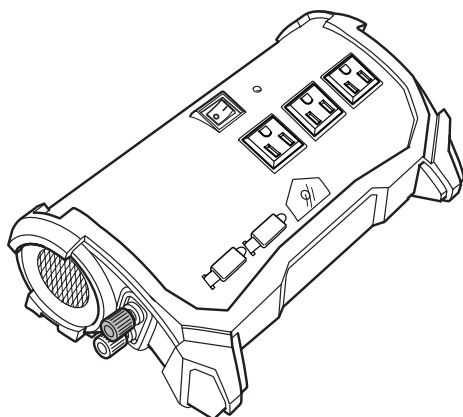




400 Watt Tailgate Mobile Power Strip

Model No.: PKC0BO

Owner's Manual
and Warranty Information



Read these instructions completely before using this product.

Retain this Owner's Manual for future reference.

- Only connect Inverter to a 12-volt DC system. Connecting to anything other than a 12-volt system may damage the Inverter or vehicle electrical system.
- Do NOT install or operate the Power Inverter in areas designated as IGNITION PROTECTED. This includes installing the 12-volt cigarette lighter/accessory socket power plug or airplane adapter. The Inverter is NOT APPROVED for ignition protected areas.
- Always turn the Inverter off and disconnect cables from the power source when not in use.
- Always remove the appliance plug from the AC receptacle before working on the appliance.
- Do not insert foreign objects into the AC receptacles or USB power outlets.
- Do not expose the Power Inverter to flammables, water, rain or snow.
- Use the Power Inverter in properly ventilated areas only.

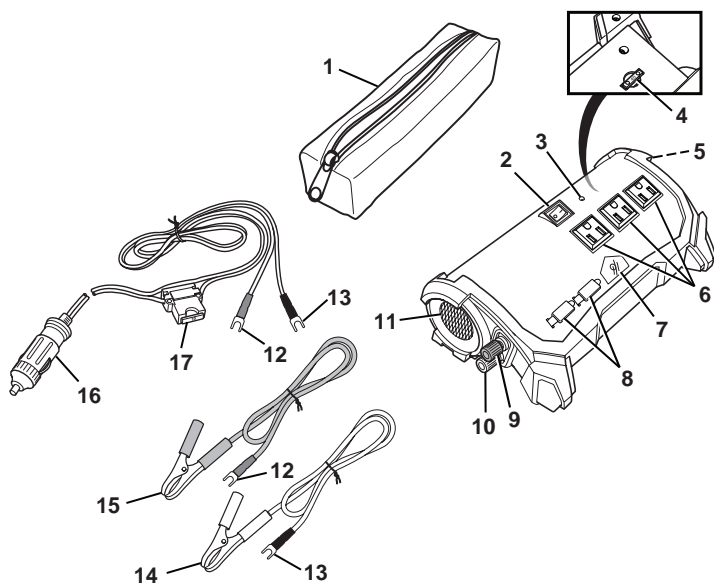
INTRODUCTION

This 400 Watt Tailgate Power Inverter can be used to operate personal electronic devices and portable office equipment with a combined, continuous power requirement of 400 watts maximum.

- When using the Power Inverter in a vehicle, check the vehicle owner's manual for maximum power rating and recommended output.
- Only connect the Power Inverter to a vehicle when the vehicle is parked. Do not connect the power plug while driving the vehicle.
- Read and understand this Owner's Manual before using the Power Inverter.
- Install and operate the Power Inverter only as described in this Owner's Manual.

FEATURES

- Compact design for safer use, transport and storage
- LED operation indicators
- Replaceable fuses
- Connects to a 12-volt cigarette lighter/accessory socket, or 12-volt battery/power source
- Three North American Standard 110/120-volt AC receptacles
- Two USB power outlets
- Detachable power cord and battery cables
- Low-voltage alarm
- Low-voltage shutdown
- Overload protection
- Thermal protection
- Cable storage bag



Legend

- | | |
|--|--|
| 1. Cable Storage Bag | 9. Red Positive (+) Screw Connector |
| 2. ON/OFF Switch | 10. Black Negative (-) Screw Connector |
| 3. LED Indicator | 11. Fan |
| 4. 40-Amp Fuse | 12. Black Negative (-) Lead |
| 5. Cooling Vent | 13. Red Positive (+) Lead |
| 6. North American Standard 110/120-volt AC Receptacles (3) | 14. Red Positive (+) Battery Clamp |
| 7. Power Indicator Light | 15. Black Negative (-) Battery Clamp |
| 8. USB Power Outlets (2) | 16. 12-volt DC Power Plug |
| | 17. 15-Amp Inline Fuse |

OPERATION

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.

