USER MANUAL

IG SERIES INVERTER SINE WAVE LONG BACKUP
(600VA - 1500VA)

UNINTERRUPTIBLE POWER SUPPLY
1998
SOROTEC®
Power Solutions Expert
USA TECHNOLOGY

USER MANUAL INVERTER

1. INTRODUCTION

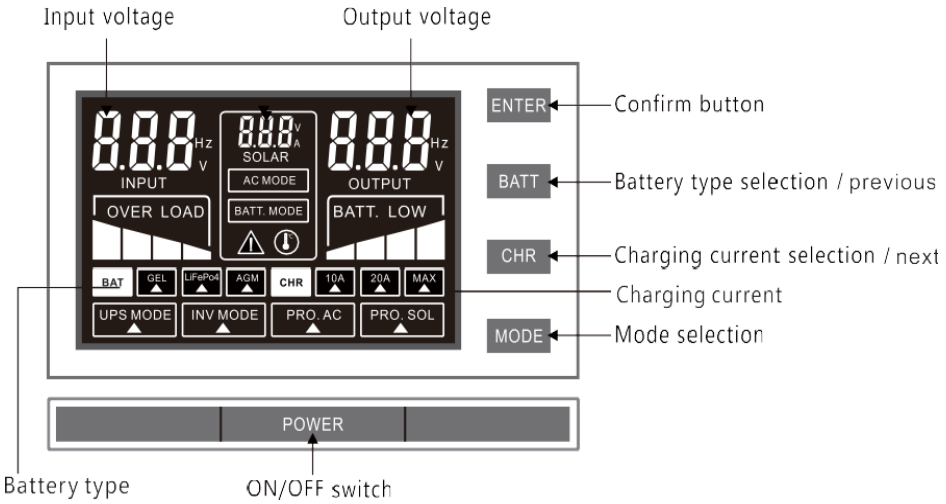
This is an advanced sine wave inverter which provides pure sine wave power to your equipment. Unlike the traditional off-line inverter, this series also provides low harmonic distortion and less energy short transfer time when blackout occurs. It provides an efficiency over 98% under normal power condition. It contains three stage intelligent battery charger to maintain the batteries in best condition.

2. MAIN FEATURES

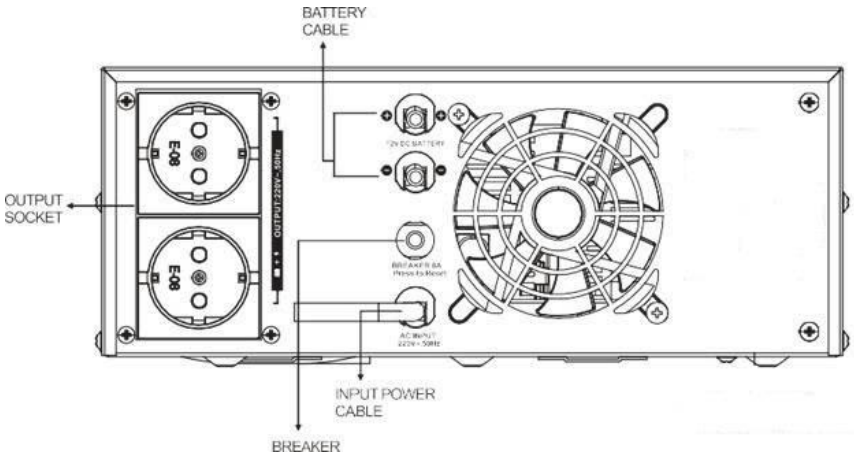
- Pure sine wave output
- Microprocessor based design
- Smart charging
- Real-time auto-detection for battery condition
- Protection for overload, short circuit, & over temperature
- Isolation between battery and AC utility
- Outstanding dynamic performance
- Speed control for cooling fan

3. DESCRIPTION OF APPEARANCE

3.1 Display panel



3.2 Rear panel



4. OPERATION

4.1 External Battery Operating Procedures

- Follow the battery specifications, connect batteries in series/parallel properly, and ensure correct voltage.
- Connect red battery cable to positive and black to negative. Be sure of polarity to avoid damage. *Don't* connect battery terminals in reverse.
- Sparks during battery cable connection are normal—due to inrush current.

