100 Watt Power Inverter

Model No.: PKC0AM

Owner's Manual

and Warranty Information

Read these instructions completely before using this product.

Retain this Owner's Manual for future reference.

OPERATION (USING YOUR INVERTER)

The Power Inverter converts 12-volt DC (direct current) input voltage to 110/120-volt, 60 Hz AC (alternating current) power.

The Inverter produces a “modified sine wave.” The modified sine wave is suitable for most AC powered appliances and personal electronic devices.

The following devices may not work with a modified sine wave:

- Photocopiers, laser printers, magneto-optical hard drives
- Some laptops
- Metal halide arc (MHI) lights
- Some fluorescent lights with electronic ballasts
- Power tools that use solid-state power
- Fans and power tools that use variable speed controls
- Some new furnaces and pellet stoves with microprocessor control
- Digital radios and clocks
- Sewing machines with speed/microprocessor control
- Electronics that modulate radio frequency signals on the AC line
- X-10 home automation systems
- Oxygen concentrators and other medical equipment

Most battery chargers can be connected to the AC receptacle. Battery chargers that use separate transformers or chargers that plug into the AC receptacle to supply a low-voltage DC-to-AC output should work. However, battery chargers for small nickel-cadmium batteries can be damaged if plugged into the Inverter.

The following appliances or devices could be damaged if plugged into the Inverter:

- Small battery operated appliances that can be plugged directly into the AC receptacle such as flashlights, cordless razors and toothbrushes.
- Certain battery chargers for cordless tool battery packs. These chargers can be identified by a warning label stating dangerous voltages are present at the battery terminals.

NOTICE **Monitor the temperature of the battery charger for about 10 minutes. If the battery charger becomes abnormally warm, disconnect it from the Power Inverter immediately.**

If you are unsure about powering any appliance or device with the Inverter, contact the manufacturer or consult the owner’s manual of the device.

Connecting to Power Source

⚠ WARNING **FIRE HAZARD**

Do not connect the Inverter to RV or household AC distribution wiring, to an AC load circuit or where the neutral conductor is connected to the negative terminal of a DC power source. Connecting to these circuits could cause damage to the Inverter and/or create a spark.

NOTICE **Do not use with positive ground electrical systems. Connecting the Inverter to a positive ground electrical system will damage the Inverter. Only use the Power Inverter on negative ground electrical systems. If in doubt, check with your vehicle dealer or consult the vehicle’s owner’s manual.**

Connecting to 12-volt Cigarette Lighter/Accessory Socket

1. Insert the Power Inverter into a 12-volt cigarette lighter/accessory socket. Twist it slightly to ensure good contact.
2. When connected the green LED on the Inverter will be on.

USB Power Outlet Operation

NOTICE **The USB power outlet does not support data communications. The outlet has a maximum of 5 volts/2.1 A.**

1. Plug the USB-powered device into the USB power outlet.
2. Make sure the Inverter is correctly inserted in 12-volt cigarette lighter/accessory socket.
3. Turn on the USB-powered device.
4. When shutting down, turn off the USB device first, then remove the Inverter.
5. Unplug the USB device from the USB power outlet.

NOTICE **The USB power outlet is an unswitched outlet. Whenever the Inverter is plugged in, there will be power to the USB outlet.**

Protective Features

Over-Voltage Protection (Red LED on Inverter will light) - The Inverter will automatically shut down when the input voltage exceeds 15 volts DC.

Overload Protection (Red LED on Inverter will light)

The Inverter will automatically shut down if the continuous draw exceeds its maximum wattage rating. If you continue to use the Inverter at or near the maximum output, it will eventually overheat and shut down.

To Reset the Inverter

1. Unplug Inverter from 12-volt cigarette lighter/accessory socket.
2. Unplug all the devices from the Inverter.
3. Before devices are reconnected to the Inverter, verify the total wattage of the devices to ensure they are less than the rating of the Inverter.
4. Plug Inverter back in 12-volt cigarette lighter/accessory socket. The green LED should be on.

