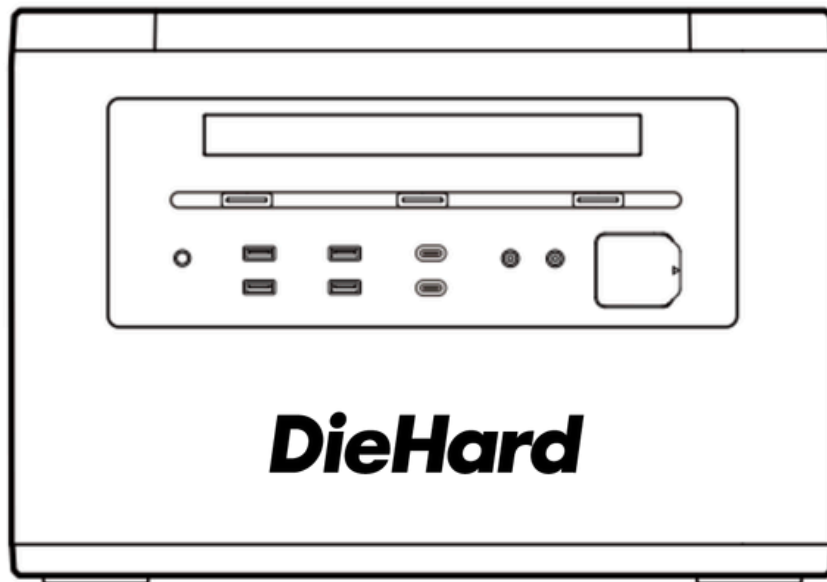


DieHard®

POWER AHEAD®



OWNER'S MANUAL

2400 WATT PORTABLE POWER STATION

FOR MODEL: DH-20020-01

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OWNER'S MANUAL

2400 WATT PORTABLE POWER STATION

FOR MODEL: DH-20020-01

CONGRATULATIONS!

You have just purchased a DieHard® portable power station. Please read this manual carefully before operating the power station. Model and serial number may be found on the bottom of your portable power station. You should record both model and serial numbers and keep them in a safe place for future use.

KEEP THIS OWNER'S MANUAL FOR REFERENCE.

KEEP ALL ORIGINAL PACKAGING FOR STORAGE AND TRANSPORTATION.

**CUSTOMER SUPPORT AND A COPY OF THIS OWNER'S MANUAL CAN ALSO BE FOUND AT
WWW.DIEHARDPOWERSTATIONS.COM/PRODUCT-SUPPORT**

CONTENT

- Charging Instructions
- Warnings and Important Safety Instructions
- Product Introduction
- Packing List
- Product Description
- LCD Display
- How to Charge the Power Station
- How to Power/Charge Devices
- Pass-Through Charging
- Automatic Shutoff
- Fault Codes
- FAQs, Troubleshooting, and Owner's Manual Updates
- Cleaning, Storage, and Maintenance
- Transporting
- Technical Specifications
- California Proposition 65
- Limited Warranty

⚠ CHARGING INSTRUCTIONS

- Fully charge power station before first use.
- It is highly recommended to charge power station when battery indicates less than 20%. It is recommended to fully charge the power station every three months to maintain the life of the power station. See How To Charge the Power Station section of this manual for specific instructions.

IMPORTANT SAFETY INSTRUCTIONS

READ AND UNDERSTAND THIS MANUAL AND ALL INSTRUCTIONS AND LABELS ON THE PORTABLE POWER STATION BEFORE OPERATING.



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WARNINGS



WARNING

Please read the following instructions for safety before use. Improper use may result in fire, property damage, personal injury, or death.
DO NOT use the product with incompatible components or alter the product in any way.
Make sure to use the product according to the following safety instructions and guidelines.



WARNING

Do not expose the product to any liquid or submerge in water. If the battery comes into contact with water, it may cause chemical decomposition of the battery. This may cause the battery to catch fire or explode.



WARNING - RISK OF EXPLOSIVE GASES

To reduce the risk of battery explosion, follow these instructions and those published by the battery manufacturer and manufacturer of any equipment you intend to use in the vicinity of the battery. Review cautionary marking on these products and on engines.

