Installation and Operation Guide

It's Under Control®

AD-8

Audio Distribution System

RTI

AD-8 Audio Distribution System

FEDERAL COMMUNICATIONS COMMISSION NOTICE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the device.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received including interference that may cause undesired operation.

N27917

DECLARATION OF CONFORMITY (DOC)

The Declaration of Conformity for this product can be found on the RTI website at: www.rticorp.com/declaration

SAFETY SUGGESTIONS

Read Instructions. Read all safety and operating instructions before operating the unit.

Retain Instructions. Keep the safety and operating instructions for future reference.

Heed Warnings. Adhere to all warnings on the unit and in the operating instructions.

Follow Instructions. Install and operate in accordance with the manufacturer's instructions.

Accessories. Only use attachments/accessories specified by the manufacturer.

Portable Cart Warning. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

Heat. Do not block any ventilation openings.

Heat. Keep the unit away from heat sources such as radiators, heat registers, stoves, etc., including amplifiers that produce heat.

Power. Unplug this apparatus during lightning storms or when unused for long periods of time.

Power Sources. Connect only to the power cord that was included with the unit.

Power Cord Protection. Route power supply cords so that they are not likely to be walked on or pinched by items placed on or against them, paying particular attention to the cords at plugs, at convenient receptacles, and at the point at which they exit from the unit.

Power Cord Grounding Plug. Do not remove the grounding prong of the grounding-type plug. A grounding type plug has two blades and a third grounding prong. The third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

MAINS Outlet. Where MAINS outlets are used, the apparatus shall be connected to a MAINS socket outlet with a protective earthing connection.

MAINS Plug. Where the MAINS plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.

Water and Moisture. Do not use the unit near water—for example, near a sink, in a wet basement, near a swimming pool, near an open window, etc.

Object and Liquid Entry. Do not allow objects to fall or liquids to be spilled into the enclosure through openings.

SAFETY SUGGESTIONS

Cleaning. Clean only with dry cloth.

Servicing. Do not attempt any service beyond that described in the operating instructions. Refer all other service needs to qualified service personnel.

Damage Requiring Service. The unit should be serviced by qualified service personnel when:

- Objects have fallen or liquid has been spilled into the unit.
- The power supply cord or the plug has been damaged.
- The unit does not appear to operate normally or exhibits a marked change in performance.
- The unit has been dropped or the enclosure has been damaged.

WARNING!
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THE UNIT TO RAIN OR MOISTURE.

LIMITED WARRANTY

Remote Technologies Incorporated warrants its products for a period of one (1) year from the date of purchase from Remote Technologies Incorporated or an authorized Remote Technologies Incorporated distributor.

This warranty may be enforced by the original purchaser and subsequent owners during the warranty period, so long as the original dated sales receipt or other proof of warranty coverage is presented when warranty service is required. Except as specified below, this warranty covers all defects in material and workmanship in this product. The following are not covered by the warranty:

Damage resulting from:

1. Accident, misuse, abuse, or neglect.

2. Failure to follow instructions contained in this Guide.

3. Repair or attempted repair by anyone other than Remote Technologies Incorporated.

4. Failure to perform recommended periodic maintenance.

5. Causes other than product defects, including lack of skill, competence or experience of user.

6. Shipment of this product (claims must be made to the carrier).

7. Being altered or which the serial number has been defaced, modified or removed.

Remote Technologies Incorporated is not liable for any damages caused by its products or for its failure of its products to perform, including any lost profits, lost savings, incidental damages, or consequential damages.

Remote Technologies Incorporated is not liable for damages based upon inconvenience, loss of use of the product, loss of time, interrupted operation, commercial loss, any claim made by a third party or made by you for a third party.

Remote Technologies Incorporated's liability for any defective product is limited to repair or replacement of the product, at our option.

If any component of your AD-8 Audio Distribution System needs service, please contact Remote Technologies Incorporated by telephone, fax or E-mail for return information. **Please do not return products to Remote Technologies Incorporated without return authorization**.

DISCLAIMER

All rights are reserved. No part of this document may be photocopied, reproduced, or translated without the prior written notice of Remote Technologies Incorporated.

The information contained in this document is subject to change without notice. Remote Technologies Incorporated shall not be liable for errors or omissions contained herein or for consequential damages in connection with the furnishing, performance, or use of this guide.

AD-8, Integration Designer, and the RTI logo are registered trademarks of Remote Technologies Incorporated.

Other brands and their products are trademarks or registered trademarks of their respective holders.
iPod, iPod classic, iPod nano, and iPod touch are trademarks of Apple Inc., registered in the U.S. and other countries.

TABLE OF CONTENTS

AD-8   Audio Distribution System

CHAPTER 1 | WELCOME

Thank you for using the AD-8 Audio Distribution System.

With eight audio source inputs and eight zone outputs, wherever you go - the music moves with you. An integrated 16-channel amplifier provides plenty of power, while zone independent volume and tone control brings the sound to life. When you combine the AD-8 with RTI central processors, remote controls, touchpanels, and keypads, this RTI Audio Distribution solution easily keeps pace with the rhythm of your life.

The AD-8 audio distribution system is designed to be a seamless extension of an RTI control system. The AD-8 provides the audio switching, amplification and distribution functions, while RTI central processors and user interfaces manage the audio source control, user input and status feedback. Information such as the selected source, volume level, and tone control settings are available for each zone. Depending on the source equipment used, more advanced information such as song playlists, cover art, and tuner RDS data may also be available. Of course with RTI control systems, audio is just the beginning. Imagine every aspect of your environment working in complete harmony – from audio and video to lighting, ambience, temperature and more. Such scenarios are only made possible from an audio distribution system backed by a professional grade control system. Thanks to the efficient engineering that defines the AD-8, there is no reason to limit yourself to a system that was designed only for music – with RTI so much more is possible.

IMPORTANT NOTES

Please read these important notes about the AD-8:

- The AD-8 should be placed in an area where it is around normal room temperature (between 60°F to 90°F).
- Avoid installing the AD-8 in a location with little or no air circulation.
- Avoid installing the AD-8 in a location where it can come in contact with direct sunlight.
- Do not let the AD-8 system get wet. It should not be handled with wet hands or placed in an area where it could get wet.
- Do not subject the AD-8 to smoke, dust, or vibrations.
- Only use the power cord that is supplied with the AD-8. Using the wrong type of power cord may result in damage.
- Do not disassemble the unit. Service of the AD-8 should be performed by authorized personnel only.