4.2 Operation Modes

- Press the 'POWER' button for 3 seconds to turn the inverter on or off.
  If there's no AC input, a buzzer will beep every 30 seconds.
  The inverter will shut down automatically if not turned on again after that.

4.3 <<How to settle 'BATT'

- Press 'BATT' and the LED will flash.
- Keep pressing it until it displays your battery type:
  - 'GEL' (for sealed lead-acid),
  - 'LifePO4' (for LiFePO4),
  - 'AGM' (for AGM).
- Press 'ENTER' to confirm your selection.

4.4 <<How to settle 'CHR'

- Press 'CHR' and the number will flash.
- Keep pressing it to select the charging current:
  - You can choose 10A or 20A for standard models.
  - 'MAX' is only available for specific models.

- Press ‘ENTER’ to confirm.

4.5 <<How to settle ‘MODE’

- Press ‘MODE’ and it will cycle between: ‘UPS MODE’ and‘INV MODE’
- Choose the mode you want, then press ‘ENTER’ to set it.

5. FAN WORKING MODE

- AC mode: Fan will rotate when the battery is charging, and will not run when the battery is fully charged.
- Fan will rotate when the load is bigger than 50%, and will not run when the load is less than 50%.
- Fan will rotate when the temperature is bigger than 60°C, and will not run when the temperature is less than 50°C.
- Fan rotates for 10 minutes per hour.

6. SPECIFICATION

Model	**IG600**	**IG1200**
General		
UPS Topology	Sine Wave Inverter	
Physical		
Form Factor	Tower	
Input		
Nominal Input Voltage (VAC)	220	
Input Voltage Range (VAC)	135 - 290 ± 5%	
Input Frequency (Hz)	45 - 65	
Efficiency AC	>90%	
Output		
Capacity (VA)	600	1200
Capacity (W)	480	960
On Battery Waveform	Pure sine wave	
On Battery Voltage(s) (VAC)	220 ± 5%	
On Battery Frequecy (Hz)	50 ± 0.5	
Automatic Voltage Regulation (AVR)	Yes	
Power Factor	0.8	
Outlet(s) - Total	2	2
Outlet Type	IEC Universal *2	IEC Universal *1 & Hardwire Terminal Block *1
Outlet (s) - Battery & Surge Protected	2	2
Typical Transfer Time (ms)	2 - 6 (Max 10)	
Battery		

Battery Voltage (VDC)	12	24
Quanlity (Pcs)	1	2
Charge Current (A)	10 - 20 (can adjust by button)	
Battery Type	Sealed lead-acid	
Overload	125% load 30s	
Surge Protection & Flltering		
Certification	CE(EN60950)	
EMI	EN62040-2 Class A	
Protection	Low Voltage, Over voltage, Overload, Short circuit	
Management & Communications		
LCD Panel	Display AC mode, Bypass mode, Inverter mode, Input Voltage, Output Voltage, Frequency, Load, Capacity battery...	
Audible Alarms	Battery Mode, Low Battery, Overload, UPS Fault	
Physical Size - UPS Module		
UPS Dimensions (D*W*H) (mm.)	290*255*120 ± 2%	
UPS Weight (Kg.)	8.43 ± 2%	15.40 ± 2%
Environmental		
Operating Temperature (Độ C)	0 - 40 (non-condensing)	
Operating Relative Humidity (Non-condensing) (%)	10 - 90 relative humidity	
Noise Level	≤ 40db (1m)	
Fan cooling	Yes	
*Note: Specifications may vary depending on production stage		

7. TROUBLE SHOOTING

Problem	Possible Causes	Action to take
Inverter no reaction while AC is connected	1. Line cord plug is loose 2. Breaker broken. 3. Dead 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 red indicator flickers	Inverter is overloaded	Turn off inverter and unplug excessive loads from inverter.
Inverter does not provide expected run time.	1. Excessive loads connected at inverter's outlets 2. Battery is weak	Do not operate the inverter. Leave the inverter plugged in for 10 hours. Then test it again. If the inverter still

	and can not provide enough power.	need to be replaced call your dealer. Battery should charge.
Button on front panel doesn't 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 and restart again, then plug in the line cord and test again. If button still does not work call for service.
Inverter emits urgent beep, Battery capacity indicator flickers	Low battery	1. Charge batteries. 2. Replace batteries.
Inverter cannot DC start	1. Battery polarity wrong. 2. Battery voltage 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 to charge the battery. 4. Call for service.