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Smart choice for power	xantrex
	RC8
RC8 Remote Control	Installation and Operations Guide
	www.xantrex.com

Information About Your System

As soon as you open your RC8 Remote Control package, record the following information and be sure to keep your proof of purchase.

- ☐ Serial Number (on DC end) _____
- ☐ Purchased From _____
- ☐ Purchase Date _____

If you need to contact Customer Service, please record the following details before calling. This information will help our representatives give you better service.

- ☐ Type of installation [e.g. RV, truck, vehicle, home] _____
- ☐ Length of time inverter has been installed _____
- ☐ Battery/battery bank size _____
- ☐ DC wiring size and length _____
- ☐ Warning, Error or Panel Fault Message _____
- ☐ Appliances operating when problem occurred _____
- ☐ Description of problem _____

RC8 Remote Control

Installation and Operations Guide

About Xantrex

Xantrex Technology Inc. is a world-leading supplier of advanced power electronics and controls with products from 50 watt mobile units to one MW utility-scale systems for wind, solar, batteries, fuel cells, microturbines, and backup power applications in both grid-connected and stand-alone systems. Xantrex products include inverters, battery chargers, programmable power supplies, and variable speed drives that convert, supply, control, clean, and distribute electrical power.

Trademarks

RC8 Remote Control is a trademark of Xantrex International. Xantrex is a registered trademark of Xantrex International.

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Notice of Copyright

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Disclaimer

UNLESS SPECIFICALLY AGREED TO IN WRITING, XANTREX TECHNOLOGY INC. ("XANTREX")

- (a) MAKES NO WARRANTY AS TO THE ACCURACY, SUFFICIENCY OR SUITABILITY OF ANY TECHNICAL OR OTHER INFORMATION PROVIDED IN ITS MANUALS OR OTHER DOCUMENTATION.
- (b) ASSUMES NO RESPONSIBILITY OR LIABILITY FOR LOSS OR DAMAGE, WHETHER DIRECT, INDIRECT, CONSEQUENTIAL OR INCIDENTAL, WHICH MIGHT ARISE OUT OF THE USE OF SUCH INFORMATION. THE USE OF ANY SUCH INFORMATION WILL BE ENTIRELY AT THE USER'S RISK.

Date and Revision

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Contact Information

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Web: www.xantrex.com

Out of Warranty Service

If the warranty period for your RC8 Remote Control has expired, if the unit was damaged by misuse or incorrect installation, if other conditions of the warranty have not been met, or if no dated proof of purchase is available, your unit may be serviced or replaced for a flat fee.

To return your RC8 Remote Control for out of warranty service, contact Xantrex Customer Service for a Return Material Authorization (RMA) number and follow the other steps outlined in "Return Procedure" on page 18.

Payment options such as credit card or money order will be explained by the Customer Service Representative. In cases where the minimum flat fee does not apply, as with incomplete units or units with excessive damage, an additional fee will be charged. If applicable, you will be contacted by Customer Service once your unit has been received.

Return Material Authorization Policy

Before returning a product directly to Xantrex you must obtain a Return Material Authorization (RMA) number and the correct factory "Ship To" address. Products must also be shipped prepaid. Product shipments will be refused and returned at your expense if they are unauthorized, returned without an RMA number clearly marked on the outside of the shipping box, if they are shipped collect, or if they are shipped to the wrong location.

When you contact Xantrex to obtain service, please have your instruction manual ready for reference and be prepared to supply:

- The serial number of your product
- Information about the installation and use of the unit
- Information about the failure and/or reason for the return
- A copy of your dated proof of purchase

Record these details in "Information About Your System" on page 20.

Return Procedure

1. Package the unit safely, preferably using the original box and packing materials. Please ensure that your product is shipped fully insured in the original packaging or equivalent. This warranty will not apply where the product is damaged due to improper packaging.
2. Include the following:
 - The RMA number supplied by Xantrex Technology Inc. clearly marked on the outside of the box.
 - A return address where the unit can be shipped. Post office boxes are not acceptable.
 - A contact telephone number where you can be reached during work hours.
 - A brief description of the problem.
3. Ship the unit prepaid to the address provided by your Xantrex customer service representative.

If you are returning a product from outside of the USA or Canada In addition to the above, you **MUST** include return freight funds and are fully responsible for all documents, duties, tariffs, and deposits.