CHAPTER 1 | PRODUCT CONTENTS

Contents within the box include the following items:

- One (1) AD-8 Audio Distribution System
- One (1) Custom RTI AD-8 Faceplate
- Eight (8) Four Position Phoenix Connectors
- Two (2) Rack Mounting Ears with Screws
- One (1) Power Cord
- One (1) Installation Guide

UNPACKING AND INSPECTION

After unpacking your new AD-8 Audio Distribution System, save all of the packing materials in case you ever have to ship the unit.

Thoroughly inspect the AD-8 and packing materials for signs of damage. Report any damage to the carrier immediately. Report any equipment malfunctions to RTI or an authorized RTI distributor.
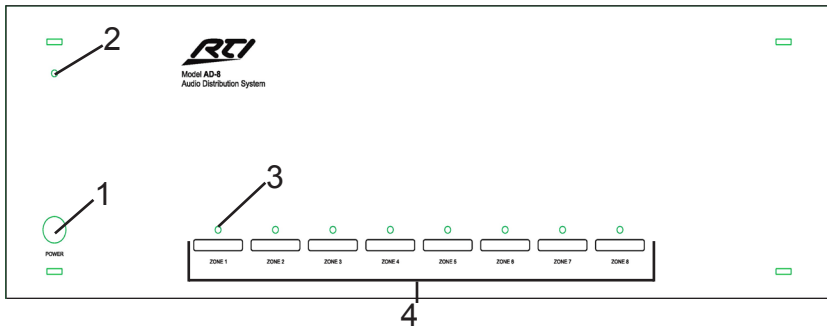
CHAPTER 2 | FEATURES AND DESCRIPTION

The AD-8 provides superior quality and reliability as well as these specific features:

- Eight analog stereo audio output zones (either 4 ohm or 8 ohm speakers may be connected to the zone outputs).

- Eight analog audio source inputs.

- Cool Power® class-D amplifier provides twenty-five watts per channel.

- Amplifier offers thermal and short-circuit protection.

- Independent volume and tone control for all audio zones.

- Accessory wall plates allow source equipment to be connected remotely with a Cat-5 cable.

- Controlled via RS-232 or IR.

- Optional phone and doorbell mute function.

- Zone power indicator LEDs.

- Designed to be rack mountable (3U rack form factor) or free standing.

- As many as eight (8) cascaded AD-8 units may be source-looped, which can distribute audio sources up to 64 zones.

CHAPTER 2 | FEATURES AND DESCRIPTION

AD-8 FRONT PANEL

1. Power Switch

Turns AD-8 power on or off.

2. Power LED

A blue LED will be lit up when power is on and will be off when the power is off.
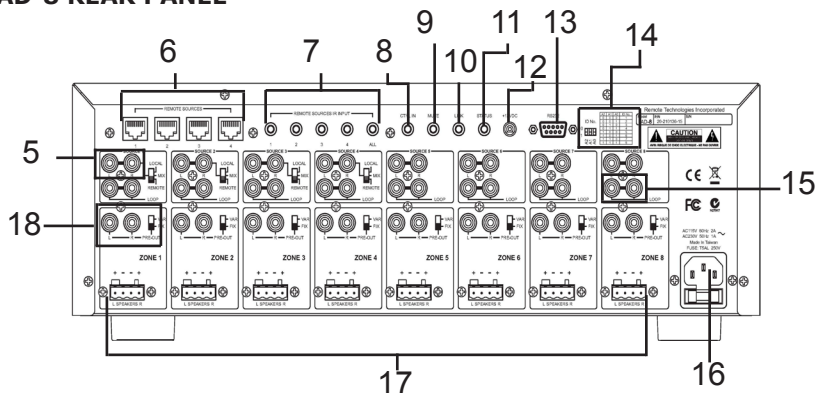
3. Zone Power LED

A red LED indicates, when lit, that the corresponding zone is on.

4. Recessed Zone Label Holders

A recessed rectangle for placement of a name label (not included) for each zone.

CHAPTER 2 | FEATURES AND DESCRIPTION

AD-8 REAR PANEL

5. Local Source Inputs

Stereo RCA inputs for audio signal from up to eight independent audio sources (receiver, cable box, satellite radio etc.), with buffered loop out capabilities. You have the option of selecting whether the remote source, local source, or both sources are used.

6. Remote Source Inputs

RJ-45 jacks for connection of up to four RTI Remote Source wall plates (model RSP-1) for independent audio sources located remotely (iPod® dock, CD player, PC, etc.). Remote Source wall plates installed in locations where the audio source devices will be used are wired back to the AD-8 with Cat-5 cable, and provide a convenient audio signal path from the source to the AD-8 as well as IR control of the source from an RTI control system.

7. Remote Source IR Control Inputs

These 3.5mm mini-jack inputs are for connecting to an IR output port of an RTI control system for control of a remote audio source. The IR control is then delivered over the same Cat-5 cable that runs between the AD-8 and an RTI Remote Source wall plate (RSP-1). *See above* - **Remote Source Inputs**. There is a remote source IR control input for each of the four audio sources allowing for independent IR control of each device. There is also an input labeled "All" that will allow the delivery of IR to all connected sources at the same time.

8. Infrared Control Input

This 3.5mm mono mini-jack is for infrared control of the AD-8 from a control system. A discrete set of IR codes is available within the RTI Integration Designer programming software or on the RTI website (RTI dealer accessible only).
NOTE: Mini-jack is mono with tip = IR+, ring=Gnd.

CHAPTER 2 | FEATURES AND DESCRIPTION

AD-8 REAR PANEL - CONTINUED

9. Mute

This 3.5mm stereo mini-jack is for the connection of a PDM-1

Phone/Doorbell Mute Module that can automatically mute the AD-8 audio.

10. Link

This is for future use. DO NOT USE.

11. Status

This 3.5mm mono connection provides a +12VDC output when any zone is turned on (15mA max). This can be used to trigger external equipment. When all zones are turned off, 0VDC is present.
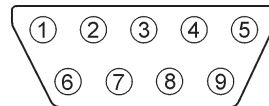
12. +12VDC

This is for future use. DO NOT USE.

