POWEROLOGY

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HELIO 1600W Portable Solar Power Generator

SKU: PPBCHA1600BK

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Product Overview

The Powerology HELIO 1600W Portable Solar Power Generator is a rechargeable portable power station with a 1024Wh LiFePO4 battery, pure sine wave AC output, multiple device-charging connections, and a built-in foldable 40W solar panel for portable power at home, in a vehicle, and outdoors.

Safety Instructions

Warning:

1. Do not immerse the product in water or expose it to rain or other liquids.
2. Do not operate the product with wet hands.
3. Keep the product away from fire, heat sources, flammable materials, and corrosive environments.
4. Do not cover or block the ventilation openings during operation or charging.

5. Do not connect appliances that exceed the rated or surge output.
6. Use a compatible charger or power source matching the rated input.
7. Do not use the product if it is damaged, swollen, leaking, or emitting an unusual odor.
8. Do not disassemble, modify, puncture, crush, drop, or subject the product to severe impact.
9. Do not insert fingers or conductive objects into any port or AC outlet.
10. Keep the product and its cables out of the reach of children.
11. Do not incinerate the power station or its LiFePO4 battery.
12. Do not use frayed, crushed, loose, or otherwise damaged cables, and do not sharply bend cables.
13. The product is not weatherproof; do not use it in rain or wet conditions, and bring it indoors before rain.
14. Do not operate, charge, or store the power station outside the manufacturer-specified operating, charging, and storage temperature ranges.
15. Do not charge the power station while it is powering external devices unless simultaneous charging and discharging is expressly confirmed as supported for the connected input and load conditions.
16. If an output stops because of overload, overcurrent, overvoltage, short-circuit, or over-temperature protection, disconnect all loads, switch off the affected output, allow the unit to cool if necessary, and reconnect only compatible equipment.
17. Stop using the product and contact a qualified service agent if it becomes abnormally hot or deformed.

Attention:

1. Read and follow all operating instructions before use.
2. Place the product on a stable, dry, and well-ventilated surface.
3. Disconnect connected devices before cleaning or storing the product.
4. Clean the product with a soft, dry cloth; do not use abrasive or corrosive cleaners.
5. Store the product in a cool, dry place away from direct sunlight.

6. Recharge the battery every six months during long-term storage to help preserve battery life.
7. Stop using the product and contact a qualified service agent if it malfunctions.

Operation

1. Before First Use

Place the power station on a stable, dry, and well-ventilated surface.

Inspect the housing, display, ports, solar panels, and charging accessories for damage.

Fully charge the internal battery before relying on the power station for portable or emergency use.

Confirm that connected equipment is compatible with the selected output.

2. Charging Through the DC Input

Place the power station where its ventilation openings will remain unobstructed.

Connect a compatible charging adapter to the DC input port. The adapter output must be within 12–30V DC, 10A, and 240W maximum.

Connect the adapter to a suitable wall outlet.

Check the display to confirm that charging has started.

Disconnect the adapter after charging is complete.

3. Charging Through the USB-C Input

The USB-C port supports USB-C input charging as well as output charging.

Connect a compatible USB-C Power Delivery charger and cable to the USB-C Output/Input port.

Use only USB-C charging equipment within the supported 5V/3A, 9V/3A, 12V/3A, 15V/3A, or 20V/5A profiles, up to 100W.

Check the display to confirm that charging has started.

Disconnect the USB-C charger after charging is complete.

4. Charging with the Built-in Solar Panel

Move the power station outdoors to an open location with direct sunlight; do not use it in rain or wet conditions, and bring it indoors before rain.

Unfold the solar panels and support the unit securely with its stand.

Aim the panel surfaces toward direct sunlight and keep them free from shade.

Check the display to confirm that solar charging has started.

Reposition the panels as sunlight conditions change, then fold them away after use.

5. Using the AC Output

Confirm that the connected appliance does not exceed the power station's rated AC output.

Turn on the power station.

Enable the AC output using the corresponding control.

Connect the appliance to the AC outlet and operate it normally.

After use, disconnect the appliance and switch off the AC output to conserve battery power.

6. Charging USB Devices

Turn on the power station.

Connect the device to a compatible USB output using a suitable cable.

Enable the relevant output if it does not activate automatically.

Confirm that the connected device is charging.

Disconnect the cable and switch off the output after charging.

7. Using the 12V Car Outlet

Confirm that the accessory is designed for a 12V car outlet.

Turn on the power station and enable the DC output.

Insert the accessory plug fully into the car outlet.

Monitor the display and connected accessory during operation.

Disconnect the accessory and switch off the DC output after use.