If you are returning a product to a Xantrex Authorized Service Center (ASC) A Xantrex return material authorization (RMA) number is not required. However, you must contact the ASC prior to returning the product or presenting the unit to verify any return procedures that may apply to that particular facility.

About This Guide

Purpose

The purpose of this Installation and Operations Guide is to provide explanations and procedures for installing, operating, maintaining, and troubleshooting the RC8 Remote Control.

Scope

The Guide provides safety guidelines, detailed planning and setup information, procedures for installing the inverter, as well as information about operating and troubleshooting the unit. It does not provide details about particular brands of batteries. You need to consult individual battery manufacturers for this information.

Audience

The Guide is intended for <audience members> anyone who needs to install and operate the RC8 Remote Control. Installers should be certified technicians or electricians.<Any other information to identify the audience>

Organization

This Guide is organized into three chapters and one appendix.

Chapter 1, "Introduction" lists and describes the basic features and parts of the RC8 Remote Control.

Chapter 2, "Installation" describes how to install the RC8 Remote Control.

Chapter 3, "Operation" describes the operation of the RC8 Remote Control.

Chapter A, "Specifications" provides the electrical and physical specifications for the RC8 Remote Control.

Conventions Used

The following conventions are used in this guide.



WARNING

Warnings identify conditions or practices that could result in personal injury or loss of life.



CAUTION

Cautions identify conditions or practices that could result in damage to the unit or to other equipment.

Important: These notes describe an important action item or an item that require your attention.

Abbreviations and Acronyms

The following abbreviations and acronyms may be used in this Guide.

AUX	Auxiliary
COM	Communications Port
LED	Light Emitting Diode
PV	Photovoltaic
RC	Remote Control
ROF	Remote Override Function
Vdc	Volts DC

Related Information

You can find more information about Xantrex Technology Inc. as well as its products and services at www.xantrex.com

Disclaimer

Product

THIS LIMITED WARRANTY IS THE SOLE AND EXCLUSIVE WARRANTY PROVIDED BY XANTREX IN CONNECTION WITH YOUR XANTREX PRODUCT AND IS, WHERE PERMITTED BY LAW, IN LIEU OF ALL OTHER WARRANTIES, CONDITIONS, GUARANTEES, REPRESENTATIONS, OBLIGATIONS AND LIABILITIES, EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE IN CONNECTION WITH THE PRODUCT, HOWEVER ARISING (WHETHER BY CONTRACT, TORT, NEGLIGENCE, PRINCIPLES OF MANUFACTURER'S LIABILITY, OPERATION OF LAW, CONDUCT, STATEMENT OR OTHERWISE), INCLUDING WITHOUT RESTRICTION ANY IMPLIED WARRANTY OR CONDITION OF QUALITY, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE TO THE EXTENT REQUIRED UNDER APPLICABLE LAW TO APPLY TO THE PRODUCT SHALL BE LIMITED IN DURATION TO THE PERIOD STIPULATED UNDER THIS LIMITED WARRANTY.

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Exclusions

If this product is a consumer product, federal law does not allow an exclusion of implied warranties. To the extent you are entitled to implied warranties under federal law, to the extent permitted by applicable law they are limited to the duration of this Limited Warranty. Some states and provinces do not allow limitations or exclusions on implied warranties or on the duration of an implied warranty or on the limitation or exclusion of incidental or consequential damages, so the above limitation(s) or exclusion(s) may not apply to you. This Limited Warranty gives you specific legal rights. You may have other rights which may vary from state to state or province to province.

Warning: Limitations On Use

Please refer to your product manual for limitations on uses of the product. SPECIFICALLY, PLEASE NOTE THAT THE RC8 REMOTE CONTROL SHOULD NOT BE USED IN CONNECTION WITH LIFE SUPPORT SYSTEMS OR OTHER MEDICAL EQUIPMENT OR DEVICES. WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, XANTREX MAKES NO REPRESENTATIONS OR WARRANTIES REGARDING THE USE OF THE XANTREX RC8 REMOTE CONTROL IN CONNECTION WITH LIFE SUPPORT SYSTEMS OR OTHER MEDICAL EQUIPMENT OR DEVICES.

Warranty and Return

Direct returns may be performed according to the Xantrex Return Material Authorization Policy described in this manual. For some products, Xantrex maintains a network of regional Authorized Service Centers. Call Xantrex or check our website to see if your product can be repaired at one of these facilities.

