TheaterTouch™

MODEL IRF-6 SYSTEM INTERFACE MODULE

User's Guide and Installation Manual

RTI

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.

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 and (2) this device must accept any interference received, including interference that may cause undesired operation.

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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. Follow operating instructions and instructions for use.

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

Power Sources. Connect the unit only to a power supply of the type described in the operating instructions, or as marked on 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.

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.

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:

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

WARNING !

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

LIMITED WARRANTY AND DISCLAIMER

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 dealer.

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 your User's 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 your *IRF-6* System Interface Module 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.***

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Chapter 1. Welcome

Thank you for purchasing this *IRF-6* System Interface Module. The *IRF-6* combines the functions of a six (6)-zone IR router, an IR connecting block, an RF receiver, and a control system all in one compact box. The *IRF-6* works together with an RTI System Controller to form a powerful and reliable automation system.

The *IRF-6* is flexible enough to be the perfect control system in a small room with just a few connected devices, or in a much larger system with dozens of devices integrated into an affordable, easy to use system.

The *IRF-6* requires no programming. All data is transmitted to the *IRF*-6 in real-time from a RTI System Controller.

Before using the *IRF-6*, please read and follow all the instructions in this manual.

IMPORTANT NOTES

Please read these important notes about the *IRF-6*:

- The *IRF-6* should be placed in an area where it is around normal room temperature (between 60°F to 90°F).
- Do not let the *IRF-6* get wet. It should not be handled with wet hands or placed in an area where it could get wet.
- Do not subject the *IRF-6* to smoke, dust, or vibrations.
- Use only the power supply that is provided with the *IRF-6*. Using the wrong type of power supply may result in permanent damage.
- Do not disassemble the unit. Service and repair should be performed by an authorized technician only.

NOTE

The *IRF-6* System Interface Module is compatible with infrared (IR) commands with carrier frequencies between 15kHz and 460kHz, as well as those commands that do not use a carrier. This covers the vast majority of remotes available to date.

Despite every effort to make the *IRF-6* System Interface Module work with all IR controlled products, some may be incompatible due to non-standard frequencies or data formats.

PRODUCT CONTENTS

Contents within the box include the following items:

- One (1) *IRF-6*™ System Interface Module
- One (1) Antenna
- One (1) Antenna mounting bracket
- One (1) Owner's Manual
- One (1) Warranty card
- One (1) Registration card
- One (1) Wall-mount power supply
- One (1) Screwdriver
- Four (4) Rubber feet

UNPACKING AND INSPECTION

After unpacking your new *IRF-6* System Interface Module, save all of the packing materials in case you ever have to ship the unit.

Thoroughly inspect the *IRF-6* and packing materials for signs of damage. Report any damage to the carrier immediately. Report any equipment malfunctions to RTI or an authorized RTI dealer.

