

**CHICAGO POWER
ELECTRIC® SYSTEMS**

100 WATT MINI/SLIM POWER INVERTER

Model 95519

ASSEMBLY AND OPERATION INSTRUCTIONS



Due to continuing improvements, actual product may differ slightly from the product described herein.



3491 Mission Oaks Blvd., Camarillo, CA 93011

Visit our website at: <http://www.harborfreight.com>

**TO PREVENT SERIOUS INJURY, READ AND UNDERSTAND
ALL WARNINGS AND INSTRUCTIONS BEFORE USE.**

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

REV 1/07

SPECIFICATIONS

Continuous Output Power	100 Watts
Peak Power	200 Watts
Input Voltage	13.8 Volts DC
Output Voltage	115 Volts AC @ 60 Hz
Automatic Shutdown	At 10.2 Volts DC
AC Receptacle	One 3-Prong, Grounding Outlet
USB Port Output	5 Volt/250 mA DC (500 mA Maximum)
Maximum Efficiency	Approximately 80% with Full Load
Power Connector Type	16 AWG x 2C x 24" Long Wire/Lighter Plug with F10A/250V Fuse
Power Switch Type	Clear Push-Button with 3-Way LED: Green LED Indicates 12 Volt DC Power to Unit Green LED Indicates AC Power Output is Active Red LED Indicates Overheating, Electrical Problem
Thermal Shutdown	<149° F
Accessories	Carrying Case
Dimensions	4" W x 2-9/16"L x 7/8" T
Unit Weight	0.4 Pound

SAVE THIS MANUAL

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

GENERAL SAFETY RULES

 **WARNING!**

READ AND UNDERSTAND ALL INSTRUCTIONS
Failure to follow all instructions listed below may result in
electric shock, fire, and/or serious injury.
SAVE THESE INSTRUCTIONS

WORK AREA

1. **Keep your work area clean and well lit.** Cluttered benches and dark areas invite accidents.
2. **Do not operate power equipment in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.** Power equipment creates sparks which may ignite the dust or fumes.

ELECTRICAL SAFETY

1. **Never remove the grounding prong of a power tool or appliance or modify the plug in any way. Do not use any adapter plugs with this product.** If the tool or

appliance should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user.

2. **Double insulated tools and appliances are equipped with a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. Do not change the plug in any way.** Double insulation eliminates the need for the three wire grounded power cord and grounded power supply system.
3. **Avoid body contact with grounded surfaces such as pipes, radiators, ranges, and refrigerators.** There is an increased risk of electric shock if your body is grounded.
4. **Do not expose power tools and appliances to rain or wet conditions.** Water entering a power tool or appliance will increase the risk of electric shock.
5. **Stay alert. Watch what you are doing, and use common sense when operating this product. Do not use this product while tired or under the influence of drugs, alcohol, or medication.** A moment of inattention while operating this product may result in serious personal injury.

PERSONAL SAFETY

Use safety equipment. Always wear ANSI-approved safety impact goggles when using this product.

TOOL USE AND CARE

1. **Do not force this product. Use the correct product for your application.** The correct product will do the job better and safer at the rate for which it is designed.
2. **Do not use the Inverter if the Power Switch does not turn it on or off.** Any product that cannot be controlled with the Power Switch is dangerous and must be replaced.
3. **Turn off the Inverter and unplug it from its Power Cord before making any adjustments, changing accessories, or storing a tool or appliance.** Such preventive safety measures reduce the risk of starting the tool or appliance accidentally.
4. **Store the Inverter out of reach of children and other untrained persons.** This product may be dangerous in the hands of untrained users.
5. **Maintain this product with care. Keep the Inverter clean and dry.** Properly maintained power equipment are less likely to bind and are easier to control. Do not use this product if damaged. Tag a damaged Inverter “**Do not use**” until repaired.
6. **Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect this product’s operation. If damaged,**

have the Inverter serviced before using. Many accidents are caused by poorly maintained power equipment.

7. **Use only accessories that are recommended by the manufacturer for your model.** Accessories that may be suitable for one Inverter may become hazardous when used on another Inverter.

SERVICE

1. **Product service must be performed only by qualified repair personnel.** Service or maintenance performed by unqualified personnel could result in a risk of injury.
2. **This Inverter does not contain any replaceable parts.** If the unit needs service, make sure to take it to a qualified service technician.
3. **Maintain labels and nameplates on the Inverter.** These carry important information. If unreadable or missing, contact Harbor Freight Tools for a replacement.

