

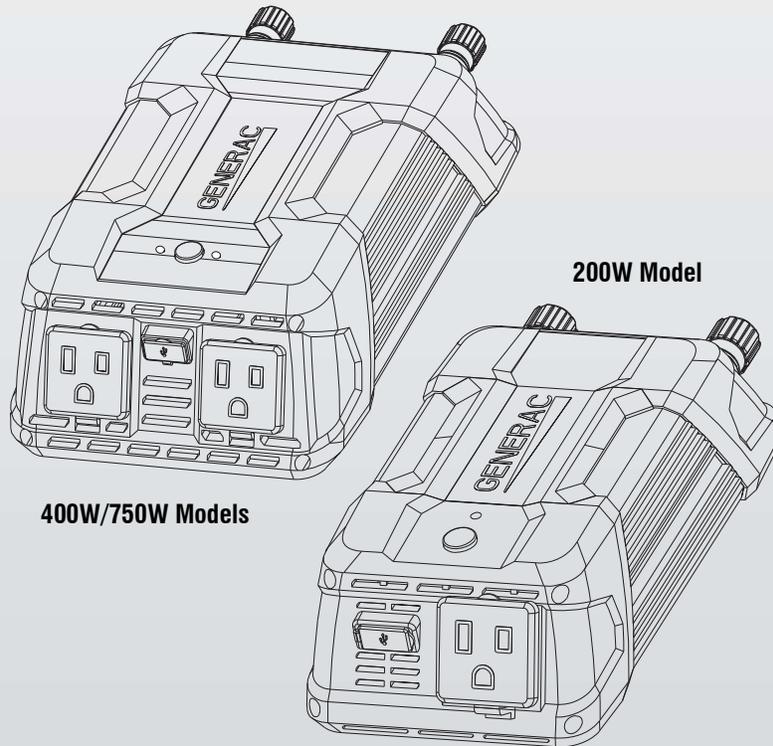
# Owner's Manual

## DC-AC Power Inverter

Models: 006180-0 (750W)

006179-0 (400W)

006178-0 (200W)



**⚠ WARNING!**

**⚠ Power inverter produces powerful voltage that can cause death or great physical harm.**

**Read and Save These Instructions**

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## INTRODUCTION

### **⚠ WARNING!**

**⚠ This manual contains important instructions for operating this power inverter. For your safety, and the safety of others, read this manual thoroughly before operating the power inverter. Failure to properly follow all instructions and precautions can cause you and others to be seriously hurt or killed.**

#### NOTE:

Since there are many variations in the circumstances surrounding the installation and operation of power inverters, we cannot possibly anticipate or provide advice or safety messages to cover every situation.

## READ THIS MANUAL THOROUGHLY

If any portion of this manual is not understood, contact Customer Service for operating procedures.

The operator is responsible for proper and safe use of the equipment. We strongly recommend that the operator read this manual and thoroughly understand all instructions before using the equipment. We also strongly recommend instructing other users to properly operate the unit. This prepares them if they need to operate the equipment in an emergency.

The inverter can operate safely, efficiently and reliably only if it is properly located, operated and maintained. Before operating the equipment:

- Become familiar with and strictly adhere to all local, state and national codes and regulations.
- Study all safety warnings in this manual and on the product carefully.
- Become familiar with this manual and the unit before use.

The manufacturer cannot anticipate every possible circumstance that might involve a hazard. The warnings in this manual, and on tags and decals affixed to the unit are, therefore, not all inclusive. If using a procedure, work method or operating technique that the manufacturer does not specifically recommend, ensure that it is safe for others. Also make sure the procedure, work method or operating technique utilized does not render the equipment unsafe.

THE INFORMATION CONTAINED HEREIN WAS BASED ON EQUIPMENT IN PRODUCTION AT THE TIME OF PUBLICATION. GENERAC RESERVES THE RIGHT TO MODIFY THIS MANUAL AT ANY TIME.

### **CALIFORNIA PROPOSITION 65 WARNING**

This product contains or emits chemicals known to the State of California to cause cancer, birth defects and other reproductive harm.

