



SIERRA WAVE™
Solar Link™ 240



USERS MANUAL

Sierra Wave™ Solar Link 240 #9670

Sierra Wave™ Solar Link 240 is a remarkably light 9 lb. portable power center with a full 240-watt hours of rechargeable power to bring portable energy to your home, office, or job site. Whether as a backup power supply for areas experiencing power outages due to natural disaster or as a mobile generator for a campsite, the Solar Link 240 powers your world. Charge it from available electricity or operate self-sufficiently using one of the Sierra Wave Solar Collectors. No set-up is required, just plug in and go. Includes a 12V & 120V chargers and a cable to connect directly to a solar panel. The internal LiFePo4 battery and energy management system is the most advanced on the market with a long life cycle and reliable performance.

Section 1 Important Warnings & Safeguards

Read all instructions thoroughly before operating this unit to avoid injury to self or property and avoid damage to the unit. Keep instructions handy for reference during use.

ENERGIZED EQUIPMENT - ELECTRICAL SHOCK & EXPLOSION HAZARDS



DANGER

- Do Not submerge in liquid or operate in wet environments. Device is not waterproof or water resistant. Operate in dry environments only.
- Do Not operate in flammable or explosive environments
- Do Not operate if the unit is damaged in any way including loose electronics or if charging cords are frayed and wires are exposed.
- Do Not place foreign objects inside of the power outlets
- Do Not disassemble. There are no user serviceable parts. Contact the manufacturer for all repairs.



CAUTION

- **Do Not use to operate any medical life support equipment**
- **Consult your physician before using with CPAP devices or other non-life support medical equipment**
- Administer close supervision when operating around children or persons with disabilities
- Do Not use any devices over 400W for risk of damage to the inverter
- Do Not block the air inlets
- Not recommended for use or storage below 14° (-10°C) or above 120°F (49°C). If using above 120°F, place out of direct sunlight to prevent overheating.

Solar Link 240 is only serviceable by an authorized repair facility. Do not dismantle. Warranty is void if the device is opened by unauthorized personnel. Call Aervoe Industries, Inc. at 800-227-0196 for repair information.

The limited warranty described in the included warranty card is the sole and exclusive warranty provided by Aervoe Industries, Inc. In no event will Aervoe be liable for any indirect or incidental damages or losses of any kind arising from or as a result of misuse or abuse, or the incorrect installation or operation of the product.

FCC REQUIREMENTS

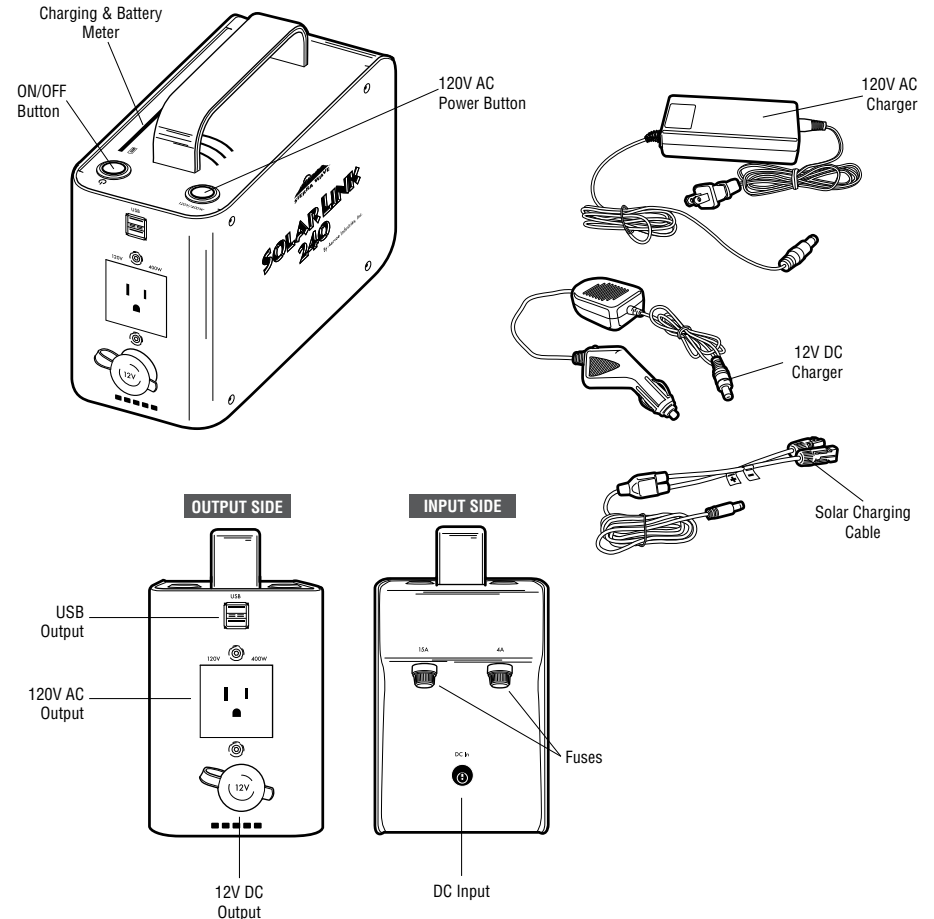
Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment

