



USER'S MANUAL

AB-NBINV-1000



EXPLANATION

Thank you for purchasing our Nimble inverter. This kind of inverter is light in size and reasonable in design, which represents the new trend of high-frequency inverter. It can provide safe and reliable AC power supply for household appliances such as televisions, computers, power tools, etc. With automatic protection function, your inverter, battery under abnormal load to get effective protection, convenient and practical.

Please read this manual carefully before installation and operation. Instructions are kept for reference.

SAFETY FEATURES:

1. Overload protection, power automatically cut off output.
2. Built-in breaker, can provide safety guarantee in case of failure.
3. After the low-voltage alarm, the power supply automatically cuts off the output.
4. After overvoltage protection, the power supply automatically cuts off the output.
5. After over temperature protection, the power supply automatically cuts off the output.
6. Output short circuit protection, the power automatically cut off output.

Operation:

1. Connect the battery correctly, turn on the switch, the LCD screen will lit up with AC output.
2. Insert the appliance into the inverter, turn on the switch and insert one appliance at a time.
3. During use, the battery voltages begin to drop. When the voltage of inverter DC input falls to alarm voltage, the alarm will beep. At this time, the computer or other sensitive electrical appliances should be turned off in time.
4. Ignoring the alarm sound, the inverter will automatically turn off the output when the voltage of the DC input falls to the turn-off voltage. This prevents battery losses.

Attention: in order to avoid excessive battery discharge caused by the vehicle cannot start, cannot be used for a long time excessive discharge. The battery life time can be shortened if it is used till the inverter alarm show up. If need to use different electrical appliances for long time in the car, it is suggested to connect the inverter to another battery that can discharge for long time or start the vehicle engine.

1. Once the electrical power exceeds the standard power of the power inverter (or the current exceeds the peak power), the inverter turns off the output, and the inverter sends out an alarm sound.
2. Once the safe working temperature is exceeded or the ambient temperature is increased due to poor ventilation, the inverter will automatically shut off the output and send out an alarm sound.
3. If the charging system is bad. Causes the battery voltage to rise excessively, the inverter will automatically shut down the output.

Note: although the inverter is equipped with overvoltage protection, the input voltage exceeds the overvoltage turn-off voltage, and the inverter may be damaged.

4. Once overload, under voltage, over temperature. The inverter automatically shuts down the output.

ATTENTION

Please read the instructions carefully before using the inverter

Safety first

Improper installation or use can be dangerous or cause accidental injury. Please read the instructions carefully before use, especially the warnings and the contents of the sections.

Note: under certain conditions or some operation methods may bring harm to the inverter or other facilities; the warning warns you that certain conditions may cause personal injury.

Warning: electric shock danger, keep children away

1. AC output socket and common electrical socket, has the potential danger, can be fatal.
2. Socket, fan or vent should not be blocked.
3. The inverter cannot be soaked in water, rain and snow.
4. Ordinary AC wire cannot be directly connected with inverter AC output in any way.

Warning: surface heating

1. After continuous use, the surface temperature of the shell will rise to 60°C. Ensure the airflow is unobstructed within 5CM on at least 2 end surfaces when in use. Objects susceptible to high temperatures should not be placed nearby.

Warning: danger of explosion

Do not use in the presence of flammable or explosive materials, in the vicinity of gasoline-powered cabin bottoms, or in the vicinity of propane storage tanks where car tires or lead-acid batteries are stored. The hydrogen leaks out of the battery, causing it to ignite when it comes in contact with an electrostatic spark. When using it, ensure that in case of accident, assistance is available nearby.

Note:

1. Do not insert the DC power inconsistent with the inverter into the inverter.
2. The grounded DC load cannot be connected to the inverter.
3. Do not work at more than 60°C.
4. When connecting the battery, avoid short circuit caused by tools and jewelry.

