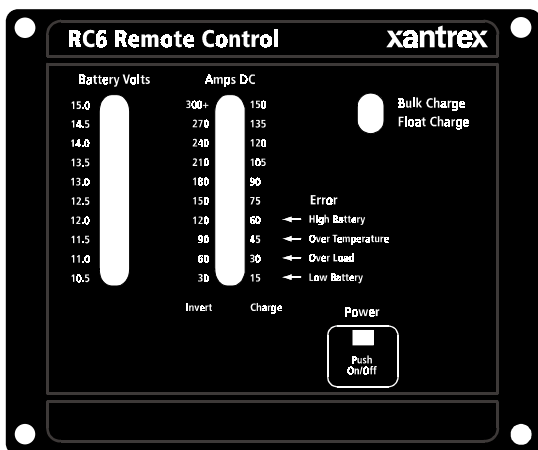


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RC6

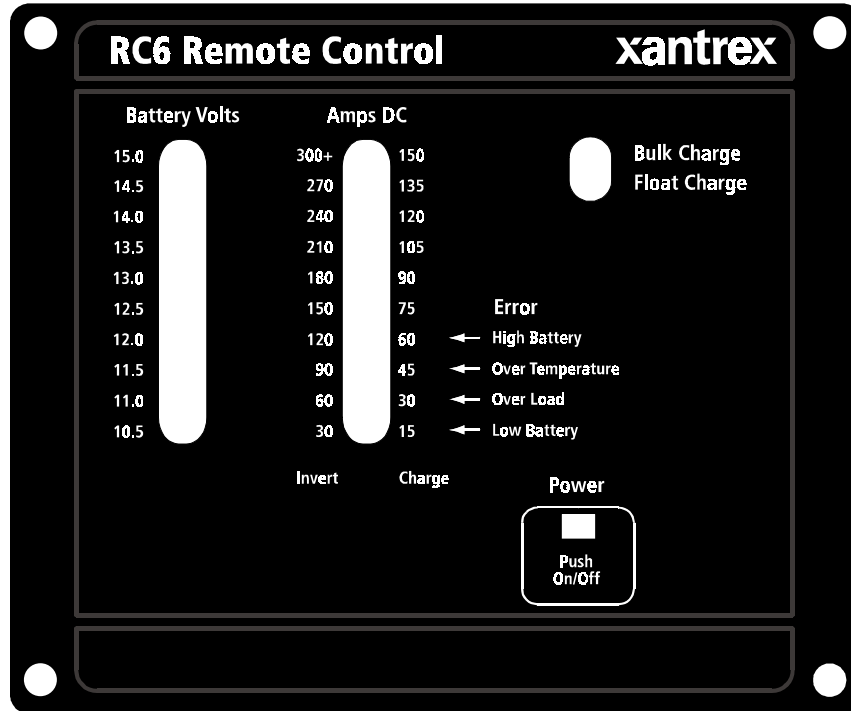
User's and Installation Guide

**Xantrex
RC6 Remote
On/Off Switch and Monitor**

www.xantrex.com



RC6 REMOTE ON/OFF SWITCH AND MONITOR



XANTREX TECHNOLOGY, INC

RC6 User's and Installation Guide

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Using the RC6 Remote On/Off and Inverter/Charger Monitor

This section of the guide is designed to help the user interpret and operate the RC6 remote when used with Xantrex RV Series Inverter/Chargers.

Most of the time the remote control will only be used to turn the inverter on and off. However, should you wish, a multitude of information is available about the state of the inverter/charger and battery system. Without a remote control, the inverter will work just fine but most of the information the RC6 can show won't be accessible to you. In this case, the indicator light and legend on the front of the inverter will be your guide to what the inverter is doing.

Let's look at some of the features of the Xantrex RC6 Remote Control.

Reading the RC6 Remote Control

The RC6 remote control is capable of turning the inverter on and off, as well as showing the following:

- Battery Bank Voltage
- Current flowing into or out of the battery bank during charging or inverting
- Error conditions the inverter may encounter (High Battery, Over Temperature, Over Load, and Low Battery conditions)
- The charge state the inverter is currently in (Bulk Charge, Absorption, or Float Charge)
- Whether the inverter is on or off

The following picture shows the front of the RC6. Notice the two bar graph scales that run vertically. The left scale displays the voltage of the battery bank while the right scale displays the DC (direct current) amperage flowing into (charging) or out of

