

**POWERDRIVE™ POWER**  
powerdriveinverters.com **INVERTERS**

# Owner's Guide

Please Save for Future Reference



**POWER DRIVE 100D** 100 Watt  
DC to AC  
Power Inverter

Thank you for purchasing the POWERDRIVE100D power inverter, a high performance solution to using household power while on the road. Please read and understand all of the information provided in this manual before operating or installing. If properly used, the inverter will give you years of reliable service providing AC power for TVs, computers and stereos. For safe and optimum performance, the inverter must be installed and used properly. Carefully read and follow the guidelines in this manual giving special attention to the CAUTION and WARNING statements. Keep this manual for reference should troubleshooting be necessary.

**CAUTION** statements provide information that could damage your inverter or equipment connected to it.

**WARNING** statements provide information on conditions that could result in personal injury or loss of life.

**WARNING:** Incorrect installation or misuse of the RPPD100D could result in personal injury or damage to the inverter and/or attached equipment. Read and follow the directions in the owner's manual. The ROADPRO RPPD100D produces the same potentially lethal AC power as normal household outlets. It is suggested that you treat it with the same respect that you would any AC outlet.

**WARNING:** SHOCK HAZARD, KEEP AWAY FROM CHILDREN.

DO NOT insert any foreign objects into the RPPD100D's outlets, vents or fan openings.

DO NOT expose the RPPD100D to rain, water or any other liquids.

DO NOT connect the RPPD100D to utility power distribution systems or branch circuits.

**WARNING:** HEATED CASE AND SURFACE.

The case to the RPPD100D may become very warm under high power operation reaching 140°F. Be sure that there is at least 4 inches of unobstructed air space around the entire surface of the inverter at all times. During use, DO NOT place materials that could be damaged by heat on or near the RPPD100D.

**WARNING:** EXPLOSION HAZARD.

DO NOT operate the RPPD100D near flammable fumes or gases such as the bilge of a gasoline power boat or near propane tanks.

DO NOT operate the RPPD100D in an enclosed area that contains automotive type lead-acid batteries. This type of battery emits explosive hydrogen gas which can be ignited by sparks.

## **CAUTION:**

DO NOT connect any AC device which has its neutral conductor connected to ground.

DO NOT expose the RPPD100D to air temperatures in excess of 104°F.

DO NOT use the RPPD100D on the following items:

1. Small battery-operated appliances such as flashlights, razors and nightlights that can be plugged directly into an AC outlet to recharge.
2. Certain battery chargers for battery packs used in hand power tools. These chargers will have a "Warning Label" indicating that dangerous voltages are present at the battery terminals.

## **RPPD100D Waveform Output:**

The output waveform of your RPPD100D is referred to as "square wave" or "modified sine wave." Some very sensitive electronic equipment and some medical equipment (listed below) may not operate satisfactorily on "square wave" or "modified sine wave." It is a stepped waveform designed to have characteristics similar to the pure 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).

The problems described above, do not occur with most battery-operated equipment. The vast majority of these items use a separate charger or transformer that plugs into the AC outlet and produces a low voltage output. If the label on your adapter states that it produces a low voltage (AC or DC) output (30 volts or less) then the RPPD100D will operate the item safely. Some of the following items may not operate properly on a "square wave" inverter. If you have any questions, contact the device's manufacturer.

- Laser printers, photocopiers, magneto-optical hard drives.
- Certain laptop computers.
- Some battery chargers for cordless tools and razors.
- Digital clocks with radios.

## **INSTALLATION:**

Insert plug into your vehicle's cigarette lighter socket or accessory power port.

NOTE: Make sure the cigarette lighter, or power port socket is clean and provides a tight fit for the plug. For safety, unplug the RPPD100D when not in use.

## **Operating Indicators:**

Green LED Indicator on top of your inverter will light to indicate power to your inverter.

## **Current Overload Protection:**

If the inverter is overloaded, it will shut down to protect itself. To restore normal operation, disconnect the excessive load and turn the unit Off and disconnect the plug.

## **Low Voltage Protection:**

If the input voltage drops to 10.5V or less, the inverter will shut down to protect the battery. To restore normal operation, return the DC input voltage to at least 12V. The inverter will automatically return to normal operation.

## **High Voltage Protection:**

If the DC input voltage rises above 15 volts, the inverter will shut down to protect itself. To restore normal operation, return the DC input voltage to less than 15 volts. The inverter will automatically return to normal operation.

**CAUTION:** Although the inverter has protection against over-voltage, it may still be damaged if the input voltage were to exceed 16 volts.

## **Over Temperature Protection:**

If the inverter's internal temperature rises to 104°F, the inverter will shut down to protect itself.