What proof of purchase is required? In any warranty claim, dated proof of purchase must accompany the product and the product must not have been disassembled or modified without prior written authorization by Xantrex.

Proof of purchase may be in any one of the following forms:

- The dated purchase receipt from the original purchase of the product at point of sale to the end user, or
- The dated dealer invoice or purchase receipt showing original equipment manufacturer (OEM) status, or
- The dated invoice or purchase receipt showing the product exchanged under warranty

What does this warranty not cover? This Limited Warranty does not cover normal wear and tear of the product or costs related to the removal, installation, or troubleshooting of the customer's electrical systems. This warranty does not apply to and Xantrex will not be responsible for any defect in or damage to:

- a) the product if it has been misused, neglected, improperly installed, physically damaged or altered, either internally or externally, or damaged from improper use or use in an unsuitable environment;
- b) the product if it has been subjected to fire, water, generalized corrosion, biological infestations, or input voltage that creates operating conditions beyond the maximum or minimum limits listed in the Xantrex product specifications including high input voltage from generators and lightning strikes;
- c) the product if repairs have been done to it other than by Xantrex or its authorized service centers (hereafter "ASCs");
- d) the product if it is used as a component part of a product expressly warranted by another manufacturer;
- e) the product if its original identification (trade-mark, serial number) markings have been defaced, altered, or removed.

Important Safety Instructions

This manual contains important safety instructions that should be followed during the installation and maintenance of this product.

To reduce the risk of electrical shock, and to ensure the safe installation and operation of this product, the following safety symbols have been placed throughout this manual to indicate dangerous conditions and important safety instructions.



WARNING

Warnings identify conditions or practices that could result in personal injury or loss of life.



CAUTION

Cautions identify conditions or practices that could result in damage to the unit or to other equipment.

Important: These notes describe an important action item or an item that require your attention.

1. All electrical work must be done in accordance with local, national, and/or international electrical codes.
2. Before installing or using this device, read all instructions and cautionary markings located in (or on) the manual, the controller, the batteries, and the PV array.
3. Do not expose this unit to rain, snow or liquids of any type. This product is designed for indoor mounting only.
4. Use insulated tools to reduce the chance of short-circuits when installing or working with the inverter, the batteries, or the PV array.
5. Remove all jewelry such as rings, bracelets, necklaces, etc., while installing this system. This will greatly reduce the chance of accidental exposure to live circuits.

6. The inverter contains more than one live circuit (batteries and PV array).
7. Power may be present at more than one source.
8. This product contains no user-serviceable parts. Do not attempt to repair this unit.

SAVE THESE INSTRUCTIONS

Warranty and Return Information

Warranty

What does this warranty cover? This Limited Warranty is provided by Xantrex Technology Inc. ("Xantrex") and covers defects in workmanship and materials in your RC8 Remote Control. This warranty period lasts for 2 years from the date of purchase at the point of sale to you, the original end user customer. You require proof of purchase to make warranty claims.

What will Xantrex do? Xantrex will, at its option, repair or replace the defective product free of charge, provided that you notify Xantrex of the product defect within the Warranty Period, and provided that Xantrex through inspection establishes the existence of such a defect and that it is covered by this Limited Warranty.

Xantrex will, at its option, use new and/or reconditioned parts in performing warranty repair and building replacement products. Xantrex reserves the right to use parts or products of original or improved design in the repair or replacement. If Xantrex repairs or replaces a product, its warranty continues for the remaining portion of the original Warranty Period or 90 days from the date of the return shipment to the customer, whichever is greater. All replaced products and all parts removed from repaired products become the property of Xantrex.

Xantrex covers both parts and labor necessary to repair the product, and return shipment to the customer via a Xantrex-selected non-expedited surface freight within the contiguous United States and Canada. Alaska and Hawaii are excluded. Contact Xantrex Customer Service for details on freight policy for return shipments outside of the contiguous United States and Canada.