Power Source

The Power Inverter can be operated using a 12-volt battery or other 12-volt DC power source using the battery cables, or using a 12-volt DC cigarette lighter/accessory socket with the power cord. The power source must provide between 10.5 and 15 volts DC and must be able to provide sufficient current (in amperes) to operate the device.

NOTICE Do not exceed the maximum input voltage of 15 volts DC. The Inverter could be damaged.

NOTICE The Power Inverter is for 12-volt battery systems only. A 6-volt battery system will not provide adequate input voltage and a 24-volt system will damage the Inverter.

Determining Battery Capacity and Operating Time

To determine your battery capacity, you will need to know the wattage of each appliance and/or tool that will be simultaneously powered by the Inverter. Keep in mind to add 15% to the wattage of each appliance and/or tool due to efficiency loss using the Inverter. Once you have determined the total wattage, use the following formula to determine the battery capacity in amp-hours and the operating time between charges. For this example, we will use a 12-volt battery rated at 400 amp-hours.

$$300 \text{ (example of total wattage)} \div 120 \text{ (AC volts)} = 2.5 \text{ amps}$$

$$400 \text{ (amp-hour rating of DC battery)} \div 10 \text{ (always use 10)} = 40 \text{ amp-hours @ 120 volts AC}$$

$$40 \text{ (amp-hours @ 120 volts AC)} \div 2.5 \text{ (amps)} = 16 \text{ hours of operating time}$$

To increase the operating time, the amp-hour rating must be increased. Either choose a battery with a higher amp-hour rating, or connect multiple batteries together in parallel. If the 12-volt battery has a rating of 400 amp-hours, connecting two 12-volt batteries, each having a 400 amp-hour rating in a parallel arrangement, would increase the amp-hour rating to 800 amp-hours, doubling the time of operation.

Use conservative estimates when selecting a battery. The number of amp-hours you expect to use should be 50% of the battery's rated amp-hours.

Positioning of Power Inverter

Allow at least 1.2 inches (3 cm) of clearance around the Inverter to allow for airflow. Always use the Inverter where there is adequate ventilation. Do not block cooling vents or the fan.

⚠ WARNING FIRE HAZARDS

- Do not place the Inverter near flammable materials or in any location that may accumulate flammable fumes or gases.
- Do not expose the Inverter to extreme heat or flames. The surrounding air temperature should be between 14° and 86°F (-10° and 30°C). Do not place the Inverter on or near a heating vent or any equipment which is generating heat above room temperature. Do not place the Power Inverter in direct sunlight.

⚠ WARNING ELECTROCUTION HAZARD

Do not operate the Power Inverter if it is wet. Do not allow water, moisture or other liquids to come in contact with the Power Inverter, the device being operated or the power source.

Connecting to Power Source

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 a Cigarette Lighter / Accessory Socket

NOTICE If the total power consumption of the connected devices exceeds 140 watts (1.2 amps), use the battery cables and an appropriate power source, not the 12-volt DC power plug. If you exceed the maximum output, the inline fuse for the 12-volt DC power plug will blow. Before connecting the 12-volt DC power plug, make sure the total output of the accessories you are plugging into the Inverter does not exceed 140 watts.

NOTICE Use the 12-volt DC power plug only when the vehicle's engine is running. Use of the 12-volt DC power plug with the engine off will cause excessive battery drain.

1. Make sure the green LED indicator is not illuminated and that all devices are disconnected from the Power Inverter.
2. Unscrew the red positive (+) screw connector cap.
3. Slide the red positive (+) lead onto the red positive (+) screw connector stud. Tighten the screw connector cap securely.
4. Unscrew the black negative (-) screw connector cap.
5. Slide the black negative (-) lead onto the black negative (-) screw connector stud. Tighten the screw connector cap securely.
6. Insert the power plug in the 12-volt DC cigarette lighter/accessory socket.
7. Rotate the power plug to make good contact with the socket.
8. The power indicator light will light continuously, indicating the Inverter is connected to a power supply.