Common Problems

Power tools will start but will not continue to run - Some induction motors (motors without brushes) may require 2 to 6 times their wattage rating in order to start up. If the power tool runs only momentarily when power is applied, try to leave the power tool on while quickly and repeatedly turning the Inverter on and off.

Buzzing in audio systems - Some inexpensive stereo systems will emit a buzzing sound from their speakers when operating from the Inverter. This is because the power supply in the device does not adequately filter the modified sine wave produced by the Inverter.

Television interference - The Inverter is shielded and filtered to minimize interference with TV signals. In some cases, especially with weak TV signals, some interference may be visible. Try the following corrective measures:

- Position the Inverter as far away as possible from the television, the antenna and the antenna cable.
- Adjust the orientation of the Inverter, the antenna cable and the TV power cable to minimize interference.
- Use high-quality, shielded antenna cable.

CARE AND MAINTENANCE

Storage

Store this Power Inverter in a cool, dry area and keep it away from direct sunlight, heat, excessive humidity and dampness. Storage temperature should be between -4°F and 185°F (-20°C and 85°C) with the humidity between 10% and 90%.

Cleaning

Do not clean or wipe the Power Inverter with solvents or chemical materials. If necessary, remove dirt or stains using a soft cloth dampened with a mild detergent solution.

FREQUENTLY ASKED QUESTIONS

What issues can cause my mobile power outlet to stop working?

Overheating, incorrect input voltage, and overloading are some basic symptoms. The unit is equipped with self-protection features that help prevent damage to the mobile power outlet and accessories being powered by it. There are no replaceable fuses in the mobile power outlet nor do we recommend or advise opening the unit to repair it. Please follow the proper procedures for resetting the mobile power outlet which can be found in the owner's manual for each symptom.

My mobile power outlet does not seem to have the power that I expect from it. Does the age of the battery or its condition affect the operation of the mobile power outlet?

Yes. Ensure the vehicle battery connections and terminals are free from corrosion and that the battery is in good working order. If necessary, test the battery to ensure it is producing the proper voltage level. Clean the terminals with baking soda, water, and a wire brush before connecting the mobile power outlet to the vehicle battery. Please use all precautions necessary to ensure safety in addition to wearing rubber gloves and eye protection.

My mobile power outlet is extremely warm during operation. Is this normal?

Under normal operating conditions, the mobile power outlet will be warm but heat should not be excessive where the case is hot to the touch. If the internal temperature of the mobile power outlet exceeds its upper limit, the temperature protection feature will engage and the unit will shut off. Allow the unit to cool, cycle the power switch, and begin using the unit again. Also, do not have the mobile power outlet in direct sunlight and make sure it is in a well-ventilated area. For adequate performance, operate the mobile power outlet from 32°F to 104°F (0°C to 40°C).

I plugged a device into my mobile power outlet and it will not power it. The mobile power outlet began to make a screeching sound and the red LED light is on. What is wrong?

First, test to see if the power source being supplied at the mobile power outlet connection is between 10.5 volts and 14.5 volts (low battery or over-voltage alarm has sounded with red LED light). There may be adequate voltage coming from the power source but there will be a voltage drop due to the length and thickness of the wires going to the mobile power outlet connection. If possible, use thicker gauge wires from the power source to the mobile power outlet or reduce the length of the cables. If the voltage is not within range, the red FAULT/POWER light will illuminate and the unit will sound an alarm. The mobile power outlet will have to be reset. Also, it may be necessary to run the vehicle in order to power the appliance or device upon initial startup and/or during continuous use.

Second, the mobile power outlet may have been overloaded by powering a device requiring more that the rated power output of the mobile power outlet. Make sure the accessory you are trying to power is within the rated wattage range of the mobile power outlet (overload alarm has sounded with red LED light). Use accessories requiring less power. When you turn on some accessories, they may require two to six times the rated wattage for that appliance or device for startup. If the wattage limitation is exceeded, the mobile power outlet will not power the accessory. This is known as "peak load," "inductive load," or "starting load."