How do you get service? If your product requires troubleshooting or warranty service, contact your merchant. If you are unable to contact your merchant, or the merchant is unable to provide service, contact Xantrex directly at

:

Telephone: 1 800 670 0707 (toll free North America)

1 360 925 5097 (direct)

Fax: 1 800 994 7828 (toll free North America)

1 360 925 5143 (direct)

Email: customerservice@xantrex.com

Electrical Specifications

Operating Voltage	12 VDC
Connector	RJ-11 Modular (6-conductor phone type)
Indicator	Red LED (Inverter, Search, Charge, and Error)
Switch	ON / OFF (momentary)

Physical Specifications

Indicator	Red LED (Inverter, Search, Charge, and Error)
Switch	ON / OFF (momentary)
Operating Temp	0 to 50 °C
Dimensions (WxHxD)	2.25" x 2.80" x 1.25" (5.7 cm x 7.1 cm x 3.2 cm)
Weight	0.125 lbs. (0.05 kg)
Enclosure	Indoor Rated
Finish	Lexan

Inverter Compatibility

The RC8 Remote Control is compatible with the following inverters.

- DR Series
- Legend Series I*
- Voyager Series*
- M1512/1524 Series*
- Truck Series I*
- TS Series*
- UX Series
- PS Series inverters

*These inverters are no longer available for purchase.

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A Specifications

Chapter A, “Specifications” provides the electrical and physical specifications for the RC8 Remote Control.

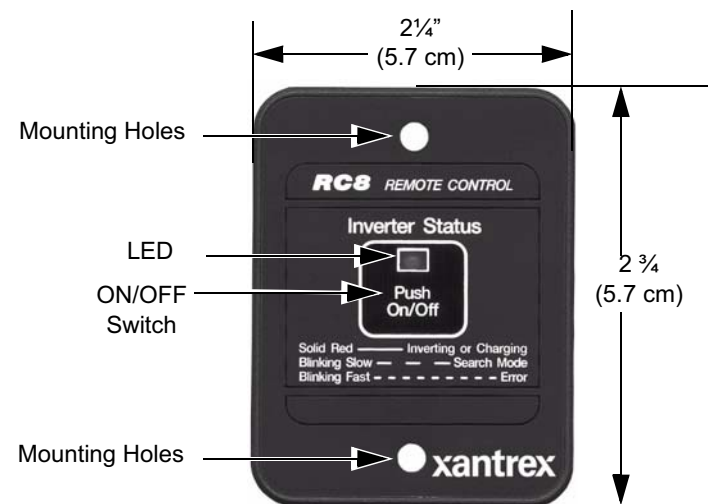


Figure A The RC8 Remote Control Specifications

1 Introduction

Chapter 1, “Introduction” lists and describes the basic features and parts of the RC8 Remote Control.

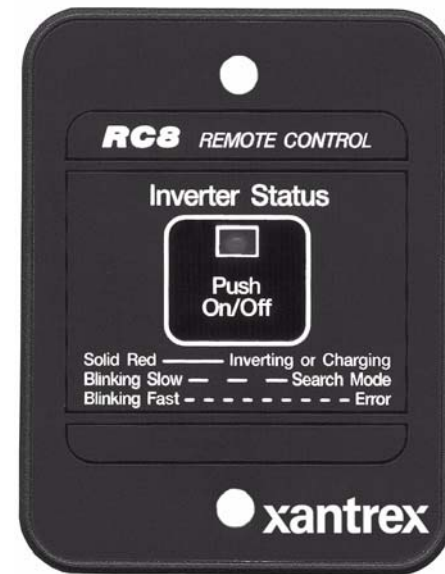


Figure 1 The RC8 Remote Control

Features

The RC8 Remote Control duplicates the ON/OFF power switch on the inverter and displays general system operating parameters.

The remote can operate the inverter from distances of up to 100 feet and connects directly to the inverter's "RC8 Remote" or "COM" port using a special, tinned, 6-conductor length of cable.

The RC8 Remote Control is compatible with DR Series, Legend Series I, Voyager Series, M1512/1524 Series, Truck Series I, TS Series, UX Series, and PS Series inverters.

The RC8 Remote Control includes the following features.

- Easy-to-Read LED
- Front Panel Control
- Plug-in Installation
- ROF - Remote Override Function (Legend Series I, Truck Series I, and UX Series inverters only)

The following system operating parameters are displayed with a single LED.

- Inverter Status (ON/OFF)
- Inverter/Charger Indicator
- Search Mode Indicator
- Error Indicator

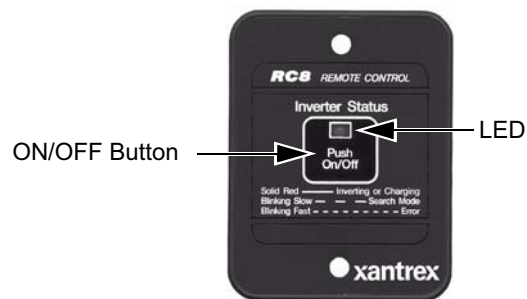


Figure 2 The RC8 Remote Control Features

PS Series Inverters

When the RC8 is used with PS Series inverters, its red LED will display the following.