NOTE: Note: 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 can radiate 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 of more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and 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

Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Section 2 PARTS IDENTIFICATION



Section 3 CHARGING

For maximum efficiency charge after each use or every 2 months if it is being stored. Failure to properly charge as listed below could damage the unit and affect performance.

Charging Meter - indicates charging rate

1. Five orange LEDs represent the charging rate when using any of the methods of charging below.
2. Each LED equals approximately 20% charge rate. This will help you to position a solar panel in the best angle to the sun. If the Solar Link is plugged into a 120V or 12V power source, all 5 LEDs should be illuminated.

Battery Meter - indicates how full the battery is

1. Five blue LEDs represents the current battery capacity.
2. Each LED represents approximately 20% full.

Solar Charging (recommended #9580 80-Watt Solar Collector)

1. The Solar Link has built-in battery protection and does not require a solar charge controller.
2. Place the Solar Link and Solar Collector in direct sun.
3. Connect the SOLAR CHARGING CABLE (included) male pin tip to the DC INPUT on the Solar Link. Connect the MC4 (+) and (-) tips to the solar collector.
4. Adjust the Solar Panel so that it is directly facing the sun. Charging will begin immediately and the orange CHARGING METER indicators will illuminate.
5. To ensure full battery charge, continue charging for 1 additional hour.
6. Disconnect when charging is complete.

120V AC Wall Charging (adapter included)

The Solar Link utilizes a modified sine wave inverter. Refer to information below.

1. Connect the male pin tip of the 120V AC CHARGER into the DC IN PORT of the Solar Link and then plug the other end into an electrical outlet.
2. The charging indicator on the 120V AC CHARGER will illuminate red when charging is in process and green when the Solar Link has reached a full charge.
3. The CHARGING METER indicators will also illuminate.
4. To ensure full battery charge, continue charging for 1 additional hour.
5. Disconnect when charging is complete.

Modified Sine Wave Inverter Information

Modified sine wave inverters are the most common type on the market and work well for most uses. It is designed for use with small electronic equipment up to the power limits stated - 400W.

Due to the nature of the electrical output from this inverter, some devices using variable speed controllers and solid-state power will require the use of a Pure Sine Wave inverter (found in the Solar Link 1000). You may notice additional noise from audio equipment or devices with electric motors.

Unsuitable Devices

Use of any of the following items with Solar Link 240 is at the user's own risk and Aervoe Industries, Inc. does not accept any responsibility for damage or injury resulting from use.

- Fluorescent lights with electronic ballasts
- Power tools with solid state power or variable speed control
- Digital clocks with radios
- Sewing machines with speed/microprocessor control
- X-10 home automation systems
- Medical equipment such as oxygen concentrators

12V DC Vehicle Charging (adapter included)

CAUTION: The vehicle engine must be operating to maintain the proper vehicle battery level required to charge the Solar Link. Vehicle battery discharge or slow charging to the Solar Link could occur.

1. Connect the male pin tip of the 12V DC CHARGER into the DC IN PORT of the Solar Link and then plug the other end into a vehicle power outlet.
2. The green charging indicator on the 12V AC CHARGER will illuminate when charging is in process.
3. The CHARGING METER indicators will also illuminate.
4. To ensure full battery charge, continue charging for 1 additional hour.
5. Disconnect when charging is complete.

Section 4 OPERATING INSTRUCTIONS

Once charged, the Solar Link 240 is ready to use right out of the box. No set up is required. All outputs may be used simultaneously. Check your device's specifications to make sure they are compatible with the Solar Link.