**NOTE:** Internal inverter temperature can rise due to being operated in a high heat environment or due to the fan or vents being blocked during operation (even in relatively cool outside air). To restore normal operation, turn the unit off and allow it to cool. The inverter will automatically return to normal operation after it has cooled.

**USB Outlet;** The USB outlet will supply 5 volts at 500ma to charge and power cell phones, iPods® and other small electronics.

## **Operating Limits**

### **Power Output:**

The inverter can deliver 100 watts for about 60 minutes. The inverter must cool for 15 minutes before it can resume operation at 100 watts.

NOTE: Operating time will vary depending upon the type, capacity charge level of the battery, and the power draw of the AC products you are using. With a normal vehicle battery and a 100 watt load (such as a small television) you can expect an operating time of 2 to 3 hours. It is recommended that you start your vehicle once an hour when using the RPPD100D for extended periods of time to prevent draining the battery.

**WARNING:** To prevent personal injury or loss of life, never start or leave your engine running in a poorly ventilated area such as a garage.

### Helpful Formulas:

To Convert AMPS to WATTS:  $AMPS \times VOLTS = WATTS$

To Convert WATTS to AMPS:  $WATTS \div VOLTS = AMPS$

These formulas yield a close approximation of the continuous loads of a product.

### Estimated Watts Used by Common Appliances and Tools

Appliance	Approx. Watts
Cell phone	10
VCR	40-60
CD or DVD player	40
Xbox Console	100
7" to 10" LCD television	50 » 150
Laptop computer (recharge battery)	150

### Specifications:

Operating AC Voltage (Normal)	105~125-Volts AC
DC Input Voltage	10~15-Volts DC
Continuous AC Power Output	100 Watts
USB Output	5 Volts DC
Maximum AC Power Output (Surge)	175 Watts
AC Output Frequency	60Hz $\pm$ 2Hz
AC Output Waveform	Modified Sine Wave
Battery Drain with No AC Load	0.50 Amps
Efficiency (Maximum)	87%
Ambient Operating Temperature Range	14°F (-10°C) ~ 104°F (40°C)
Low Battery Shut Down Point	10.5 $\pm$ 0.3-Volts DC
High Voltage Shut Down Point	15.5 $\pm$ 0.5-Volts DC

*Specifications Subject to Change without Notice*

<b>Problem/Symptom</b>	<b>Possible Causes</b>	<b>Solution</b>
Low output voltage	Overloaded	Reduce the load.
No output voltage	Low input Voltage	Let battery recharge.
No power when operating at full 1100 watts	Thermal Shutdown	Allow inverter to cool down. Reduce load.

This Limited One Year Warranty from POWERDRIVE, a DAS brand, applies to all electronic products and devices manufactured by DAS Distributors and sold under the brand name POWERDRIVE.

### **Terms of the Warranty:**

POWERDRIVE warrants that the product you have purchased from a DAS authorized retailer is free from defects in materials and workmanship under normal use during the warranty period. The warranty period begins on the day of retail sale. This warranty extends only to the original purchaser. It is not transferable to anyone who subsequently receives the product. It excludes all expendable parts (fuses, etc). During the warranty period POWERDRIVE will repair your defective product, replace it with an identical item, or at our option exchange it for an equivalent product of value and performance. This Limited Warranty does not extend to any product that has been damaged or rendered defective as a result of: an accident, misuse or abuse, as a result of an act of God, by operation outside the usage parameters stated in this manual, by modification of the product, attempted repair, or as a result of war or terrorist attack. Other limitations of this warranty exclude; payment for your lost time, loss of use of your product, or property damage caused by the product or its failure to work, or any other incidental or consequential damages including personal injury. Except as expressly set forth in this warranty statement, POWERDRIVE makes no other warranties expressed or implied. Defective products must be returned to the dealer within 30 days, after 30 days, the product may be returned to POWERDRIVE.

When returning products to POWERDRIVE: Shipping to POWERDRIVE shall be prepaid, your replacement will be mailed back to you at no additional charge. Carefully pack product and all included accessories into a suitable box, along with original dated register receipt or invoice, a letter stating the defect, daytime phone number, and a physical return address. (UPS will not deliver to a PO Box.)

- Any package with a PO Box address will not be processed, and will be held until further notification from you.
- Make sure you can track your shipment to us. POWERDRIVE will not be responsible for lost packages.
- POWERDRIVE will not be responsible for damage incurred during shipment to us.
- Failure to provide a dated proof of purchase will invalidate warranty.

Ship to:

### **POWERDRIVE Returns**

**1875 Zeager Road, Elizabethtown, PA 17022**

For customer assistance and technical support call 1-866-622-7979 Monday through Friday 8:00am to 5:00pm Eastern Time. Or write to: [techsupport@roadprobrands.com](mailto:techsupport@roadprobrands.com)



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