SAFETY INSTRUCTIONS

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, INJURY, OR DEATH:

- Read all the instructions before using the power station.
- Use only as described in this manual.
- Do not disassemble, repair, or modify the power station or the battery.
- Do not place the power station close to or in a fire or expose it to heat.
- Keep out of direct sunlight.
- Do not charge, use, or store the power station in a bathroom or an area exposed to rain or moisture.
- Use and store the power station only in a clean and dry environment.
- Do not use and store in a dusty or wet environment.
- Do not use the power station in or near water. Do not allow rain or other moisture to fall on the power station.
- Only use the output socket to power external devices.
- Never connect the output to main power supply under any circumstances.
- Do not touch the power station or the plug-in points if your hands are wet.
- Do not connect any metallic objects to the AC input or output.
- Do not dispose of the power station together with household waste.
- Do not use any inappropriate power cords.
- Do not operate or charge the device through a power system other than the rated voltage.
- Only use the power station if it is functioning correctly.
- In case of contact with battery fluid, immediately wash affected skin or clothing with soap and water. Do not rub your eyes. If fluid enters the eyes, flush them with cold running water for at least 10 minutes and seek medical attention immediately. Always keep fresh water and soap nearby when working near the battery. Avoid touching your eyes during handling. Battery fluid may be ejected under abusive conditions and can cause irritation or burns- avoid contact.



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SAFETY INSTRUCTIONS (CONT.)

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, INJURY, OR DEATH:

- Do not move the power station if it is recharging or in use.
- Check the power station before every use. Do not use the power station if it is damaged or broken.
- Do not use a power station that is damaged or modified. Damaged or modified batteries may exhibit unpredictable behavior, resulting in fire, explosion, or risk of injury.
- Do not use the power station if the power cord is broken or damaged.
- Do not use the power station if input or output cable is damaged.
- Do not put your fingers or hands into the power station. Keep loose clothing, jewelry, etc. away from openings.
- Keep the power station away from children. Do not let children use the power station
- This portable power station is not intended for use by persons (including children) with reduced physical, reduced sensory, or reduced mental capacities, or lack of experience or knowledge, unless they have been given supervision or instruction concerning use of the power station by a person responsible for their safety.
- Keep this product away from pets.
- Only charge, use, and store the power station within the temperature ranges in the Technical Specifications section of this manual.
- To reduce the risk of damage to the electric plug and cord, pull the plug rather than the cord when disconnecting the power.
- In a storm, unplug the power cord from the socket.
- Do not place the power station on its side or upside down while in use or when storing.
- Do not use accessories for other uses.
- If rust, peculiar odors, overheating, or other abnormal circumstances are observed, stop using the power station immediately and contact customer service.
- Do not disassemble the portable power station. Reassembly may result in a risk of fire or electric shock. The power station complies with all legal requirements for the transport of dangerous goods.
- Ensure the power station is adequately secured when transporting it in a motor vehicle.
- Switch the power station off immediately if it has accidentally fallen, was dropped, or was exposed to vibrations.
- Once the power station is fully charged, unplug the AC charging cable.
- Use of different cables will void the product's warranty and may cause damage or serious bodily injury.
- Manufacturer is not liable for any damage caused by using different brand charging cables.
- NEVER smoke or allow a spark or flame in the vicinity of the power station or engines.
- Be extra cautious to reduce the risk of dropping a metal tool onto the battery. It might spark or short circuit battery or other electrical parts that may cause an explosion.
- When charging the internal battery, work in a well-ventilated area and do not restrict ventilation in any way.
- Do not expose the power station to fire or excessive temperature. Exposure to fire or temperature above 265°F may cause an explosion.

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Please carefully read the instructions for the electric devices you are going to connect to your power station.

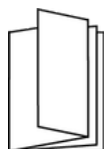
PRODUCT INTRODUCTION

The DieHard 2400 Watt Portable Power Station (Model: DH-20020-01) is convenient for emergency off-grid demand, for sudden power failures, for remote working conditions, and for outdoor adventures. With power output up to 2400W, fast charging, and a long cycle life the DieHard 2400 Watt Portable Power Station is a reliable and durable solution for all your portable power needs.