# Safety Rules

## SAFETY RULES

Throughout this publication, and on tags and decals affixed to the inverter, DANGER, WARNING, CAUTION and NOTE blocks are used to alert personnel to special instructions about a particular operation that may be hazardous if performed incorrectly or carelessly. Observe them carefully. Their definitions are as follows:

### **DANGER!**

**INDICATES A HAZARDOUS SITUATION OR ACTION WHICH, IF NOT AVOIDED, WILL RESULT IN DEATH OR SERIOUS INJURY.**

### **WARNING!**

**Indicates a hazardous situation or action which, if not avoided, could result in death or serious injury.**

### **CAUTION!**

**Indicates a hazardous situation or action which, if not avoided, could result in minor or moderate injury.**

#### NOTE:

**Notes contain additional information important to a procedure and will be found within the regular text body of this manual.**

These safety warnings cannot eliminate the hazards that they indicate. Common sense and strict compliance with the special instructions while performing the action or service are essential to preventing accidents.

These safety warnings cannot eliminate the hazards that they indicate. Common sense and strict compliance with the special instructions while performing the action or service are essential to preventing accidents.

Four commonly used safety symbols accompany the **DANGER**, **WARNING** and **CAUTION** blocks. The type of information each indicates is as follows:

 **This symbol points out important safety information that, if not followed, could endanger personal safety and/or property of others.**

 **This symbol points out potential explosion hazard.**

 **This symbol points out potential fire hazard.**

 **This symbol points out potential electrical shock hazard.**

## ELECTRICAL HAZARDS

### **⚠ WARNING!**

 **Power inverter produces powerful voltage that can cause death or great physical harm.**

- NEVER operate in rain or snow, set on wet surfaces, immerse in liquid, or use in marine applications.
- NEVER touch bare wires or receptacles.
- NEVER use electrical cords that are worn, frayed, bare, or otherwise damaged.
- NEVER use power inverter for any purpose other than its intended use.
- NEVER place the power inverter near the vehicle's heat vent or in direct sunlight as this prevents proper cooling.
- NEVER use the power inverter if it is damaged; replace immediately.
- NEVER open the power inverter. There are no user-serviceable parts inside.
- NEVER connect to AC distribution wiring or to any areas marked "Ignition Protected". This power inverter is NOT approved for ignition protected areas such as marine applications.
- NEVER insert foreign objects into the AC or USB outlets.
- ALWAYS disconnect the power inverter AND appliances from the power supply when not in use.
- The inverter produces the same potentially lethal AC power as a household outlet. It is suggested that it be treated as such.
- Store indoors in a dry location out of reach of children.
- Some appliances are not recommended for use with this power inverter. See "Appliance Wattage Information" for further details.
- Use only UL-listed, three-prong extension cords intended for outdoor use when connecting appliances to the power inverter outdoors. Use the proper size (wire-gauge) extension cord to handle the electric load that will be plugged into it.

## MEDICAL AND LIFE SUPPORT USES

### **⚠ WARNING!**

- In case of emergency, call 911 immediately.
- NEVER use this product to power life support devices or life support appliances.
- NEVER use this product to power medical devices or medical appliances.
- Inform your electricity provider immediately if you or anyone in your household depends on electrical equipment to live.
- Inform your electricity provider immediately if a loss of power would cause you or anyone in your household to experience a medical emergency.

# Safety Rules

## FIRE AND BURN HAZARDS

### **⚠ WARNING!**

 **NEVER operate near flammable materials, fumes, or gases.**

- NEVER expose to extreme heat or flames.
- ALWAYS install the power inverter in a location not likely to come into contact with skin as the surface may become hot.
- NEVER operate the power inverter near fumes or gases (such as the cabin of a gasoline power boat or near propane tanks) or in an enclosed area that contains lead-acid batteries for automotive use. This type of battery emits explosive hydrogen gas which can be ignited by sparks.

### **⚠ WARNING!**

 **Battery gases are explosive.**

- NEVER allow open flames, lit cigarettes, sparks, or spark producing equipment near the battery.

 **Battery electrolyte fluid is comprised of sulfuric acid, which can be very dangerous and cause severe burns.**

- NEVER allow battery fluid to contact eyes, skin, or clothing. If contact or spillage occurs, immediately flush the area with water.

 **To avoid electric arcing, which can result in electric shock, follow these instructions exactly.**

**Exposed terminals, even on disconnected batteries, can cause electric shock.**

- NEVER touch both battery terminals with bare hands at the same time.
- Remove rings, watches or any other object containing metal when working with battery. If metal comes into contact with battery terminals, electric shock and serious burns can result.
- Only use insulated/non-conducting tools when working with or near battery.
- NEVER lay tools or other metal objects on top of battery.
- NEVER operate in rain or snow, set on wet surfaces, immerse in liquid, or use in marine applications.

