



USER MANUAL

WP-Sine 24/500

'AC Power from the battery'



For safe and optimal performance, the sine wave inverter must be used properly. Carefully read and follow all instructions and guidelines in this manual and give special attention to the CAUTION and WARNING statements.

PLEASE KEEP THIS MANUAL FOR FUTURE REFERENCE

Disclaimer

While every precaution has been taken to ensure the accuracy of the content of this guide, WhisperPower assumes no responsibility for errors or omissions. Note as well that specifications and product functionality may change without notice.

Important

Please be sure to read and save the entire manual before using your WhisperPower sine wave inverter. Misuse may result in damage to the unit and/or cause harm or serious injury. Read safety in its entirety before using the unit and save it for future reference.

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1. INTRODUCTION

Thank you for purchasing the WhisperPower sine wave inverter. With our easy-to-use design, this product will offer you reliable service for providing AC power and 5V USB power for your home, cabin, RV or trailer. The WhisperPower sine wave inverter can run many AC-powered appliances when you need AC power anywhere. The 5V USB power can charge many USB-powered devices. This manual will explain how to use this unit safely and effectively. Please read and follow these instructions and precautions carefully.

IMPORTANT SAFETY INFORMATION

This section contains important safety information for the WhisperPower sine wave inverter. Each time before using the WhisperPower sine wave inverter, please read all instructions and cautionary markings on or provided with the inverter, and all appropriate sections of this guide. The WhisperPower sine wave inverter contains no user-serviceable parts. See Warranty section for how to handle product issues.

WARNING: FIRE AND/OR CHEMICAL BURN HAZARD

-Do not cover, obstruct, or vent openings and/or install in a zero clearance compartment.

CARE/HOLD IN DEATH OR SERIOUS INJURY

-When working with electrical equipment or lead-acid batteries, have someone nearby in case of an emergency.

-Always handle all of the battery manufacturer's specific precautions when installing, using and servicing the battery connected to the inverter.

-Wear eye protection and gloves.

-Avoid touching your eyes while using the unit.

-Keep fresh water on hand in the event that battery acid comes in contact with eyes. If this occurs, flush eyes away with extensive water for a minimum of 15 minutes and seek medical attention.

-Batteries produce explosive gases. **DO NOT** smoke or have an open

spark or fire near the system.

-Keep unit away from moist or damp areas.

-Avoid dropping any metal tool or object on the battery. Doing so could create a spark or short circuit which goes through the battery or another electrical tool that may create an explosion.

WARNING: Shock hazard. Keep away from children!

- Avoid moisture. Never expose unit to snow, water etc., same as regular wall AC outlets at home.

WARNING: Explosive hazard!

- Do NOT use the WhisperPower sine wave inverter in proximity of flammable fumes or gases (such as propane tanks or large engines).

WARNING: Covering the ventilation openings.

- Always operate unit in an open area.

WARNING: Exposure to heat or freezing temperatures as will decrease the working life of the unit.

- Protect equipment to both heat or freezing temperatures as will decrease the working life of the unit.

FCC INFORMATION

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and stores radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

• Consult the dealer or an experienced radio/TV technician for help.

LIMITATIONS ON USE

Do not use in connection with life support systems or other medical equipment or devices.

2. INSTALLATION

WARNING: WhisperPower recommends that all wiring be done by a certified technician or electrician to ensure adherence to the applicable electrical safety wiring regulations and standards codes. Failure to follow these instructions can damage the unit and could also result in personal injury or loss of life.

CAUTION: Before beginning your WhisperPower sine wave inverter installation, please consider the following:

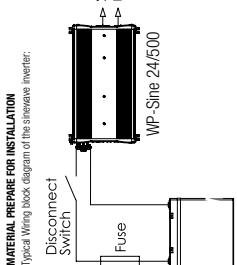
- The WhisperPower sine wave inverter should be used or stored in an indoor area or away from direct sunlight, heat, moisture or conductive contaminants.
- When placing the unit, allow a minimum of 7.5 cm space around the unit for optimal ventilation.



