

ubiolabs

500Wh Power Station

User Manual

ESS102

Our customer service team is here to help.

www.ubiolabs.com

support@ubiolabs.com

1-866-642-4428

(Monday-Friday, 9AM-5PM PST)



Charge your device now

Your new 500Wh power station ships partially charged. To get started please plug it in with the included AC adaptor. Fully charging from empty should take around 6-7 hours. We recommend fully charging the device before use.



Not Waterproof

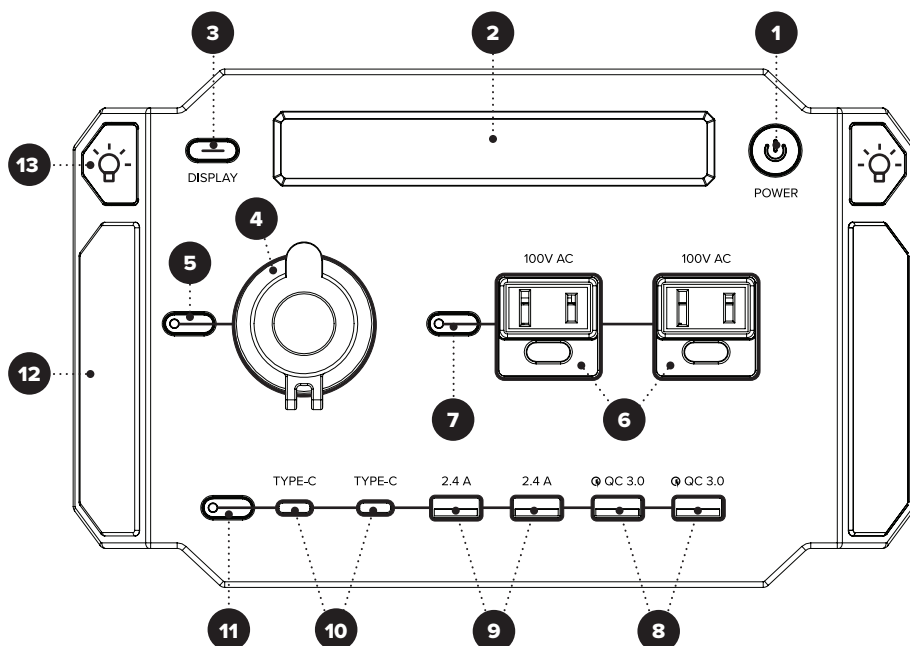
The Power Station is not designed to be used in wet conditions or exposed to water. Outdoor use permitted in dry conditions only.

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Getting to Know the Power Station

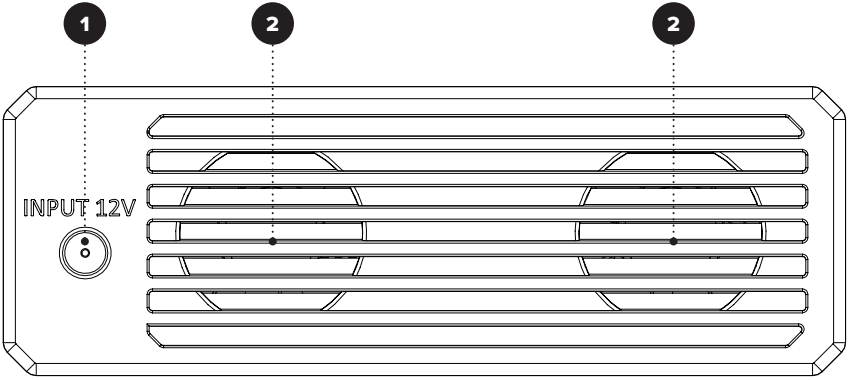
Front Panel



- 1. Main Power Button** Press and Hold to turn on.
- 2. Smart LCD Screen**
- 3. Screen Button** Turns the LCD screen on and off. Turning the screen off will not power down the device.
- 4. 12V DC barrel port**
- 5. 12V barrel port power button**
- 6. 110V AC Outputs**
- 7. AC Output power button**
- 8. Quick Charge USB ports**
- 9. USB-A ports**
- 10. Type-C ports**
- 11. USB and Type-C power button**
- 12. LED utility light**
- 13. LED utility light power button**