## Safety Rules

- ALWAYS make sure connections are made to the correct terminal. Damage due to reversed polarity is not covered by warranty.
- NEVER connect or set up the power inverter or appliances while operating a vehicle. Not paying attention to the road may result in a serious accident.
- NEVER plug the power inverter into a location that interferes with the vehicle controls (i.e. near the gear shift lever).
- ALWAYS use the power inverter where there is adequate ventilation.
- NEVER block ventilation slots. NEVER install in an engine compartment or in any enclosed area in the vehicle that does not allow air circulation.
- NEVER place materials that could be damaged by heat near the power inverter during use.
- ALWAYS make all DC connections before making AC connections.
- NEVER service an AC appliance without first disconnecting from the power inverter.
- NEVER connect the power inverter to live AC power circuits.
- Some chargers for small nickel-cadmium batteries can be damaged if connected to the power inverter. Do not use the power inverter on the following items:
  - Small battery-operated appliances such as flashlights, razors, and night lights. Charge these items using a standard household outlet.
  - 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.
- Loose connections may cause wire overheating, melted insulation, and damage to the power inverter.
- ALWAYS use the power cords that were included with the power inverter.
- NEVER use the power cords for any other purpose than with the power inverter.
- Connect the power inverter to batteries with a normal output of 12VDC only; Do not use with 6V or 24V systems.
- NEVER use with positive ground electrical systems. Reverse polarity connections will result in a blown fuse and may cause permanent damage to the inverter and void the product warranty. (Most modern automobiles, RVs, and trucks are negative ground systems.)
- NEVER operate the power inverter in areas with high levels of dirt, dust, or debris.
- Follow ALL manufacturer instructions: power inverter instructions, battery manufacturer instructions, and the manufacturer of any equipment intended for use with this power inverter.

# General Information

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## UNPACKING

### **⚠ WARNING!**

**⚠ ANYONE using this power inverter must read, understand, and follow all safety and operation instructions provided in the product manual. Failure to closely follow these instructions can result in circumstances leading to property damage, serious injury, and death.**

- Inspect for damage. Carefully inspect the product for any damage that may have occurred during shipment. If loss or damage is noted, return the product to the retailer.

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## FEATURES

### ***SHORT-CIRCUIT PROTECTION***

The power inverter will shut down if a short circuit occurs.

### ***OVERLOAD PROTECTION***

The power inverter will shut down if an overload situation occurs.

### ***THERMAL SHUTDOWN PROTECTION***

The power inverter will shut down due to insufficient ventilation or a high temperature environment.

### ***LOW VOLTAGE SHUTDOWN***

The power inverter will shut down if the power source voltage drops below 10.5 +/- 0.3 volts to avoid damaging the power source.