13. RS-232

DB-9 jack for RS-232 control of the AD-8 from a control system. See Chapter 3 Installation & Operation for RS-232 control details.

DB-9 Pinout

2	TXD	Transmit Data
3	RXD	Receive Data
5	GND	Ground

① ② ③ ④ ⑤
⑥ ⑦ ⑧ ⑨

14. ID Number

A system configuration can have up to 8 AD-8 units installed. Each AD-8 can have a unique ID number for discrete IR control thereby eliminating the need for IR routing. Discrete IR code libraries are available for each unique ID. Use the 3 switches and the ID assignment grid to the right of the 3 switches to set the unique ID for each AD-8 unit.

CHAPTER 2 | FEATURES AND DESCRIPTION

AD-8 REAR PANEL - CONTINUED

15. Audio Source Loop Outlets

An individual source signal can be looped to multiple AD-8 systems using these RCA jacks.

16. AC Power Socket and Fuse

A three-pin grounded socket that connects with a removable AC power cord with a T5AL 250V fuse.

17. Speaker Outputs

Eight sets of removable Phoenix connectors for speakers in each zone.

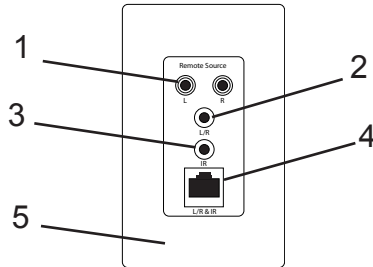Either 4 ohm or 8 ohm speakers may be connected to the zone outputs.

18. PRE-OUT Outputs

Provides line level audio outputs for driving external amplifiers. The switch can be set to PRE or FIX. PRE - the level is variable and will ramp up and down with the corresponding zone volume control. FIX - the level is fixed and is not affected by the zone volume control.

CHAPTER 2 | FEATURES AND DESCRIPTION

RSP-1 REMOTE SOURCE PLATE - FRONT

1. Audio Inputs - RCA

Two RCA input jacks for connection to the output (left and right) of the remote audio source (Receiver, CD Player etc).

2. Audio Inputs - 3.5mm

One 3.5mm stereo mini jack for connection to the output of the remote audio source (iPod®, PC etc).

3. IR Output

One 3.5mm mono mini jack for connection of an IR emitter to control the remote source. IR control delivered from control system.

4. Audio Inputs and IR Output

This RJ-45 connection carries the left and right audio inputs from the remote source and the IR control output over cat-5 cable. *Note: This would not normally be used.*

5. Decora® faceplate (not included)

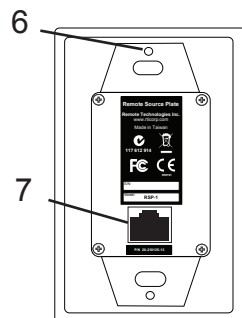Compatible with standard single-gang Decora® style faceplates.

RSP-1 REMOTE SOURCE PANEL - REAR

6. Mounting holes

Use screws to mount the RSP-1 in a standard single-gang electrical box.
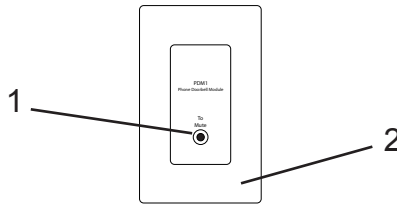

7. Audio and IR control - RJ-45

This RJ-45 connection carries the left and right audio inputs from the remote source and the IR control output between the AD-8 and the remote source.

CHAPTER 2 | FEATURES AND DESCRIPTION

PDM-1 PHONE/DOORBELL MUTE PLATE - FRONT
The back panel of the AD-8 has a 3.5mm stereo connector input labeled "Mute". This is designed to be used with the PDM-1 Phone/Doorbell Mute module. When the PDM-1 is installed, the system will temporarily mute when the phone or doorbell rings.
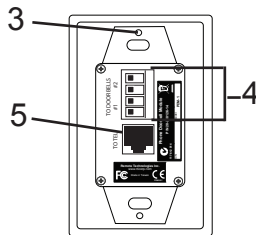

1. Phone - Doorbell Output - 3.5mm

This 3.5mm stereo mini jack is for connecting to the "Mute" connection on the rear panel of the AD-8. (See the AD-8 rear panel description)

2. Decora® faceplate (not included)

Compatible with standard single-gang Decora® style faceplates.

PDM-1 PHONE-DOORBELL MUTE MODULE - REAR

3. Mounting holes

Use screws to mount the PDM-1 in a standard single-gang electrical box.

4. Doorbell Connectors

The PDM-1 Phoenix connector will accept up to two AC or DC voltages from two different doorbell chimes. This connection is done with two conductor wire from the terminals on the doorbell chime to the Doorbell 1 or Doorbell 2 inputs on the back of the PDM-1. Polarity is not important for this connection.

5. Phone System - RJ-11

A single phone line can be brought into the RJ-11 connection on the back of the PDM-1. The ring voltage from the phone line will trigger the AD-8 system to mute.
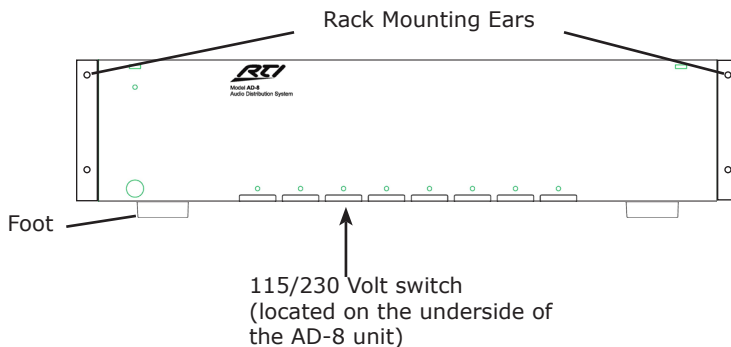
CHAPTER 3 | INSTALLATION AND OPERATION

FREE STANDING

The AD-8 ships with four removable feet that allow the AD-8 to be placed on a flat surface. To maintain proper ventilation and cooling, do not install the AD-8 on a flat surface without the feet.

RACK MOUNT

The AD-8 can be mounted in a component rack as part of a comprehensive audio/video electronics system using the included rack mounting ears. Align the rack mounting ears with the screw holes located on the sides of the AD-8 near the front. Fasten the rack ears to the AD-8 using three screws (supplied). Remove feet before mounting in a rack.