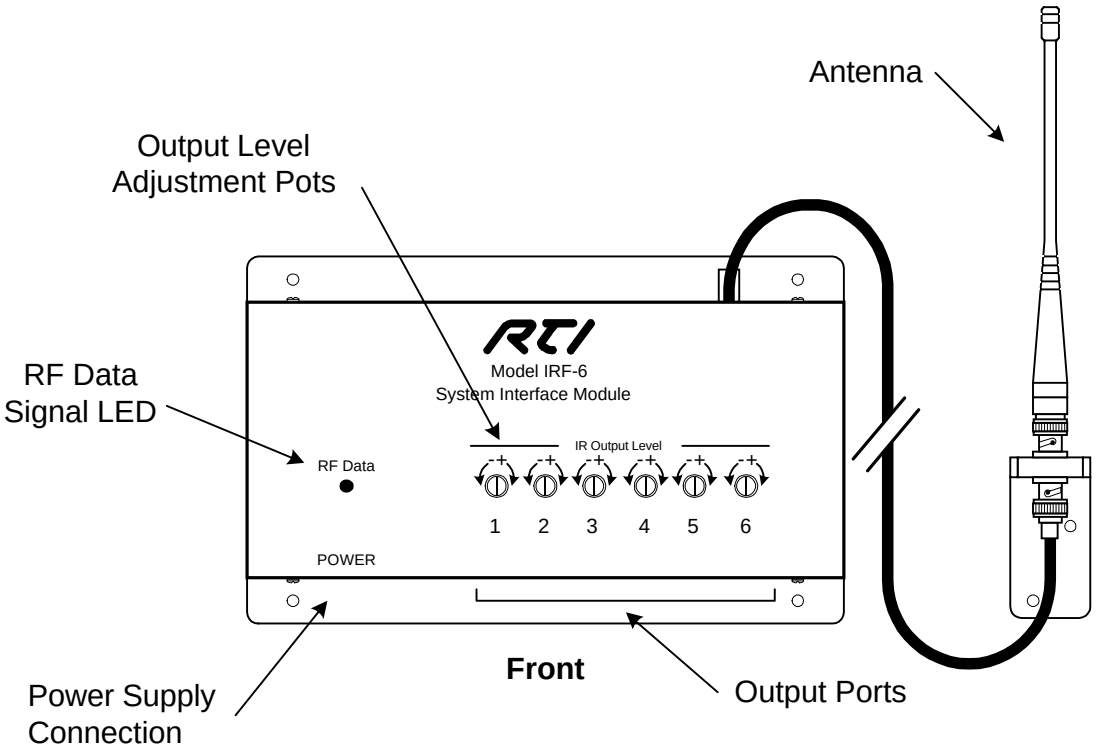
Chapter 2. Introduction

FEATURES

The *IRF-6* provides superior quality and reliability as well as these specific features:

- Six multi-purpose output ports.
- Remote antenna with a twelve (12) foot antenna lead for greater mounting flexibility and increased reliability.
- Variable IR output power on all ports.
- Output ports support the optional RTI Modules (Power Sensing Modules, Communication Modules, etc.). One Module can be plugged into each output port.
- Output ports are compatible with industry standard IR emitters and repeater systems. All output ports incorporate both short-circuit and overload protection.
- The ID Code Selector switch allows for up to ten independent *IRF-6* units per system, or up to ten independent systems per dwelling.
- Multiple *IRF-6*'s can have the same ID Code so they can be used with a single System Controller.
- No programming required. The *IRF-6* receives all data in real-time from a RTI System Controller.

IRF-6 REFERENCE



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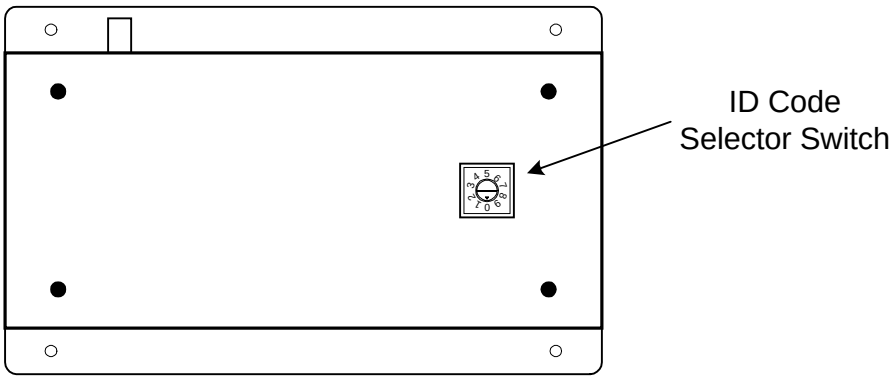

