassis

ZR-6 – No more than 30 KPV per chassis

Customer Benefits

Now your customer can have multiple user interfaces where it works best for them. This includes larger rooms, outdoor areas that have multiple entertainment areas, and rooms that have two entryways.

Installation Benefits

The ZR-KE offers an easy way to connect multiple user interfaces to a control a single zone on a Niles MultiZone Receiver.

CRITICAL KNOWLEDGE

The ZR-KE can be powered either by direct connection via CAT-5 to a ZR-4 or ZR-6, or by an optional 12V DC power supply. The keypad power supply in the ZR-6 will operate keypads only up to a maximum KPV of 30. Any additional keypads must be connected to a ZR-KE with its own power supply. Only 1 active IR sensor in a room. When a room has more than 1 keypad, IR sensors should be disabled in all but one keypad.

INSTALLATION REQUIREMENTS

Power supply is required when the maximum chassis Keypad Power Value is exceeded.

CABLE SCHEDULE

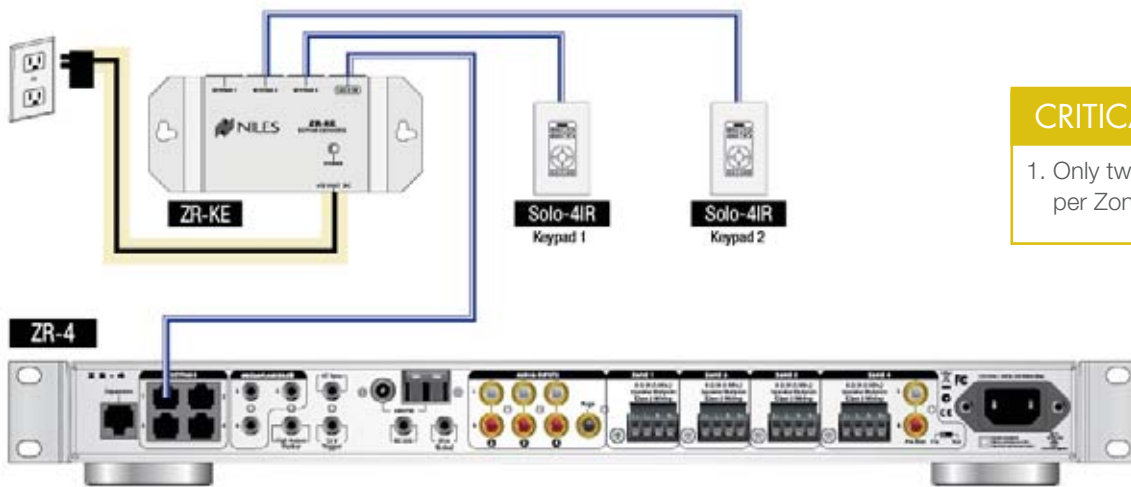
Keypad Expander Connections

QTY	CABLE	SIGNAL	FROM	TO
1	CAT-5	Data	ZR-4 or ZR-6 Keypad Port	ZR-KE Input
1	CAT-5	Data	ZR-KE	Keypad or Touchscreen (depending on receiver model)
1	12V DC	Power	AC Outlet	ZR-KE ¹