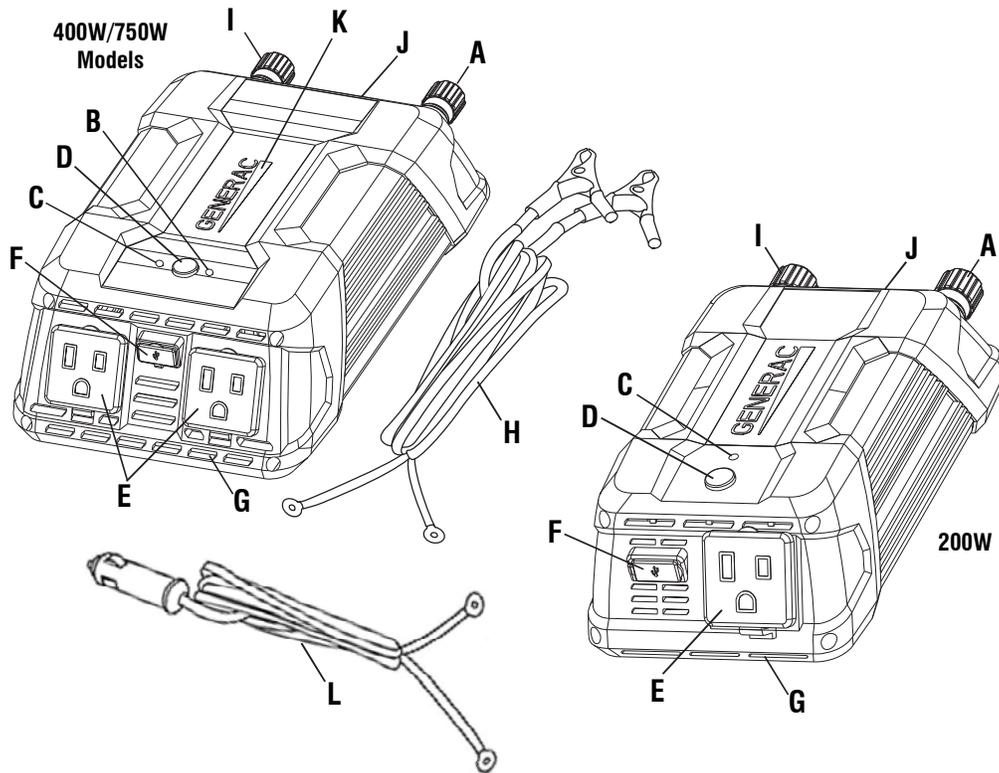
### ***LOW SHUTDOWN WARNING***

Indicates that the power source has dropped to 11.0 +/- 0.5 volts. The power inverter will continue to operate.

### ***HIGH VOLTAGE SHUTDOWN***

The power inverter will shut down if the power source voltage exceeds 15.5 +/- 0.5 volts to avoid damaging the power inverter.

## COMPONENTS



- A - Positive DC Terminal Post - Connects to the red ring terminal on the DC Power Cord.
- B - Red LED Indicator - Illuminates red when the power inverter has a fault (400W and 750W models only).
- C - Green LED Indicator - Illuminates green when DC power input is present.
- D - On-Off Switch - Turns the power inverter on and off.
- E - AC Outlet - Provides power to run equipment with AC power cords.
- F - USB2.1A Port - Provides 5-volt power to run equipment with USB power cords.
- G - Ventilation Openings - Draws air flow through the power inverter to the cooling fan to prevent over-heating.
- H - Battery Power Cord - Connects to the vehicle's battery.
- I - Negative DC Terminal Post - Connects to the black ring terminal on the DC Power Cord.
- J - Cooling Fan - Protects the inverter from over-heating.
- K - Powerbar - Illuminates orange indicating magnitude of load connected to inverter output (400 and 750W models only).
- L - Vehicle Power Cord (not included with 750W models). Contains a replaceable fuse accessed by unscrewing the tip. Replace only with a similar type fuse, 8 amp, type 3AG, time lag/slow blow.

# Operation

## **⚠ WARNING!**

**Thoroughly read and understand all information provided in this Owner's Manual before operating this power inverter.**

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## **PREPARING FOR OPERATION**

### **⚠ WARNING!**

** Power inverter produces powerful voltage that can cause death or great physical harm.**

- NEVER operate in rain or snow, set on wet surfaces, immerse in liquid, or use in marine applications.
- NEVER place the power inverter near the vehicle's heat vent or in direct sunlight as this prevents proper cooling of the power inverter.
- ALWAYS use the power inverter where there is adequate ventilation.
- NEVER block ventilation slots.
- NEVER operate the power inverter near fumes or gases (such as the cabin of a gasoline power boat or near propane tanks) or in an enclosed area that contains lead-acid batteries for automotive use. This type of battery emits explosive hydrogen gas which can be ignited by sparks.
- NEVER operate the power inverter in areas with high levels of dirt, dust, or debris.

## ***CARE AND MAINTENANCE***

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The power inverter should be kept in areas that are:

- Dry - Do not allow water or other liquids to come in contact with the power inverter.
- Ambient - During operation, temperature should be between 32° and 104° F (0° - 40° C).
- Ventilated - During operation leave at least a 2" clearance around the power inverter for air flow and ensure the ventilation openings are not obstructed.
- Clean - Avoid environments with high levels of dirt, dust, or debris.
- Secure - Keep the power inverter in a location where it will not be dropped, exposed to direct sunlight or heating units, or placed in areas of high humidity or dampness. Keep out of reach of children.

## APPLIANCE WATTAGE INFORMATION

### NOTE:

The values provided in the following table are estimates only.

- **ALWAYS** verify actual wattage requirements for appliances by checking appliance label, operating manuals, or contacting the manufacturer.
- Appliances with electric motors require additional power when starting.

Appliance	Watts		Appliance	Watts
Bluetooth Headset	2		27" LCD TV	125
MP3 Player	3		12V Drill	250
Digital Camera	3		Dorm Fridge	250
Cell Phone	10		Halogen Light	250
Handheld Video	50		Orbital Buffer	700
Laptop	60			

Before using the power inverter, take time to check the power rating of the appliance and verify the wattage does not exceed the power inverter output. Power rating information can usually be found on an appliance's product label, stamped inside, or on the back of the appliance.