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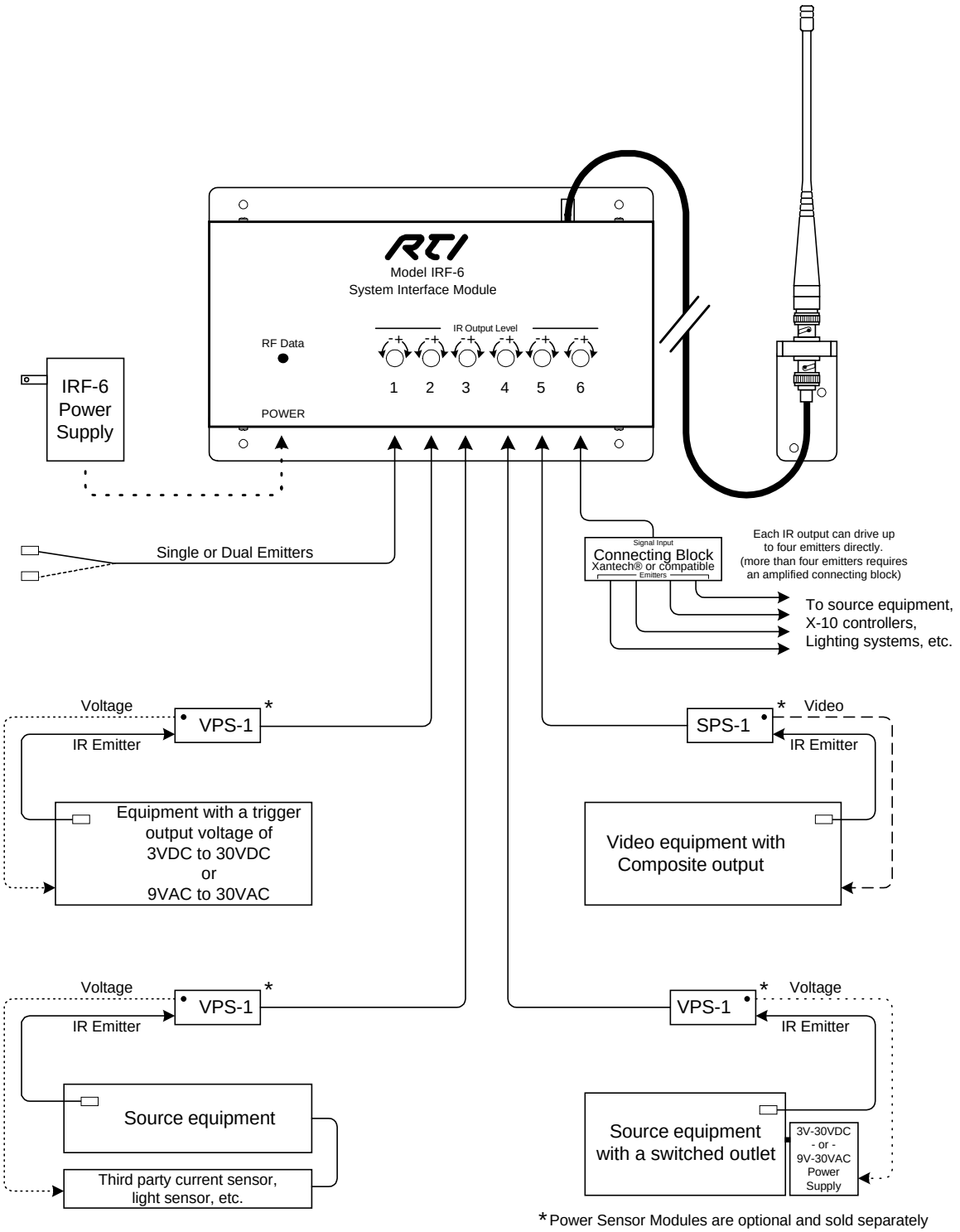
IRF-6 CONNECTION OPTIONS