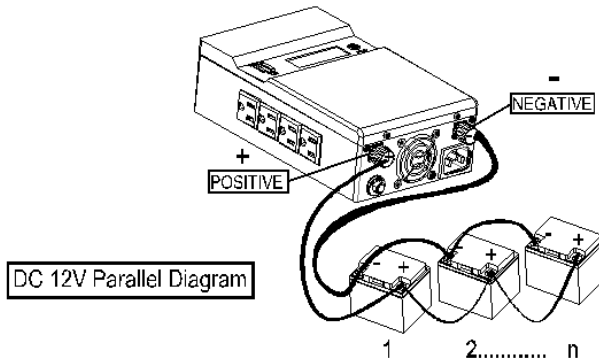
INSTALLATION INSTRUCTIONS

The installation environment should be suitable for safety and performance considerations

1. Dry: cannot soak or rain.
2. Shady: suitable for the temperature in the environment between 10°C and 40°C use.
3. Ventilation: keep no foreign matter within 5CM around the shell and other end surfaces well ventilated.
4. Safety: do not connect with battery-operated appliances. Do not install in a flammable liquid environment Such as gasoline and volatile explosive gases.
5. Clean and dustproof: working environment is very important for inverter.
6. You can use this product by connecting the inverter to the battery (group) using a wire. The red round terminals on the color conductor are connected to the positive terminal of the inverter/battery, and the round terminals on the black conductor are connected to the negative terminal.
See schematic diagram. Note the positive and negative relationship of the battery.

Notice: positive and negative pole is strictly forbidden to connect with the reverse otherwise the inverter without the reverse connection protection function will be seriously damaged.

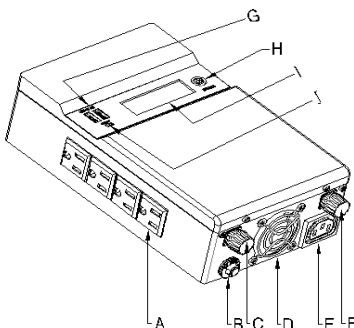
1. Tighten the terminals, but not too tightly. Wire terminals do not loose off the principle.
2. Clip the black clip to the negative electrode of the battery, and the red clip to the positive electrode of the battery, two clamps are connected correctly. Being too loose may cause an unexpected drop in current, lead to overheating, damage to the machine, or cause a fire.
3. Turn on the inverter. If the inverter is not working, check point 3.
4. After use, separate the wire from the battery.



APPLICATION METHOD

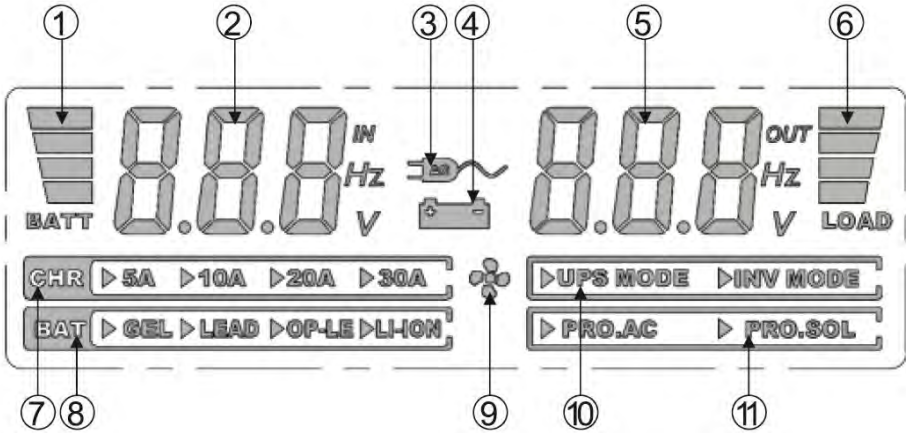
Power inverter is suitable for AC load. AC output wave type is "modified sine wave", which means the power supply is similar to sine wave in function. Power or "wattage" means the rated power of the product. At the moment of starting, the power of the product is higher than that of normal operation. Refrigerator, motor power at the start of the peak. Power inverter can withstand 2 times rated power. If you need to use more than one electrical appliance at the same time, first turn off the electrical switch, turn on the inverter switch, and then turn on the electrical switch one by one. The highest peak should be turned on first.