PACKING LIST



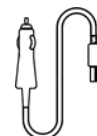
Power Station



User Manual



AC Cable
(Input)

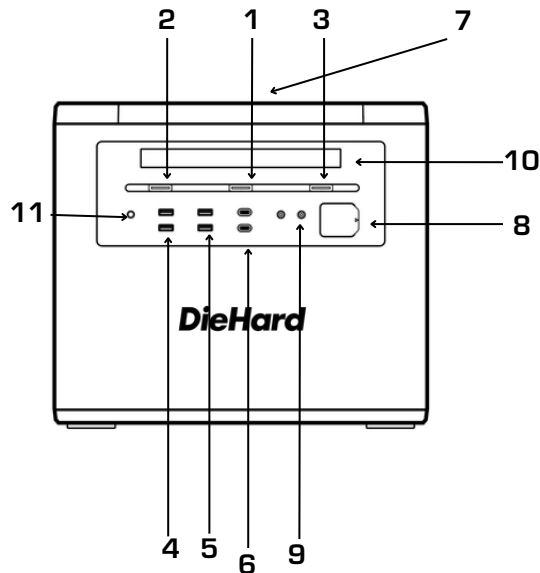


13V Car Connector Cable
with Anderson Port

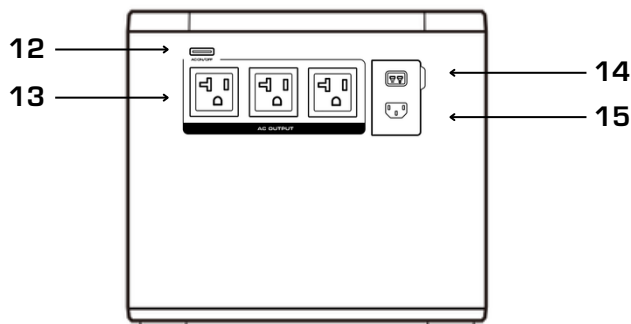
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PRODUCT DESCRIPTION

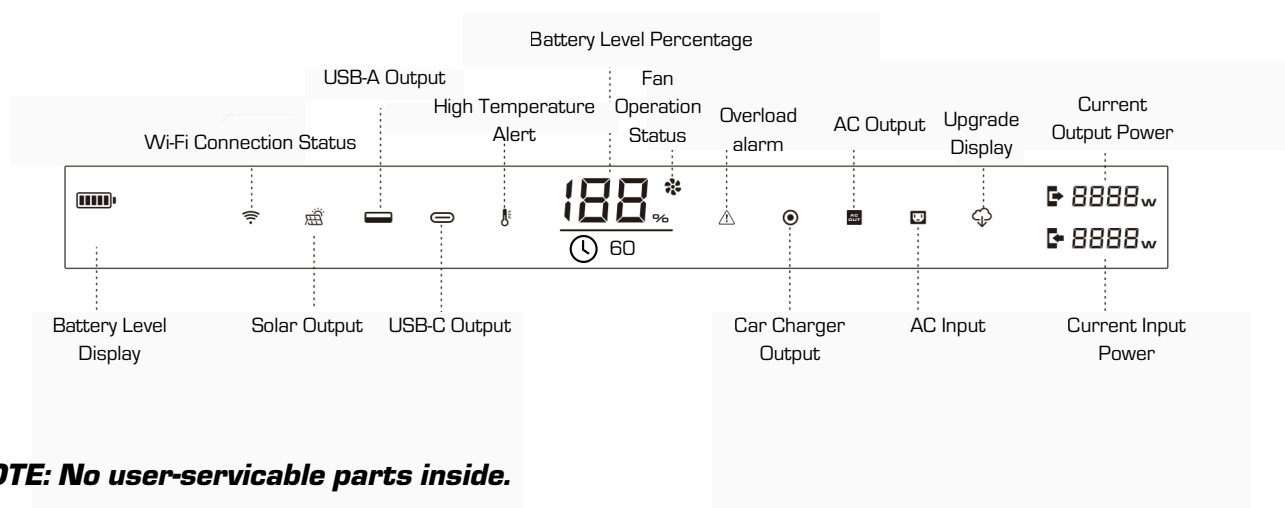


- 1. Main Power Switch
- 2. USB/Wireless Output Power Switch
- 3. DC Output Power Switch
- 4. USB-A QC3.0 Quick Charge Up To 18W QC24W Output Ports *2
- 5. USB-A Output Ports *2
- 6. USB-C Output Port *2
- 7. Wireless Charging (top of unit)
- 8. Car Charger Output Port
- 9. DC 5521 Output Port *2
- 10. Liquid Crystal Display
- 11. This button is non-functional.



