

# POWER INVERTER

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800W 12V/60Hz

 **GREANTECK**

## AFTER-SALES SERVICE

Dear customer:

GREANTECK adheres to the principle of comprehensive, high quality and fast service. Taking your satisfaction as the highest goal, we provide you with the following services:

1. Free 2-year warranty for the GREANTECK modified power inverter.
2. After the delivery, we will follow up and consult according to the customer's contact information to ensure your satisfaction and proper use. All feedback on the quality and use of the product will be replied to within 24 hours. And we will determine the measures to deal with the actual situation based on your feedback.
- a) We will answer any of your professional technical questions within 24 hours.
- b) We will give you professional advice and guidance base on your feedback to facilitate your own troubleshooting of simple machine failure.
- c) Carefree Warranty.If the inverter has a complicated fault or the machine parts are damaged during the warranty period, you can contact us to send it for repair. The local repair service can guarantee you a worry-free use of the inverter.
4. In the case of quality problems under normal use, please contact us as soon as possible to facilitate the timely repair and replacement of your products.
5. If any problems with products that are out of warranty, please contact us and we will try our best to assist you in solving the problem.
6. The following situations are not covered by the warranty:
  - a. Self-disassembly products
  - b. Unauthorized repair, misuse and modification
  - c. Damaged by abnormal voltage, fire, liquid and other external causes

## GENERAL INFORMATION

The GREANTECK Modified Sine Wave Power Inverter delivers outstanding performance for back-up power and off-grid system, which is widely used in emergencies or household. The advanced modified sine wave technology provide cleaner, smoother and more reliable power for sensitive equipment without any interference. Brilliant design using top electronic materials makes it safe,stable with long machine-life.

### Key Features

1. Compact,lightweight and robust design
2. Optimized for 12 VDC system voltage
5. Integrative safety protection (under-voltage, over-voltage, AC Over-load, Over Heating, Short Circuit and Reverse connect)
6. Excellent surge rating :  $2 \times$  the power rating
7. Ground-fault circuit interrupter protection
8. Ultra-silent cooling system
9. Build-in 2 x AC sockets, 2 x USB ports

## IDENTIFICATION OF PARTS

### ■ Key Parts

1. **USB Power Port** — (Max 3.4A)5±0.2V for small electronic devices.
2. **AC sockets** — Up 4.1 amps at 120VAC 60Hz.
3. **ON/OFF/REMOTE Switch** — Under proper operation, the indicator will light up red when the ON/OFF button is pressed.
4. **Negative Terminal** — Negative (-) DC Input (Black)  
**Positive Terminal** — Positive (+) DC Input (Red)
5. **Cooling Fan** — Thermally controlled

## INCLUDED COMPONENTS

The GREANTECK modified sine wave inverter will come with :

Cigarette Lighter Plug x 1  
Alligator Battery Clips x 2  
Fuses x 2

# **IMPORTANT SAFETY INSTRUCTIONS**

**Please read these instructions carefully.**

In order that you can better use this inverter and prevent accidents of personal injury and object damage, please focus on the contents of the safety precautionary points and use common sense in life to operate the inverter carefully. This manual contains important safety, installation and operating instructions for the inverter.

Please be sure to read and comply with the following symbols in this manual :

 **Indicates what must be performed**

 **Indicates prohibited operations**

 **Indicates the possibility of fire**

## **■ General Safety Information**

-  **NEVER disassemble or attempt to repair the inverter without guidance of a professional GREANTECK service team staff.**
-  **Installation and wiring must comply with the Local and National Electric Codes (NEC) and must be done by a certified technician.**
-  **Read all of the instructions and cautions in the manual before beginning the installation.**
-  **Make sure all connections going into and from the inverter are tight. There may be sparks when making connections, therefore, make sure there are not flammable materials or gases near installation.**

## ■ Electric Safety

### WARNING

- 🚫 NEVER connect the AC output of the unit directly to an Electrical Breaker Panel/ Load Centre which is also fed from the utility power / generator.
- 🚫 NEVER use with positive ground electrical systems. The unit is designed to be used with a negative ground electrical system!
- ❗ The inverters are suitable for 12V Battery Banks ONLY.
- ❗ Make sure the inverter is off before connecting anything.
- ❗ When connecting battery terminals, ensure the polarity of the battery connections is correct. Incorrect polarity may cause permanent damage to the unit.
- ❗ ALWAYS make sure inverter is in OFF position and disconnect all AC and DC connecting when working on any circuit associated with the inverter.
- ❗ Be careful when touching bare terminals of capacitors as they may retain high lethal voltages even after power is removed.

## ■ Installation Safety

### 1. Placement Requirements

Make sure there is enough space and that the installation is done according to the guidelines

#### WARNING

- 🚫 NEVER install the inverter in a sealed enclosure with flooded batteries. Gas can accumulate and there is a risk of explosion.
- 🚫 NEVER mount the inverter vertically on a vertical surface since it would present a hazard for the fan opening which will affect your inverter's life and even causing other dangers.
- 🚫 NEVER mount the inverter upside down.
- ❗ GREANTECK Inverter should be placed in a horizontal position.
- ❗ **Well-ventilated area** — Allow at least 12 inches of clearance around the inverter to keep objects from blocking the vents and to provide adequate air circulation.
- ❗ **Dry** — No liquids are allowed near the inverter. It should be in a place where there is no moisture of any kind.
- ❗ **Cool** — Inverters must be in an area where the fans are not blocked. Do not put the inverter under direct sun light or near a heating source. The ambient temperature should be controlled from 32 to 104°F (preferred temperature of 50- 77°F).