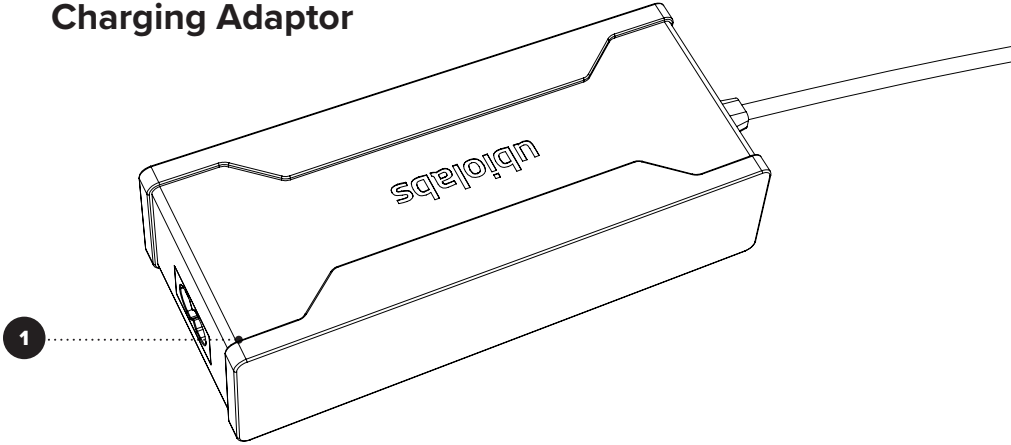
Getting to Know the Power Station

Rear Panel



- 1. DC Input** Used to charge your device with included wall adaptor.
- 2. Fan Vents** Ensure proper airflow during use.

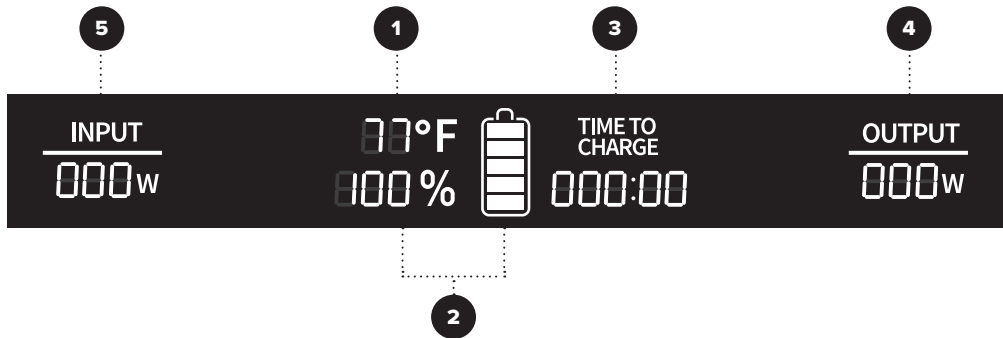
Charging Adaptor



- 1. 80W AC charging adaptor** The included adaptor has been designed to work specifically with the power station.
** Do not use any other charging adaptor with the Power Station.

Getting to Know the Power Station

Smart Screen LCD



Normal Operation

1. Battery Temperature Displays the temperature of the internal battery pack. Normal operating range is 0° to 140° F.

2. Remaining Battery Capacity Displays the remaining battery capacity.

3. Time to charge or time to discharge Real-time calculation of total time to fully charge or discharge when in use. Display will automatically switch to “Time to Charge” when plugged in to the included AC adaptor.

4. Total output watts Displays total output watts during use.

5. Input watts Displays total input watts when device is being charged.

Getting to Know the Power Station

Error Messages



**BATTERY
TEMP**

1. High battery temperature

Displays when internal battery pack reaches temperature over 113° F when charging, and 140° when discharging. It is recommended that you unplug devices, power off, and allow to cool for 30-60 minutes.



HIGH UNIT TEMP

2. High internal temperature

Displays when the internal AC inverter reaches a temperature of 167° F. It is recommended that you unplug devices, power off, and allow to cool for 30-60 minutes.



**HIGH
OUTPUT**

3. High output

Displays when a device is plugged in that exceeds the recommended output of the power station. The device plugged in is drawing too much power. Unplug high wattage devices.