- **Solid**
With AC line power present, the unit is charging the batteries while directing AC to the load. With no AC line power present, the inverter is running on the batteries and supplying AC to the load.
- **Blinking Slow (1 to 2 flashes @ 1 second intervals)**
The inverter is in search mode (no load connected).
- **Flickering***
The inverter has detected an overcurrent error. The LED (and inverter) will turn OFF whenever an overcurrent condition exceeds eight seconds.
- **OFF***
The inverter is OFF or an error condition caused by overheating, low battery voltage, or high battery voltage has occurred.

Important: If the LED does not come back on after pressing the ON/OFF switch on the RC8, the error condition may not have cleared. Check the inverter's error indicator and consult the operator's manual for recommendations.

TS Series Inverters

When the RC8 is used with TS Series inverters, its red LED duplicates the POWER LED status display on the inverter.

- **Solid**

With AC line power present, the unit is charging the batteries while directing AC to the load. With no AC line power present, the inverter is running on the batteries and supplying AC to the load.

- **Blinking Slow (1 to 3 flashes @ 1 second intervals)**

The inverter is in search mode (no load connected).

- **Flickering***

The inverter has detected an overcurrent error. The LED (and inverter) will turn OFF whenever an overcurrent condition exceeds eight seconds.

- **OFF***

The inverter is OFF or an error condition caused by overheating, low battery voltage, or high battery voltage has occurred.

Important: If the LED does not come back on after pressing the ON/OFF switch on the RC8, the error condition may not have cleared. Check the inverter's error indicator and consult the operator's manual for recommendations.

2 Installation

Chapter 2, "Installation" describes how to install the RC8 Remote Control.

Mounting the RC8 Remote Control

Mount the remote control in a clean, dry environment.

Important: Verify there are no electrical wires or other hazards in the location where the unit is to be mounted.

To mount the RC8 on a wall:

1. Drill a 1-7/8" diameter hole in a wall. There must be at least 1-1/2" of clearance behind the hole. Remove any wall insulation (if applicable) that may contact the back of the remote.
2. Route the communications cable from the inverter up into the opening in the wall. It is recommended that only the 6-conductor, tinned cable (10, 25, 50 or 100 foot length) provided with the remote be used. For optimum performance, the distance should not exceed 100 feet.

Important: Do not plug the cable into the inverter at this time.

Connecting the RC8 to the Inverter

To connect the RC8 to the inverter:

1. Connect the communications cable to the RJ11 Port on the back of the RC8.
2. Position the remote into the opening in the wall and secure it with the two screws provided.
3. Switch the inverter OFF. Plug the communications cable into the “RC8 REMOTE or COM” port on the inverter.

