



Part # 53100, 53115, 53200

DC to AC 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.

SPECIFICATIONS:

	53100	53150	53200
Max Continuous Output	1000W	1500W	2000W
Peak/Surge Capacity	2000W	3000W	4000W
Normal Input Voltage	12VDC		
Input Voltage Range	10-15VDC		
Max Efficiency	90%		
Output Voltage	115VAC ± 5%		
Output Frequency	60Hz ± 2Hz		
Output Waveform	Modified Sine Wave		
Low Voltage Shutdown	10.5 ± 0.5V		
Over Voltage Shutdown	15.5 ± 0.5V		
No Load Current Draw	<0.5A	<0.5A	<0.7A
Recommended Input Wire Size @ 3 Feet	#4	#4	#2

Recommended ANL Fuse Size (not included)		200A	250A	500A
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INTRODUCTION:

This inverter can operate most AC appliances such as camcorders, computers, fax machines, TVs, and power tools from the 12VDC 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

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.

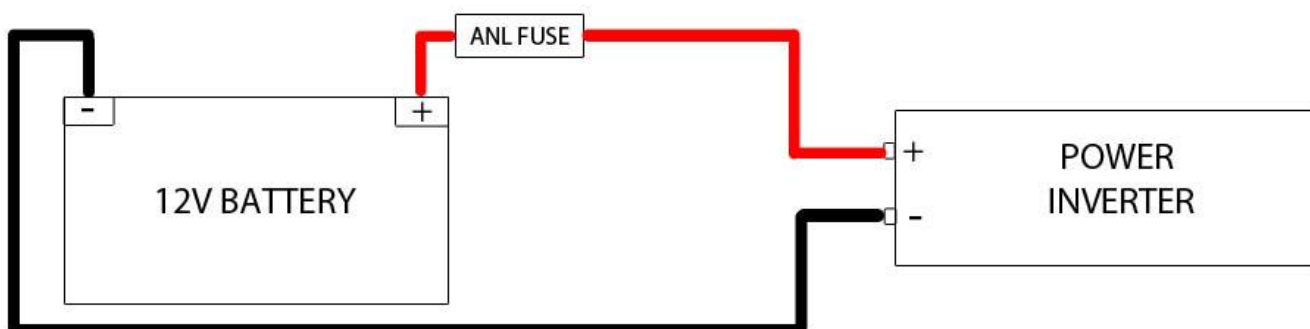


Figure 1

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 then turns itself off if the source battery voltage becomes too low. In order to resume output, the battery will need to be charged and the inverter will need to be turned off then back on.

2. EQUIPMENT LOAD

The unit has a built-in overload protection circuit. If the inverter is overloaded the inverter will cut 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 be turned off.

When the input voltage increases to ~15.5V, the output will be turned 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 25 feet is recommended. Use 3 prong extension cords. Use exterior extension cords.

TROUBLESHOOTING:

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