¹ If required by KPV calculation

ZR-6 MULTIZONE SYSTEM DESIGN GUIDE

APPLICATION: ADDING ADDITIONAL KEYPADS USING THE ZR-KE

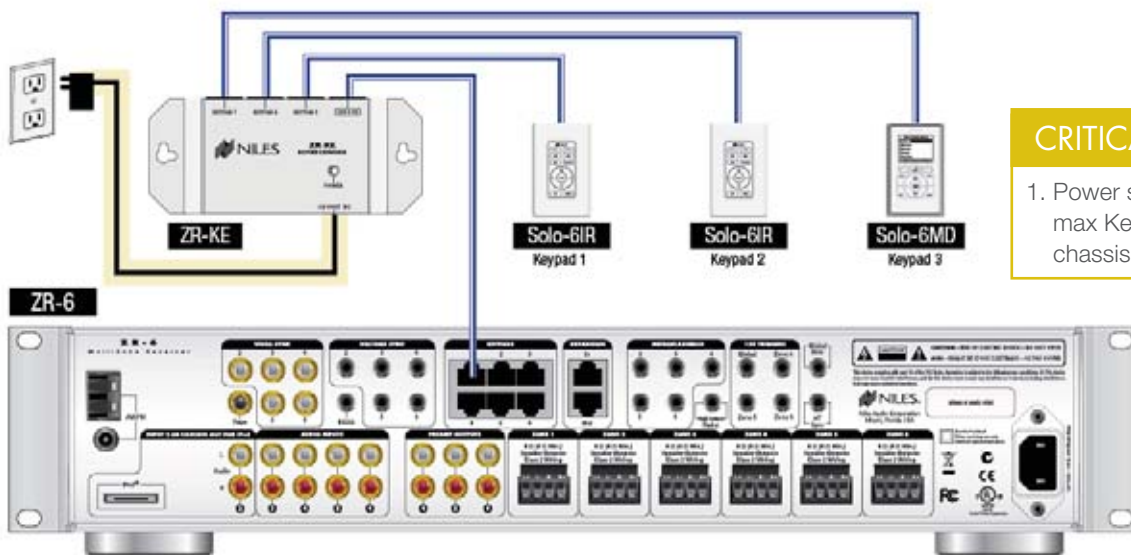


CRITICAL KNOWLEDGE

1. Only two keypads can be used per Zone output on the ZR-4

WIRING LEGEND

- CAT-5 Data
- AC (Optional)



CRITICAL KNOWLEDGE

1. Power supply only needed if max Keypad Power Value per chassis is exceeded.

WIRING LEGEND

- CAT-5 Data
- AC (Optional)

OVERVIEW: SMARTDOCK® 2 AND ES2

The SmartDock2 and the ES2 provide elegant solutions for integrating an iPod into a ZR-6 MultiZone System. They both provide additional features and placement flexibility that add convenience and value to the installation.

SMARTDOCK2

The SmartDock2 is a 30-pin docking station for the iPod® that includes an adjustable slide to accommodate various iPod sizes. The primary function of the SmartDock2 is to provide a bridge between an iPod, a Niles ZR-6 MultiZone Receiver, and an adjacent computer. This configuration allows you to sync with iTunes® and instantly switch back to the receiver without ever having to remove the iPod from the dock.



SmartDock² Smart Docking Station for iPod[®]



SmartDock2
FG01575
Smart Docking Station
for iPod



ES2

The ES2 Extender System is a pair of wall plates that allow an iPod® to be placed up to 100 meters away from a Niles ZR-6 MultiZone Receiver or other home entertainment system. The input plate has a 30-pin connector for the iPod cable and a connection for the power supply. The output plate has a 30-pin connector for the system connection. Both plates have two CAT-5 connectors on the back that carry audio, video, data and other signals between them that allow you to listen to and control your iPod.

Please check the iWARE® 2 iPod Compatibility Chart in the *Additional Documents* section at:
www.nilesaudio.com/techsupport/

ES₂ Wall-Mount Extender System for iPod[®]



ES2
FG01574
Input Wall Plate



ES2
FG01574
Output Wall Plate

ZR-6 MULTIZONE SYSTEM DESIGN GUIDE

OVERVIEW: SMARTDOCK[®] 2 AND ES2 KEY FEATURES

QUICK SYNC WITH iTUNES[®]