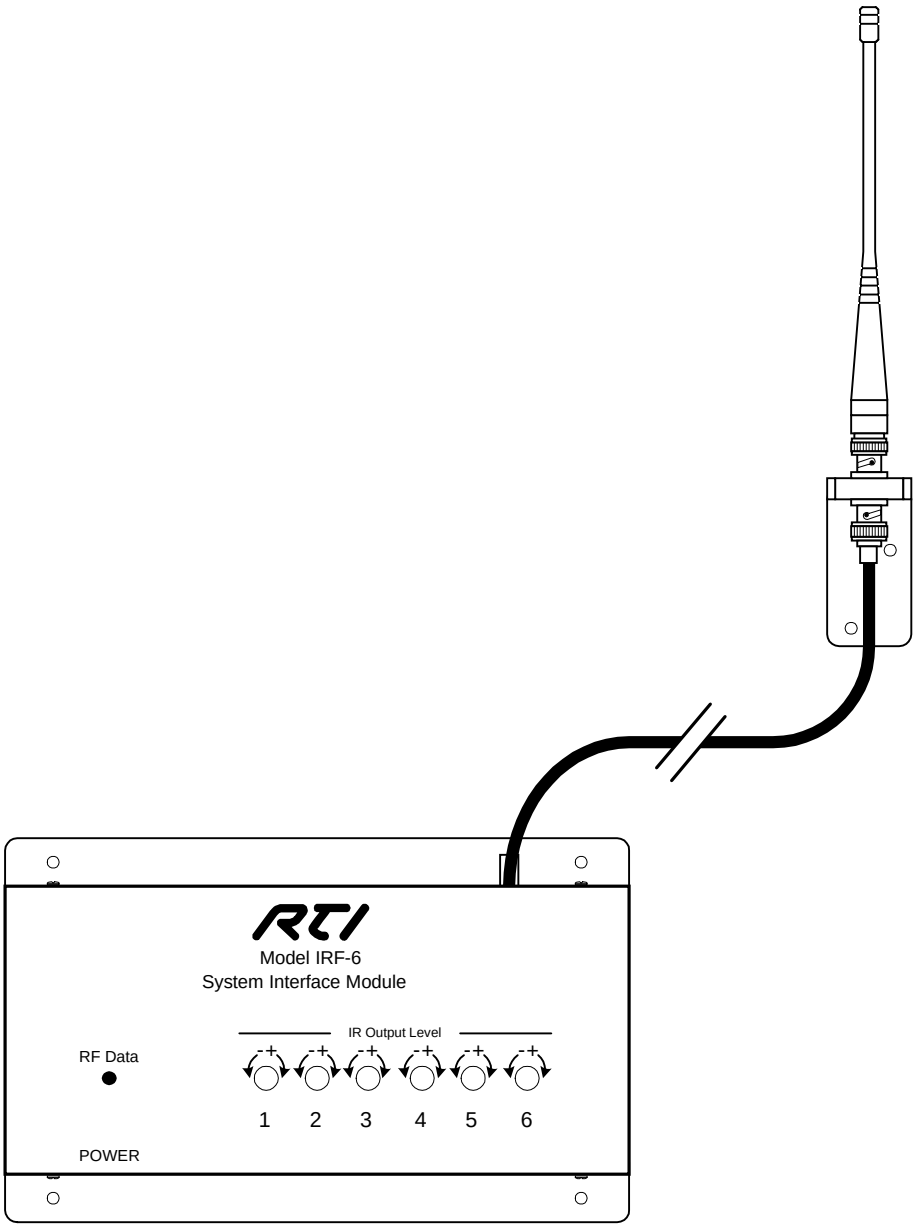
These are just some of your connection options. There is a virtually unlimited number of connection possibilities and devices that can be controlled.



