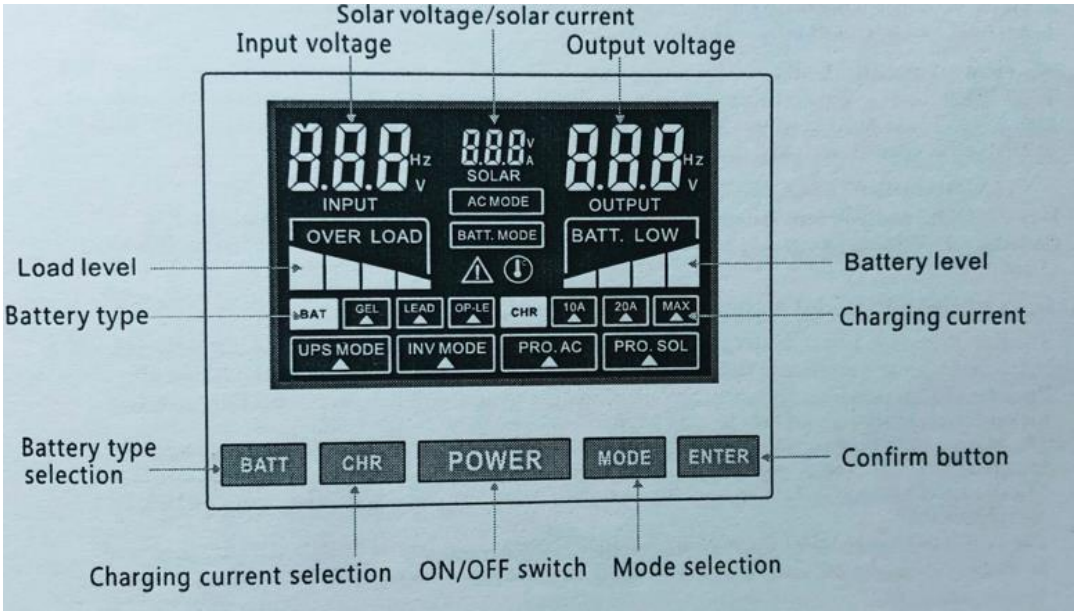
1-INTRODUCTION

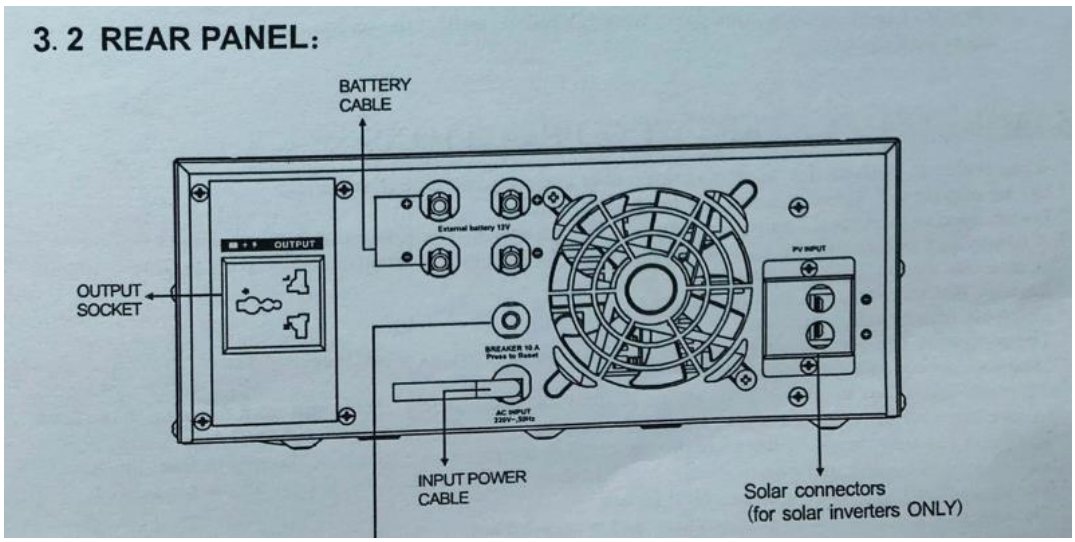
This is an advance Sine wave solar inverter which Provide Pure sine wave power to your equipment unlike the traditional off-line inverter, this series also provides low harmonic distortion and has a very short transfer time when blackouts occur. It provides an efficiency over 98% under normal power condition it contains three stage intelligent battery charger to maintain the batteries in best condition.

2-MAIN FEATURES

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

3-DISPLAY 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 blue cable for negative. Battery cable and polarity must be connected securely. Do not short the positive and negative of the batte4ry electrode or joint reversely.
4.13 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.

4.13 << How to settle ‘BATT’

Press BATT and flasher. Keep on pressing it till it reaches the battery type you choose (Default= Lead Acid battery) then press ENTER to set it up. Battery type includes Gel, Lead-Acid and open 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 ‘ENTER’ to set it up. You can choose 10A or20A for standard models. ‘MAX’ is only available for special designed models.