- ① **Less dust area** — Do not install inverter in an environment with high dust, saw dust residue or other particles that may get sucked into the inverter increasing internal temperature.
- ① **Close proximity to battery bank** — prevent excessive voltage drop by keeping the unit close to the battery bank and having a properly sized wire going from the battery bank to the inverter.
- ① **Protection against fire hazard** — There will be some electrical arcing or spark when the inverter connects with the battery. The unit should be away from any flammable material, liquids, gas or any other combustible material. Otherwise it may cause severe consequences.
- ① **Separate compartment from battery** — Do not install the inverter in the same compartment as the battery bank because it could serve as a potential fire hazard.

## CAUTION

- ① Cockroaches or other insects may cause damage to the machine, so please take care to keep the machine and the surrounding environment hygienic.

## RECOMMENDATION

We recommend mounting the inverter on something stable such as floor, table or stable support to prevent it from bouncing. Mount in a location that can support the weight of the inverters. It is better to fix the product with four screws.

## SPECIAL NOTES FOR CHILDREN

- 🚫 NEVER allow children to use the inverter
- 🚫 NEVER install the unit where it is accessible to children. Keep the unit away from children.
- ❗ Accessories may cause harm to children, please place all accessories in places that are not easily accessible to children.

## 2. DC Side Connection Requirements

### WARNING

- ❗ The GREANTECK modified sine wave inverters are suitable for 12V battery bank systems only. not following the minimum DC requirement will cause irreversible damage to the unit.

### CAUTION

- ❗ Be careful of the positive and negative poles. Reversing the poles might cause permanent damage to the inverter. It will surely blow the internal fuse.

### NOTE

- ❗ The input terminals of the inverters have large capacitors connected to them. Once a positive and negative wire are connected to the terminals, it will complete the circuit, and commence drawing a heavy current momentarily. As a result, there may be a sparking occurring even if the inverter is in the off position. To minimize sparking, it is recommended that the user have the appropriate size wire feeding into the inverters and/or install an external fuse leading into the inverter.

## SECURE CONNECTION OF THE INVERTER

- a. NEGATIVE: Connect one side of the provided Negative(BLACK) DC cable to the Negative(-) bolt of the inverter, and the other side to the Negative(-)post of the battery.
- b. POSITIVE: Connect one side of the provided Positive(RED) DC cable to the Positive(+) bolt of the inverter, and the other side to the Positive(+)post of the battery.
- c. The nuts of the connection posts must be tightened to ensure a good connection.
- d. SWITCH BUTTON: Please note that the switch has 2 gears. From top to bottom are on, off.
- e. The inverter will shutdown automatically if connection reversed. Irreversible damage to the machine cannot be excluded which will affect your warranty.

### **3. Battery Bank Requirements**

- !** The battery is for supplying DC input voltage to the inverter. Its rated voltage should be the same as the rated input voltage of the GREANTECK inverter. Any voltage that exceeds the input voltage range of the inverter will cause the inverter to be overloaded and may damage the inverter.
- !** The battery ought to supply enough current for the load. (The load is the amperage or wattage rating of the equipment being powered by the inverter.) A small capacity battery cannot supply enough power for large electrical equipment and it will cause the inverter to be under-voltage.

## ■ Operation Safety

Assuming proper battery connection, the inverter is now ready for use.

### 1. AC Side Operation

- a. Connect electronic devices to electrical socket(s) on inverter. Flip inverter power to ON position (on AC side).
- b. When finished, switch AC devices off FIRST, then turn off inverter switch

#### CAUTION

- ! Make sure that the switches of the inverter and appliance power are in OFF position before connection.
- ! When switching off the Inverter, turn off the electronic devices first. Although the Inverter Is off, the capacitors will still have a charge, so the DC and AC terminals must be disconnected If altering the circuitry.

## ■ Use Safety

1. Do not operate the inverter if under the influence of alcohol or drugs. Read warning labels on prescriptions to determine if your judgement or reflexes are impaired while taking drugs. If there is any doubt, do not operate the inverter.
2. People with pacemakers should consult their physician(s) before using this product. Electromagnetic fields in close proximity to a pacemaker could cause interference to or failure of the pacemaker.
3. Avoid unintentional starting. Be sure the switch is in the OFF position when not in use and before plugging in any appliance.
4. The power inverter will output the same AC power as utility power, please treat the AC outlets as carefully as you would treat an AC outlets at home. Do not put anything besides the appliance into the output terminals. It may cause electric shock or fire. Do not put anything besides the electrical appliance into the output terminal. It may cause electric shock or fire.

## Parameters

Model	GTM - 800 Watts
Rated Input Voltage	12VDC
Continuous Power	800W
Peak Power	1600W
Input Voltage Range	9.5-16VDC
Over Voltage Shutdown	16VDC
Low Voltage Shutdown	9.5VDC
Low Voltage Alarm	10VDC
No Load Current	0.4±0.1A
Over Load Protection	800W
Output Voltage	<input type="checkbox"/> 110V / <input type="checkbox"/> 120V AC±10%

## Parameters

### Model GTM - 800 Watts

Frequency	<input type="checkbox"/> 60Hz $\pm 1$ Hz
Wave Form	Modified Sine Wave
Efficiency	$\geq 85\%$
Over Heat Protection	149°F $\pm 8$ °F
Short Circuit Protection	Yes
USB	5VDC ,      MAX 3.4A
Cooling Fan	Thermal controlled cooling fan. It works only when the inverter housing temperature reaches 104°F.
Operating Temperature (Automatic Recovery/ Shutdown)	32-113°F
Storage Temperature	14-113°F



GREANTECK reserved the right to change the contents of this manual without notice.