



User Manual

Charger Inverter / UPS

INV-1500

1. INTRODUCTION

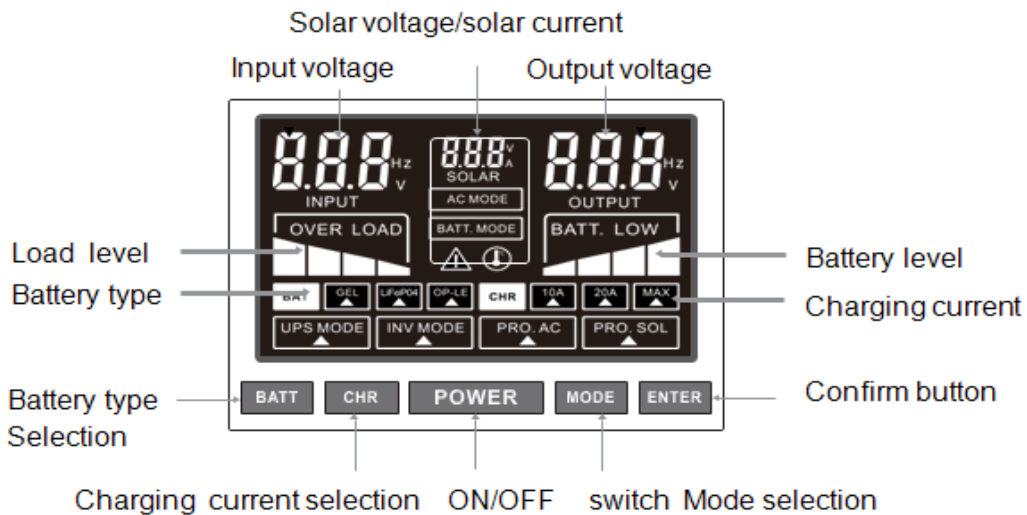
This is a sine wave inverter that provides clean, pure sine wave power with low harmonic distortion to your installation. and has very short transmission times during power outages. It provides over 98% efficiency under normal power conditions. It contains a three-stage smart battery charger to keep your battery in optimal condition.

2. MAIN FEATURES

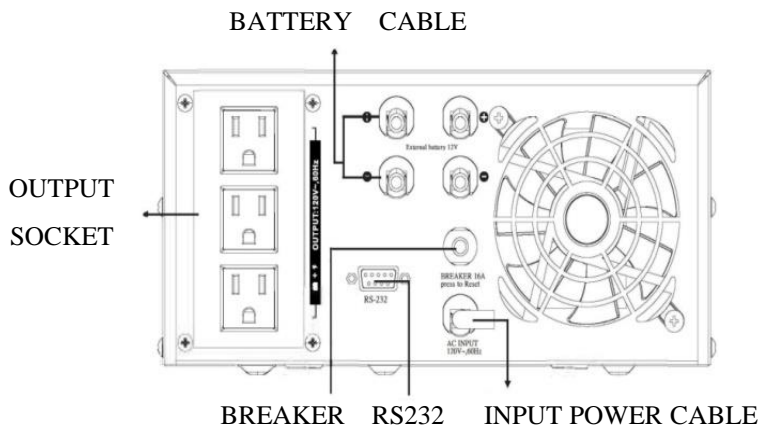
- ★ Pure sine wave output
- ★ Microprocessor based design.
- ★ Three-stages of Smart charging.
- ★ Real time auto-detection for battery Condition.
- ★ Protection for overload, short circuit, & over temp.
- ★ Isolation between battery and AC utility.
- ★ Outstanding dynamic performance.
- ★ Speed control for cooling fan.

3. DESCRIPTION OF APPEARANCE

3.1 DISPLAY PANEL :



3.2 REAR PANEL :



4. OPERATION

4.1 External battery operating procedures

- 4.11 Please follow the parameter table, series battery and ensure proper battery voltage first.
- 4.12 Red battery cable connects to positive and black cable for negative. Battery cable and polarity.
- 4.13 must be connected securely. Do not short. The positive and negative of the battery electrode or joint reversely.

When connecting the battery cable, occurrence of spark in the joints is normal phenomenon.