- 12. AC Output Power Switch
- 13. AC Output Port *3
- 14. Anderson Port (use when recharging power station with a solar panel or car)
- 15. AC Charging Input Port

DISPLAY



NOTE: No user-servicable parts inside.

NOTE: Fully charge power stations before use.



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HOW TO CHARGE THE POWER STATION

NOTE: Disconnect the power station when fully charged.

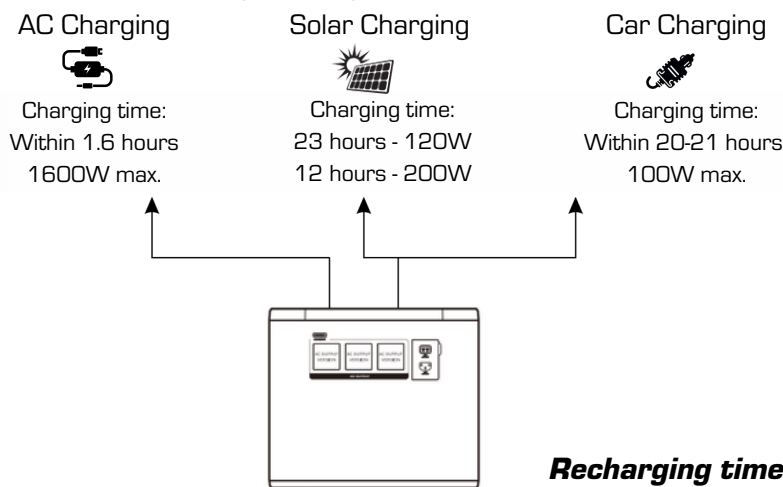
NOTE: Only charge the power station with the provided charging cables.

It is recommended to fully charge the power station every three months to maintain the life of the power station.

- The DieHard portable power station must be charged with an officially designated charging cable. We are not responsible for consequences of charging with non-original parts.
- When charging, please place the power station on flat surface without flammable and combustible substances near. Do not leave power station unattended when charging to prevent accidents.
- After continuous full load discharge, if the battery is in a high temperature state, it is recommended to wait to charge the power station until it has returned to room temperature. Otherwise, the power station may not charge.
- The rechargeable ambient temperature of the battery is 23°-125° F; however, the ideal recharging ambient temperature is 71.6°- 82.4° F and recharging at this temperature range can significantly extend the service life of the battery.

How To Charge the Power Station:

- AC Charging:
Using the provided AC cable, plug the power station into a wall outlet.
[AC input located on the back of the power station].
- Charging with a Solar Panel (sold separately):
Plug the solar panel into the Anderson Port (located on the back of the power station).
To ensure the best outcome, use the solar panel in a location with sufficient sunlight.
- Charging with a Car:
Using the included car connector charger cable, plug one end into the Anderson port and one end into the cigarette lighter of car. The car must be running to charge the power station.



Recharging times are approximate and can vary depending on numerous factors.



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HOW TO POWER/CHARGE DEVICES

- Use the power station within the allowable operating temperature of -10°-135°F. Use outside this temperature may cause the power station to go beyond its safe and effective operating limits.
- Do not immerse the power station in water. The DieHard Portable Power Station is not waterproof.
- Continued use of high-powered electrical output may engage temperature protection (overload). If overload protection occurs and the power station turns off, please wait about 30 -60 minutes before using or charging. Turn on power again before use.

Turning on the Power Station:

Press the power button quickly to turn on the portable power station.

Using the USB Charging Output:

After ensuring the power station is powered on, quickly press the USB Button to use USB output ports (USB-A /USB-C) and wireless charging. Plug the device you are charging into the correct USB port.

Press the USB Button quickly again to turn this option off.

Using the Wireless Charging:

After ensuring the power station is powered on, quickly press the USB Button to use the wireless charging option. Set the device you are powering on the wireless charging icon on the top of the power station. *Note: some protective cases may prevent the phone from charging and must be removed to allow charging.

Press the USB Button quickly again to turn this option off.

Using the 12V DC Output:

After ensuring the power station is powered on, quickly press the DC Button to use the DC output ports.

Plug in the device you are powering into the correct DC port.