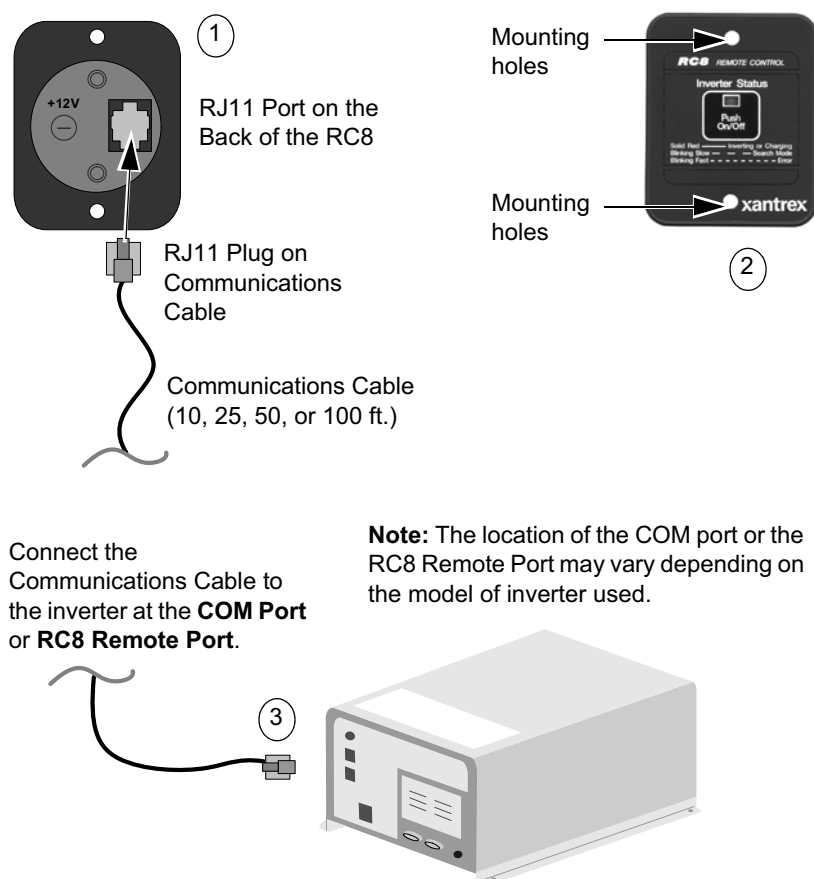


Figure 3 Connecting the RC8 to the Inverter

DR Series, Voyager Series and M1512/1524 Series Inverters

When the RC8 is used with DR Series, Voyager Series, or M1512/1524 Series inverters, its red LED will display the following:

- **Solid**

With AC line power present, the unit is charging the batteries while directing AC to the load. With no AC line power present, the inverter is running on the batteries and supplying AC to the load.

- **Blinking Slow (1 to 3 flashes @ 1 second intervals)**

The inverter is in search mode (no load connected).

- **Blinking Fast (3 to 5 flashes @ 1 second intervals)**

The inverter is charging the batteries.

- **Flickering (3 to 5 flashes @ 1 second intervals)**

The inverter has detected an overcurrent error. The LED (and inverter) will turn OFF whenever an overcurrent condition exceeds eight seconds.

- **Erratic Blinking (0 to 3 and 2 to 5 flashes @ 2 second intervals)**

The inverter has detected an error condition caused by overheating, low battery voltage, or high battery voltage.

- **OFF**

The inverter is OFF.



WARNING: Shock Hazard

On inverters equipped with a battery charger, the RC8 will not necessarily control charging or AC pass-through. Some units will always charge the batteries and pass AC power through to the output whenever AC power is available. Refer to the appropriate inverter owners manual for details. ***ALWAYS check the inverter's output to verify there is no voltage present before opening or servicing the inverter.***

Legend Series I, Truck Series I, and UX Series Inverters

When the RC8 is used with Legend Series I, Truck Series I, or UX Series inverters, its red LED duplicates the LED status display on the inverter.

- **Solid**

With AC line power present, the unit is charging the batteries while directing AC to the load. With no AC line power present, the inverter is running on the batteries and supplying AC to the load.

- **Blinking Slow (3 to 5 flashes @ 1 second intervals)**

The inverter is in search mode (no load connected).

- **Blinking Fast**

The inverter has detected an error condition caused by overheating, over-current, low battery voltage, or high battery voltage. The LED (and inverter) will turn OFF whenever an overcurrent condition exceeds eight seconds.

- **Erratic Blinking (0 to 3 and 2 to 5 flashes @ 2 second intervals)**

An error occurred while the inverter was in search mode, usually caused by a low or high battery voltage condition.

- **OFF**

The inverter is OFF.



WARNING: Shock Hazard

On inverters equipped with a battery charger, the RC8 will not necessarily control charging or AC pass-through. Some units will always charge the batteries and pass AC power through to the output whenever AC power is available. Refer to the appropriate inverter owners manual for details. ***ALWAYS check the inverter's output to verify there is no voltage present before opening or servicing the inverter.***

Remote Override Function (ROF)



CAUTION: Equipment Damage

This option is intended for use with Legend Series I, Truck Series I, and UX Series INVERTERS only. Attempting to use this feature with any other inverters will result in serious damage to the inverter and remote.

In certain installations, it may be desirable to turn a connected 120 Vac load ON and OFF with the vehicle's ignition switch. For example: Many larger vehicles use a rear-mounted 12 Vdc video camera with 120 Vac cab-mounted monitor to aid in backing up. The ROF option switches the inverter (monitor) ON at the same time the camera is switched ON.

