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RECHARGEABLE APPLIANCES

1. Certain chargers for small nickel cadmium batteries can be damaged if connected to the CPI 200 CH. Two types of equipment are particularly prone to this problem:

   1. Small battery operated appliances that can be plugged directly into an AC receptacle for recharging, including flashlights, razors, and night lights.
   
   2. Certain battery chargers for battery packs used in hand power tools, specifically those that have a WARNING label stating that dangerous voltages are present at the battery terminals.

Problems do not occur with the vast majority of battery operated tools, most of which use a separate charger or transformer that plugs into an AC receptacle and produces a low voltage output. If the label on your tool’s AC adapter or charger states that it produces a low voltage AC or DC output (less than 30 volts) you can safely power the charger with your CPI 200.

In order to check the performance of your CPI 200 before using it, please have the following on hand:

1. A 12 volt DC power source (such as a vehicle battery).
2. A test load such as a lamp or other small appliance that can be plugged into the AC receptacle on the inverter.

Power Source

You will need an 11 to 15 volt DC power source capable of supplying enough current to run the test load. As a rough guide, divide the wattage of the test load by 10 to get the current (in amperes) that the power source must supply. A fully charged standard automotive battery will work fine.

CAUTION

Connecting to the Power Source

Your CPI 200 CH comes with a 24 inch cable and cigarette lighter plug.

WARNING

Do not connect to the power source if flammable fumes are present. Explosion or fire may result.
Quick Checkout (continued)

To connect your inverter to the power source:

1. If the power source is a DC power supply, switch it off.
2. Insert the cigarette lighter plug into your vehicle’s cigarette lighter.
3. Press and release power button.
4. Connect load to AC outlet or USB port.

The inverter must only be connected to batteries with a nominal output voltage of 12 volts. It will not work with a 6 volt battery, and will be damaged if it is connected to a 16 volt or greater battery.

To prevent fire, do not cover or obstruct ventilation openings.
CONTROL & INDICATORS

4

POWERING UP
To apply power to the CPI 200, simply plug in to 12 Volt DC source (cigarette lighter).

POWER OUTPUT
AC Output:
Your CPI 200 will deliver 200 watts continuously. (NOTE: the wattage rating applies to resistive loads.)

USB Output:
5 Volt continuous output.

INPUT VOLTAGE
Your CPI 200 will operate from input voltage ranging from 10 to 15 volts. Optimum performance occurs when the voltage is between 12 and 14 volts.

The inverter will automatically shut down if the input voltage drops below 10.0 ± 0.3 volts. This protects the battery from being over-discharged. The inverter will restart when the input voltage exceeds 12.0 ± 0.3 volts.

The inverter will also shut down if the input voltage increases to 15.5 ± 0.5 volts. This helps protect the unit from damage due to excessive input voltage. Although the inverter is protected in this way, it may still be damaged should the input voltage exceed 16 volts.

AUTOMATIC SHUTDOWN
The unit will automatically go into thermal shutdown if it becomes overheated due to excessive input voltage, poor circulation or high ambient temperature.

CAUTION NOTE: Make sure you unplug inverter from power source before you leave your vehicle.

Power/Output Indicator
5 Volt continuous output.

Power Output
AC Output:
Your CPI 200 will deliver 200 watts continuously. (NOTE: the wattage rating applies to resistive loads.)

USB Output:
5 Volt continuous output.

Input Voltage
Your CPI 200 will operate from input voltage ranging from 10 to 15 volts. Optimum performance occurs when the voltage is between 12 and 14 volts.

Operating Limits
Input Voltage/Auto Shutdown

CAUTION NOTE: Make sure you unplug inverter from power source before you leave your vehicle.

Power/Output Indicator
5 Volt continuous output.

Power Output
AC Output:
Your CPI 200 will deliver 200 watts continuously. (NOTE: the wattage rating applies to resistive loads.)

USB Output:
5 Volt continuous output.

Input Voltage
Your CPI 200 will operate from input voltage ranging from 10 to 15 volts. Optimum performance occurs when the voltage is between 12 and 14 volts.