Chapter 3. Installation Considerations

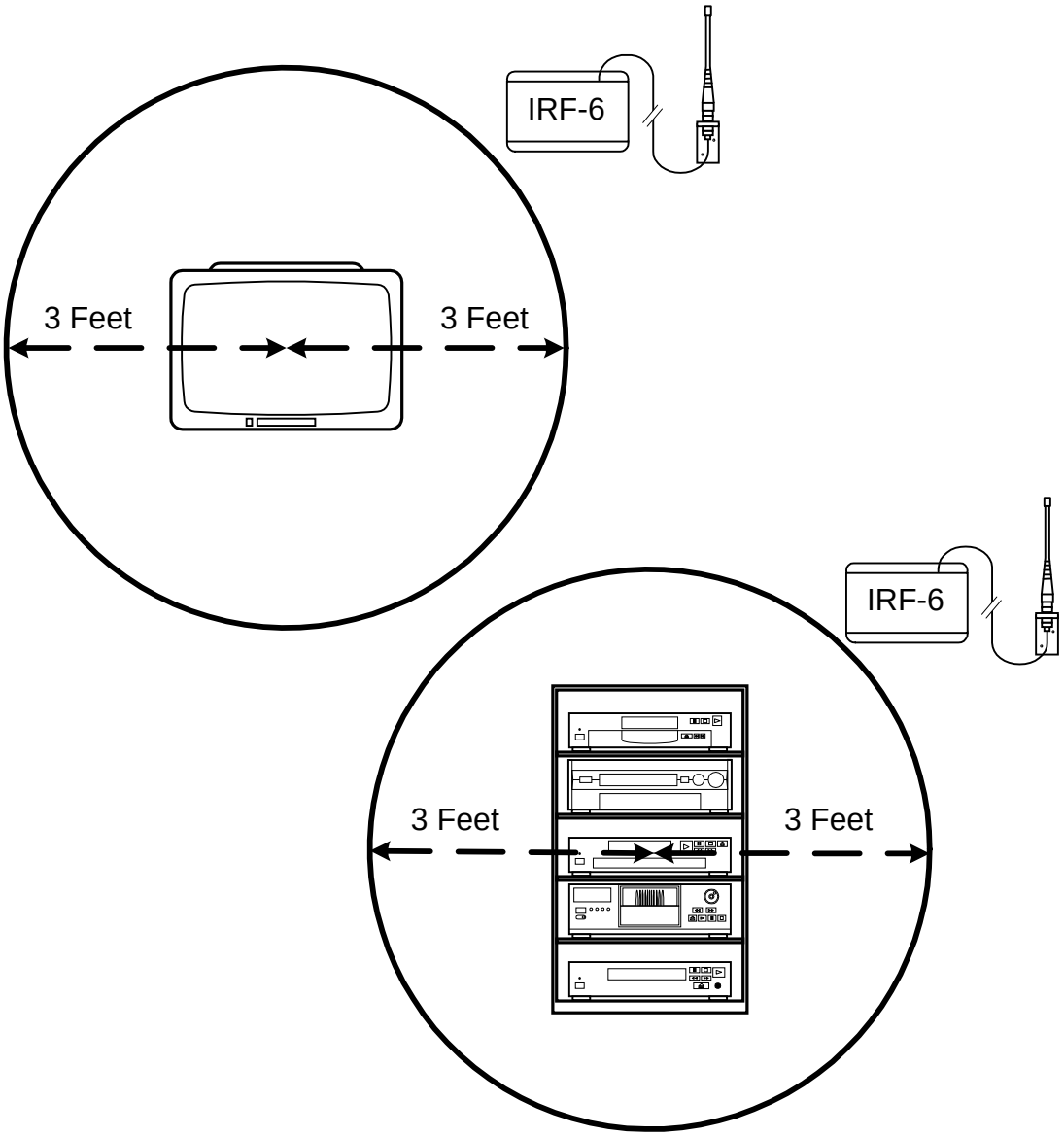
ANTENNA PLACEMENT

The placement and orientation of the antenna may be critical for good performance in certain environments. For best results, the *IRF-6* should be mounted so the antenna is between five (5) and seven (7) feet high and in a vertical position.



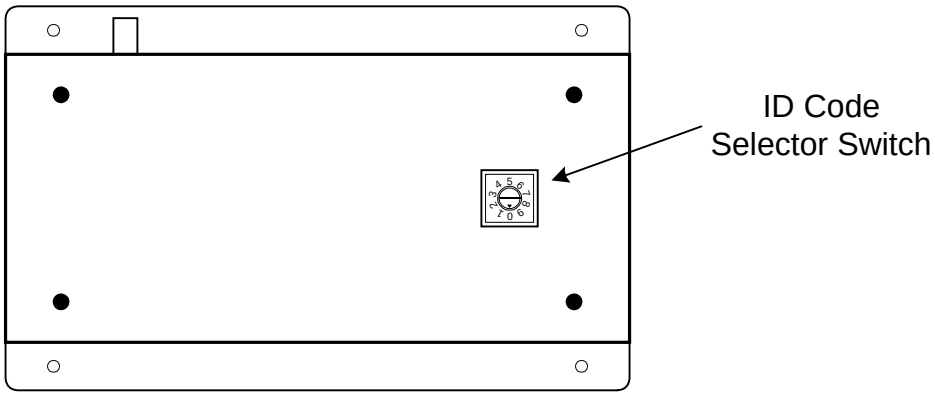
MOUNTING LOCATION

Try to keep *IRF-6* at least three (3) feet away and the antenna six (6) feet away from video monitors and other sources of strong electro-magnetic energy. For best results, the antenna should be mounted between five (5) and seven (7) feet high.