NOTE: To maintain proper ventilation, it is recommended that you leave a rack space above and beneath the AD-8.

Rack Mounting Ears

Foot

115/230 Volt switch (located on the underside of the AD-8 unit)

CONNECTING THE 115/230VAC POWER CORD

The included AC power cord must be inserted into the AC input receptacle on the AD-8. When the AC power cord is connected to a power source, press the Power button to turn the AD-8 on and off.

IMPORTANT NOTICE FOR INTERNATIONAL DISTRIBUTORS

This product is shipped from RTI with AC voltage set to 115 Volts. The voltage will have to be changed for certain international locations. International distributors should take the following critical step.
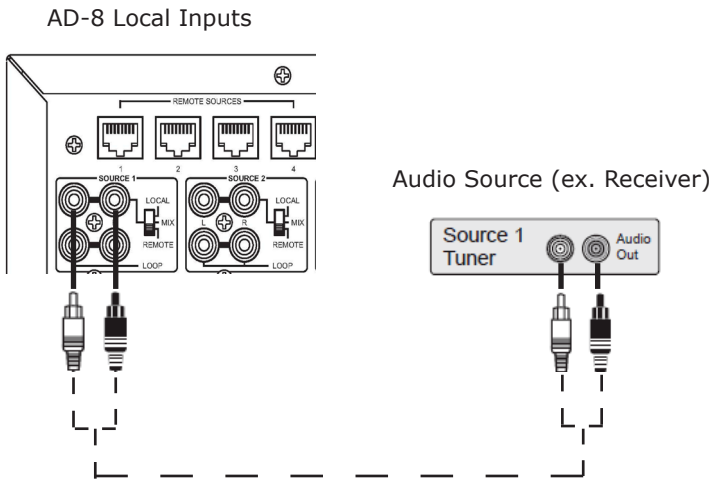
• Ensure that the voltage switch is set properly for your location The red voltage switch on the bottom of the product may need to be changed to the 230 Volt position.

*The red voltage switch should be left in the 115 Volt position if used within the United States.

CHAPTER 3 | INSTALLATION AND OPERATION

CONNECTING LOCAL AUDIO SOURCES

The AD-8 has eight sets of RCA audio inputs for connecting up to eight external source components. These eight audio sources can be selected to play in up to eight zones. A user in one zone can listen to one audio source while another user in a different zone listens to a different audio source. Also, if users in more than one zone choose the same audio source, control of that source is shared between the zones.

AD-8 Local Inputs

Audio Source (ex. Receiver)

CONNECTING REMOTE AUDIO SOURCES

(See "Connecting Remote Audio Sources" diagram)

Audio sources that are located in other areas can have their audio signals delivered back to the AD-8 and shared among all of the output zones.

NOTE: The first four sources can be local, remote, or both by selecting the appropriate switch position.

WIRING FOR REMOTE AUDIO SOURCES

Use standard Cat-5 cable between the RSP-1 Remote Source Plate and the RJ-45 jacks on the rear of the AD-8. The RSP-1 has stereo RCA jacks and a 3.5mm mini stereo jack for connecting to the output of the audio source.

In addition to carrying the audio signals, the Cat-5 cable between the RSP-1 and AD-8 carries IR control of the remote source from an RTI control system. The control system delivers IR commands to the 3.5mm IR inputs on the rear of the AD-8.
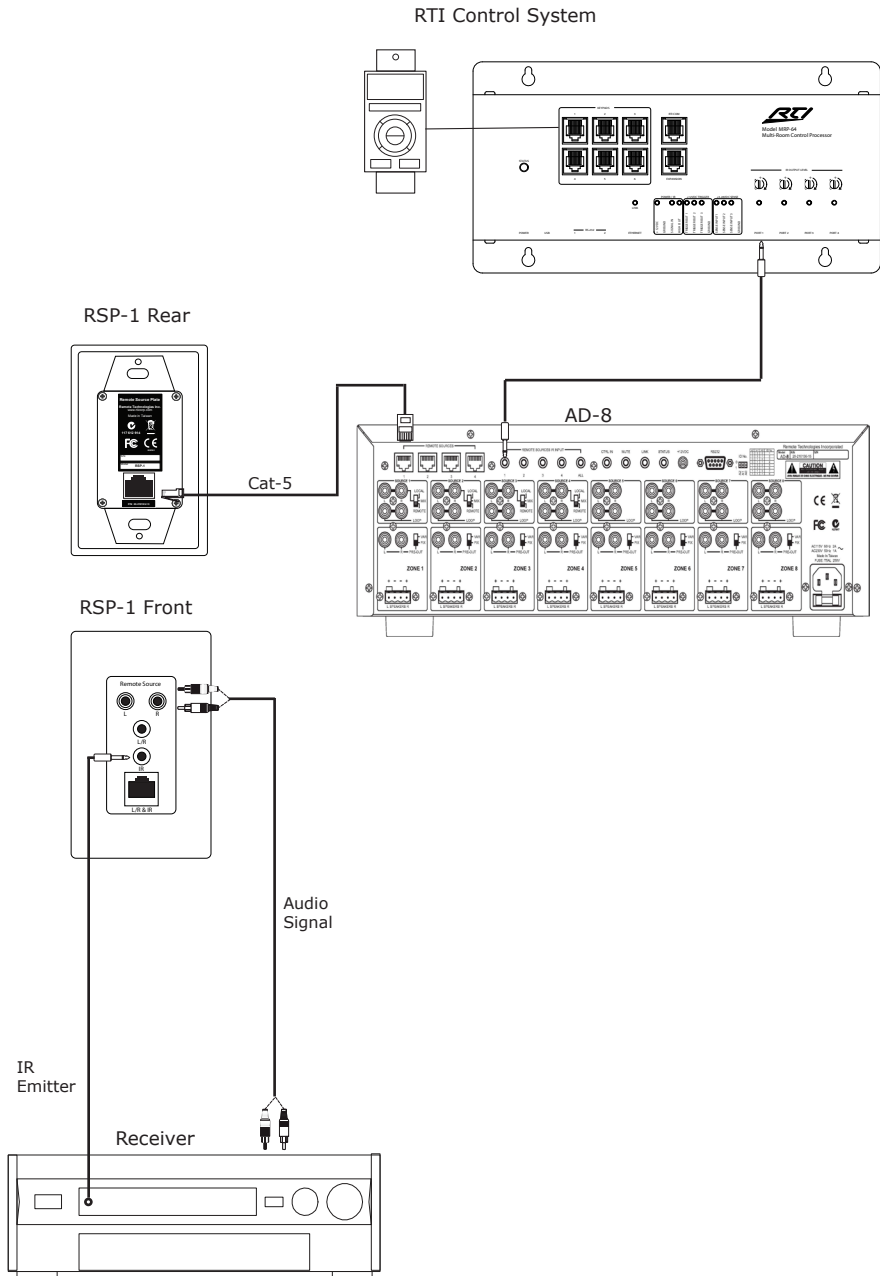
NOTE: The AD-8 can accommodate 500 total feet of Cat-5 cable for each zone. For the most reliable operation, it is best that no single run of Cat-5 exceeds 250 feet. The correct wiring scheme for the Cat-5 cable is standard EIA/TIA 568B. Properly terminating the Cat-5 cable is crucial for the operation of the system.