NOTICE If the Power Inverter does not work, verify that the 12-volt cigarette lighter/accessory socket is powered. The ignition switch may have to be turned on to power the socket.

Connecting to a 12-volt Battery or 12-volt DC Power Source

NOTICE Do not connect the Inverter to RV or household AC distribution wiring, to an AC load circuit breaker 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.

1. Make sure the green LED indicator is not illuminated and that all devices are disconnected from the Power Inverter.
2. Unscrew the red positive (+) screw connector cap.
3. Slide the red positive (+) battery cable lead onto the red positive (+) screw connector stud. Tighten the screw connector cap securely.
4. Unscrew the black negative (-) screw connector cap.
5. Slide the black negative (-) battery cable lead onto the black negative (-) screw connector stud. Tighten the screw connector cap securely.
6. Securely connect the red positive (+) battery clamp to the positive (+) terminal of the battery or power source.
7. Securely connect the black negative (-) battery clamp to the negative (-) terminal of the battery or power source.
8. The power indicator light will light continuously, indicating the Inverter is connected to a power supply.

Connecting a Load to the Power Inverter

NOTICE The Power Inverter is capable of delivering up to 400 watts of power output. This Inverter can be easily overloaded when using all three 110/120-volt AC outlets. Do not exceed 400 continuous watts when the Inverter is connected to power. The Inverter could be damaged.

NOTICE Do not operate high wattage appliances or equipment that will produce heat, such as hair dryers, irons, heaters and toasters, with this Inverter.

The manufacturer provides a label with power consumption information in watts or amps for their product. If the device's power consumption is not indicated in watts, but in amps AC, multiply the amp AC value by 120 (AC volts) to determine the wattage.

NOTICE When you turn on an appliance or device, it will require twice the rated wattage of the appliance or device to start. This is known as the "starting load" or "peak load." To determine the starting load or peak load, multiply the rated wattage by two. If this exceeds the peak surge output of the Inverter, do not operate the appliance or device with the Inverter.

The Power Inverter can operate a resistive load device or an inductive load device.

Operating a resistive load device is easier for the Inverter. However, the Inverter will not operate larger resistive load devices.

TVs and stereos are inductive load devices (devices with a coil or transformer). They may require more current to operate than a resistive load device of the same wattage rating. The Inverter will not operate larger inductive load devices.

Operating the 110/120-volt AC Receptacles

1. Press the ON (I) side of the ON/OFF switch. The Inverter will emit a short beep and the green LED indicator will light continuously, indicating the Inverter is functioning.
2. Plug the device into the 110/120-volt AC receptacle.
3. Switch the device on. If the low-voltage alarm sounds, move the Inverter to a higher source of DC power or remove the battery clamps and charge the DC power source.

NOTICE Monitor the temperature of the device for the first 10 minutes of operation to determine its temperature. If the temperature of the device becomes excessively hot, it is an indication that the device should not be used with this Inverter.

4. When shutting down, first turn the power of the appliance or device off.
5. Remove the power plug from the Inverter's 110/120-volt AC receptacle.
6. Press the OFF (O) side of the ON/OFF switch. The Inverter will emit a short beep and the green LED indicator will turn off, indicating the Inverter is turned off.
7. If connected to a cigarette lighter/accessory socket:
Remove the power plug from the 12-volt DC cigarette lighter/accessory socket.
If connected to a battery or other 12-volt power source with the battery clamps:
Remove the black negative (-) battery clamp, then remove the red positive (+) battery clamp.
8. Disconnect the leads from the screw connector studs.
9. Tighten the screw connector caps.

NOTICE Always disconnect the Power Inverter from the 12-volt cigarette lighter/accessory socket or battery/power source when the Power Inverter is not in use.

Operating the USB Power Outlets

NOTICE The USB power outlets do not support data communication. The outlets have a maximum of 5 volts/500mA DC power each to an external USB-powered device.

