

CHICAGO
Electric Power Tools

INVERTER - MODIFIED SINE
400 / 800 WATT

Model 47641

ASSEMBLY AND OPERATING INSTRUCTIONS



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For technical questions and replacement parts, please call 1-800-444-3353

Specifications

| ITEM | DESCRIPTION |
|---------------------|---|
| Continuous Power | 400 (maximum) watts for 30 minutes 320 (maximum) watts for 4 hours |
| Peak Power | 800 Watts |
| Input Voltage | 10-15 Volts DC |
| Output Voltage | 115 Volts AC at 60 Hz |
| AC Receptacle | 3-Prong, polarized |
| Fuse | 40 amps |
| Dimensions | 4-3/8 (L) x 4-1/2 (W) x 2-3/8 (H) inches |
| Weight | 2.0 lbs |
| Indicators | Green LED = power on Red LED = overload |
| Switch | Rocker type, On / Off |
| Battery Input Cords | Cigarette lighter cable and plug Battery cable with clamps |
| Features | - Modified sine wave with overload protection - Overload shutoff and short circuit protection - Low voltage alarm and cutoff - Over-voltage shutdown |

Save This Manual

You will need the manual for the safety warnings and precautions, assembly instructions, operating and maintenance procedures, parts list and diagram. Keep your invoice with this manual. Write the invoice number on the inside of the front cover. Keep the manual and invoice in a safe and dry place for future reference.

Safety Warnings and Precautions

WARNING: When using tool, basic safety precautions should always be followed to reduce the risk of personal injury and damage to equipment.

Read all instructions before using this tool!

1. **Do not plug in battery chargers** for cordless power tools if the charger for the power tool has a warning that dangerous voltages are present at the battery terminals.

2. **Keep work area clean.** Cluttered areas invite injuries.
3. **Observe work area conditions.** Do not use machines or power tools in damp or wet locations. Don't expose to rain. Keep work area well lighted. Do not use electrically powered tools in the presence of flammable gases or liquids.
4. **Keep inverter away from any direct heat source or combustible material.** Keep well ventilated.
5. **Do not open the metal case;** risk of electric shock.
6. **Keep children away.** Children must never be allowed in the work area. Do not let them handle machines, tools, or extension cords.
7. **Store idle equipment.** When not in use, tools must be stored in a dry location to inhibit rust. Always lock up tools and keep out of reach of children.
8. **Use the right tool for the job.** Do not attempt to force a small tool or attachment to do the work of a larger industrial tool. There are certain applications for which this tool was designed. It will do the job better and more safely at the rate for which it was intended. Do not modify this tool and do not use this tool for a purpose for which it was not intended.
9. **Dress properly.** Do not wear loose clothing or jewelry as they can be caught in moving parts. Protective, electrically non-conductive clothes and non-skid footwear are recommended when working. Wear restrictive hair covering to contain long hair.
10. **Use eye and ear protection.** Always wear ANSI approved impact safety goggles when using tools. Wear a full face shield if you are producing metal filings or wood chips. Wear an ANSI approved dust mask or respirator when working around metal, wood, and chemical dusts and mists.
11. **Do not overreach.** Keep proper footing and balance at all times. Do not reach over or across running machines.
12. **Maintain tools with care.** Keep tools sharp and clean for better and safer performance. Follow instructions for changing accessories. Inspect tool cords periodically and, if damaged, have them repaired by an authorized technician.
13. **Disconnect power.** Unplug inverter when not in use.
14. **Avoid unintentional starting.** Be sure the switch is in the Off position when not in use and before plugging in any appliance.
15. **Stay alert.** Watch what you are doing, use common sense. Do not operate any tool when you are tired.

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16. **Check for damaged parts.** Before using any tool, any part that appears damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment and binding of moving parts; any broken parts or mounting fixtures; and any other condition that may affect proper operation. Any part that is damaged should be properly repaired or replaced by a qualified technician. Do not use the tool if any switch does not turn On and Off properly.
 17. **Guard against electric shock.** Prevent body contact with grounded surfaces such as pipes, radiators, ranges, and refrigerator enclosures.
 18. **Servicing.** Service this device only with a qualified Technician. This item does not have any replaceable parts.
 19. **Do not operate tool if under the influence of alcohol or drugs.** Read warning labels on prescriptions to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, do not operate the tool.
 20. **Pacemaker safety warning.** People with pacemakers should consult with their physician(s) before using this product; operation of equipment in close proximity to a heart pacemaker could cause interference or failure of the pacemaker.
 21. **Use tools with both hands when required.** Many tools such as chain saws, drills, routers, etc., require the use of both hands when operating. This helps maintain tool stability and keeps hands away from the working area of the tool.

Note: Performance of this unit may vary depending on the inverter voltage, available battery power, or appliance wattage.

