



## Power Inverter 400W RCI-400MS User Manual

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User Manual

### Thank You for Purchasing RCI-400MS Power Inverter

So as to gain the most benefit, efficient operation, and long use from your new RCI-400MS product, please read carefully the information and explanation of features contained in this manual. You are also advised to keep this manual in a safe place for ready reference.

### Introducing RCI-400MS Inverters

The latest RCI-400MS range leads the field in power inverters, and sets the pace in development and design. They have been meticulously assembled to provide reliable service, converting low voltage, direct current (DC) to 110 volt alternating household current (AC). They draw their power from two different sources depending on the model and its capacity:

Standard 12 volt automobile battery  
Portable high power 12 volt sources.

### The advanced surge capacity of the RCI-400MS range of power inverters gives them the means to start most electrical appliances, including:

3/8" Drill  
20" TV/VCR combinations  
Quartz Halogen Light  
Computer  
12" 3 Speed Fan

In addition, because of their state-of-the-art microprocessor controlled units that run cooler, and their high working efficiency, the RCI-400MS power inverters consume less battery power, and therefore run for a longer time.

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### Before Using RCI-400MS

When you turn on an appliance or a tool that runs on a motor, the appliance basically goes through two stages:

1. Start up - requiring an initial surge of power (commonly known as the "starting load" or "peak load".
2. Continuous operation - power consumption drops (commonly known as the "continuous load".)

### Before using your power inverter, you need to calculate these loads, i.e.:

1. Starting load (at start up)
2. Continuous load (on continuous operation)

The formula for power consumption (measured in either WATTS (wattage) or AMPS (amperes)) is:

$$\text{AMPS} \times 110 (\text{AC voltage}) = \text{WATTS}$$

The wattage (WATTS) or amperes (AMPS) can normally be found stamped or printed on most appliances and equipment, or in the user's manual. Otherwise, contact the manufacturer to find out whether the device you are using is compatible with a modified sine wave.

### To calculate the starting load:

$$\text{Starting Load} = 2 \times \text{WATTS}$$

In general, the start up load of the appliance or power tool determines whether your inverter has the capability to power it.

### To calculate the continuous load (same as wattage in the above formula):

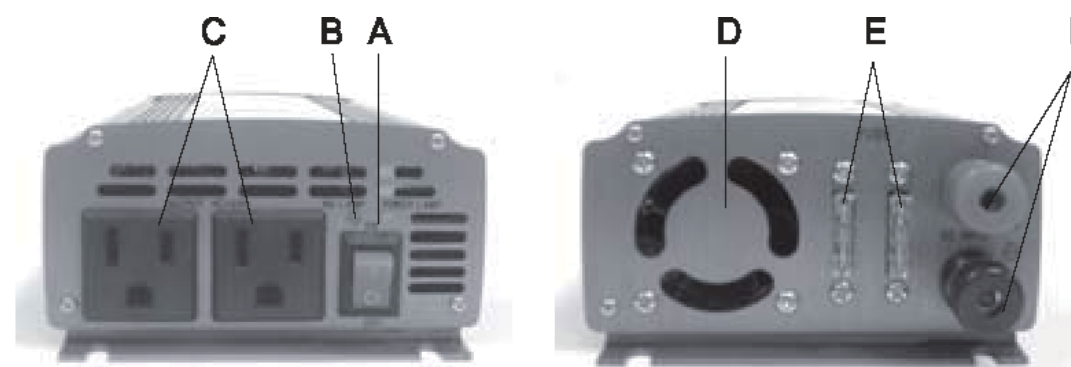
$$\text{Continuous load} = \text{AMPS} \times 110 (\text{AC voltage})$$

### Attention:

Always run a test to establish whether the RCI-400MS will operate a particular piece of equipment or appliance.

In the event of a power overload, the RCI-400MS inverter is designed to automatically shut down.

This safety feature prevents damaging the unit while testing appliances and equipment within the 400 watt range.



### Feature:

- A. ON/OFF Rocker Switch
- B. LED Indicator Light. (Green = Power On, Red = Overload )
- C. Two Standard North American 110V AC Outlets
- D. High-Speed Cooling Fan
- E. 40 Amp Fuse Compartment
- F. Power Input Terminals -  
BLACK = NEGATIVE  
RED = POSITIVE

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### Important:

- \* Make sure you connect your RCI-400MS inverter to a 12 volt power supply only. Do not attempt to connect the inverter to any other power source, including any AC power source.
- \* Do not try extending or otherwise changing the 12 volt power cord attached to your inverter.
- \* 120 volts of current can be very dangerous. Incorrect operation of your inverter may result in damage to belongings, personal injury or loss of life.

### How To Connect RCI-400MS Inverter

1. Make sure the ON/OFF rocker switch (see diagram, part A) is in the OFF (O) position.
2. Remove the cigarette lighter from its outlet in your vehicle.
3. Push the 12 volt power plug firmly into the outlet.
4. Connect the supplied BLACK cable to the BLACK (negative) power input terminal (See diagram, part F) of your RCI-400MS power inverter.
5. Connect the supplied RED cable to the RED (positive) power input terminal (see diagram, part F) of your RCI-400MS power inverter.
6. Switch the inverter rocker switch to the ON (I) position. The LED Indicator Light (see diagram, part B) should glow GREEN verifying the inverter is receiving power.
7. Make sure that the appliance to be operated is turned OFF. Plug the appliance into one of the two AC outlets (see diagram, parts C.)
8. Turn the inverter rocker switch to the ON (I) position.
9. Turn the appliance on.

### Attention:

You can use an extension cord from the inverter to the appliance without significantly decreasing the power being generated by the inverter. For best operating results, the extension cord should be no longer than 50 feet.

The green LED Indicator briefly flashing when you first turn the inverter ON is a sign of that there is a short circuit within the power supply.

- i. Turn the inverter OFF.
- ii. Remove the 12 volt plug from the cigarette lighter socket.
- iii. Firmly re-insert the plug.
- iv. Turn the inverter ON again.

**If this does not remedy the problem try using a different 12 volt power source.**

### Using the Inverter to Operate a TV or Audio Appliance

All Power Express inverters are shielded and filtered to minimize signal interference. Despite this, some interference may occur with your television picture, especially with weak signals. Below are some suggestions to try and improve reception.

1. Make sure the television antenna produces a clear signal under normal operating conditions (i.e., at home plugged into a standard 110 AC wall outlet). Also, ensure that the antenna cable is adequately shielded and of good quality.
2. Try altering the positions of the inverter, antenna cables, and television power cord.
3. Add an extension cord from the inverter to the TV so as to isolate it, its power cord and antenna cables from the 12 volt power source.
4. Try coiling the television power cord and the input cables running from the 12 volt power source to the inverter.
5. Affix one or several "Ferrite Data Line Filters" to the television power cord. Ferrite Data Line Filters can be purchased at most electronic supply stores including Radio Shack - Part Number 273-105.
6. Try grounding the inverter with an 18 awg (minimum), using as short a length as possible.