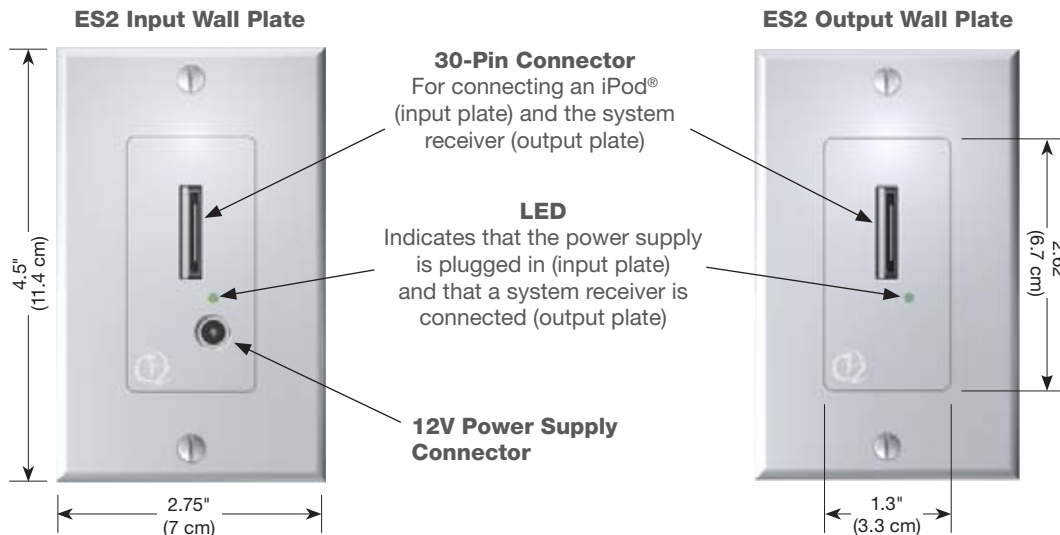
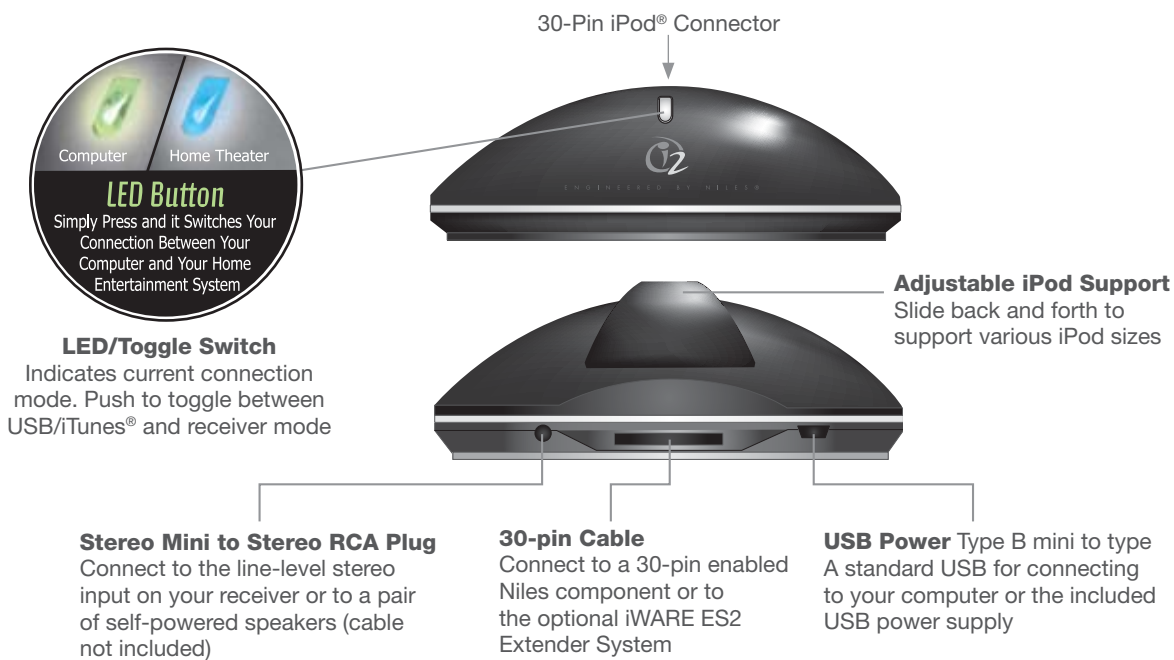
The SmartDock2 enables you to sync your iPod with iTunes on your computer without disconnecting the iPod from your AV system.