If the appliance power consumption is rated in amps AC, simply multiply by the AC volts (115) to determine the wattage.

Appliances with electric motors require additional power when starting.

**High-wattage appliances or equipment that produces heat, such as hair dryers, microwave ovens, and toasters CANNOT be operated by this power inverter.**

## OPERATING TIME

Operating time varies depending on the battery charging level, capacity, and power level drawn by the AC load.

With the vehicle running, the inverter can operate indefinitely.

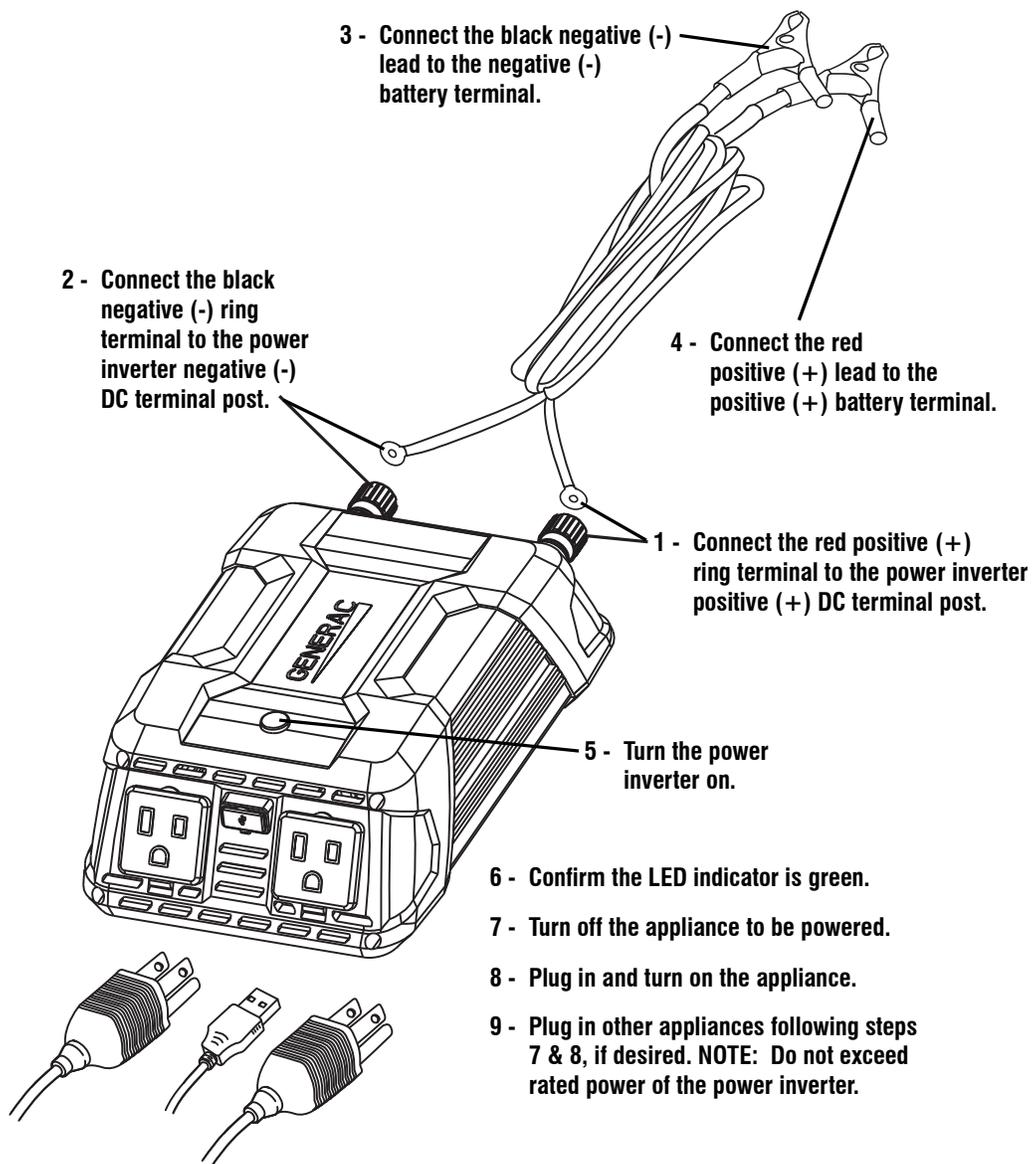
With the vehicle not running, it may be necessary to start the vehicle periodically to recharge the battery.