**Recreational vehicles • Caravans
Pleasure craft • Holiday homes**
High frequency sine wave inverter

MATERIAL PREPARE FOR INSTALLATION

Typical wiring block diagram of the sine wave inverter:



Fire or Circuit Breaker

The use of open cycle battery is highly recommended for sine wave inverters. Inverters application

For battery care, you need to identify how much you will be using them between charges. WhisperPower recommends you purchase as much battery capacity as possible. See more on Battery Run time and load in Section 3.

DC Input cable

• DC cable less or 100' rated circuit breaker connected along the DC positive line is required.

• Select the size of circuit breaker with 35A / 300' minimum rating.

• Based on the size of the battery bank chosen on the 24V Battery Bank above, determine the overall short circuit current rating of the battery bank from the battery manufacturer. The use of circuit breaker chosen has to be able to withstand the short circuit current that may be generated by the battery bank.

Disconnected Switch

Select a Disconnected Switch with the same or higher the rating of the selected fuse or circuit breaker from the above.

The Disconnected Switch is used to disconnect the DC power between the sine wave inverter and the battery bank during service or for trouble shooting.

INSTALLING THE SINEWAVE INVERTER SYSTEM

WARNING: Electrical Shock Hazard



The unit 'ON/OFF' switch does not disconnect the DC power from the battery. Be the DC Disconnect Switch or disconnect the DC input cables connection to disconnected the DC power from the battery before working on any circuits connected to the unit. Failure to follow these instructions can result in death or serious injury.



SineWave Inverter Installation:

- Choose an appropriate mounting location.
- For indoor use, the orientation of the unit can be mounted in any direction except with the DC input panel facing downwards.
- For RV installation, the unit has to be mounted flat on a horizontal surface.
- Drill the 4 mounting holes, position the mounting screw and place the inverter in position and fasten the inverter to the mounting surface.

SineWave Inverter DC Input Connection:

- Connect one end of the negative DC input cable to the sinewave inverter DC negative terminal (black).
- Connect the other end of the negative DC input cable to the battery negative terminal.
- Make sure the Disconnect Switch is in the OFF position.
- Connect one end of the positive DC input cable to the sinewave inverter DC positive terminal (red).
- Connect the other end of the positive DC input cable to one of the terminals of the Disconnect Switch.
- Connect one end of the cable between the other terminal of the Disconnect Switch and one side of the terminal of the fuse holder.
- Connect 1 DC input cable between the other terminal of the fuse holder and the battery positive terminal.
- Install the selected fuse to the fuse holder.
- Turn the Disconnect Switch to ON position.

Connected unit with provided Battery clips cable:



CAUTION: Please be sure all the connections are tight before the use of the unit.

- Attach the red ring-type connector to the positive (+) DC terminal (red) on the power inverter and connect the black ring-type connector to the negative (-) DC terminal (black) on the Power inverter.
- Attach the negative clip to the negative (-) battery terminal.
- Attach the positive feed clip to the bus or circuit breaker of the 24V battery bank as indicated on 'Typical Wiring diagram of the Power Inverter'.
- Unit is ready for use.

AC Load on sinewave inverter

Although the sinewave inverter can provide high surge power up to 100 times the rated output power, some appliances may still trigger on the inverter protection system during start up or surge periods. A higher sinewave inverter is required for those appliances.



Test the sinewave inverter connection:

- Turn unit on by pressing and holding the ON/OFF button to 'Power ON' position. The 'Power' light turns on indicating the WhisperPower sinewave inverter is ON. Both AC output and 5V USB is now available.
- Plug in a small AC load like a 25W table lamp or small appliance to the AC socket to verify AC is available.
- The unit is successfully installed and functioning properly.