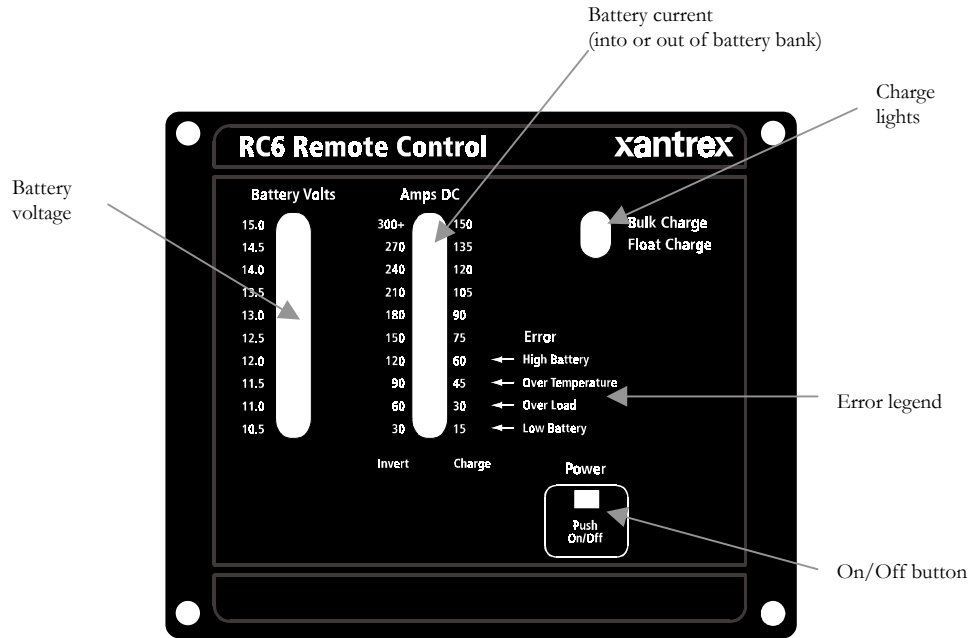


Voltage is electrical pressure. It is equivalent to water pressure in a hose.



Current or **Amps** is the volume of electrical flow, just like gallons per hour through a garden hose.

(inverting) the battery bank. The lower portion of the **Amps DC** scale also displays the four **Error** conditions. In the upper right portion of the RC6 are two lights marked **Bulk Charge** and **Float Charge**. These lights indicate the stage the battery charger is in. When the inverter is inverting, they are not lit.



Let's take a more detailed look at each of the items pointed out in the picture above.

Power On/Off Switch and LED Indicator

The power on/off switch on the lower front right of the remote is a momentary type switch and alternately turns the inverter on or off when pressed. The green light in the middle of it will be lit steadily when the inverter is working, and if the inverter is in the load search sense mode it will blink on and off rapidly. In charger mode the light will blink slow green.

Battery Voltage Bar Graph

This bar graph contains a light that will move up and down the bar as the battery voltage changes. The corresponding battery voltage is read to the left of the light. Red lights mean out of tolerance, yellow lights marginally within tolerances, and green lights show that everything is in a normal operating range. It is perfectly normal for battery voltage to drop a bit when operating heavy loads. The inverter constantly monitors the battery bank and will not allow it to be over discharged or over charged.

Note: A completely dead battery will read about 11.6 volts or less in an "at rest" condition. "At rest" means the battery has been sitting dormant for several hours with no load on it, and is not being recharged. When the battery drops below a certain pre-set point, the inverter will shut down, and if AC power is available to the inverter, it will recharge the batteries.

Amps DC Bar Graph

The **Amps DC** bar graph functions just like the voltage bar graph, except now you have a choice of two scales to read from. This meter tells you the volume of electricity that is being taken out of or put back into the battery. If the unit is in inverter mode, as indicated by an absence of **Bulk** or **Float** charge lights on the RC6, then read the scale on the left side of the Amps DC meter. If the unit is in charger mode then the scale on the right will indicate the volume of electricity in amps that is being put back into the battery. All the lights on the Amps DC scale are red in color, so don't be alarmed when you see red lights.


Error Conditions


The RV and Truck series inverters are very well protected against a multitude of potentially bad situations, and in normal usage it will be rare to see any error other than possibly an occasional low battery condition (if you have small batteries or high usage). If the inverter/charger encounters a situation it can't handle then it will shut down and protect itself, the battery bank, and your appliances. The following four situations are monitored, protected against, and displayed on the RC6:

- **High Battery** - The battery voltage has risen above 15.0 volts DC and the inverter will shut down until acceptable battery voltage has been restored.
- **Over Temperature** - The internal temperature of the inverter has risen above acceptable limits. The inverter will shut down until it has cooled off enough to operate properly. This error may be caused by loads too great for the inverter to operate continuously, or it may be caused by lack of ventilation to the inverter. During this type of error you should attempt to reduce the number of electrical loads that you are operating, this will avoid a repeat over-temp shutdown if the cause was too many loads for the ambient conditions.