There are four power wires and two connections for the positive (+) and negative (–) terminals on my mobile power outlet. Do I need to use both terminal connections and all four wires?

Yes, connecting the wires using all four terminal connections on the mobile power outlet will ensure less voltage drop throughout the circuit powering the mobile power outlet from the vehicle's battery.

Why is the 12-volt accessory plug option only available on some PEAK mobile power outlets?

The 12-volt accessory plug option is available on PEAK mobile power outlets up to 400 watts. Above this rating, the mobile power outlet's current draw is higher than what the vehicle's circuitry is designed to handle for an accessory plug.

In an effort to extend the run time of the mobile power outlet, is it possible to connect multiple batteries together?

Yes, but only in a parallel circuit. We recommend you consult the vehicle owner's manual and the mobile power outlet instruction manual for proper installation procedures.

I accidentally connected the wires from the mobile power outlet to my vehicle in reverse and the mobile power outlet will not work. Is the unit damaged?

It is dependent on testing the unit afterwards. There are no replaceable fuses in the mobile power outlet nor is it recommended to open or service the unit. Reconnect the unit to the vehicle correctly and try to operate the mobile power outlet. If the unit does not operate after reconnecting it, the mobile power outlet suffered damage that is beyond repair.

How long can I use the mobile power outlet without the vehicle's engine on?

The greater the rated amp hours of the vehicle battery, the longer the mobile power outlet will supply power to the accessories. To determine the battery capacity, you will need to know the wattage of the accessory the mobile power outlet will power. Add 15% to the wattage of the accessory due to efficiency loss. Once you have determined the wattage, use the following formula to determine the battery capacity in amp-hours and the operating time between charges. Use conservative estimates; the number of amp-hours you expect to use should be 50% of the battery's rated amp-hours. For this example, we will use a 12-volt battery rated at 400 amp hours as follows:

2400 (example of total wattage) / 120 (AC volts) = 20 amps

400 (amp-hour rating of DC battery) / 10 (always use 10) = 40 amp-hours @ 120 volts AC

40 (amp-hours @ 120 volts AC) / 20 (amps) = 2 hours of operating time

SPECIFICATIONS

1.	Max output continuous power	100 W
2.	Max output peak surge	200 W (0.1 sec)
3.	North American Standard AC receptacles	1
4.	Max output current	≤0.91 A
5.	AC output voltage range	105 - 125 V
6.	AC output frequency range	60 ± 3 Hz
7.	DC input voltage range	11 - 15 V
8.	Max no load current draw (13.8 V)	≤0.6 A
9.	Max input current consumption (13.8 V)	≤8 A at 100 W
10.	Over voltage protection range	15.75 ± 0.75 V
11.	Under voltage protection range	10.0 ± 0.5 V
12.	Output overload protection range	105 - 130 W
13.	Efficiency	≥80%
14.	USB output	5 V, 2.1 A
15.	Signal format	Modified sine wave
16.	Working temperature	32°F to 104°F (0°C to 40°C)
17.	Storage temperature	-4°F to 185°F (-20°C to 85°C)
18.	Storage air humidity	10%-90%
19.	Dimensions (L x W x H)	5.5 x 2.5 x 1.75 in.
20.	Weight	0.4 lb / 0.18 kg

TROUBLESHOOTING

Problem	Situation	Action
No power output	Faulty connection	Twist Inverter slightly to ensure good contact.
	Battery voltage below 10 volts	Recharge or replace battery.
	Equipment being operated draws too much power	Reduce the output load; DO NOT exceed maximum rating for the Inverter.
	Inverter in thermal shutdown condition	Allow Inverter to cool down. Ensure there is adequate ventilation around the Inverter. Ensure that load is no more than its maximum rating for continuous operation.
Low power output	Battery condition may be poor	Recharge or replace battery.
	Faulty connection	Twist Inverter slightly to ensure good contact.