SETTING THE ID CODE

Since the ID Code Selector switch is on the back of the *IRF-6*, the ID code should be set before mounting. Use the supplied screwdriver to select an ID code between 0 and 9. This will be the ID code you use in the RTI System Controller software to match a System Controller to an *IRF-6*.



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MOUNTING

The *IRF-6* can be mounted on either a shelf or a wall (see Appendix A for mounting hole details). Since the IR output ports can drive up to 500 feet of wire, and the optional Power Sensor and Communication Modules can be extended, the *IRF-6* does not need to be mounted near the equipment being controlled.

CONNECTING THE AC ADAPTER

The included AC adapter should be connected to the **Power** jack on the bottom of the *IRF-6*. The RF Data LED will flash twice to confirm that the unit is running properly.

Use only the supplied AC adapter to power the *IRF-6.* Using a different power supply could result in damage to the *IRF-6* or poor performance.

CONNECTING INFRARED TO OUTPUT PORTS

The infrared output of the *IRF-6* is compatible with all standard infrared emitters as well as standard infrared repeating systems. Each output port is capable of driving up to four infrared emitters directly. More than four infrared emitters requires an amplified connecting block. A connecting block can be wired up to 500 feet away from the *IRF-6* using #22 AWG wire.

CONNECTING POWER SENSOR MODULES

When using optional Power Sensing Modules, follow the instructions included with the modules for installation, and follow the instructions in the software manual of your System Controller for programming.

CONNECTING COMMUNICATION MODULES

When using optional Communication Modules, follow the instructions included with the modules for installation, and follow the instructions in the software manual of your System Controller for programming.

ADJUSTING IR OUTPUT GAIN

The *IRF-6* is shipped with the IR gain set to the optimum level for most equipment and should only need to be adjusted if the attached equipment is not responding reliably.

Chapter 4. Troubleshooting

If you are having problems with your *IRF-6* System Interface Module, read through these troubleshooting tips and common questions before contacting technical support.

If you continue to have difficulties, do not hesitate to contact technical support. See **Chapter 5** for more information on contacting RTI.

IRF-6 DOESN'T RESPOND TO COMMANDS

Verify the *IRF-6* is receiving RF signals from the System Controller. The RF Data LED should flash with each command.

Make sure the original factory power supply is plugged into a known good, non-switched outlet and the connector is seated properly on the *IRF-6.*

Check to see if the button associated with the command you are sending is programmed to output RF, and that the *IRF-6* and the System Controller are set to the same ID Code.

Make sure the antenna cable is attached to the antenna properly and the antenna is mounted away from strong electro-magnetic energy sources.

SENSOR MODULES ARE NOT FUNCTIONING

Verify that the modules are programmed to use the correct Output Port and the proper conditional statement is used in the System Controller software.

Make sure you are using a known good IR emitter.

Chapter 5. 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:

Remote Technologies Incorporated

Tel. (612) 253-3100

Fax (612) 253-3131

www.rticorp.com -or- 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 *IRF-6*, software, or accessories, contact RTI at:

(612) 253-3137

support@rticorp.com

www.rticorp.com/support

For questions regarding service or repair of your *IRF-6*, contact RTI at:

(612) 253-3136

service@rticorp.com

www.rticorp.com/service

Please do not return products to RTI without return authorization.

SHIPMENT OF IRF-6 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 will be charged for the repairs or examination.

If it is necessary to ship the *IRF-6* System Interface Module for service:

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

You must pay any shipping charges incurred in getting your *IRF-6* System Interface Module 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.