SPECIFIC SAFETY RULES

1. **WARNING! Do not plug in a battery charger if the charger has a warning that dangerous voltages are present at the battery terminals.**
2. **Keep the Inverter away from any direct heat source or combustible material.**
3. **Avoid potential electrical shock. Do not attempt to open the metal housing of the Inverter.**
4. **Always disconnect power from the Inverter when not in use.**
5. **Avoid unintentional starting.** Make sure the Power Switch of the Inverter is in the “OFF” position when not in use and before plugging in any tool or appliance.
6. **Keep the Inverter well ventilated.** Do not place any objects on top of or next to the Inverter or wrap anything around the Inverter. Doing so can cause the Inverter to overheat, causing a potential fire hazard and/or damage to the Inverter.
7. **Make sure to read and understand all warnings and safety precautions as outlined in the manufacturer’s manual for the device that this Inverter is used to power.**
8. **Performance of this unit may vary depending on the Inverter voltage, battery power, or tool/appliance wattage.**
9. **The Inverter housing will become hot when in use.** Avoid touching materials (clothes, sleeping bags, carpet, etc.) to the Inverter that can not withstand such high temperatures. Avoid touching a hot Inverter with your fingers and hands.

10. **CAUTION!** This Inverter must only be connected to a circuit with a nominal output voltage of 12 VDC. Lower voltage will not operate the Inverter properly, and more voltage could damage the unit.
11. **Do not use this Inverter with positive ground electrical systems.**
12. **CAUTION!** Some rechargeable tools and appliances may damage the Inverter or the tool/appliance. When first using a rechargeable device, check its temperature for the first ten minutes. If it becomes abnormally hot, do not use the device with the Inverter.
13. **It is recommended that the vehicle be started every hour to recharge its battery system.** Doing so will help prevent any unexpected shutdown of the equipment. This will also ensure there will be enough battery power to start the vehicle.
14. **Do not attempt to power a device over 100 watts.** Doing so will damage the Inverter.
15. **Do not attempt to connect or set up the unit or its components while operating your vehicle.** Inattention to the road may result in a serious accident.
16. **This Inverter is not designed for use with medical devices.**
17. **WARNING!** People with pacemakers should consult their physician(s) before using this product. Electromagnetic fields in close proximity to a heart pacemaker could cause interference to or failure of the pacemaker.
18. **WARNING!** The warnings and cautions discussed in this 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.

SAVE THESE INSTRUCTIONS

UNPACKING

When unpacking, check to make sure all the parts shown in the illustrations on **page 8** are included. If any parts are missing or broken, please call Harbor Freight Tools at the number shown on the cover of this manual as soon as possible.

OPERATION INSTRUCTIONS

1. **NOTE:** For this Inverter to work properly, your power source must provide nominal 12 volts DC, and the power source must provide enough current to operate a load of 100 Watts or under.
2. Place the Inverter on a dry, flat, level surface capable of supporting the weight of the unit. Make sure the Inverter has adequate ventilation and is not in direct sunlight.
3. Connect the 12 volt DC Cigarette Lighter Connector to the Inverter.
4. Connect the 12 volt DC Cigarette Lighter Plug to the vehicle's Cigarette Lighter Receptacle.
5. Press the Power Switch on the Inverter to turn the unit on. The LED in the Power Switch will illuminate a dim BLUE indicating the Inverter is receiving 12 volt DC power.
6. **NOTE:** If the Inverter does not turn on, check to make sure the vehicle's ignition switch is actually powering the Cigarette Lighter Receptacle. Some vehicles require the ignition switch to be turned on.
7. Plug the 115 volt AC device you wish to power into the 115 volt AC Outlet on the Inverter or the USB powered tool/appliance into the Inverter's USB Power Port. The tool/appliance must not use more than 100 (total) watts during continuous operation, otherwise it may overload the Inverter.
8. **NOTE: The Inverter's USB Power Port does not support data communications. It only provides 5 volt/500 mA DC maximum power to an external USB powered device. USB power output is not controlled by the Power Switch of the Inverter. USB power is always on when the Cigarette Lighter Power Cord is connected to a 12 volt DC power source.**
9. Operate the tool/appliance normally.
10. **NOTE: The Inverter will not operate tools/appliances that generate heat such as hair dryers, electric blankets, microwave ovens, toasters, etc.**

Protective Features

1. **Low battery voltage:** Though not harmful to the Inverter, this condition could damage the power source. In this case, the Inverter will automatically shut down when DC input voltage falls below 10.2 volts DC.
2. **Input voltage too high:** This situation can damage the Inverter. To avoid damage, the Inverter will automatically shut down when DC input voltage exceeds 15.0 volts.