Warning: The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

Unpacking

When unpacking, check to make sure the following parts are included. If any parts are missing or broken, please call Harbor Freight Tools at the number on the cover of this manual as soon as possible.

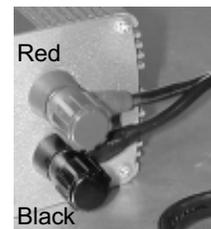


Operation

For the power inverter to work properly, your power source must provide between 10 to 15 volts DC, and the power source must provide enough current (i.e., 33 amps to operate the load of 400 Watts or under).

Caution: This inverter must only be connected to batteries with a nominal output voltage of 12 volts. Lower voltage will not operate the inverter properly, and more voltage could damage it. Do not use this inverter with positive ground electrical systems.

1. Place the Power Inverter on a flat surface. Make sure it has adequate ventilation and is not in direct sunlight.
2. Connect either the lighter output connector cable or the battery clamp cable lugs to the red and black terminal screws on the back of the inverter. Securely tighten.
3. The Power Inverter can be used either while the engine is running or off. Insert the Lighter Output Connector Cable plug firmly into the cigarette lighter socket. Or, connect the Battery Cable Clamps to the negative (black) and Positive (red) terminals of the battery.
4. Plug the 110 VAC device(s) you wish to power into the 3-prong AC Receptacles. See photo on the next page. The appliance(s) must not use more than 400 (total) watts during continuous operation.





Caution: Some rechargeable appliances may damage the Power Inverter or the appliance. When first using a rechargeable device, check its temperature for the first 10 minutes. If it becomes abnormally hot, do not use this device with the Inverter.

5. Flip the Power Switch to the On (I) position to turn on. Do not use the appliance until the green power LED indicator is on.
6. Turn on appliance. If the red overload LED indicator comes on, or an alarm sound is heard, turn off the appliance.

Caution: It is recommended that the vehicle be started every hour to recharge the battery system. Doing this will prevent any unexpected shutdown of the equipment. This will also ensure that there will be enough battery power to start the vehicle.

Appliance Power Consumption

The Appliance Power Consumption table below gives general use wattage. Always verify the appliance wattage before using.

| APPLIANCE | WATTAGE |
|-------------------|----------|
| Buffer | 77 Watts |
| Camcorder Charger | 99 Watts |
| Drill Charger | 8 Watts |
| Glue Gun | 20 Watts |
| 13 inch Color TV | 72 Watts |
| VCR | 40 Watts |
| CD Changer | 60 Watts |
| Laptop Computer | 80 Watts |

Maintenance

This device does not contain any replaceable parts. If it needs service take it to a qualified technician.

Troubleshooting Tips

1. If the low battery alarm sounds, this means that the input voltage is below the necessary 10.7 V. The battery needs recharging. You should stop using the appliance and then recharge the battery. If this is not done the Inverter will shut off automatically at around 10.0 V.
2. The Inverter will automatically shut down if the input voltage exceeds 15 volts DC.
3. The Inverter will shut down when the internal temperature reaches unsafe levels. You may restart the inverter by turning the rocker switch to Off, waiting 15 minutes, and then pushing the rocker switch back to On.
4. If you are unsure if the inverter will have the proper amount of current to run the device, use this rough guideline: Take the power consumption of the load in watts and divide it by 12 (input voltage). The result will be the number of amps needed to power your device.

Example: Load is rated at 320 watts. $320 \text{ watts} / 12 \text{ V} = 26 \text{ amps}$ needed. You could use this device with the inverter.

5. If your television will not start it is important to keep in mind that some appliances may require two to six times their wattage to start up. This inverter will not work with such devices.
6. Your power tools start up but don't continue to run: Try leaving the power to the tool on, while quickly but repeatedly turning the inverter power switch On and Off.
7. If your audio system buzzes while using this inverter, it is because some sound systems can not filter out the modified sine wave produced by the inverter. The only solution is to use a sound system that incorporates a higher quality power supply.
8. This inverter is made to minimize the interference with TV signals. However, especially with weak TV signals, some interference may still be visible. To correct this, place the inverter as far away as possible from the television antenna and its cables. Next, adjust the orientation of the inverter to the antenna cables and TV power cord to minimize the interference. Also use a shielded antenna cable.



9. If the low battery alarm is on all the time try these corrective measures:
Recharge battery if in poor condition. Next, check the condition of the lighter cable plug and the socket. You may need to clean the socket.
10. If you are getting a low output voltage, try reducing the load to minimize watts. You may have overloaded the inverter. Reduce your load to 140 watts. Also, keep input voltage above 10.5 volts to maintain a constant flow of power.
11. If you are not getting any power output, turn the power switch Off, and On again, until the green power light comes on. Some automotive systems require that the ignition be turned on. Turn the ignition to the accessory position. Your devices may draw too much power to operate them. The inverter may be in thermal shutdown. Let it cool down and make sure there is adequate ventilation around the unit.