- **UNIT OPERATION**
- Reverse thing DC input terminal will damage the unit and cannot be repaired. Damage caused by reverse polarity connection is not covered by the warranty.

WARNING: RISK OF EQUIPMENT DAMAGE

- Do not connect an AC power source like utility power or generate to the unit 230VAC outlets.

Estimate Run time on Load

Following runtimes are estimates, based on usage of a 24V-60Ah battery bank for reference. Actual run times may vary.

Load	Consumption	Estimate run time
Cordless Phone	5W	150 hrs
ClockPad®	8W	77 hrs
Table Lamp	8W/60W	15 hrs
Small Heater (250 W)	20W/LCD TV	11.5 hrs
Pentairjet (230 L)	100W	9 hrs
Sump Pump (1/2 HP)	120W	n/a (usage too high)
Microwave (mid-size)	300W	n/a (usage too high)
Coffee Maker	500W	1 hr
F. loaded light	500W	

5. WARRANTY

Two Years Limited Warranty

The limited warranty program is the only one that applies to this unit, and it's formal in the responsibilities of WhisperPower. There is no other warranty than those described herein. Any implied warranty of merchantability or fitness for a particular purpose on this unit is limited in duration to the duration of this warranty.

This unit is warranted to the original purchaser only, to be free of defects without additional charge. The warranty does not extend to subsequent purchases or users. Whispower will not be responsible for any amount of damage in excess of the retail purchase price of the unit under any circumstances. Incidental and consequential damages are specifically excluded from coverage under this warranty. This unit is not intended for commercial use. This warranty does not apply to damage to units from misuse or incorrect installation/connection. Misuse including wiring or connecting to improper voltage power sources.

4. TROUBLESHOOTING

Problem	Symptom	Solution
No AC output and Power LED is OFF.	Unit is off	Turn unit on using theoggle switch.
Check if user has disconnected the power cord or turned off the inverter.	Unit is off	Check if user has disconnected the power cord or turned off the inverter.
Unit has stopped working but the power cord is still connected.	Unit is off	Verify that the power cord is still connected and turn the unit on again.
Power Save mode is on.	Unit is off	Press Power mode button to turn unit on.
Fault indicator is Flashing.	Unit is off	Power consumption on AC load is in use and the AC Load command is incomplete. Turn ON and OFF the AC load to increase the AC load to >10W.

6. SPECIFICATIONS

NOTE: Specifications are subject to change without notice.

Spec	Value	Notes
Action	None	
Power Consumption	50W	
Power Supply	80W	
Output Current	4.7A	
Output Voltage	50V	
Output Recovery	<2% Transient	
Input	DC 12V	
Input Current	10A	
Input Recovery	<2% Transient	
Protection	None	
DC Output	El	
DC Input	Normal battery voltage	
Operation Range	25V	
Peak Current	21.3V	
No load current	40A	
DC Output Protection	<15Amp/peak	
SVUSP Power Range	2.1A	
Input Undercharge	21.4V	
Input Undercharge Shutdown	23.6V	
Input Overcharge Shutdown	31.0V	
Environmental		
Operating Temperature Range	0 ~ 40°C (22 ~ 104°F)	
Relative humidity	20 ~ 90% (0 ~ 140°F)	
Mechanical		
Dimensions (WxDxH)	173x205x20mm	
Weight	1.1kg	
Compliance		
CE		

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Limitations:

This warranty does not cover accessories, such as adapters and batteries, damage or abrasions resulting from care or usage due to severe weather or freezing temps, scratches, abrasions, damage due to storage or exposure to sunlight, accidents, damage during shipping to our service facility, alterations, unauthorized use or repair, neglect, misuse, abuse, failure to follow instructions for care and maintenance, fire and flood.

7. CE MANUFACTURER DECLARATION

Product WhisperPower NP_Sine_Ac Power from the battery' Whispower guarantees that the unit complies with the relevant standards.

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WhisperPower®

NP_Sine_Ac

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