CONTROLLING REMOTE AUDIO SOURCES

Remote audio sources can be controlled from their own front panel or via infrared control delivered over the same Cat-5 cable wired to the RSP-1 Remote Source Panel that is used for the audio signal (see above). The IR commands used to control the sources come from an RTI control system which is wired to the IR inputs located on the rear of the AD-8. Each remote source has an individual IR input for independent control and commands sent to the "All" input on the AD-8 will allow control of all remote sources if routing the IR codes is not necessary.

CHAPTER 3 | INSTALLATION AND OPERATION
CONNECTING REMOTE AUDIO SOURCES

RTI Control System

RSP-1 Rear

Cat-5

AD-8

RSP-1 Front

Audio
Signal

IR
Emitter

Receiver

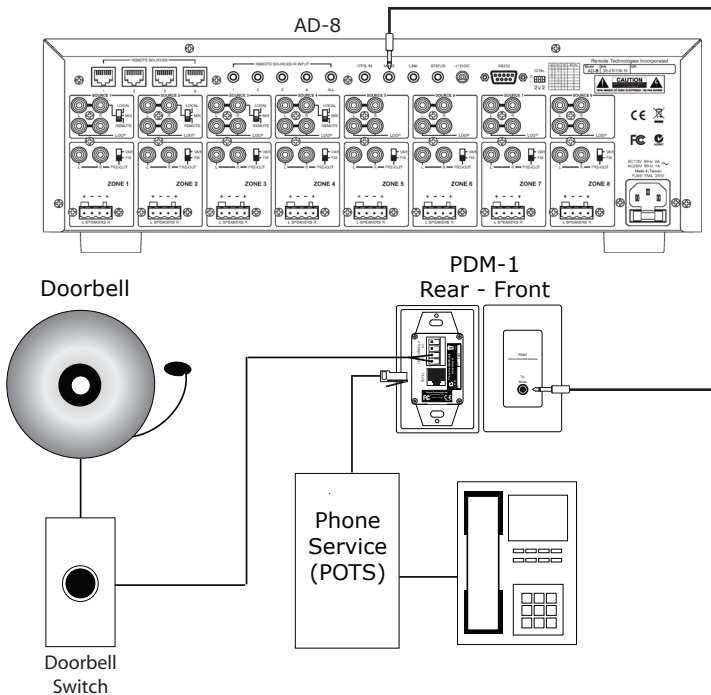## CHAPTER 3 | INSTALLATION AND OPERATION

WIRING FOR MUTE INPUT

The back panel of the AD-8 has a 3.5mm non-shorting stereo connector input labeled "Mute". This is designed to be used with the PDM-1 Phone-Doorbell-Mute module. When the PDM-1 is connected, the system will temporarily mute when the phone or doorbell rings.

Doorbell

The back of PDM-1 will accept up to two AC or DC voltages from two different doorbell chimes. This connection is done with two conductor wire from the terminals on the doorbell chime to the Doorbell A or Doorbell B inputs on the back of the PDM-1, Polarity is not important for this connection.

Telephone Paging

The ring voltage from a phone line will trigger the AD-8 system to mute.

AD-8

Doorbell

PDM-1
Rear - Front

Phone
Service
(POTS)

Doorbell
Switch

CHAPTER 3 | INSTALLATION AND OPERATION

SPEAKER WIRE TERMINATION

Install the eight supplied Phoenix connectors into the audio zone outputs on the AD-8. Connect the positive and negative wires for each audio channel output, keeping the proper orientation of positive and negative signal for each speaker connection. Typically, two-conductor speaker wire uses red to denote positive and black to denote negative. Some types of wire indicate positive with a line running through the insulation. Four-conductor wire can also be used. This has four separated wires in one outer jacket, making it possible to run a single speaker wire to a zone for its pair of speakers. This type of wire typically uses red and black for one speaker and white as positive and green as negative for the second speaker.

IR CONTROL OF AD-8

A discrete set of IR codes is available within the RTI Integration Designer programming software or on the RTI website (accessible to RTI dealers only). A 3.5mm mono mini jack labelled CTRL IN is located on the rear of the AD-8.

RS-232 CONTROL OF AD-8

A DB-9 jack offers RS-232 control of the AD-8 from an RTI or third-party home automation control system or a PC running a hyperterminal program. A set of RS-232 codes is available within the RTI Integration Designer programming software or on the RTI website (accessible to RTI dealers only).
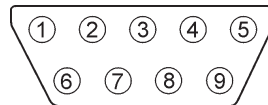
Connection Settings:
Baud rate: 9600
Data bits: 8
Parity: None
Stop bits: 1

DB-9 Jack Pinout:

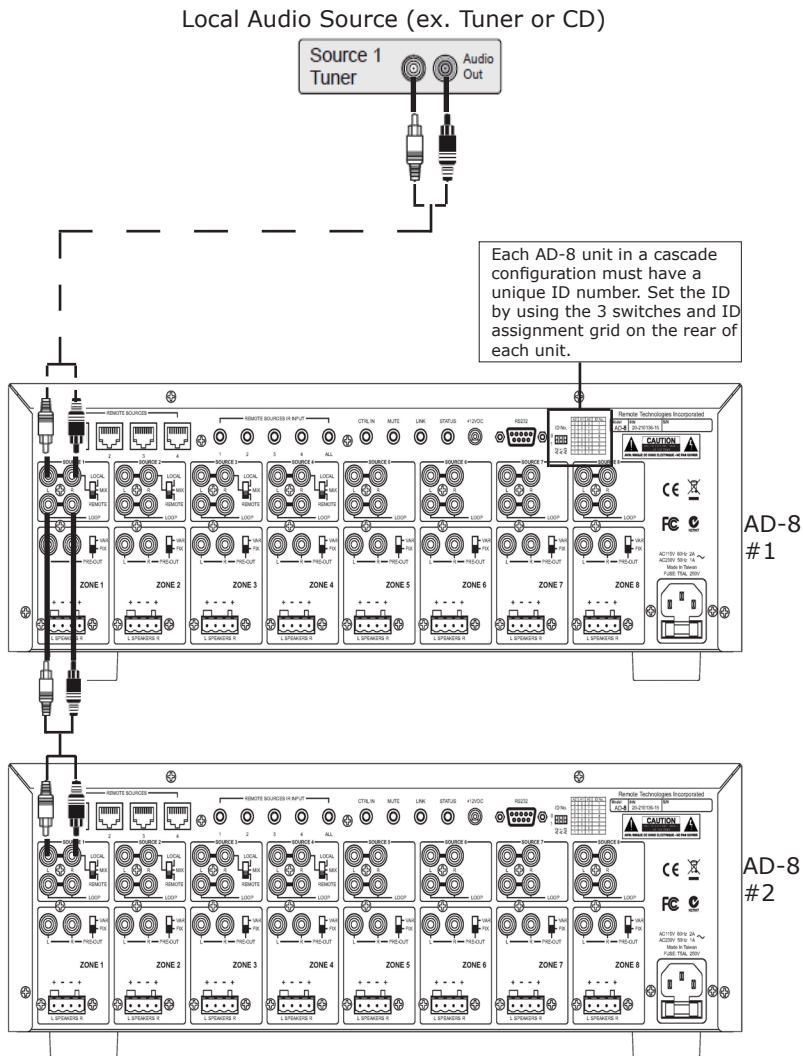| 2	TXD	Transmit Data
3	RXD	Receive Data
5	GND	Ground

CHAPTER 3 | INSTALLATION AND OPERATION

CASCADING MULTIPLE AD-8 SYSTEMS

It is possible to expand the number of output zones by cascading up to eight AD-8 Audio Distribution Systems together. This allows audio to be delivered to as many as 64 zones.
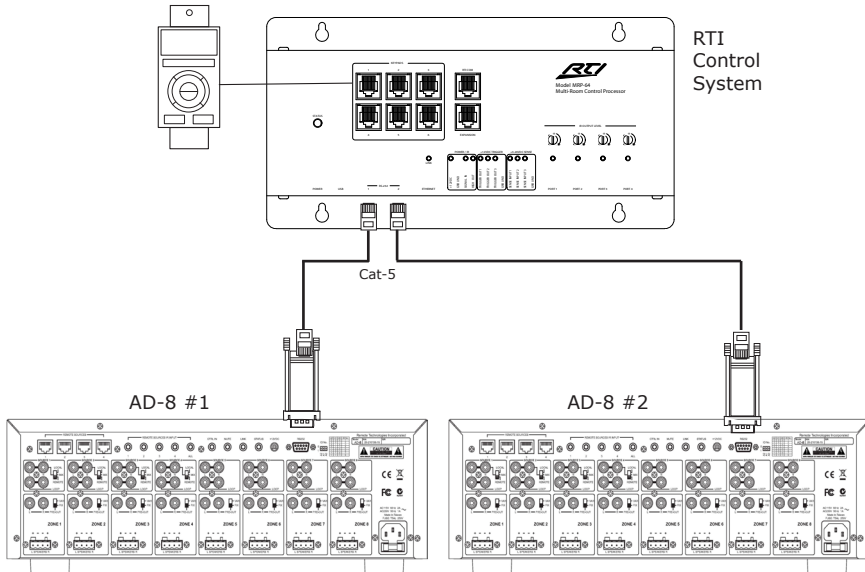
Local Source Cabling

The loop output connections allow sources to be extended to the source input on additional cascaded AD-8 units.
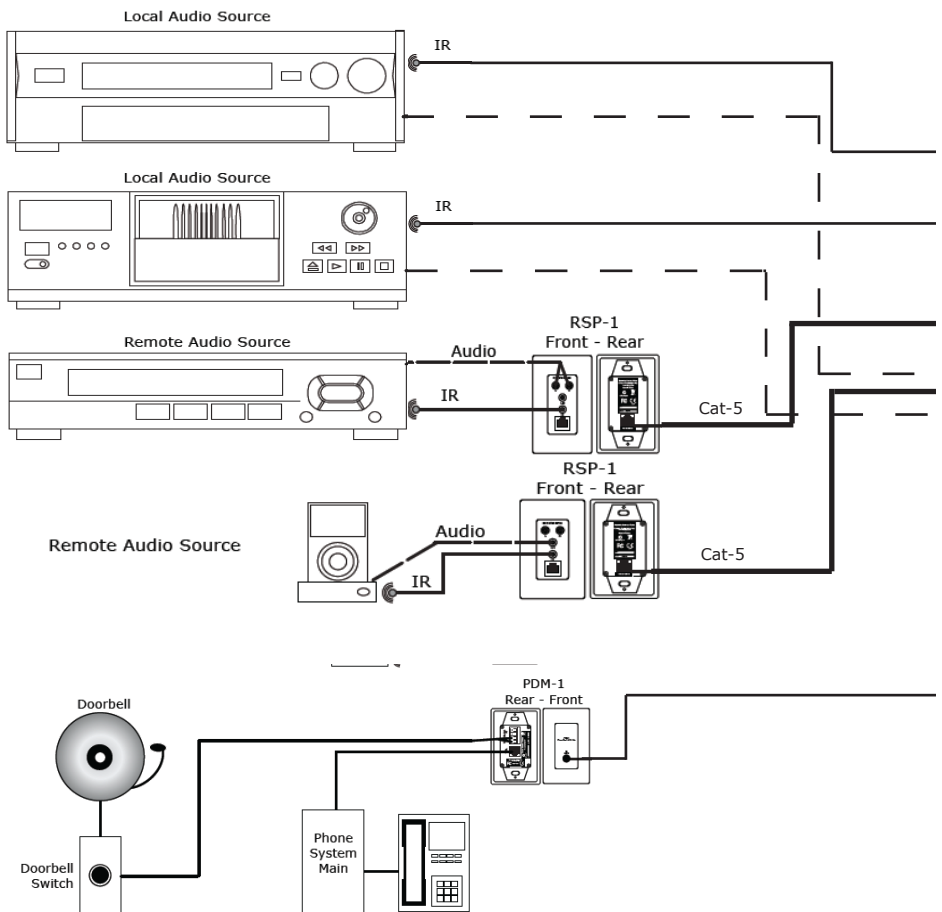
Local Audio Source (ex. Tuner or CD)

