

# Part # 53300

## DC to AC 3000 Watt Power Inverter

### Instruction Manual

#### CAUTIONS:

- This is not a toy. Keep out of reach from children.
- DO NOT install near flammable materials.
- DO NOT use or make connections in mark or designate as IGNITION PROTECTED.
- DO NOT expose to rain, snow, water, or any other liquids.
- DO NOT use with positive ground electrical systems.
- NEVER connect the inverter to AC distribution wiring.
- DO NOT plug foreign objects into the receptacles.
- DO NOT open, there are no user serviceable parts inside.



**CAUTION: SERIOUS SHOCK HAZARD.** This inverter should only be serviced by qualified personnel. There are no user serviceable parts.  
Discharge capacitors before servicing.

#### INTRODUCTION:

This inverter can operate most AC appliances such as camcorders, computers, fax machines, TVs, and power tools from the 12V DC current from your vehicles battery. This fully portable unit gives you a standard AC outlet anywhere your vehicle is located.

#### FEATURES:

- Low Battery Automatic Shutdown
  - Overload and Short Circuit Protection
  - Reverse Polarity Protection
  - Compact Size, Light Weight, and High Efficiency
  - High Surge Current Capability to Start TVs, Motors and Other Inductive Loads
  - Thermal Protection
  - Built-in Cooling Fans
  - Soft Start Technology
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## INSTALLATION AND OPERATION:

1. Using the included cables, directly connect the inverters (-) and (+) terminals to your automotive batteries respective (-) and (+) terminals, (See Figure 1 below). The cables should be bolted to the battery clamps for a solid connection (do not use jumper cables for installation). We recommend using an ANL inline fuse or circuit breaker (not included). The ANL fuse or breaker should be as close to the battery as possible, installed on the positive (+) cable. Please refer to the specifications table on page 1 for recommended wire sizes and fuse/breaker sizing. NOTE: There will be a spark between the cable from the negative terminal of the inverter when it is first connected to the negative terminal of the battery