**SHORT
CYCLE UNIT**

4. Internal short

Displays when an internal short circuit has occurred. The built-in circuit breaker will cut off power to the device in the event of a short circuit. To reset the circuit breaker, power down the device, wait 30 seconds and power it back on.

Getting to Know the Power Station

Error Messages



5. Mute

Displays when a user has pressed the display button to mute the audible warning that occurs when an error message is on screen.

A black square containing the text "LOW BATTERY" in white capital letters.

LOW BATTERY

6. Low battery warning

Flashes when the internal battery pack reached 10% capacity remaining. You can continue to use the power station when the low battery indicator is illuminated.

Audible Warnings

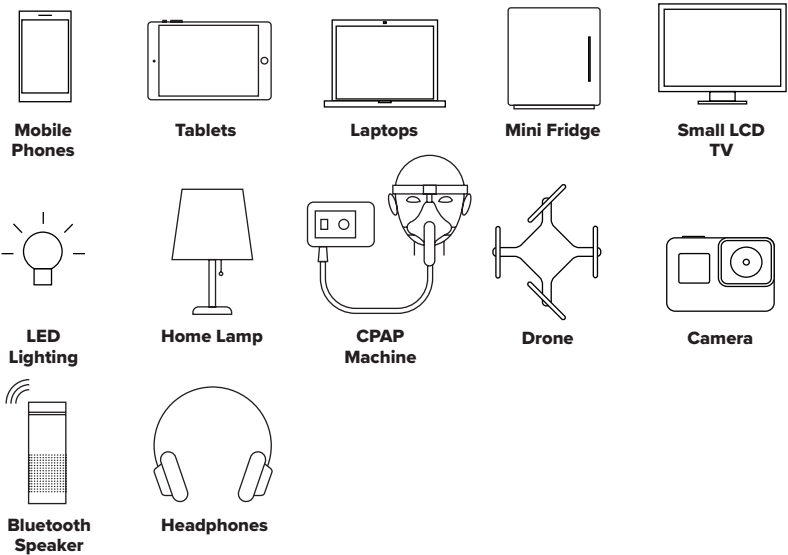
In addition to the on-screen error messages, the Power Station beeps to let you know an error message is being displayed.

We do not recommend ignoring error messages, but to mute the beeping sound press the display button.

Using the Power Station

What Does It Power?

While there are more devices than we can list here, your new power station is well suited to powering these types of devices:



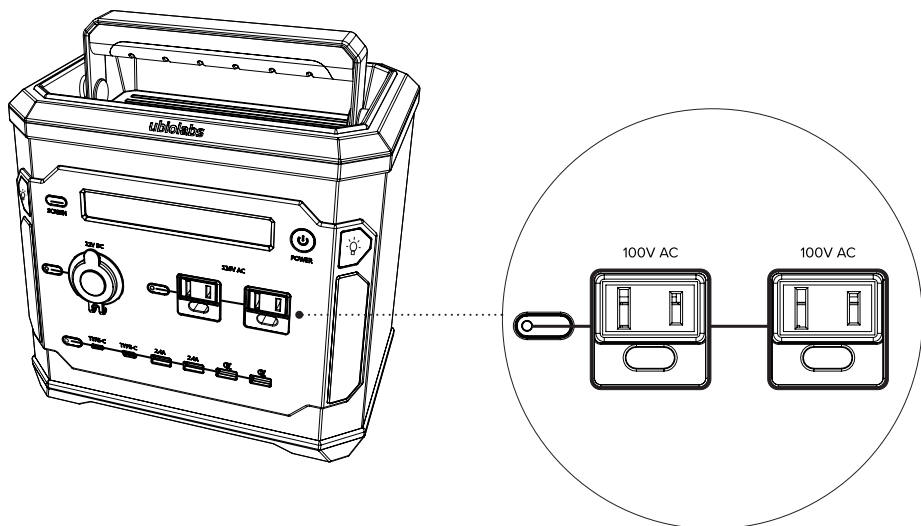
The Power Station is not designed to handle:



These devices typically draw more than 300 watts of power and exceed the rated output capacity of the Power Station.

Using the Power Station

The AC Outputs



The two AC outputs power devices that use a standard wall plug and operate at 110V. The combined output for both AC outputs is 300W.