Press the DC Output Power Button quickly again to turn it off.

Using the AC Output:

(Located on the back of the power station)

After ensuring the power station is powered on, quickly press the AC Button to use the AC output ports. Plug the device you are powering into the correct AC port.

Press the AC Button quickly again to turn it off.

Turning Off the Power Station:

Press and hold the Power Button until the power station shuts down.

If there is a charging input source connected, the power station will not shut down.

PASS THROUGH CHARGING

This portable power station features pass through charging. This allows you to use connected devices while the power station is recharging (via AC wall outlet, solar panel, or car charging).



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AUTOMATIC SHUTOFF

The AC output will automatically shut off after 45 minutes if no AC load is detected. The system can detect a minimum AC load of 10W — anything below this may be treated as no load.

Similarly, the DC output will shut off after 120 minutes if no DC load is detected. The system can detect a minimum DC load of 1W — anything below this may also be considered as no load.

Important Charging Information/Optimized Battery Charging

When using this portable power station to charge a smartphone/device, please be aware that the device may automatically enter shut-off mode if it detects a low power draw. This can occur if your smartphone/device has Optimized Battery Charging enabled, as the phone may pause or limit charging to preserve battery health.

To ensure consistent charging:

- Consider disabling Optimized Battery Charging temporarily in your smartphone/device settings.
- Use a higher-power device or multiple devices to maintain a sufficient power draw, preventing auto shut-off.



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LIST OF FAULT CODES

FAULT CODE	DESCRIPTION	SOLUTION
E500	BMS Communication Issue Exclamation point will appear on the screen and flash 5 times.	Contact Customer Service
E501	Inverter Communication Issue Exclamation point will appear on the screen and flash 5 times.	Contact Customer Service
E502 E503	DC Output Overcurrent Protection If these codes populate, you have too much power plugged into the DC ports.	Turn off your Power Station. Unplug the device you are attempting to charge, it is too powerful for the Power Station. Restart your Power Station once the device is unplugged.
E504 E505	DC Car Charger Input Overcurrent Protection DC symbol on the screen will flash and and beep 5 times.	The Car Charger input is too powerful to charge your Power Station. You cannot use this as a power source to recharge your Power Station. Restart your Power Station.
E506 - E509	USB-A Output Overcurrent Protection USB-A symbol on the screen will flash, and beep 5 times.	Turn off your Power Station. Unplug the device you are attempting to charge, it is too powerful for your Power Station. Restart your Power Station once the device is unplugged.
E510 E511	USB-C Output Overcurrent Protection USB-C symbol on the screen will flash, and beep 5 times.	Turn off your Power Station. Unplug the device you are attempting to charge, it is too powerful for your Power Station. Restart your Power Station once the device is unplugged.
E512 - E515	USB-A Short Circuit Protection You may be attempting to charge a faulty or broken device using your Power Station.	Turn off your Power Station. Unplug the device(s) you are attempting to charge. Check the device to see if something is wrong with it. Turn on the Power Station and try charging your device again. If you get the same error, it may be an issue with your Device.



POWER AHEAD®

LIST OF FAULT CODES

FAULT CODE	DESCRIPTION	SOLUTION
E522	<i>Inverter Battery Over-voltage</i> Your power source is either too powerful, or not connecting to your Power Station properly.	Turn off your Power Station. Unplug the Power Station from the power source. Wait 1 Minute. Plug your Power Station back in to the power source. If it is still not working, try another power source. If it's still an issue, contact customer service.
E523	<i>Inverter Battery Under-voltage</i> Your Power Station needs to charge.	Your Power Station needs to charge before it will charge an external device.
E524	<i>Inverter Overcurrent</i> The device you are attempting to charge is too powerful for your unit.	Turn off your Power Station. Unplug the device from your Power Station. You cannot use it to charge that device.
E525	<i>Inverter Output Short-Circuit</i> AC symbol on the screen will flash and beep 5 times. The unit has detected a short-circuit.	Restart your Power Station. It has detected a short-circuit in the device you are charging, and has turned off to protect itself. You can plug the device back in once your Power Station has restarted.
E526	<i>Inverter Load Overload</i> AC symbol on the screen will flash and beep 5 times. The unit has detected a short-circuit.	This means you have too many devices or too much power plugged into your Power Station. Please turn off your Power Station, unplug the devices, and restart your Power Station.
E27	<i>Inverter Heatsink Fault</i> Your Power Station has detected a spike in heat or surpassed an internal ambient temperature of 100°F for an extended period of time and shut off to protect itself.	Turn off your Power Station. Let it cool for a minimum of 30 minutes. Restart Your Power Station. If message persists, let it cool for 1 Hour before trying again.
E528	<i>Inverter System Fault</i> Your Power Station's Battery Management System caught an error.	Turn off your Power Station. Restart your Power Station after 1 minute. If issue persists, contact Customer Service.