ILLUMINATED TOGGLE SWITCH

Pressing the illuminated light on the SmartDock2 toggles the dock between receiver mode and USB/iTunes mode. A blue illumination on the switch indicates receiver mode. A green illumination on the switch indicates USB/iTunes mode.

FLEXIBLE POWER OPTIONS

The SmartDock2 can receive power from a connected computer via the USB port, the included power supply, or a directly connected ZR-6





APPLICATION: ADDING AN iPod® USING THE SMARTDOCK® 2 AND ES2

DO THIS FIRST

Review the compatible iPod models list

WHAT DOES THIS APPLICATION DO?

This application demonstrates how to remotely locate a SmartDock2 and connect it to both a PC and the ZR-6 MultiZone Receiver.

Key Considerations

The SmartDock2 connects an iPod to the ZR-6 MultiZone Receiver and enables you to sync with iTunes on a computer.

The ES-2 extension kit allows you to conveniently integrate an iPod to the ZR-6 from anywhere in the home.

Customer Benefits

Integration of an iPod into a ZR-6 MultiZone Receiver becomes seamless and elegant.

Installation Benefits

The ES2 and SmartDock2 combination allows the installer to locate the iPod in any location that the customer desires, while still being accessible to the ZR-6 MultiZone system.

INSTALLATION REQUIREMENTS

The ES2 requires two (2) CAT-5 cables between the two wall plates. The input wall plate (the iPod end) must be powered by the included power supply that can be connected to the front or rear of the input wall plate.

CRITICAL KNOWLEDGE

- 1) The SmartDock2 and ES2 are not compatible with any first generation SmartDocks or ES1s!
- 2) The 30-pin iPod cable supplied with the ZR-6 MultiZone Receiver connects the ZR-6 (or ES2 input wall plate) directly to an iPod. The 30-pin cable supplied with the SmartDock2 and ES2 connects the SmartDock2 or ES2 output wall plate to the ZR-6, or the ES2 input wall plate to a SmartDock2. Please note these two 30-pin cables are not the same and cannot be interchanged.
- 3) Although CAT-6 offers higher communication speeds, its increased twists per inch may reduce the maximum distance between the two wall plates. CAT-5 is recommended for wire runs greater than 75 ft.
- 4) In a multi-chassis ZR-6 MultiZone Receiver system, there can be only one iPod connected to the system.

CABLE SCHEDULE

SmartDock2 Connections

QTY	CABLE	SIGNAL	FROM	TO
1	30-pin	Data	SmartDock2	ZR-6 30-pin
1	USB	Data	SmartDock2	iTunes Computer