4.2 Operation Modes

- 4.12 Press " POWER "for 3 seconds to turn on or turn off the inverter.
Double press "POWER" fast to select "PRO AC"(AC Preferred) or "PRO SOL"(solar preferred)
Default= PRO AC. (for solar inverter ONLY)
If " PRO AC " is selected, the inverter will be powered by AC after it's fully charged. If " PRO SOL " is However this may reduce the battery life due to frequent charging and discharging

- 4.13 << HOW to settle " BATT "
- Press 'BATT' and ▲ flashes. Keep on pressing it till it reaches the battery type you
Choose, then press 'ENTER 'to set it up. Battery type includes "GEL" (Suitable for Gel battery).
"LiFeP04"(Suitable for LiFeP04 battery) and "OP-LE"(Suitable for Lead-Acid battery).

- 4.14 << HOW to settle " CHR "
- Press "CHR"and.▲ flashes. Keep on pressing it till it reaches the charging current you want, then press

- 4.15 << HOW to settle " MODE "
- Press "MODE" and you will see.▲ flashes.in turns between "UPS MODE" and "INV MODE", keep on

- 4.16 Press "ENTER" about 4 seconds to enter Advanced Menu
The first page is to select the battery voltage of turning off. There are options of 10.0V,10.5V, 10.8V and
Press "BATT' to previous option, press "CHR" to next option, and then Press "ENTER" to select the option
The second page is to select the battery voltage of switching to AC charging. There are options of 11.4V,
The third page is to select "PRO AC"(AC preferred) or "PRO SOL"(solar preferred).
The fourth page is confirmation page, select "YES" to confirm the selection of previous 3 pages, Select "NO"

5. IMPORTANT SAFETY INSTRUCTIONS

- ★ When replacing the batteries, use the same number and the same type of batteries.
- ★ Do not dispose of batteries in a fire; the battery may explode
- ★ Do not open or mutilate the battery or batteries, released electrolyte is harmful to the skin and eyes
- ★ A battery can present a risk of electric shock and high short circuit current. The following Precaution should be observed when working on batteries.
- ★ Remove watches, rings or other metal objects.
- ★ Use tools with insulated handles
- ★ with disconnection of this unit from the main, hazardous voltage still may be accessible through supply of battery
- ★ The lead acid battery may cause chemical hazard
- ★ The battery presents a risk of electric shock and energy hazard.

6- SPECIFICATION

Capacity	1500VA / 1000W
Battery Type	DC 12V
Input Voltage Range	UPS .Mode : 85-145 ± 5 (Vac) INV Mode : 70-145 ± 5 (Vac)
Input Frequency	45 ~ 65Hz
Output Voltage Range (AC mode)	UPS mode: 102 - 130 ± 5 (Vac) INV mode : 85 - 130 ± 5 (Vac)
Output voltage (battery mode)	120 ± 5 (Vac)
Output Frequency (battery mode)	60Hz ± 0.5Hz
Transfer Time	< 10 ms
Charging Current(max)	10A / 20A (selectable)
Output Wave Form (battery mode)	Pure Sine wave
Dimension (mm LxWxH)	290 x 250 x 120
Operating Temperature	0 ~ 40 °C
Humidity	20% to 90% non-condensing

7. TROUBLE SHOOTING

Problem	Possible Causes	Action to take
Inverter no reaction while AC is connected	<ol style="list-style-type: none"> 1. Line cord plug is loose. 2. Breaker broken. 3. The socket is broken. 	<ol style="list-style-type: none"> 1. Check the line cord plug. 2. Replace breaker. 3. Check wall socket.
Power output is normal, inverter emits continuous beep, Load level indicator flickers	Inverter is overload	Shut down the inverter and remove excess load on the inverter.
Inverter does not provide expected run time.	<ol style="list-style-type: none"> 1. Excessive loads connected at inverters outlets 2. Battery is weak and cannot provide enough 	<p>Do not operate the inverter. Leave the inverter plugged in and charge the battery for 10 hours. Then test it again.</p> <p>If the inverter still fails to provide the expected run time, the battery should be replaced.</p>
Button on front panel doesn't work.	<ol style="list-style-type: none"> 1. The MCU in side in inverter is not running correctly. 2. Button damaged. 	Unplug power cord and battery cord from the inverter to let it shut down automatically, and plug line cord and battery cord again, if button still fails, please call for service.
Inverter emits urgent beep, Battery capacity indicator flickers	Low battery	<ol style="list-style-type: none"> 1. Charge batteries. 2. Replace batteries. 3. Call for service.
Inverter cannot DC start	<ol style="list-style-type: none"> 1. Battery polarity wrong. 2. Battery over voltage. 3. Battery exhausted. 4. Inverter fault. 	<ol style="list-style-type: none"> 1. Check battery and connection. 2. Check battery voltage 3. Connect AC power cord charge the battery. 4. Call for service.