Simply power-on the AC section and plug in a device like you would into a wall socket. The display will show the total watts being used.

If in doubt, most devices show the amounts of watts they require. This can be found printed on the unit (the small, difficult to read text found in inconvenient locations) or in the user manual.

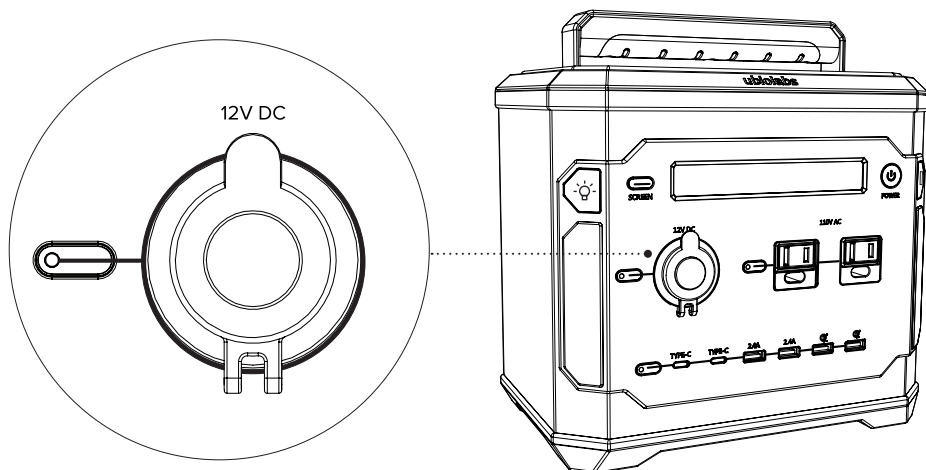
As a general rule all hair dryers, coffee makers, full size refrigerators and other large appliances will require more than the 300W the Power Station can provide.

If you plug a device in that exceeds 300W, the display will show the High Output error (see page 7 #3) and provide an audible warning. Please unplug the device and the Power Station will return to normal operation.

It is unlikely you've damaged the Power Station.

Using the Power Station

12V Barrel Port

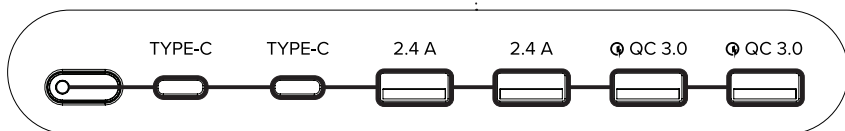
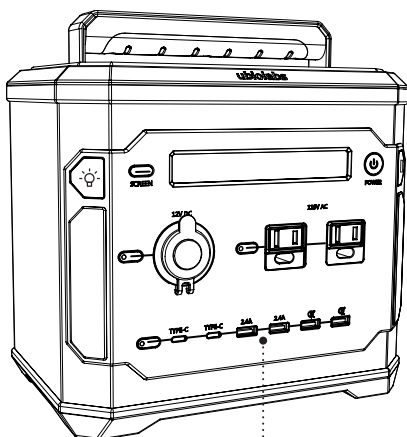


The 12V barrel port adaptor can be used to power or charge many devices. With a 10A/120W max output current, devices such as mobile phones, tablets, bluetooth speakers, and other USB powered devices can be charged or operated with the appropriate adaptor cable. Additionally, there are a number of other devices that have been designed for use such as air compressors, automatic car jacks and many more.

Remember to always seal the port with the rubber cover when not in use and turn off the port power as it can be susceptible to short circuits.

Using the Power Station

USB and Type-C Ports



The USB and Type-C ports are designed for use with mobile phones, tablets, Bluetooth speakers, and other USB-powered devices. Each port outputs 5V which means almost any device that uses a USB, micro USB, or Type-C input can be charged.