3. **Thermal shutdown protection:** The Inverter will automatically shut down when the unit exceeds 149° Fahrenheit.
4. **Overload & short circuit protection:** The Inverter will automatically shut down when a short circuit occurs.
5. **AC ground leakage:** The Inverter will automatically shut down when current leakage exceeds safety level.
6. **NOTE:** The LED Light on the Inverter will illuminate RED to indicate an input voltage problem or alternately blink RED and BLUE to indicate one of the other problems listed above before automatic shut down occurs.
If the Inverter shuts down, turn its Power Switch to “OFF”. Remove the load. Wait several minutes. Then, turn the unit back on.

TOOL/APPLIANCE POWER CONSUMPTION

The Table below gives *approximate* general use wattage. **Always verify the tool/appliance wattage before using the Inverter.**

TOOL/APPLIANCE	WATTAGE
Buffer	77 Watts
Camcorder Charger	99 Watts
Drill Charger	8 Watts
Glue Gun	20 Watts
13" Color Television	72 Watts
VCR	40 Watts
CD Changer	60 Watts
Laptop Computer	80 Watts

INSPECTION, MAINTENANCE, AND CLEANING

1. **WARNING! Always make sure the Power Switch of the Inverter is in the “OFF” position and the unit is disconnected from its power source before performing inspection, maintenance, or cleaning procedures.**
2. **Before each use, inspect the general condition of the Inverter.** Check for misalignment or binding of moving parts, cracked or broken parts, damaged electrical wiring, and any other condition that may affect its safe operation. If abnormal heat, noise, or vibration occurs, have the problem corrected before further use. **Do not use damaged equipment.**
3. **To replace the Fuse:** Turn the Fuse Cap on the Plug end of the Cigarette Lighter Power Cord counterclockwise and remove to expose the Fuse. Pull out the old Fuse and replace with a new **F10A/250V** Fuse. Then replace the Fuse Cap.
4. **To clean the exterior parts of the Inverter, use only a clean, dry cloth. Do not clean the unit with water or harsh cleaners.**
5. **NOTE: This Inverter does not contain any replaceable parts.** If the unit needs service, make sure to take it to a qualified service technician.
6. Make sure to store the Inverter in a clean, dry, safe location out of reach of children and other unauthorized people.
7. **CAUTION! All maintenance, service, or repairs not mentioned in this manual must only be performed by a qualified service technician.**

TROUBLESHOOTING

1. **If you are unsure if the Inverter will have the proper amount of current to run a tool/appliance, use this rough guideline:** Take the power consumption of the load in amps and multiply it by 12 (input voltage). The result will be the approximate number of watts needed to power the tool/appliance.
Example: Load is rated at 26 amps. 26 amps x 12 volts = 312 watts needed. You cannot use this device with the Inverter.
2. **If your television will not turn on, it is important to keep in mind some appliances (including many televisions) may require two to six times their wattage to turn on.** This Inverter will not work with such devices.
3. **If your audio system buzzes while using this Inverter, it is because some sound systems cannot filter out the modified sine wave produced by the Inverter.** A possible solution is to use a sound system that incorporates a higher quality power supply.
4. **This Inverter is designed to minimize the interference with television signals.** However, especially with weak television signals, some interference may still be vis-

ible. 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 television power cord to minimize the interference. Also, use a shielded antenna cable.

5. **If the low battery alarm is on all the time, try these corrective measures:** Re-charge the battery. Next, check the condition of the cigarette lighter cable plug and the socket. You may need to clean the socket.
6. **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 under 100 watts. Also, keep input voltage above 10.1 volts DC to maintain a constant flow of power.
7. **If you are not getting any power output, turn the Power Switch off and on again.** 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 the unit cool down, and make sure there is adequate ventilation around the unit.

WARRANTY

**CHICAGO POWER
ELECTRIC[®] SYSTEMS**

LIMITED 90 DAY WARRANTY

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of ninety days from the date of purchase. This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

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

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