POWER AHEAD®

LIST OF FAULT CODES

FAULT CODE	DESCRIPTION	SOLUTION
E529	<i>Inverter PV Overvoltage</i> Your Solar Panel's Voltage may be too powerful for your Power Station.	Turn off your Power Station. Unplug the Solar Panel. Check Solar Panel Voltage compatibility, your Solar Panel may be too powerful.
E530	<i>Inverter PV Overcurrent</i> Your Solar Panel(s) are sending too much current (amps) into the Power Station.	Turn off your Power Station. Unplug the Solar Panel. Check Solar Panel Amp compatibility. Your Solar Panel may be producing too much power.
E531	<i>Inverter PV Other Faults</i> Something is misfiring between your Solar Panel and the Power Station.	Turn off Your Power Station. Unplug the Solar Panel. Turn your Power Station back on and try Plugging the Solar Panel back in. If the issue persists, contact Customer Service.

FAQS, TROUBLESHOOTING, OWNER'S MANUAL UPDATES

Tolerance Range: The screen displays power data with a tolerance of $\pm 2\text{w}$ for DC output. For AC output above 100W, the tolerance is $\pm 10\%$. If the AC load is below 100W, the displayed power may vary by up to $\pm 20\text{W}$.

For additional information, latest product information, and Owner's Manual updates please visit www.diehardpowerstations.com/product-support or scan the QR code below:





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CLEANING, STORAGE, AND MAINTENANCE

Equipment Cleaning

Make sure that the power station is disconnected from all input power sources and output devices. Wipe with a clean, dry, soft, lint-free cloth. Remove any foreign objects, dirt, or other obstructions on the vents on both sides. While cleaning foreign objects in the side vents, do not allow debris, dirt, or other blockages to enter the power station. Do not use corrosive cleaners or solvents. Do not use compressed air to clean the side cooling vents, as it will cause foreign particles to enter the interior and cause a short circuit.

KEEP THE ORIGINAL PACKAGING FOR STORAGE AND TRANSPORT.



WARNING

Note: To avoid the risk of electric shock, do not use metal objects to clean the ports.

Storage

- Please store the portable power station out of the reach of children. If children accidentally swallow parts, seek medical help immediately.
- When the equipment power is low, please charge before storing it. Otherwise, long and low power storage may cause damage to the battery inside the product. If the device is seriously insufficient and idle for too long, the battery will enter deep sleep mode. If the battery needs to be awakened from the deep sleep mode, choose the slow charge mode for the machine until full to extend battery life. We recommend that you discharge at least every three months and charge with slow charges.
- Do not place the portable power station close to a heat source, such as direct sunlight in the car, a fire source, or a heating furnace.
- The environment for storage should be kept dry. Do not place the power station near water that may leak.
- Do not store or transport the power station together with eyeglasses, watches, metal necklaces, hairpins, or other metal objects.

Maintenance

- If the power station is not used regularly, please charge and discharge it every three months under average temperature to keep the service life.
- Regularly check all ports and wall chargers for debris, dirt, damage, and corrosion.
- Do not disassemble the power station.
- Do not cover the power station with towels, clothes, or other items. Regularly observe the side vents for dust and foreign matter and clean them according to the cleaning procedures specified in the manual.

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IMPORTANT:

Disposal/recycling: Do not put the power station and its accessories in the trash can. Items must be properly handled in accordance with local laws and regulations. For additional information, please see www.epa.gov

TRANSPORTING

Do not transport the power station with a battery power level higher than 30%.

- Not permitted on aircrafts.
- Do not drop.
- Do not disassemble.
- The power station is not waterproof. Do not expose to liquids.
- Avoid extreme temperature.
- Please dispose of batteries and electronic goods in accordance with local regulations.