ON/OFF Button - when on, the surrounding LED lights will turn green

120V AC Power Button - when on, the surrounding LED lights will turn red

USB 2.0 Operation

- Turn the ON/OFF BUTTON on
- Plug in your device's USB power or charging cable
- A combined 5V/2A maximum output is available between the two ports
- Disconnect and power off when not in use

120V AC Operation (max 400W output)

- Turn on the 120V ON/OFF BUTTON
- PRESS THE 120V AC POWER BUTTON to activate the inverter
- Plug in your 120V device's power or charging cable into the electrical socket
- Disconnect and power off when not in use

12V DC Operation (Max 20A output)

- Plug in your 12V device's power or charging cable into the 12V Vehicle Socket
- Neither POWER BUTTON need to be on
- Disconnect and power off when not in use

Section 5 CARE & MAINTENANCE

- Dust regularly with a clean dry cloth to prevent dust and dirt from building up on the vents and power inputs/outputs
- Store in a clean, dry place when not in use
- Charge after each use, every 30-60 days, and before storing so it is ready to use when needed

Section 6 TROUBLESHOOTING

If your Solar Link fails to operate as specified, follow these troubleshooting steps to correct the issue. If you still experience issues, please contact Aervoe Industries, Inc. at www.aervoe.com or 800-227-0196.

Charging Issues

- Ensure all cords are connected securely
- Check power indicators on chargers and the Solar Link to make sure they are operating
- If using a solar collector to charge, ensure it is correctly positioned in direct sunlight
- If using the 12V DC charger make sure the vehicle it is connected to is operating
- Check that the fuses on the Solar Link have not blown

12V DC Output Fails

- Check the Battery Meter to see if the Solar Link has sufficient battery charge available. If not, follow the charging steps previously described.
- Check to make sure that the 12V DC circuit protection fuse is not blown by removing the 15A FUSE housing. Inspect the fuse and replace if needed with the same size fuse.
- Check the 12V DC Out socket for obstructions or other visible damage
- Verify the device being charged is not damaged

120V AC Output Fails

- Check the Battery Meter to see if the Solar Link has sufficient battery charge available. If not, follow the charging steps previously described.
- Ensure the ON/OFF BUTTON and 120V AC POWER BUTTON have been activated and the green and red lights are on
- Check to make sure that the 120V AC circuit protection fuse is not blown by removing the 4A FUSE housing. Inspect the fuse and replace if needed with the same size fuse.
- Check the 120V AC Out socket for obstructions or other visible damage
- Verify the device being charged is not damaged

USB 2.0 Output Fails

- Check the Battery Meter to see if the Solar Link has sufficient battery charge available. If not, follow the charging steps previously described.
- Ensure the ON/OFF BUTTON is on and the green light is on
- Check the USB port for obstructions or other visible damage
- Verify the device being charged is not damaged

Section 7 TECHNICAL INFORMATION

SPECIFICATIONS	
BATTERY TYPE	LiFePo4 (lithium iron phosphate) 20Ah - 14.2V
BATTERY LIFESPAN	2000+ cycles (cycle = charge and discharge)
PROTECTION CIRCUIT	Built-in over voltage, self discharge, and short circuit protection
FUSES (replaceable)	4A fuse (120V AC outlet) and 15A fuse (12V DC outlet)
DC INPUT POWER	14.6V/4A, 10A max
120V AC WALL CHARGER	Input: 120V AC, 100-240V, 50/60hz, 100VA Output: 14.6V-15V DC, 4A C-UL, FCC approved
12V DC VEHICLE CHARGER	Input: 11-30V DC (regulated) Output: 14.6V DC, 4A
RATED OUTPUT POWER (watt-hours)	AC 120V, 60hz, 400 watts max modified sine wave inverter, 210 watt-hours 12V DC - 15A, 240 watt-hours USB 2.0 (5V-2A) - 2 ports, 240 watt-hours
OPERATING TEMPERATURE	32°F TO 113°F (0°C TO 45°C)
DIMENSIONS	9.84" x 4.33" x 7.68" (250 x 110 x 195mm)
WEIGHT	9 lbs. (4.5kg)
CERTIFICATIONS	CE, FCC, meets EU low voltage 2006/95/ED and EMC 2004/108/EC

SOLAR LINK 240 CHARGING TIME	
Using #9530 30-Watt Solar Collector	6-8 hours (2 chained together)
Using #9580 80-Watt Solar Collector	6-8 hours
Using 120V AC Wall Charger or 12V DC Vehicle Charger	5-6 hours

OPERATING TIME	User is responsible for verifying the Solar Link is compatible with wattage rates on your specific device.
#9505 Max Burton® Digital Stove To Go®	2 hours
Standard TV	8 hours
Small power tools	6 hours
Laptop (65-90 watts)	3-4 hours
Recharge a cell phone	20 times
Recharge a tablet computer	10 times

To estimate how many hours of power are in the Solar Link, find the watt hour draw of the device that you wish to power and divide into 210W (120V AC) or 240W (USB & 12V DC). (EX: One 10-watt light = 21 hours of continuous light)



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