PRODUCT OVERVIEW



- A. AC output Socket
- B. Circuit breaker
- C. Battery input Positive +
- D. Fan
- E. AC Input
- F. Battery Input Negative -
- G. USB Charging 3.0A
- H. POWER ON / OFF Switch
- I. LCD Display
- J. UPS or Inverter Model Select Switch

INVERTER LCD SCREEN DESCRIPTION



1. Display battery power
2. Display battery voltage
3. AC mode (when the mark, the power supply is in the mains mode, only for UPS model)
4. Battery mode (mark indicates that the power supply works in battery mode)
5. Display AC output voltage or error code
6. The load
7. Mains charging current (shows the maximum mains charging current in mains mode, limited to models with UPS)
8. Battery type (display the battery type currently supported by the inverter)
9. Fan status
10. Mains power input mode (only for UPS)
11. Municipal power/solar energy priority mode (only for UPS model)

PROBLEMS AND SOLUTIONS

PROBLEMS	REASONS	SUGGESTIONS & SOLUTIONS
The equipment and inverter doesn't work.	Bad battery	Check the battery, according to the specific situation, repair or replace the battery.
	The positive and negative electrodes of the battery are connected in reverse.	Reconnect the battery cables correctly.
	The battery cable is not be connected well	Check the connections of the battery cable and tight the terminals.
The inverter has no output, and the LCD screen shows OUP.	Battery voltage is too high, the inverter shutdown for self-protection.	Check battery voltage ,if battery is connected with the charger, please disconnect it.
The inverter has no output, and the LCD screen shows LUP.	Battery voltage is too low, the inverter shutdown for self-protection.	Replace the battery or charge the battery before using it.
The inverter has no output, and the LCD screen shows OCT.	High temperature, the inverter shutdown for self-protection.	Turn off the inverter and cool or 15 minutes. Remove items around fan and inverter. Place the inverter in a cool place. Reduce the load and restart the inverter.
The inverter has no output, and the LCD screen shows OLP.	Overload the shutdown for protection.	Remove part of the load, it is recommended that the total load should not exceed 70% of the rated load of the inverter, and restart the inverter.
The inverter has no output, and the LCD screen shows SCP.	Load break, shutdown for self-protection.	Check output cable and load, clear the short road, then restart the inverter.

Output voltage of inverter is too low	The inverter adopts RMS voltage transmission out of the general measurement voltmeter for the average value voltmeter, so the displayed voltage value is slightly higher.	Does not affect the inverter working, or use the true RMS table to re-measure.
	The inverter is starting some load with higher peak power	No need to process, after the load starts, the normal voltage will be restored
Battery's life is too short	With more load, large power consumption.	Reduce some unnecessary load and replace with a larger battery.
	battery aging	Replace a new battery
	battery under charge.	Check the battery charger and recharge it

SPECIFICATION

Power - Watt / VA	500Watts / 1000VA
Input	
AC Input voltage	110/120Vac or 220/230/240Vac
AC Input voltage range	UPS Model:90~140VAC / 175~260VAC Inverter Model:70~145VAC / 140~270 VAC
AC Output frequency	50 / 60Hz
DC Input voltage	12V
DC Voltage range	10.5 ~ 15V
DC No-load current	< 0.6A (12.5V)
Battery Charging current	10A
Battery low voltage alarm	10.5V
Battery low voltage protection	10V
Efficiency	> 90%
Output	
Output voltage	120V / 220Vac
Output wave form	Modified sine wave
Output frequency	50 / 60Hz
USB A-type port current	5V 3.0 A (2pcs)
Efficiency	> 85%
Socket	4 Nema5-15R / 2 Euro / 4 Arg. / 2 Universal / etc.
Protection with Breaker	Overload protection, input overvoltage protection, input under-voltage protection, reverse polarity protection, short circuit protection, over temperature protection, buzzer protection and intelligent control.
Indicators	
LCD DISPLAY	UPS/INVERTER Status, INPUT or OUTPUT VOLTAGE, Frequency, Battery Voltage and Level, LOAD Level, Charger, etc.
Environment	
Environment of performance	Temperature 0°C~40°C, Humidity 20%~90%
Noise level	≤40dB(1m)
Physical	
Case Material	Metal
Unit dimension W x L x H (mm)	138 x 245 x 66,5 mm