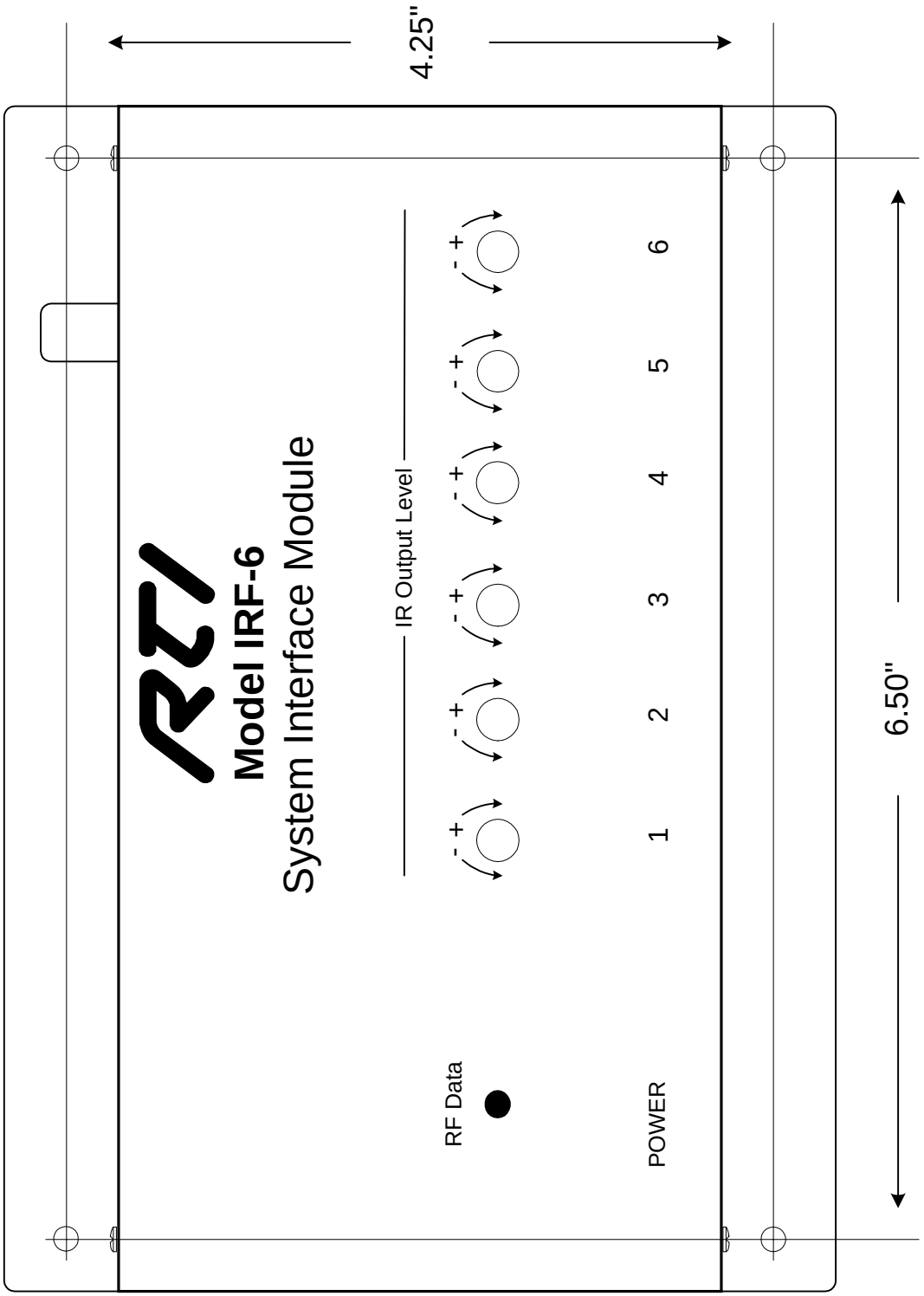
A copy of the original dated sales receipt must be provided whenever warranty service is required. You will need this receipt to establish the date of purchase.

Chapter 6. Specifications

Power Supply:	+9V DC (unregulated), 1Amp
Number of Output Ports:	Six (6)
Output Ports:	Custom 3.5mm 4-conductor jacks are designed for RTI Modules as well as industry standard IR emitters.
Infrared Bandwidth:	15kHz - 460kHz
Infrared Output Level:	Variable from 20mA to 200mA. (Each IR output can drive up to four (4) emitters directly. More than four (4) emitters requires an amplified connecting block.)
Radio Frequency Control Range:	Up to 100 Feet
Radio Frequency Carrier Frequency:	418MHz (U.S. Model)
Antenna Cable Length:	12 Feet
Mounting:	Wall-mount or free standing
Dimensions:	7.2″ wide x 5.0″ high x 1.5″ deep
Weight:	12 ozs.

All specifications subject to change without notice.

Appendix A. Mounting Hole Pattern



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