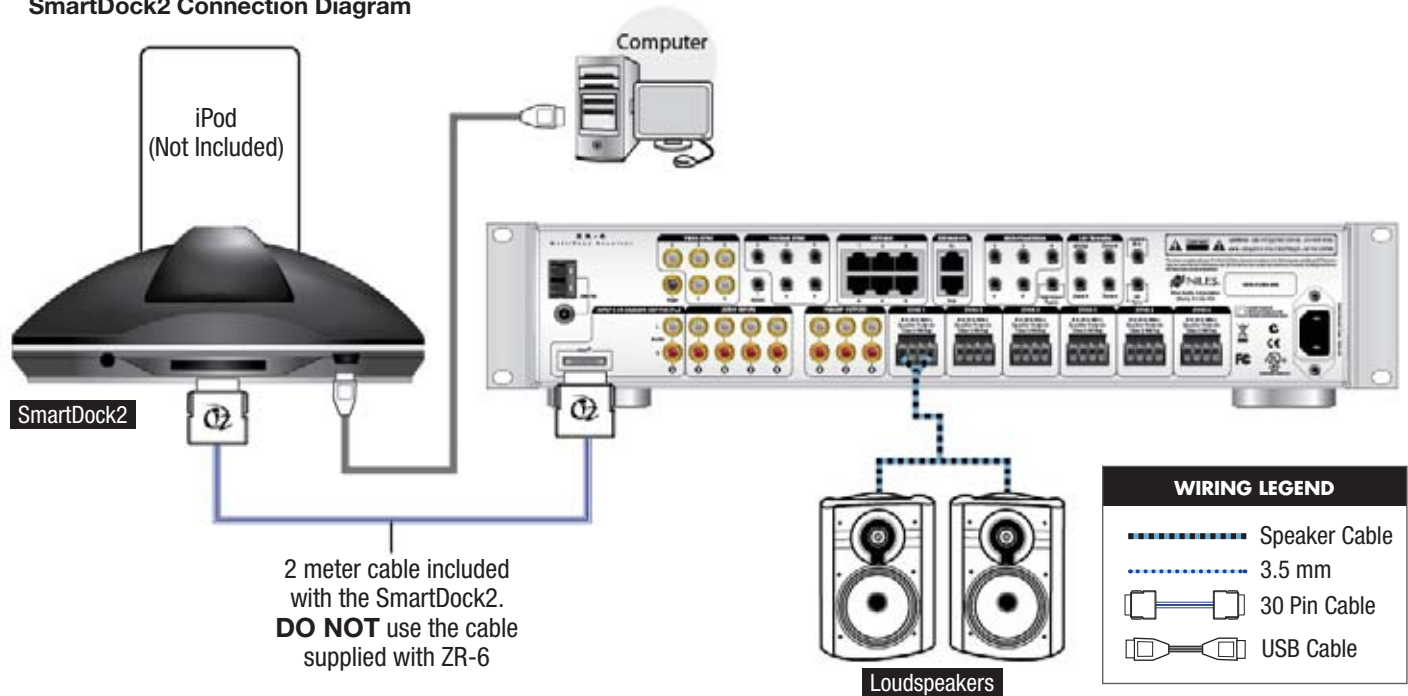
ES2 Connections

QTY	CABLE	SIGNAL	FROM	TO
2	CAT-5	Data	ES2 Input Plate	ES2 Output Plate
1	30-pin	Data	SmartDock2	ES2 Input Plate
1	30-pin	Data	ES2 Output Plate	ZR-6 30-pin
1	12V DC	Power	AC Outlet	ES2 Input Plate