The inverter will automatically shut down if the input voltage drops below 10.0 ± 0.3 volts. This protects the battery from being over-discharged. The inverter will restart when the input voltage exceeds 12.0 ± 0.3 volts.

The inverter will also shut down if the input voltage increases to 15.5 ± 0.5 volts. This helps protect the unit from damage due to excessive input voltage. Although the inverter is protected in this way, it may still be damaged should the input voltage exceed 16 volts.

Automatic Shutdown
The unit will automatically go into thermal shutdown if it becomes overheated due to excessive input voltage, poor circulation or high ambient temperature.

Cigarette Lighter Plug

Power Fault Indicator
Maintaining Your Inverter

Your CPI 200 requires very little maintenance to keep it operating properly. The exterior of the unit should be cleaned periodically with a damp cloth to prevent accumulation of dust and dirt. Keep vents and fans free from dust or debris.

Service

You can receive technical assistance with your unit through one of our customer support services:

- Automated Help Desk is available 24 hours a day, 7 days a week at 773-889-3087.

- Customer Service Operators are available at 773-889-3087, Monday through Friday, 8:00 a.m. to 6:00 p.m. Central Time.

- Questions can be faxed to 773-622-2269.

- Automated Technical Assistance is available 24 hours, 7 days a week via e-mail at: productinfo@cobra.com.

- On-line answers to frequently asked questions can be found at: www.cobra.com.

Cobra®, Nothing Comes Close to a Cobra® and the snake design are registered trademarks of Cobra Electronics Corporation, USA.

WARNING: This product contains lead, a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. Wash hands after handling.
If you suspect that your unit requires service, please call 773-889-3087 BEFORE shipping it to Cobra®. This will ensure that you receive service as quickly as possible.

If you are asked to send your unit to the Cobra® factory, please follow these steps:

1. Send the complete unit.
2. For warranty repair, enclose some form of proof-of-purchase, such as a photocopy or carbon copy of a sales receipt. If you send the original receipt, it cannot be returned.
3. Enclose a typed or clearly written description of the problem you are having with your unit, plus the name and address where you want the unit returned.
4. Pack the unit securely to prevent damage during transit. If possible, use the original packing materials.
5. Ship prepaid and insured using a traceable carrier such as United Parcel Service (UPS), Federal Express, or first class mail with delivery confirmation. Ship to: Cobra® Factory Service, Cobra Electronics Corporation, 6500 West Cortland Street, Chicago, IL 60707 USA
6. Please allow 3-4 weeks before contacting us about the status of your service. Call 773-889-3087 for assistance.

For each piece of equipment you will be powering with your CPI 200, you must determine the battery’s capacity (how long the battery can deliver a specific amount of current). For example, automotive batteries usually provide 25 amperes of current. A battery with a reserve capacity of 180 minutes can deliver 25 amperes for 180 minutes before it is completely discharged.

For each piece of equipment, calculate the total watt-hours of energy consumption (power X operating time), then divide the watt-hours by 10 to determine how many 12 volt ampere hours will be consumed.
### SPECIFICATIONS

<table>
<thead>
<tr>
<th>Specifications</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continuous output power</td>
<td>200w</td>
</tr>
<tr>
<td>Surge rating (0.1 second)</td>
<td>400w</td>
</tr>
<tr>
<td>Peak efficiency (12V—1/2 load)</td>
<td>90%</td>
</tr>
<tr>
<td>Efficiency (full load, 12V)</td>
<td>&gt;78%</td>
</tr>
<tr>
<td>No load current draw</td>
<td>&lt;= 0.45 A (12.6V)</td>
</tr>
<tr>
<td>Output waveform (resistive load)</td>
<td>Perfect modified sine wave</td>
</tr>
<tr>
<td>Output frequency</td>
<td>60Hz ± 2Hz</td>
</tr>
<tr>
<td>Output voltage</td>
<td>115V +/- 10%</td>
</tr>
<tr>
<td>USB output</td>
<td>5V</td>
</tr>
<tr>
<td>Input voltage</td>
<td>12.8 - 13.2 VDC</td>
</tr>
<tr>
<td>Shutdown voltage (unload)</td>
<td>10.0V ± 0.3V</td>
</tr>
<tr>
<td>Operating temperature range</td>
<td>-10° C to 40° C</td>
</tr>
<tr>
<td>Storage temperature range</td>
<td>-40° C to 85° C</td>
</tr>
<tr>
<td>Protection Overload, short-circuit, Overtemp</td>
<td></td>
</tr>
<tr>
<td>Reverse polarity, under/over voltage</td>
<td></td>
</tr>
</tbody>
</table>