4.15 <<How to settle ‘MODE’

Press ‘MODE’ and you will sec mode in turns between ‘Narrow MODE’ and ‘Wide Mode’

(Inverter/ INV Mode) keep in pressing it till it reaches the mode you need, then press ‘ENTER’ to set it up.

4.16 Press ‘ENTER’ about 4 seconds to enter Advanced Menu

The first page is to select battery high shift to back up when solar available and user selected PRO SOL (solar preferred) There are option of 12.9v-13.5v (Default)13.8v- Full press ‘BATT’ to previous option Press ‘CHR’ to next option, and then Press ENTER to select the option temporarily and turn to next page.

The second page is to select the battery low shift back to utility when solar available and use selected PRO SOL (SOLAR PREFERRED) There are options of 11v-11.3V-11.6 (Default) 11.9V-12.2V the third page is to select he maximum current of solar charger. There are option of ‘PR AC’) AC preferred) or ‘PRO SOL’ (Solar preferred) If pro AC is selected the inverter will be powered by AC after it’s fully charged.

The fifth page is confirmation page select ‘YES’ to confirm the selection of previous 4 pages select ‘NO’ to cancel.

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 insulted handles.
The equipment can be operated by any individuals with no previous experience.
The socket-outlet shall be installed.
Attention hazardous through electric shock also with disconnection of this unit from the main hazardous voltage still may be accessible through supply of battery.
The battery supply should be therefore disconnected in the plus and minus pole through or from the outer enclosure accessible battery fuses when maintenance or service work inside the inverter is considered.
The lead acid battery may cause chemical hazard.
Batteries will be disposed by the manufacturer or importer. Customers need to send them back with no charge for disposal.

6. PV Connection (Only apply for the model with solar charger)

CAUTION: Before connecting to PV modules, please install separately a DC Circuit breaker between inverter and PV Modules.
WARNING! All wiring must be performed by qualified personnel.

WARNING! It's very important for system safety and efficient operation to use appropriate cable for PV module connection. To reduce risk of injury, please use the proper recommended cable size as below.

Typical Amperage	Gauge	Torque Value
50A	8AWG	1.4~1.6Nm

PV Module Selection:
When selection proper PV modules, Please be sure to consider below requirement first
Open circuit Voltage (Voc) of PV Modules not exceeds max. PV array open circuit voltage of inverter.

Inverter battery type	12Vdc	24Vdc
Solar Charger		
Charging Current (PWM)	50 Amp	
System DC Voltage	12 V dc	24Vdc
Operating Voltage Range	16~23Vdc	30-46 V dc
Max.PV Array Open Circuit Voltage	23 V dc	46 V dc

Max Power voltage (V mpp) of PV modules should be close to best Vmp of inverter or within Vmp range to get best performance. If one PV module cannot meet this requirement, it's necessary to have several PV modules in series connection. Refer to below table.

Inverter battery type	Best Vmp	Vmp range
12 V dc	31 V dc	30~32V

Note: Vmp:panel max: Power point voltage
The PV charging efficiency is maximized while PV system voltage is close to best Vmp.

7-SPECIFICATION

Capacity	600VA/500W	800VA/640W	1000VA/800W	1200VA/1000W
Battery type	DC 12V		DC 12V/24V	
Input voltage range	Wide mode(Inverter mode)80-290Vac,Narrow mode 175-270Vac			
Solar Input voltage	12V/24V system (Same as battery type)			
Solar charging current	10A,20A,30A,40A,50A(Selectable)			
Input frequency	45-65 Hz			
Out Put voltage (AC mode)	Wide mode (inverter mode 80-290 Vac, Narrow mode 175-270Vac			
Out Put voltage (Battery mode)	220 Vac+ 5Vac			
Output frequency (Battery mode)	50Hz + 0.5Hz			
Transfer time	10ms typical(UPS Mode)20ms typical (Inverter Mode)			
Charging current(max)	20A			
Output wave form(battery mode)	Sine wave			
Unit dimension(mm)	290x255x120			
Operating temperature	0~40C			
Humidity	20%to 90% non condensing			
Dimensions	L360xW350xH207(mm)			

8-TROUBLE SHOOTING

Problem	Possible Causes	Action to take
Inverter no reaction while AC is connected	1.Line cord plug is loose 2.Breaker broken 3Dead wall socket	1.Check the line cord plug 2.Replace the breaker 3.Check wall socket with a table lamp
Power output is normal inverter emits continuous beep, load level indicator flickers.	Inverter is overloaded.	Turn off inverter and unplug excessive load from inverter.
Inverter does not provide expected run time	1.Excessive loads connected at inverter's outlets 2.Battery is weak and cannot provide enough	Do not operate the inverter; Leave the inverter plugged in for 10hours. Then test it again if inverter still cannot provide expected run time battery should be replaced
Button on front panel does not work	1. The CPU inside inverter is not running correctly. 2. Button damaged.	Unplug line 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 cannot DC Start	1. Battery polarity wrong. 2.Battery wrong(over voltage) 3. Battery exhaustion. 4. Inverter fault.	1. Check battery and connection. 2. Check battery voltage by voltage meter. 3. Connect AC power cord to charge the battery. 4.Call for service