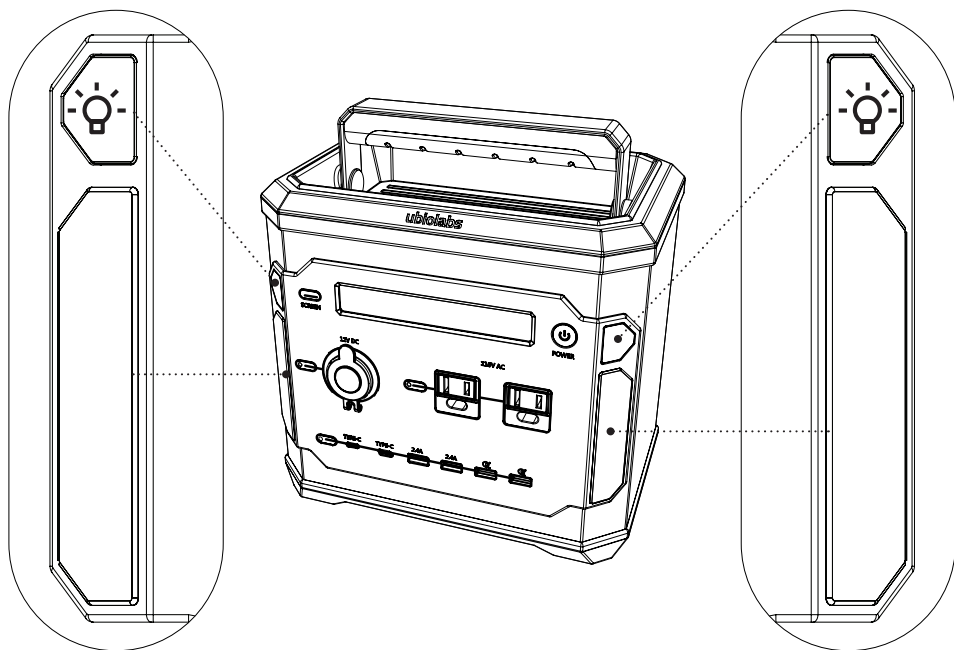
2.4A ports Universal USB ports for charging phones, tablets, Bluetooth Speakers, headphones, and other USB-powered devices. The 2.4A USB ports output a maximum of 12W but will automatically adjust their output wattage based on what's plugged in.

Intelligent Quick Charge Ports These ports are design to Quick Charge compatible devices. If your phone or tablet is Quick Charge enabled, these ports are capable of providing a maximum of 18W each which will charge devices more quickly.

Compatible devices include phones from Samsung®, Motorola®, LG®, HTC®, and more!

The Quick Charge ports are smart and will also charge standard USB powered devices that are not Quick Charge enabled. The ports will automatically adjust their output wattage and can charge most USB powered devices.

Using the Utility Lights



The Power Station comes equipped with two LED utility lights on the front left and right side of the unit. Each of the utility lights has its own power/brightness button.

To operate the utility lights, press the button once to turn the light on. Each subsequent button press will increase the brightness of the light. There are a total of 4 brightness settings.

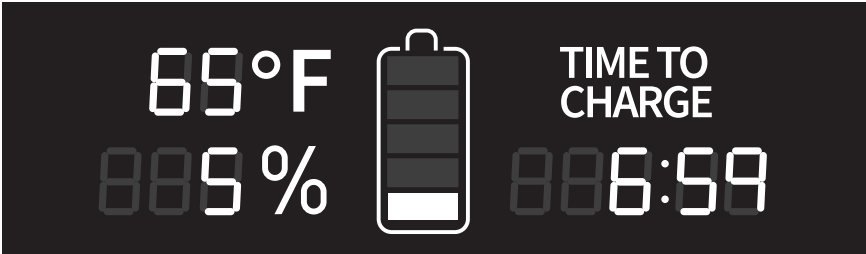
Charging the Power Station

Using the Included AC Adaptor

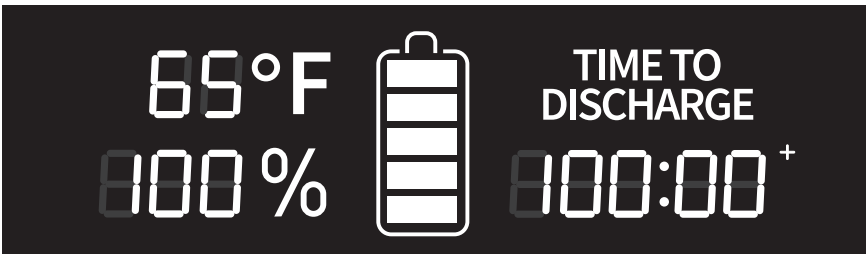
The included power adaptor has been designed to work specifically with the Power Station

DO NOT USE 3rd PARTY ADAPTORS TO CHARGE YOUR POWER STATION

When plugged-in, the battery icon on the screen will flash and the “time to charge” will be displayed. The Power Station takes around 6-7 hours to fully charge and will automatically stop charging when full.