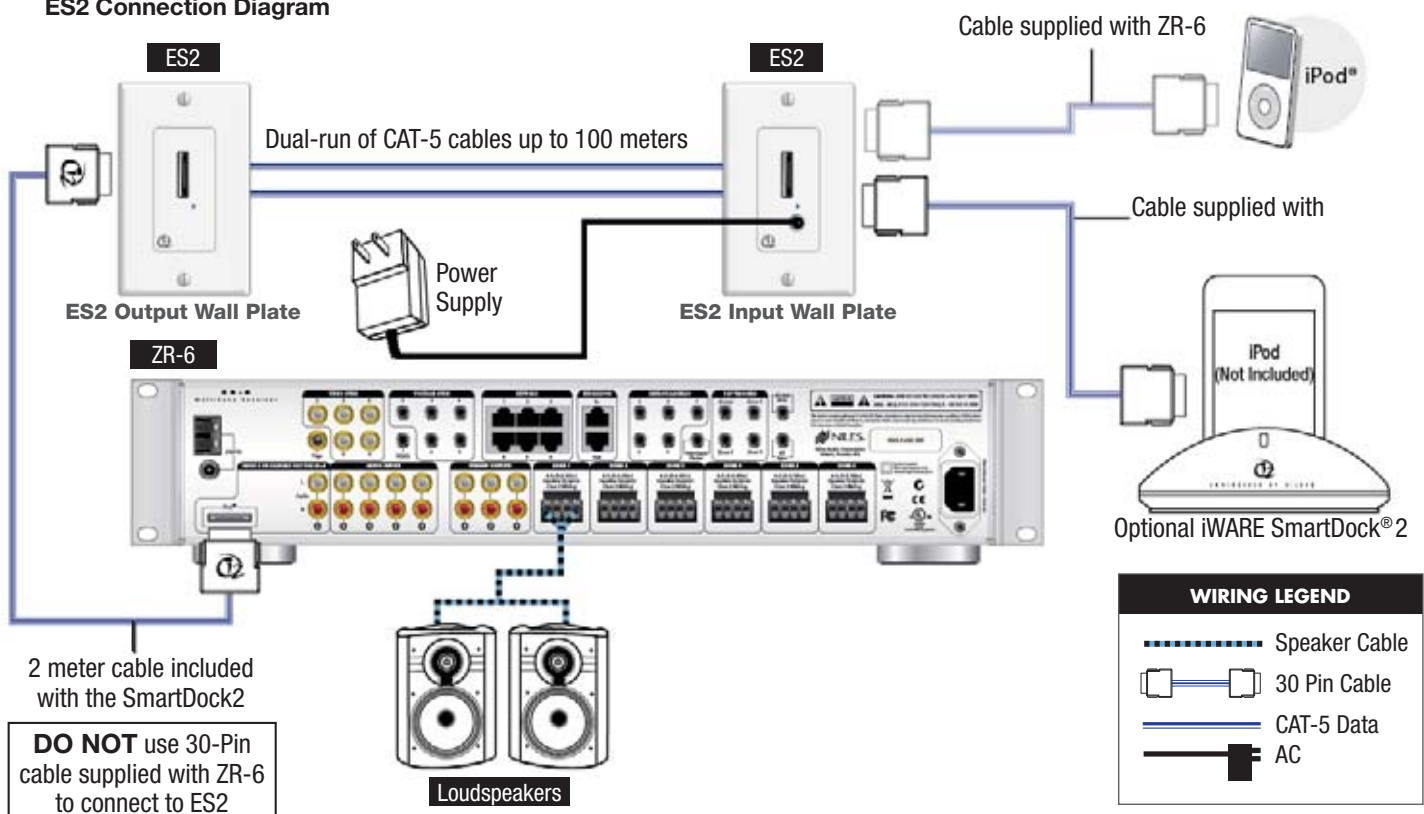
ZR-6 MULTIZONE SYSTEM DESIGN GUIDE

APPLICATION: ADDING AN IPOD USING THE SMARTDOCK AND ES2

SmartDock2 Connection Diagram



ES2 Connection Diagram



When not using a SmartDock2, use the cable included with the Niles MultiZone control system to connect to iPod.

ZR SYSTEM F.A.Q.S

DOES THE ZR-6 SUPPORT ALL iPods?

All iPods connect to the ZR-6 and display metadata. However, the older versions that do not support USB hosting will not receive power from the ZR-6 for recharging the battery.

HOW ARE MENU ITEMS SORTED ON THE iPod?

All Artists, Album and Song titles are sorted the same way as on the iPod. All the menus that appear on the keypads come directly from the iPod. Some songs may sort differently than you would think. This can be adjusted in iTunes®.

WILL THE ZR-6 INSTALL AS A DIRECT REPLACEMENT FOR GLORIA?

There is no external IR sensor connection on the Solo-6IR or Solo-6MD keypads. Any external IR sensors must be home run to the ZR-6 and connected to the global IR In port using a Niles IRH-610 or a TS-Pro must be installed in the zone. This is different from the cabling requirements for previous Niles MultiZone Receivers (i.e. 4630). Also, the ZR-6 utilizes T-568A termination for the CAT-5 cables.

CAN THE ZR-4 LEARN IR CODES LIKE THE ZR-6 AND ZR-4630 (GLORIA)?

No, the ZR-4 can only pass through IR codes that are fired into its keypads. This is the only way you can activate or control sources with the ZR-4 (the Solo-4IR keypad does not have transport keys such as play, track +/-, etc.).

IS THE IR LEARNING IN THE ZR-6 THE SAME AS GLORIA?

IR Learning in the ZR-6 is even easier than in the ZR-4630. The IR learning menu will prompt you to enter the commands (“Play”, “Pause”, “Rewind”, etc.) one by one. The labels appearing on the display eliminate the need for pressing a Niles remote button to specify a memory location prior to learning each device command. See the *ZR-6 System Guide* for details of how IR functions.