To prepare the RC8 for the Remote Override Function:

1. Carefully remove the RC8's circular back cover to expose the circuit board. The back cover can be removed by squeezing in the latch on the white plastic standoffs on the back of the cover.
2. Locate the pin jumper just below the RJ11 connector. It should only be covering one pin. Lift the jumper and reposition it over both pins. Replace the RC8's back cover.
3. Run a 12 volt DC wire from the vehicle's ignition switch (or fuse block), to the back of the RC8's "AUX INPUT +12 Vdc." This wire must be protected with a properly sized 12 volt fuse.
4. Follow the instructions on page 4 for connecting the RC8 to the inverter.

To Operate the Remote Override Function:

- Switch the vehicle's ignition ON to start the inverter.
- Switch it OFF to stop the inverter.

Important: When the ignition switch is OFF, the RC8 and inverter function normally.

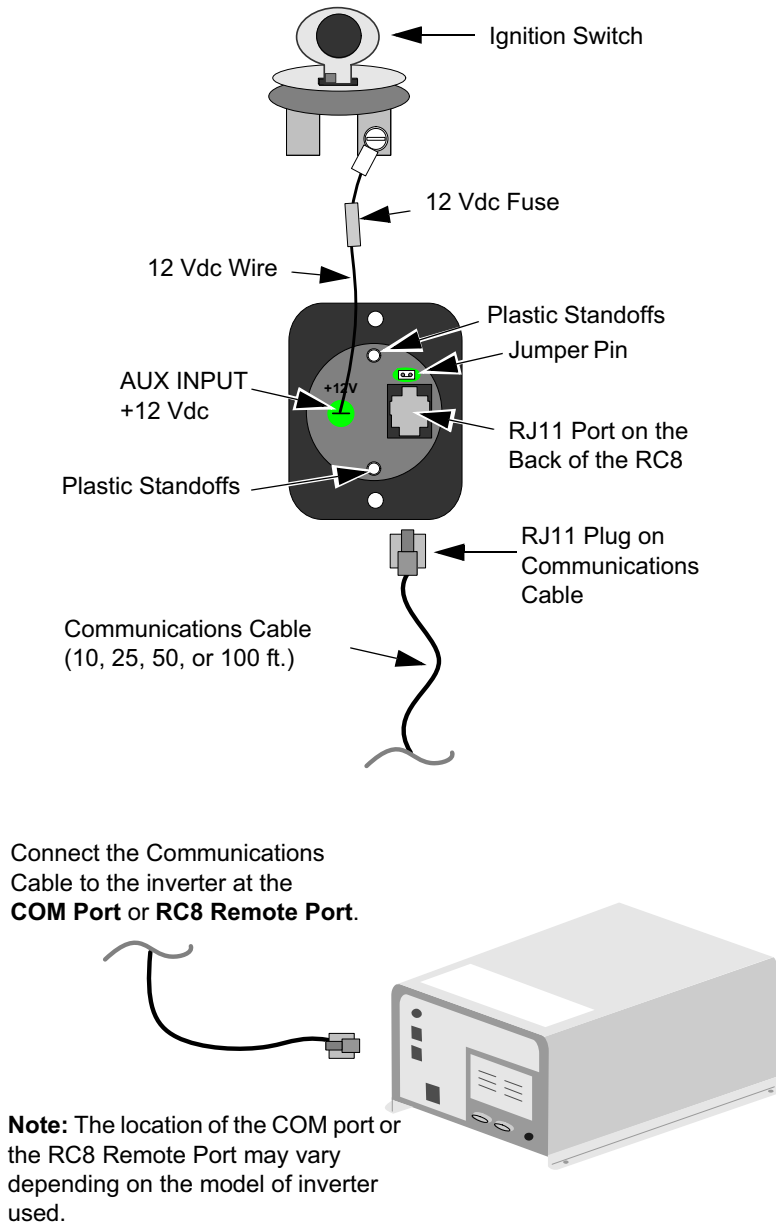


Figure 4 Connecting the RC8 to the Inverter

3 Operation

Chapter 3, “Operation” describes the operation of the RC8 Remote Control.

Startup and Test

To Start up and Test the RC8 Remote Control:

1. Switch the inverter ON using the inverter’s front panel ON/OFF switch.
2. Verify the POWER LED is ON (both inverter and remote).
3. Press the ON/OFF switch on the RC8 to turn the inverter OFF. Press it again to restore power.

Operation

The RC8 Remote Control operates as described in the following sections depending on which inverter is connected to it.