When fully charged, the battery icon will stop blinking and become solid. The smart screen will also display a 100% charge.



Best Practices

Storage and Maintenance

The Power Station can be left plugged in to a wall outlet during storage. This will ensure your Power Station is always charged and ready for use.

If storing the Power Station unplugged, we recommend fully charging every 3 months which will prolong the battery life and ensure it's ready for use.

Please store in a cool, dry place.

Cold Weather Operation

Both high and low temperatures adversely impact battery life and capacity. This is a limitation of lithium ion battery technology and is unavoidable.

Your Power Station can be used in subzero temperatures and is rated for use at -4F. While being discharged in cold temperatures the battery capacity will be reduced.

Frequently Asked Questions

What type of battery is in my Power Station?

Your Power Station uses a 10.8V/45ah lithium ion battery pack comprised of 54 individual lithium ion cells. Each cell provides 2550mAh resulting in a total battery capacity of 500Wh (137,700mAh).

The Power Station uses a nickel manganese cobalt (NMC) lithium ion battery pack which provides superior extreme temperature performance and more charge and discharge cycles than standard lithium ion cells.

How many charge and discharge cycles can I expect?

Battery pack performance is highly variable and based on many factors such as depth of discharge, temperature during use, total discharge rate of the battery pack and how frequently you charge your Power Station.

Determining how many cycles you can expect is not an exact science but the battery pack is designed to be fully charged and discharged up to 500 times and retain 80% of it's original capacity.

To prolong battery cycle life, it is best to frequently charge your Power Station and avoid fully discharging it whenever possible.

How long will the battery pack remain charged when not in use?

All lithium ion cells have a self-discharge rate when in storage. The exact rate of discharge depends on the age of the battery pack, storage temperature, and other variables. Under ideal conditions the battery pack will lose up to 5% per month.

Why is my device making a buzzing sound?

The Power Station features an audible alarm to alert the user to active error message on the screen. When you hear this, refer to the screen to see what the error message is and resolve the issue. The alarm will mute when the display button has been pressed.

Please refer to page 7 & 8 of this manual for further information on error messages.

How do I know if my device will run from the AC inverter?

First, know that the 110VAC power output on the Power Station provides up to 300W of power. The device you want to power must consume 300W or less.

The Power Station has a 500Wh capacity, meaning it can provide 500W of output for one hour.

Here's a real-world example: A 40" 4k screen has an average power consumption specification of 50W. This product can use the AC inverter because it requires less than 300W. The power station will power the screen for approximately 10 hours ($500\text{Wh}/50\text{W}=10$ hours).

Technical Specifications

	Item	Specification
AC Charging	Power	80W
	Time	6 - 7Hrs
AC Output	Output Voltage	110V AC±3%
	Output Frequency	50/60Hz±0.5Hz
	Output Power	300W (Pure Sine Wave)
	Peak Output Power	600W
	Over Load	100% <Load> 116% @ 5 min; 116%<Load>150% @ 2mins; 150%<Load>200% @ 2secs
	Static consumption (No Load)	<5W
	Max. efficiency (>70% Load)	90%
Battery Pack	Type	Lithium ion Nickel manganese cobalt
	Cell	18650 2550mAh
	Cell Number	54
	Total Capacity	500Wh
	Nominal Voltage	10.8V
	Max. Voltage	12.6
	Min. Voltage	10.5
	Discharging Temperature	-4°F-140°F
	Charging Temperature	32°F-113°F