Specifications

Battery Type: Lithium Iron Phosphate Battery. Battery Capacity: 1024Wh/ 40Ah / 25.6V. Battery Model: 3.2 / 40135V/ 20Ah 8S2P, DC Input: DC 30-12V/10A/ 240W, Built-In Solar Panel Input: 40W, DC Output: 2 x DC12 ,5525V/ 10A Max, USB-A Output: 2 x USB-A, 5V/3A, 9V/ 2A, 12V /1.5A, USB-C Output/Input: 5V / 3A, 9V / 3A, 12V /3A, 15V /3A, 20V/ 5A, AC Output: Rated Power 1600W, Peak Power 3200W.Waveform: Pure Sine Wave, AC Voltage: 230V / 6.96A, Product Size: 436 x 339 x 145mm, Model Number: PPBCHA1600

Battery Runtime

Devices	Device Watt	Discharging Time
Camera	15Wh	65 charges
Drone	30Wh	32 charges
Phone	3200mAh	75 charges
Fan	10W	92 charges
Projector	60W	15.5 hours
Speaker	60W	15.5 hours

Features

1. 1024Wh long-life LiFePO4 battery
2. 1600W pure sine wave AC output
3. Built-in foldable 40W solar panel
4. USB-C PD input/output up to 100W

5. Built-in 12V car outlet
6. Multiple outputs for powering and charging compatible devices
7. Portable folding design with integrated carrying handle and support stand

Care and Maintenance

1. Routine Care

Switch off all outputs and disconnect charging cables and connected equipment before cleaning.

Wipe the housing and folded solar-panel surfaces with a soft, dry cloth.

Keep the ports, ventilation openings, and connectors free of dust and debris.

Do not use abrasive cleaners, solvents, or excessive moisture.

Do not place heavy objects on the folded solar panels.

Store the power station in a dry, ventilated location away from direct heat and moisture.

Recharge the battery periodically during extended storage.

Inspect cables, plugs, hinges, and the support stand before each use.

Do not use frayed, crushed, loose, or otherwise damaged cables, and avoid sharp bends in cables.

Frequently Asked Questions

1. Can the power station run AC appliances?

Yes. Use the pure sine wave AC outlet only with equipment that remains within the rated 1600W AC output.

2. How can the internal battery be recharged?

Recharge it from an appropriate AC power source or unfold the built-in 40W solar panel and position it in direct sunlight.

3. Why does solar charging vary?

Solar input depends on sunlight intensity, panel angle, shade, dirt, and weather conditions. Keep the panels clean and aimed toward direct sunlight.

4. Can several devices be connected at once?

The multiple outputs may be used for compatible equipment, provided the combined demand remains within the applicable output ratings.

5. Why should unused outputs be switched off?

Active output circuits consume battery power even when little or no load is connected, so switching them off helps preserve the remaining charge.

6. How should the power station be stored?

Switch it off, disconnect all equipment, fold the solar panels, and store it in a dry, ventilated location. Recharge it periodically during extended storage.

Troubleshooting

Problem	Likely Cause	Solution
Power station does not turn on	Battery is depleted or the power control was not held long enough	Recharge the battery, then operate the power control again.
Battery does not charge from an AC source	Loose connection, unsuitable outlet, or charging adapter fault	Reconnect the adapter securely, test the outlet, and inspect the adapter and cable for damage.
Solar charging does not start	Panels are folded, shaded, dirty, or poorly aligned	Unfold the panels, clean their surfaces, remove shade, and aim them toward direct sunlight.
Solar charging is slow	Weak sunlight or an unfavorable panel angle	Move to unobstructed direct sunlight and adjust the panel angle as conditions change.
AC appliance does not operate	AC output is disabled or the appliance demand exceeds the output rating	Enable the AC output and use equipment that remains within the rated 1600W output.
USB device does not charge	Incompatible or damaged cable, loose connection, or inactive output	Reconnect the device, enable the relevant output, and try a known-good compatible cable.

Problem	Likely Cause	Solution
12V accessory does not operate	DC output is disabled or the plug is not fully inserted	Enable the DC output and insert the accessory plug securely into the 12V car outlet.
Operating time is shorter than expected	High power demand, multiple active loads, or unused outputs left on	Reduce the connected load, disconnect unnecessary devices, and switch off unused outputs.
Output stops unexpectedly	Overload or a protection function has activated	Disconnect the load, switch off the affected output, allow the unit to recover, and reconnect only compatible equipment.
Unit becomes unusually warm	Heavy load, blocked ventilation, or unsuitable placement	Disconnect loads, switch off the unit, clear the ventilation openings, and allow it to cool in a ventilated location.

Disposal

This product must not be disposed of as unsorted household waste. It is important to separate such waste for proper treatment and recycling, in compliance with local waste management regulations.

Warranty

Products that you buy directly from our Powerology website or shop come with a 24-month warranty.

The 24-month warranty applies to products purchased directly from our Powerology website or store. If Powerology products are bought from any of our verified retailers, then the product is eligible for only a 12-month warranty. To extend your product's warranty, visit our website www.powerology.me/warranty and fill in your details in the provided form along with an uploaded picture of the product to process your request. Once approved, you will receive a confirmation email of the extended product warranty. Upload the required information within 48 hours of purchase to be eligible for a 24-month warranty period.

For more info, please check: www.powerology.me/warranty

Contact Us

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