Most vehicle batteries are designed to provide short periods of high current for starting the engine. Constantly operating the power inverter from the vehicle battery until the low-voltage shut-off occurs will affect battery life. If appliances need to be powered for long periods of time, consider using a separate deep cycle battery.

# Operation

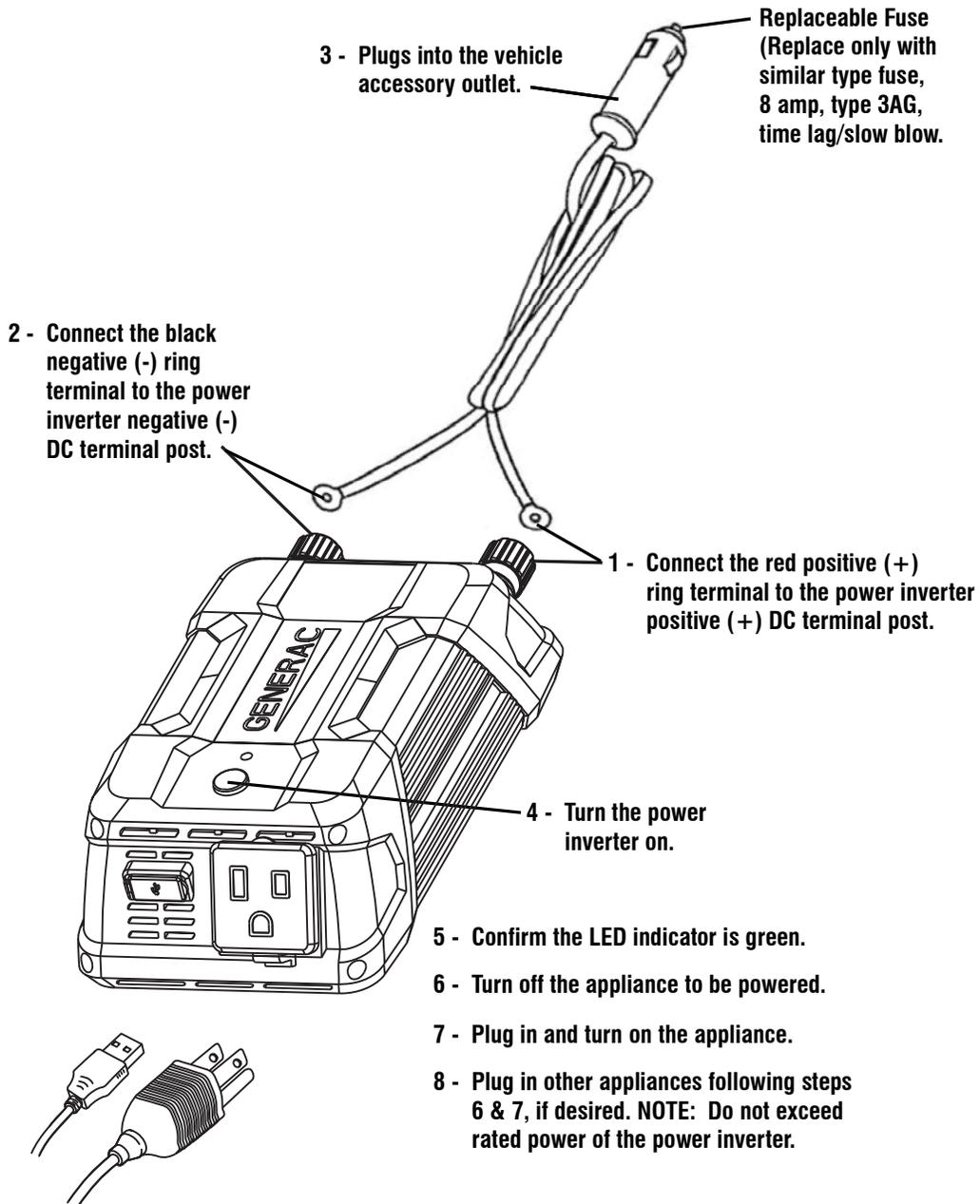
## CONNECTING THE POWER INVERTER USING THE BATTERY POWER CORD

Read and follow all the Safety Rules before connecting the power inverter.



## CONNECTING THE INVERTER USING THE VEHICLE POWER CORD

Read and follow all the Safety Rules before connecting the power inverter. The vehicle power cord is included with the 200 and 400W models and can be used for outputs up to 80W.