NOTICE The USB power outlets are unswitched outlets. Whenever the Inverter is connected to a power source, there will be power to the USB outlets.

1. Remove protective cap and connect the USB-powered device into the USB power outlet.
2. Switch the device on.
3. When shutting down, first turn the power of the device off.
4. Disconnect the USB-powered device from the USB power outlet and replace the cap.
5. Disconnect the Power Inverter from the power source.

NOTICE Always disconnect the Power Inverter from the 12-volt cigarette lighter/accessory socket or battery/power source when the Power Inverter is not in use.

Protective Features

Low-voltage Shutoff (LED indicator will blink between green and red) – When input voltage drops to 10.5 volts, the audible alarm will sound. If the voltage drops further, the alarm will continue to sound, the LED indicator will blink between green and red and the Inverter will automatically shut down. When this happens, the Inverter must be reset and connected to a power source that provides more than 11.5 volts.

Over-voltage Protection – The Inverter will automatically shut down when the input voltage exceeds 15 volts. When this happens, the Inverter must be reset.

Overload Protection – The Inverter will automatically shut down if the continuous current draw exceeds the maximum rating. When this happens, the LED indicator will blink between green and red and the Inverter must be reset.

To reset the Inverter:

1. Turn off the device and unplug it from the Inverter.
2. Press the OFF (O) side of the ON/OFF switch.
3. Press the ON (I) side of the ON/OFF switch. The green LED indicator should be lit.
4. Verify the wattage of the device(s) before plugging back into the Inverter.

High-Temperature Safety Shutoff - If the unit's temperature exceeds $212^{\circ} \pm 50^{\circ}\text{F}$ ($100^{\circ} \pm 10^{\circ}\text{C}$), it will shut down automatically. After unplugging the Inverter and letting it cool down for about 15 minutes, the Inverter can be used again.

Common Problems

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 and use this Power Inverter in a cool, dry area and keep it away from direct sunlight, heat, excessive humidity and dampness.

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.

Fuse Replacement

1. Turn off the Inverter and disconnect any devices from the Inverter.
2. Disconnect the Inverter from its power source and remove the leads.
3. Pull the fuse straight out of the holder.
4. Replace with a new 40-amp spade-type fuse in the Inverter body or a 15-amp spade-type fuse located inline on the 12-volt DC power supply cord.

SPECIFICATIONS

1.	DC Input Voltage	11-14.5V
2.	AC Output Voltage	105-125V
3.	AC Receptacle	Three 110/120V AC North American Standard Receptacles
4.	Maximum Continuous Power	400W
5.	Recommended Maximum Power Output using 12-volt DC Power Plug	140W
6.	Maximum Current Output	4.44A
7.	Peak Surge Output	800W (0.1 sec)
8.	USB Output DC	Two 5V/500mA
9.	Efficiency	≥ 85%
10.	No Load Current Consumption	≤ 500mA
11.	High Input Voltage Limit	15 ± 0.5V
12.	Short Circuit and Reverse Polarity Protection	1 x 40A spade fuse
13.	12-volt DC Power Plug Inline Fuse	1 x 15A spade fuse
14.	Signal Format/Output	Modified sine wave 60Hz ± 3Hz
15.	Working Temperature	14°F to 86°F (-10°C to 30°C)
16.	Storage Temperature	-4°F to 185°F (-20°C to 85°C)

TROUBLESHOOTING

Problem	Situation	Action
Low output voltage	Inverter is overloaded	Do not exceed maximum load rating for the Inverter.
Low output voltage (alarm sounds)	Input voltage is below 10.5 volts	Increase input voltage above 10.5 volts.
		Remove Inverter from power and charge battery/power source.
No power output	12-volt cigarette lighter/ accessory socket needs ignition to be on	Turn ignition to ACC position.
	Battery voltage below 10.5 volts	Recharge or replace battery.
	Equipment being operated draws too much power	Reduce 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.
	DC input is shorted	Check condition of power plug and 12-volt cigarette lighter/accessory socket, or battery cables and screw connectors. Clean or replace as necessary.
	Battery cables reversed	Remove the battery clamps and connect correctly.
	Fuse is blown	Check fuse and replace as necessary.