Technical Specifications

	Cycle Life	500times @80%
12V Barrel Port Output	Output Voltage	12.6± 0.5V
	Output Current	10A
	Overload Current	>11A
5V USB	Output Voltage	5 ± 0.3V
	Output Current	2.4A
	Overload Current	>3.2A
Quick Charge USB Ports	Output Voltage	3.6-12V
	Output Current	3A Max.
	Load	18W max.
Buzzer	Yes/No	Yes
LCD Display	Output Power Display	0-500W
	Input Power Display	0-500W
	Battery Temperature Display	0° - 199°F
	Battery Power Display	0-100%
	Battery Icon Display	Five Segments, Flash Charging
	Battery Temperature Alarm (Too hot)	Indicate " BATTERY TEMP", when over 113° F when charging, and 140° when discharging.
	Over Temperature Alarm (Inverter)	Indicate "HIGH UNIT TEMP" when the internal AC inverter exceeds 167° F.
	Low Voltage Alarm	Indicate "LOW BATTERY", Then into the State of Protection
	Short-Circuit Protection	Indicate "SHORT CYCLE UNIT", Then into the State of Protection

Technical Specifications

General	Ambient Humidity	10%-90%
	Cooling Method	Air
	Warranty	1 Year
	Dimension	9.2" L × 6.5" W × 8.2" H
	N.W.	14.9 Lbs.

Troubleshooting

My Device is not receiving power from the AC inverters or 12V supply

1. Ensure that the AC output or 12V section is activated. The LED next to the activation button should be illuminated. Press the power button if the LED is not illuminated.

2. Check the LCD for any fault indications on the display. “HIGH OUTPUT” indicates that the device you are trying to power requires more power than the Power Station will deliver. This will be accompanied by audible beep. If the device is in need of a recharge, like a laptop, try powering down the laptop and recharging.

“SHORT CYCLE UNIT” indicates a short on the AC or DC outputs. Unplug the devices on these connectors and power cycle the unit to continue operation.

“LOW BATTERY” indicates the Power Station will need to be recharged before it will power the device.

“BATTERY TEMP” indicates the unit has shut down while the battery temp has exceeded the normal operating range. Discontinue use of the Power Station to allow the battery to return to a safe temperature range.

“HIGH UNIT TEMP” indicates the unit has shut down to protect the battery from excessive temperature damage. Turn the Power Station off for 30-60 minutes to allow the temperature to cool to within its operating range.

My Device is not charging from the USB outputs

1. Ensure that the USB output section is activated. The LED next to the USB power button should be illuminated. Press the power button if the LED is not illuminated.

2. Ensure the USB plug is fully inserted into the jack and the device.

Customer Support

Thank you for your purchase!

We're committed to creating the most beautiful and high performance mobile charging accessories available. If you love getting charged up with Ubio Labs, please write a review on-line.

If for any reason you are unhappy with your purchase, or require assistance, please contact us so we can make it right.

DO NOT RETURN TO THE STORE

Our customer service team is here to help.

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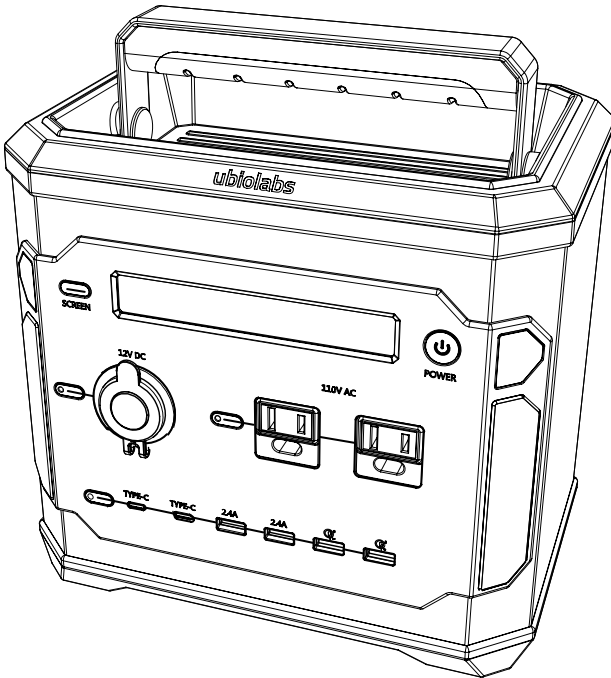
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Warranty

At Ubio Labs we are dedicated to designing and manufacturing products with superior performance and 100% customer satisfaction. All of our products come with a 1 year limited warranty from date of purchase.



**Thanks for getting
charged up with Ubio!**