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### DISCONNECTING THE POWER INVERTER USING THE BATTERY POWER CORD

**NOTE:**

**ALWAYS disconnect the power inverter when not in use to avoid reducing vehicle battery life.**

1. Turn off and unplug appliances.
2. Turn off the power inverter.
3. Disconnect the red positive (+) lead from the battery.
4. Disconnect the black negative (-) lead from the battery.
5. Disconnect the black negative (-) ring terminal from the power inverter.
6. Disconnect the red positive (+) ring terminal from the power inverter.
7. Store the inverter in a location that is:
  - Ambient (-13 to 185F, -25 to 85C)
  - Dry
  - Away from direct sunlight, heating units, dampness, high humidity, dirt, dust, or debris.
  - Out of reach of children.

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### DISCONNECTING THE POWER INVERTER USING THE VEHICLE POWER CORD

**NOTE:**

**ALWAYS disconnect the power inverter when not in use to avoid reducing vehicle battery life.**

1. Turn off and unplug appliances.
2. Turn off the power inverter.
3. Unplug the power inverter from the vehicle accessory outlet.
4. Disconnect the black negative (-) ring terminal from the power inverter.
5. Disconnect the red positive (+) ring terminal from the power inverter.
6. Store the inverter in a location that is:
  - Ambient (-13 to 185F, -25 to 85C)
  - Dry
  - Away from direct sunlight, heating units, dampness, high humidity, dirt, dust, or debris.
  - Out of reach of children.

## Troubleshooting

PROBLEM	CAUSE	CORRECTION
No Power / LED not illuminated * Only applies to the 200W and 400W models when using the optional vehicle power cord.	Poor connection.	Ensure all power inverter ring terminal and battery lead cable connections are tight.
	Damaged power inverter.	Never use a damaged power inverter. See the warranty.
	* Damaged vehicle fuse.	Replace vehicle fuse.
	* Damaged fuse in vehicle power cord.	Replace the fuse in the vehicle power cord.
LED is green but no power output	Damaged power inverter.	Never use a damaged power inverter. See the warranty.
Audio system interference	Audio system internal power supply not filtering modified sine wave.	Use audio system with higher quality filtering.

## Safety Warnings and Shutdowns

CONDITION	AC OUTPUTS AVAILABLE?	AUDIBLE ALARM	LED STATUS		CORRECTION
		200W, 400W & 750W	200W	400W / 750W	
Operating normally	Yes	none	Green	Green - On Red - Off	
Over voltage	No	long pulses	Green - flashing	Green - On Red - On	Disconnect the power inverter, check and repair battery system.
Low voltage shut down	No	1 short, 1 long	Green - flashing	Green - On Red - On	Sensitive devices should be shut down. Start vehicle to recharge vehicle battery or check vehicle battery voltage.
Electrical over load	No	2 short, 1 long	Green - flashing	Green - On Red - On	Disconnect appliance(s), disconnect power inverter, wait a few minutes, plug in the power inverter, and plug in reduced load.
Over Temperature	No	3 short, 1 long	Green - flashing	Green - On Red - On	Sensitive devices should be shut down. Unplug accessories and leave the power inverter plugged in allowing the fan to cool the unit. Clear objects away from the power inverter to improve air flow, move it to a cooler location, or reduce load if the power inverter is operating continuously.
Low voltage warning	Yes	short pulses	Green - flashing	Green - On Red - On	Low voltage shutdown is about to occur; sensitive devices should be shut down. Start vehicle to recharge vehicle battery or check vehicle battery voltage.

## SPECIFICATIONS

POWER INVERTER		750W	400W	200W
Dimensions	Length [in / mm]	9.8 / 250	8.9 / 226	7.1 / 180
	Width [in / mm]	6.6 / 167	5.0 / 127	3.7 / 94
	Height [in / mm]	2.8 / 70	2.6 / 66	2.0 / 51
	Dry Weight [oz / g]	40 / 1135	40 / 1135	32 / 907
AC Power Output	Rated Power [watts]	750	400	200
	Surge Power [watts] (<1 Second)	1,500	800	400
	Frequency [hertz]	60	60	60
	Voltage [volts] (under load, modified sine wave)	115	115	115
DC Power Output (USB 2.1A)	Voltage [volts]	5.0	5.0	5.0
	Maximum Current [amperes]	2.1	2.1	2.1
DC Power Input	Nominal Voltage [volts]	12.8	12.8	12.8
	Rated Current [amperes]	75	37	18
	Low Voltage Shutdown [volts]	10.5 +/- 0.3	10.5 +/- 0.3	10.5 +/- 0.3
	High Voltage Shutdown [volts]	15.5 +/- 0.5	15.5 +/- 0.5	15.5 +/- 0.5
Operating Temperature	Maximum [F / C]	104° / 40°	104° / 40°	104° / 40°
	Minimum [F / C]	32° / 0°	32° / 0°	32° / 0°