Each AD-8 unit in a cascade configuration must have a unique ID number. Set the ID by using the 3 switches and ID assignment grid on the rear of each unit.

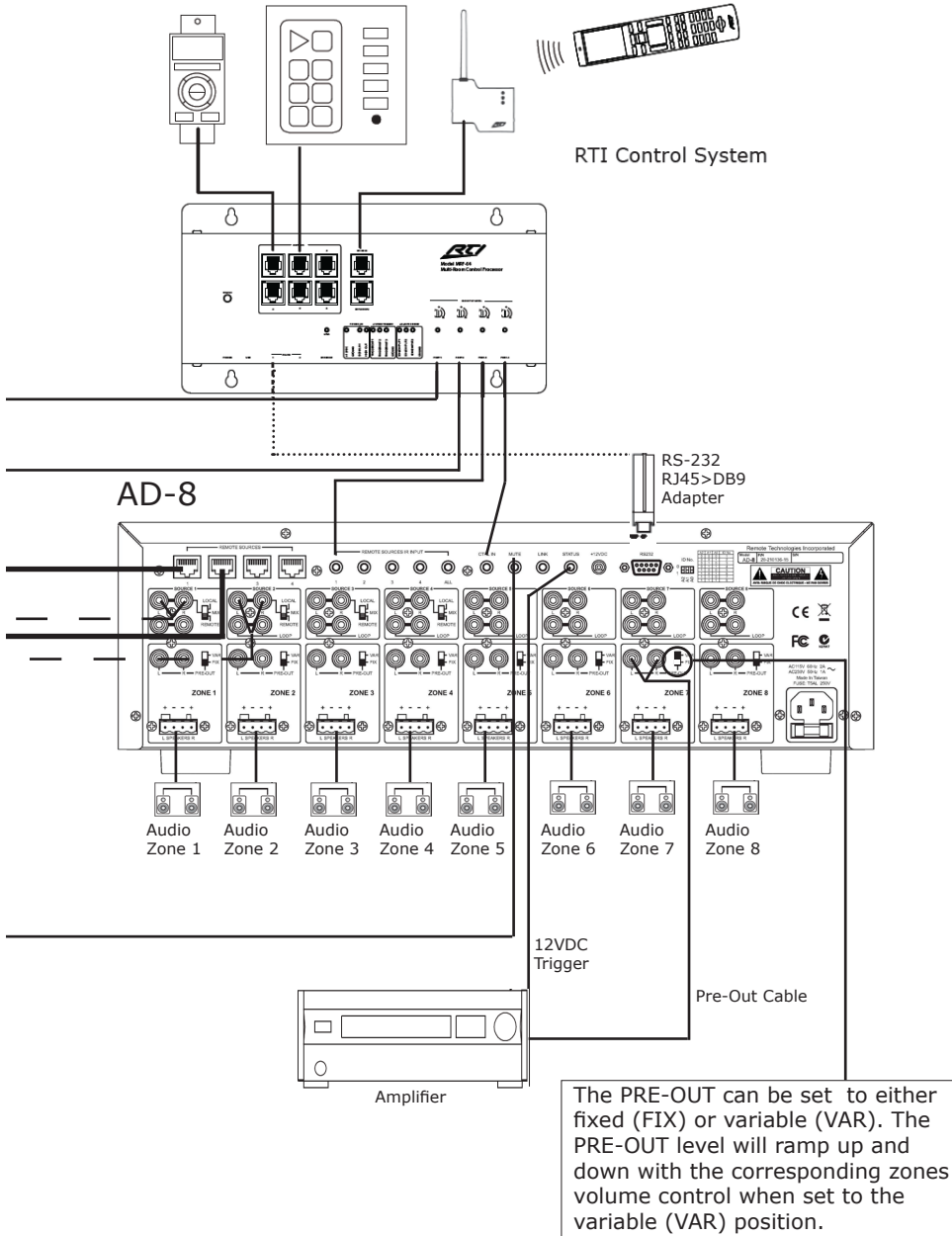AD-8 #1

AD-8 #2

CONTROLLING MULTIPLE AD-8's

Each AD-8 will require an RS-232 or IR communication to an RTI control processor. This will allow each AD-8 to be controlled separately, allowing for independent control in all eight output zones.

RTI Control System

Cat-5

AD-8 #1

AD-8 #2

CHAPTER 3 | INSTALLATION AND OPERATION

AD-8 CONNECTION DIAGRAM

RTI Control System

RS-232
RJ45>DB9
Adapter

AD-8

Audio
Zone 1

Audio
Zone 2

Audio
Zone 3

Audio
Zone 4

Audio
Zone 5

Audio
Zone 6

Audio
Zone 7

Audio
Zone 8

12VDC
Trigger

Pre-Out Cable

Amplifier

The PRE-OUT can be set to either fixed (FIX) or variable (VAR). The PRE-OUT level will ramp up and down with the corresponding zones volume control when set to the variable (VAR) position.