This power station meets all legal requirements for the transportation of dangerous goods. The capacity of the lithium battery pack exceeds 100Wh. According to international standards, if the power station is transported by air, it must be transported in accordance with IATA standard packaging. The instructions and labeling requirements of the International Air Transport Association and related declarations must be completed.

TECHNICAL SPECIFICATIONS

General Specs

Size	14.45 x 10.24 x 12.4"
Net Weight	43 lbs
Capacity	1953Wh

Output

AC output version	2400W (Peak power 4800W) 110V, 60Hz
USB A1/A2 QC3.0 output	5V $\overline{=}$ 2A 9V $\overline{=}$ 2A 12V $\overline{=}$ 2A
USB A3 A4 output	5V $\overline{=}$ 2.4A, 5V $\overline{=}$ 3A
USB-C * 2 output	5V $\overline{=}$ 3A, 9V $\overline{=}$ 3A, 12V $\overline{=}$ 3A, 15V $\overline{=}$ 3A, 20V $\overline{=}$ 5A (100W Max)
Wireless charger output	15W Max
Car charger output	13.0V $\overline{=}$ 10A
DC5521 * 2 output	13.0V $\overline{=}$ 3A



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TECHNICAL SPECIFICATIONS (CONT.)

Input	
AC charge input power	E-Speed Charge 1600W Max
AC input power	100V~120V, 50/60Hz
DC charger input/Solar input	11.5V~65V 800W Max
Battery	
Battery category	LMO
Battery specifications	24Ah
Pack specifications	11S2P
Discharge temperature	-10°F -135°F ± 5°F
Charging temperature	23°F -125°F ± 5°F
Battery Life	1300 Cycles 80%

CALIFORNIA PROPOSITION 65

WARNING: This product can expose you to chemicals including Nickel [Ni], which is known to the State of California to cause cancer, and Bisphenol A [BPA], which is known by the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

Due to constant technology updates, product specifications and configuration changes, please refer to the actual product.



POWER AHEAD®

LIMITED WARRANTY

Equity Sales & Marketing, Inc., ("ESM") warrants this product. We assure the original purchaser that our products are free of defects in workmanship and materials during the applicable warranty period determined in the "Warranty Period" section below, but the exclusions set below are excluded.

This warranty is only valid in the United States and its territories.

This warranty statement sets our total and exclusive obligations of ESM. We will not assume nor authorize any person to assume for us any other liability related to the sale of our products.

Further, this warranty does not cover cosmetic damage to the product.

Warranty Period

The warranty is for 24 months for the original purchaser from the date of purchase. For California residents, this warranty commences on the delivery date of product to the consumer, instead of the date of purchase, and is for 24 months. To determine the start date of the warranty period, a sales receipt from the first consumer purchase or other reasonable documentary proof is required.

Repair or Return Processing

We will repair or replace any products that cannot be operated due to defects in workmanship or materials within the applicable warranty period. If a valid claim is filed within the applicable period, we can choose:

1. Repair of the product; or
2. Replacement or exchange for a product(s) of equal value. The replacement product bears the remaining warranty period of the original product it replaces. The customer is responsible for the shipping cost of the return.

Exclusions

The warranty does not apply to any product modified, altered, tampered with, misused, abused, damaged by accident, damaged by acts of nature, or used for anything other than normal use as authorized in current product literature or any product purchased through an online auction house. The warranty does not apply to the battery cell unless you fully charge the battery cell prior to first use and at least every three months thereafter.

This limited warranty is the sole and exclusive warranty for the ESM product. No employee, agent, dealer, or other person is authorized to alter this warranty or make other warranty on behalf of ESM.

REPAIR OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY TO THE CONSUMER. WE SHALL NOT BE LIABLE FOR ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY ON THIS PRODUCT, EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW. ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IS LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY. OUR LIABILITY UNDER ANY CIRCUMSTANCES WILL NOT EXCEED THE PURCHASE PRICE FOR THE PRODUCT FOR WHICH LIABILITY IS CLAIMED.

The foregoing obligations are in lieu of all other obligations and liabilities including negligence and state our entire exclusive liability and the customer's exclusive remedy. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, if so, the above limitations or exclusions do not apply to you.

Customer Service

For customer service, please visit: www.diehardpowerstations.com/product-support

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