Error conditions indicated on the RC6 may also be viewed on the front panel of the inverter itself.

 During an overload condition help the inverter out by reducing the number of electrical loads it must run.

 When a low battery condition occurs, provide the inverter/charger with AC power by starting the generator or plugging in to shorepower. It will then charge the batteries.

Note: If your inverter routinely shuts down due to an over-temperature condition, then call your installer and describe the problem. Routine over-temp shutdowns are indicative of a larger problem, most likely poor ventilation in the inverter compartment.

- **Over Load** - Too much electrical load is present for the inverter to power it. This would be like you trying to pick up 500 pounds when 150 pounds is your limit. The inverter will shut down until the amount of load has been reduced to a level it can handle. You simply need to turn a few electrical appliances off until the inverter can handle the loads that are present. In a properly designed system this error is infrequent.
- **Low Battery** - The battery bank voltage has dropped to a level too low to sustain full AC power output. To avoid damage to the battery bank and AC loads due to low voltage “brown out” conditions, the inverter will shut down. If an AC source is then applied to the inverter (start the generator or plug into shorepower), the inverter will go into charge mode and recharge the batteries. The AC loads will then resume operation from the **pass through** power, thus running from the external AC source.

The bottom four lights of the Amps DC meter show the error condition represented by the adjacent **Error** box legend. During an error condition the appropriate error light will flash. The inverter will attempt to automatically restart itself every few seconds until the condition is remedied.

Bulk Charge and Float Charge Lights

Any time the inverter/charger has an alternating current source present it will use a portion of that power to charge the battery bank—this is regardless of the position of the on/off switch on the inverter or remote control.

In order to allow you to monitor the inverter’s charging cycle, two lights—**Bulk Charge** and **Float Charge**—have been placed in the upper right corner of the RC6. Xantrex chargers use a three-stage charging process which consists of three distinct phases:

1. Bulk Charge Stage
2. Absorption Charge Stage, and
3. Float or Maintenance Charge Stage


The purpose behind the three-stage charge process is to provide complete recharging of the batteries without damage due to overcharging at too high a current or voltage.

The bulk charging stage provides the battery with controlled constant current charging and is the first step in the process. When the charger is in this stage the **Bulk Charge** light on the RC6 will remain on solid.

During the **Absorption Charge** stage the **Bulk Charge** light will blink slowly. This stage “tops off” the battery.

The float or maintenance charge stage trickle charges the battery while keeping it in fully charged ready to go state. This stage is indicated on the RC6 by the **Float Charge** light slowly flashing.

During the charge process the battery voltage and current being fed into the battery may be monitored on the RC6 voltage and amp meters as discussed previously.

 The **float charge** light means the battery is fully charged and ready for use.

Installation

This section describes the basic installation of the Xantrex RC6 Remote On/Off Switch and Monitor.

You can install the RC6 easily if you follow a few basic rules and guidelines.

- Mount the RC6 in a dry location away from moisture and high humidity.
- Clean with a soft cloth dampened with water (you can use a little dish soap if needed).
- Use Xantrex connector cable for best results. This cable is tinned its entire length for better corrosion resistance.

Installation Procedure

You can mount the RC6 inside a cutout in a wall or panel. Using the faceplate as a template, drill four 1/16-inch holes for mounting screws (not included). The cutout for the RC6 should be 4-1/8 inches wide by 4-3/16 inches high by at least 15/16 of an inch deep. Next plug the cable into the connector on the back of the RC6, then to the inverter. It is never recommended to route any low-voltage DC wiring (such as the RC6 cable) in the same conduit or bundle with wiring that carries AC power. Induced current may cause false triggering, or, at worst, failure of the electronic device to which the DC wiring is connected. The last step is to set the RC6 in place and secure it with four mounting screws.

Plug the RC6's cable into the port labeled **remote** on the inverter, turn the inverter off and then on and the pair will be ready for service. That's all there is to it!

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 Xantrex RC6 Remote Control. This warranty lasts for a Warranty Period of 12 months from the date of purchase at point of sale to you, the original end user customer.

This Limited Warranty is transferable to subsequent owners but only for the unexpired portion of the Warranty Period.

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:

Phone: 1-800-670-0707 (toll-free in North America) 1-604-422-2777 (direct)

Fax: 1-604-420-2145

Email: CustomerService@xantrex.com

Direct returns may be performed according to the Xantrex Return Material Authorization Policy described in your product 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.

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.

Disclaimer

Product

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Exclusions

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Warning: Limitations On Use

Please refer to your product user manual for limitations on uses of the product. Specifically, please note that the RC6 is not intended for use in connection with life support systems and Xantrex makes no warranty or representation in connection with any use of the product for such purposes.

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:

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

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.

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