CHAPTER 4 | SPECIFICATIONS

GENERAL

Power Supply	115VAC or 230VAC (switchable), 230W
Mounting	Rack mount or free standing
Dimensions (W x H x D)	16.9" (430mm) x 5.3" (133mm) x 14.5" (369mm)
Weight	23.4 lb. (10.6kg)
Warranty	One Year (Parts & Labor)

CONTROL & CONNECTIONS

Total Output Zones	Eight zones, two channels each
Pre-Out	Eight, RCA jacks (switchable between fixed or variable
Audio Sources	Maximum of 8, 4 of which can be remote
Audio Source Inputs (Local)	Eight, 8 RCA jack pairs
Audio Source Inputs (Remote)	Four, RJ-45 jacks
Audio Source Loop	Eight, 8 RCA jack pairs
Control Input	One, 3.5mm jack, compatible with industry standard IR repeaters and receivers
Remote Source IR Inputs	Five, 3.5mm jacks
Mute Input	One, 3.5mm jack
Trigger Output (Status Jack)	One, 12VDC, 15mA max
Voltage Output	One, 12VDC, 500mA max
RS-232 Ports	One, Bi-directional DB-9
ID Number	1-8
Phone Input Sensitivity	AC25V-AC100V 20Hz
Doorbell Sensitivity	AC/DC 3-12V

All specifications subject to change without notice.

CHAPTER 4 | SPECIFICATIONS

AUDIO

Total Output Zones	Eight zones, two channels each (either 4 ohm or 8 ohm speakers may be connected to the zone outputs)
Rated Power / Channel	>20 Watts, 20Hz to 20KHz (RMS, 2 channels driven into 8 ohms)
Power / Channel	>25 Watts @ 1KHz (RMS, 2 channels driven into 8 ohms)
Total Harmonic Distortion @20W/8ohm	0.5%
Total Harmonic Distortion @1W/8ohm	<0.05%
S/N @ Rated power, IEC A-wtd, Source input shorted	92dB (mute +1)
Frequency Response 20Hz to 20KHz @ 1W/8ohms	1.5+/-0.5dB
Input Overload	2.5V
Input Impedance	>22K ohms
Channel Separation @1KHz	>60dB
Crosstalk Between Sources @ Rated Power /1KHz	>75dB
Crosstalk Between Zones @ Rated Power /1KHz	80dB
Treble Control @10KHz	10dB +/- 0.5dB
Bass Control Range @100Hz	10dB +/- 0.5dB

All specifications subject to change without notice.

CHAPTER 5 | TROUBLESHOOTING

If you are having problems with your AD-8 Audio Distribution System, please read the information below before contacting technical support.

If you continue to have problems, see Chapter 6 for more information on contacting RTI technical support.

AD-8 DOES NOT FUNCTION PROPERLY

Symptom: No sound.
Possible Causes:
- AC power unplugged > Check AC cable and outlet.
- Main power switch not on > Is main power light on?
- Outlet has no power > Verify outlet has power.
- Blown fuse > Check main fuse.
- Mute jack > Is mute jack in active mode?

Symptom: No sound from individual zones.
Possible Causes:
- Faulty wiring > Verify all wiring.
- Zone output not on > Are zone output light(s) on?

Symptom: No sound via remote source wallplate.
Possible Causes:
- Faulty wiring > Verify all wiring & terminations.
- Verify source output > Make sure source has audio output.

Symptom: No IR control via remote source wallplate.
Possible Causes:
- Faulty wiring > Verify all wiring & terminations.
- IR signal level > Adjust IR signal going into AD-8.
- IR emitter > Verify IR emitter is working.
- IR emitter placement > Verify emitter is properly placed.

Symptom: No IR control of AD-8.
Possible Causes:
- Faulty wiring > Jack is 1/8" mono, tip = IR+, ring=Gnd.
- IR signal level > Adjust IR signal going into AD-8.
- CTRL IN > Verify connection is to CTRL IN

CHAPTER 5 | TROUBLESHOOTING

Symptom: No RS-232 control of AD-8.
Possible Causes:
 - Faulty wiring > Check RS-232 pinout.
 - Incorrect string > Verify string from manual.
 - No carriage return > String requires carriage return.

Symptom: Distortion when using RSP-1.

Possible Causes:

 - IR output on the RTI control processor > Reduce IR output from RTI control processor.

 - Connection of IR output from RTI control processor directly > Connect IR connecting block to output of RTI control processor instead and wire IR emitter from output of IR connecting block (ex. ECB-5).

CHAPTER 6 | SERVICE AND SUPPORT

For news about the latest updates, new product information, and new accessories, please visit our web site at:

www.rticorp.com

CONTACTING RTI

For general info, you can contact RTI at:

Tel. (952) 253-3100
Fax (952) 253-3131
info@rticorp.com

RTI TECHNICAL SUPPORT

At RTI, customer service and satisfaction is an utmost priority. If you are encountering any problems or have a question about your RTI product, please contact RTI Technical Support for assistance.

RTI provides technical support by telephone, fax or e-mail. For the highest quality service, please have the following information ready, or provide it in your fax or e-mail.

- Your Name
- Company Name
- Telephone Number
- E-mail Address
- Product model and serial number (if applicable)

If you are having a problem with hardware, please note the equipment in your system, a description of the problem, and any troubleshooting you have already tried.

If you are having a problem with software, please note what version you have installed, the operating system on your PC, a description of the problem, and any troubleshooting you have already tried.

If you are calling about a software or programming question or problem, please be at you computer when you place your call. This will considerably speed up the troubleshooting process.

For technical support or assistance with your AD-8, software, or accessories, contact RTI at:

(952) 253-3137
support@rticorp.com
www.rticorp.com

For questions regarding service or repair of your AD-8, contact RTI at:

(952) 253-3136
service@rticorp.com
www.rticorp.com

Please do not return products to RTI without return authorization.

CHAPTER 6 | SERVICE AND SUPPORT

Shipment of AD-8 for Service

RTI will pay all labor and material expenses for all repairs covered by this product's warranty. If necessary repairs are not covered by warranty, or if a unit is examined which is not in need of repair, you may be charged for the repairs or examination.

If it is necessary to ship the AD-8 for service:

- Please pack it securely (we suggest that it be insured).
- Do not include accessories such as power cords or manuals unless instructed to do so.

You must pay any shipping charges incurred in getting your AD-8 to RTI. RTI will pay reasonable return shipping charges via a carrier of our choice to any destination within the United States if the repairs are covered under warranty.

A copy of the original dated sales receipt must be provided whenever warranty service is required. You will need this receipt to establish the date of purchase.

INDEX

It's Under Control®

Remote Technologies Incorporated
5775 12th Avenue East, Suite 180
Shakopee, MN 55379
Tel: 952-253-3100
Fax: 952-253-3131
www.rticorp.com