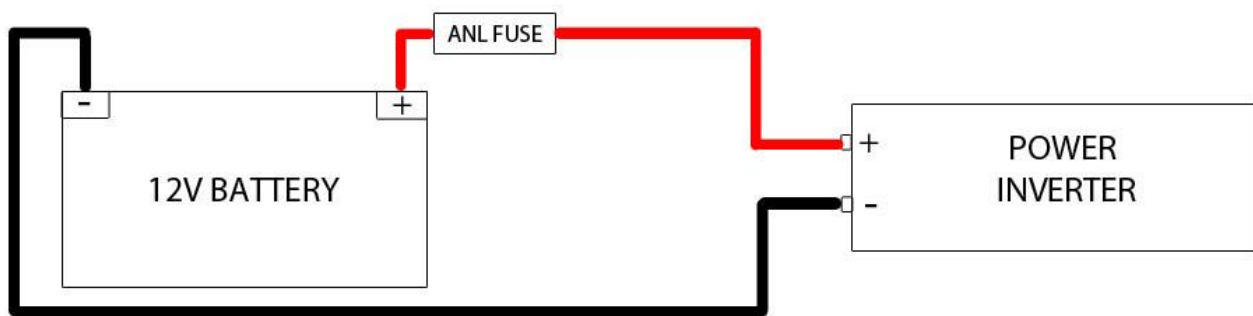


Figure 1

2. With the inverter switched "OFF" plug the AC appliance into the inverter.
3. Turn the inverter on.

### OPERATION NOTES:

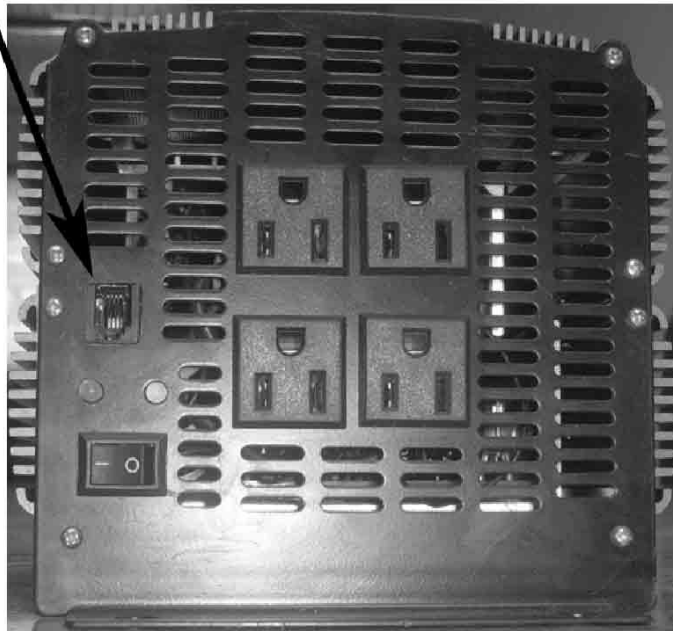
1. **Low Battery Alarm:** the inverter sounds an audible alarm and turns itself off if the source battery becomes too low.
2. **EQUIPMENT LOAD:** The unit has a built-in overload protection circuit. If the inverter is overloaded the inverter will turn off. In order to resume output the load will need to be removed and the inverter will need to be turned off then back on. Inductive loads may draw 3-5X or more than their normal current in order to start and while under a heavy load.
3. **BATTERY POLARITY:** The black (-) negative post on the inverter MUST be hooked to the negative (-) terminal of the battery.  
The red (+) post on the inverter MUST be hooked to the positive (+) terminal of the battery.
4. **DISPERSION OF HEAT:** During normal operation the inverter will get warm. The amount of heat generated will vary with the power draw of the equipment being operated. The inverter MUST be installed in a manner that allows air to circulate freely around the inverter. The sound created by the fan and the air being moved through the inverter to cool it is normal.
5. **USE OF CAR BATTERY:** To prevent a vehicle battery from discharging below the voltage required to start the vehicle engine, we recommend that the operator start the vehicle before battery voltage is reduced to 11 volts to recharge the battery system. The unit may be used while the engine is running or turned off. However, do not start a vehicle's engine while the inverter is in use.
6. **LOW VOLTAGE AND OVERVOLTAGE CONDITIONS:** When input voltage decreases to ~10.5V, the output will turn off. When the input voltage increases to ~15.5V, the output will turn off.

**7. EXTENSION CORDS:** The use of extension cords from the AC outlet will not significantly decrease the power supplied by the unit. However, for the best operating results, an extension cord of less than 60 feet is recommended. Use 3 prong extension cords. Use exterior extension cords.

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The Inverter model # 53300 is equipped with a special auxiliary socket for an optional extended wired ON/OFF remote switch (sold separately).

Socket for extended ON/OFF switch (sold separately).



**TROUBLESHOOTING:**

Problem	Possible Causes	Suggested Solutions
-No AC output & Red LED lit	<ul style="list-style-type: none"> <li>▪ The DC input is too low</li> <li>▪ Appliance load is excessive</li> </ul>	<ul style="list-style-type: none"> <li>▪ Check input connections</li> <li>▪ Recharge Battery</li> <li>▪ Replace Battery</li> <li>▪ Turn unit off, remove load, turn unit on</li> </ul>
-No AC output & Green LED lit.	<ul style="list-style-type: none"> <li>▪ Lose Input Connections</li> <li>▪ Internal Fuses</li> </ul>	<ul style="list-style-type: none"> <li>▪ Check input connections</li> <li>▪ Have qualified technician test and replace internal fuses if necessary.</li> </ul>
-Motorized appliance will not start.	<ul style="list-style-type: none"> <li>▪ Inadequate DC power supply</li> <li>▪ Bad wiring or connection</li> <li>▪ Appliance load is excessive</li> </ul>	<ul style="list-style-type: none"> <li>▪ Use battery of adequate size</li> <li>▪ Use appropriate DC input cables</li> <li>▪ Check all DC connections</li> </ul>

**SPECIFICATIONS:**

Name	Description
Input	12V (10-15V) DC
Output	115VAC $\pm$ 5%
Output frequency	60Hz $\pm$ 2Hz
Output waveform	Modified Sine Wave
Output receptacles	Two 3-prong grounded sockets.
Continuous power	3000 watts
Surge power	6000 watts
Best efficiency	Approx. 90%
No load current	<0.7A
Battery low shutdown	10 $\pm$ 0.5VDC
Battery low alarm	10.5 $\pm$ 0.5VDC
Over Voltage Shutdown	15.5 $\pm$ 0.5V
Recommended Input Wire Size @ 3 Feet	#2/0 (00)
Recommended ANL Fuse Size (not included)	500A

## **WARRANTY**

FJC warrants this inverter for 1 year from date of purchase with proof of purchase. As we cannot control the use of our products, the guarantee shall not exceed the purchase price. We make no other warranty of any kind expressed or implied. This inverter is warranted to be free from defects in material and workmanship under normal use and service for 1 year after the sale of this product by FJC, Inc. FJC's sole obligation under this warranty shall be to repair or replace any defective product or parts thereof, which are returned to our factory. The warranty shall not apply to any product or part which has been subject to misuse, negligence or accident. FJC, Inc. shall not be responsible for any special or consequential damages and the warranty as set forth is in lieu of all other warranties either expressed or implied. However FJC, Inc. makes no warranty or merchantability in respect to this inverter for any particular purpose other than that stated in this manual.

### ***FJC, Inc.***

101 Commercial Drive  
Mooresville, NC  
704-664-3587

## **RETURNS**

All merchandise to be returned must have a prior authorization from FJC, Inc. Contact FJC, Inc. before sending any product back to FJC.