**NOTES:** All protection is automatically recovered. To protect the battery, if the unit needs to be restarted after low voltage protection, the voltage of DC input should be above 12V.
Congratulations

Thank you for purchasing the CPI 200 CH Power Inverter from Cobra®. When used properly, your unit will give you many years of reliable service. The operating features of your CPI 200 CH include:

- USB 5V Output
- AC receptacle
- Low battery shutdown
- Automatic thermal protection/shutdown

How Your Cobra® Power Inverter Works

The Cobra® Power Inverter takes low voltage DC (direct current) power from your automobile or other low voltage power supply and converts it to standard 110 volt AC (alternating current) power like the electrical current you have in your home. Simply by plugging your CPI 200 into your vehicle’s cigarette lighter socket, you can use many of your household appliances and electronic products in automobiles, RVs, boats, tractors, trucks, and virtually anywhere else.

Customer Assistance

You can receive technical assistance with your unit through one of our customer support services:

- **Automated Help Desk** is available 24 hours a day, 7 days a week at 773-889-3087.
- **Customer Service Operators** are available at 773-889-3087 Monday - Friday, 8:00 a.m. to 6:00 p.m. Central Time.
- Questions can be faxed to 773-622-2269.
- **Automated Technical Assistance** is available 24 hrs., 7 days a week via e-mail at: productinfo@cobra.com.
- On-line answers to frequently asked questions can be found at: www.cobra.com.

Cobra Electronics Corporation warrants that its Cobra® Power Inverter, and the component parts thereof, will be free of defects in material and workmanship for a period of one (1) year from the date of consumer purchase. This warranty may be enforced by the first consumer purchaser, provided that the product is utilized within the U.S.A. Cobra® will, without charge, repair or replace, at its option, a defective inverter upon delivery to the Cobra® Factory Service Department, accompanied by proof of the date of first consumer purchase, such as duplicated sales receipt.

Exclusions: This limited warranty does not apply to any product damaged by accident; 2) in the event of misuse or abuse of the product or as a result of unauthorized alterations or repairs; 3) if the serial number has been altered, defaced or removed; 4) if the owner of the product resides outside the U.S.A. All implied warranties, including warranties of merchantability and fitness for a particular purpose are limited in duration to the length of this warranty. Cobra® shall not be liable for any incidental, consequential or other damages; including, without limitation, damages resulting from loss of use or cost of installation. Some states do not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply to you.

LIMITED 1-YEAR WARRANTY

Cobra Electronics Corporation
6500 West Cortland Street
Chicago, Illinois 60707 USA
INTRODUCTION

Operating Instructions for Your Cobra® 200 Watt POWER INVERTER MODEL CPI 200 CH

Printed in China
Part No. 480-396-P
Version C

The Cobra® line of quality products includes:
- CB Radios
- microTALK® Radios
- Radar/Laser Detectors
- Safety Alert®
- Traffic Warning Systems
- Mobile GPS Navigations Systems
- HighGear® Accessories
- CobraMarine® VHF Marine Radios
- CobraMarine® Chartplotters
- Accessories

For more information about our products, or to order online please visit our website: 
www.cobra.com

Nothing Comes Close to a Cobra®

For Best Results

Your CPI 200 CH must be used properly in order to provide the best possible results. Please read all instructions carefully before using the unit. Pay special attention to CAUTION and WARNING statements in this manual.

CAUTION statements specify conditions that could cause damage to the unit or other equipment.

WARNING statements identify conditions that could result in personal injury or loss of life.

Cobra® 200W Output Waveform

This unit's output waveform is referred to as "square wave" or "modified sine wave." It is a stepped waveform designed to have characteristics similar to the sine wave shape of utility power. A waveform of this nature is suitable for most AC loads (including linear and switching power supplies used in electronic equipment, transformers and motors).