DOES THE ZR-6 IR LEARNING SUPPORT OTHER DEVICES?

The ZR-6 features two IR storage pages labeled “Library 1” and “VS-6/Library 2”. These pages are used to store extra IR commands (any that will be used in sequences that are not learned on one of the source pages). For example, commands to open or close draperies turn on TVs, etc.

WHY CAN'T I LEARN IR COMMANDS FOR ALL SIX SOURCES?

Names for source devices must be specified in the configuration menu for those devices to appear in the IR Learning and Sequence building menus.

MUST I TEACH ALL DISCRETE IR CODES TO THE R-8L REMOTE?

No, the R-8L remote always sends Niles codes for devices. The actual device codes are generated from the learned IR commands stored in the ZR-6.

HOW DO I “CLONE” A ZR-6 CONFIGURATION?

ZR-6 archive software stores all configuration data stored in the ZR-6, which can then be transferred into a blank ZR-6. This includes all source names, zone linking, zones enabled for party mode, zones enabled for paging, all learned IR commands, all IR sequences, preamplifier output status, zone tone control settings, zone loudness status, zone start volume settings, and source compensation levels. Archiving does not store information residing in the keypads (IR sensor status, display contrast settings, or display time-out settings).

TS-PRO/ZR-6 F.A.Q.S

WHAT NEW FEATURES DOES THE TS-PRO PROVIDE?

The TS-Pro adds several new capabilities to your ZR-6 system:

- TS-Pro supports an external IR sensor
- TS-Pro allows control of any zone
- TS-Pro adds the ability to adjust volume in multiple zones simultaneously
- TS-Pro allows custom room (zone) naming
- TS-Pro allows custom radio preset naming
- TS-Pro provides expanded iPod search capabilities

HOW IS THE TS-PRO PROGRAMMED?

No programming is necessary. Simply connect the TS-Pro to a configured ZR-6 and the programming occurs automatically. The source buttons are named and the proper screens are loaded. The buttons on those screens appear only if an IR command for that button is learned into the ZR-6.

WHAT TYPES OF EXTERNAL IR SENSORS MAY BE CONNECTED?

Any Niles IR MicroSensor® works perfectly. The IR signal will be routed to the ZR-6 in exactly the same way as the internal IR sensor.

DOES THE TS-PRO FIT INTO A STANDARD 2-GANG JUNCTION BOX?

No. The TS-Pro is slightly larger and requires a special cutout. A template for the proper size is included in the box. A new construction bracket, TS-Pro BKT (FG01603) is available.

ARE COLOR KITS AVAILABLE FOR THE TS-PRO?

Faceplates in three colors are included in the box: white, light almond, and bone with the TS-Pro; white, black, and silver with the TS-Pro EX.

HOW IS THE TS-PRO CONNECTED TO THE ZR-6?

The TS-Pro connects to the ZR-6 with a CAT-5 cable terminated in the T568A standard – exactly the same wiring and termination as a Solo-6MD or Solo-6IR keypad. The TS-Pro is a direct replacement for either of these keypads.

HOW MANY TS-PROS CAN BE CONNECTED TO A ZR-6?

A ZR-6 will support up to six TS-Pros (one per zone) without any additional power. The Keypad Power Value (KPV) of the TS-Pro is 5. Calculate the maximum KPV for a system the same way as for a Solo-6IR or Solo-6MD keypad. See your system manual for more information.

ADDITIONAL INFORMATION



Warranty

All Niles products are manufactured with reliability in mind and backed by factory warranties against defects in materials or workmanship. For details, see warranty statement included with each product.

Customer Service and Technical Support

Call: 800-289-4434 (BUY-HIFI)

Customer Service is available from 8:00 AM to 5:30 PM

Technical Support is available from 8:00 AM to 7:00 PM

Online at: www.nilesaudio.com/techsupport or via email: techsupport@nilesaudio.com

Product Suggestions

We are eager to hear your product suggestions.

Please e-mail your suggestions to: productsuggestions@nilesaudio.com

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