# Warranty

## **GENERAC POWER SYSTEMS LIMITED WARRANTY FOR DC-AC POWER INVERTERS**

### **Consumer Use Warranty — Product is Not for Commercial Use**

#### **LIMITED WARRANTY**

Generac Power Systems (Generac) will repair or replace, free of charge, to the original retail customer in North America, any parts of the Power Inverter found by Generac to be defective in material or workmanship. This limited warranty covers the cost of the replacement parts and labor for defects. Transportation charges are the responsibility of the customer. This limited warranty has time period conditions, operating conditions and disclaimers, limitations of remedies and exclusions as stated below. For warranty service, customer should visit [www.generac.com](http://www.generac.com).

#### **LIMITED WARRANTY PERIOD**

Two (2) Years Limited for Consumer Personal Use Only  
NO WARRANTY FOR COMMERCIAL OR RENTAL USE

#### **COMMENCEMENT AND DEFINITIONS**

The limited warranty period begins on the date of retail purchase by the original purchaser. The limited warranty is not transferable. "Consumer use" is personal use by a retail customer. Commercial use" or "rental use" is any usage for income producing, business related use.

#### **NO EXTENSION OF WARRANTY**

Repair or replacement pursuant to this limited warranty shall not renew or extend the original warranty period, and any repaired product shall be warranted for the remaining original warranty period only.

#### **WARRANTY CLAIM PROCEDURE**

A Power Inverter believed to be defective may be returned to retailer where it was purchased. The retailer will work with Generac who will repair or replace it, as its sole discretion. Proof of purchase may be required. If the Power Inverter is repaired, new or reconditioned replacement parts, or a comparable equivalent product, may be used, at Generac's sole discretion. The repaired or replaced product will then be subject to the remainder of the Power Inverter's limited warranty period.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

#### **DISCLAIMER OF WARRANTIES**

To the fullest extent permitted by applicable law, this limited warranty is exclusive and expressly in lieu of any and all other warranties, including, without limitation, any implied warranties of merchantability or fitness for a particular purpose or any other implied warranties that may arise from a course of dealing or usage of trade. Generac hereby disclaims and excludes all other warranties. The duration of any implied warranties allowed by law (including, but not limited to, implied warranties of merchantability or fitness for a particular purpose) is limited to the shortest duration permitted by applicable law or the limited warranty period provided herein, whichever is longer.

#### **LIMITATIONS OF REMEDIES**

Generac shall not be liable to customer, or to anyone claiming under customer, for any other obligations or liabilities, including, but not limited to, obligations or liabilities arising out of breach of contract or warranty, negligence or other sort of any theory of strict liability, with respect to the Power Inverter or Generac's acts or omissions or otherwise. To the fullest extent permitted by applicable law, Generac shall not, in any event, be liable for incidental, consequential, special or other damages, including but not limited to loss of use, loss of income, loss of time, loss of sales, injury to personal property, or liability customer incurs with respect to any other person, or any other type or form of consequential damage or economic loss.

## EXCLUSIONS

In addition to the foregoing limitations and the terms above, the following is a non-exhaustive list of exclusions to the limited warranty, to be determined at Generac's discretion:

1. Misuse, neglect, abuse, overload, improper connections to electrical appliances are not covered by this limited warranty.
2. Lack of proper care will negate coverage under the limited warranty.
3. This equipment is not warranted for shipping or handling defects or damage.
4. Any alteration or modification of the product voids the limited warranty.
5. Use of unauthorized parts or repair by an unauthorized agent voids the limited warranty.
6. Accessories included with the product, or purchased separately for the product, are not covered by this limited warranty.
7. Removal or altering of manufacturer's serial label voids the limited warranty.
8. Normal wear and tear is not covered by this limited warranty.
9. Normal maintenance and wear items are not covered by the limited warranty.
10. Failures due to acts of God, war, other force majeure beyond Generac's control are not covered by the limited warranty.

## REGISTRATION

Warranty registration with the company is required on all products. Register your product online at [www.generac.com](http://www.generac.com).

## OTHER WARRANTY QUESTIONS

Call 1-888-GENERAC (1-888-436-3722) or visit [www.generac.com](http://www.generac.com).

