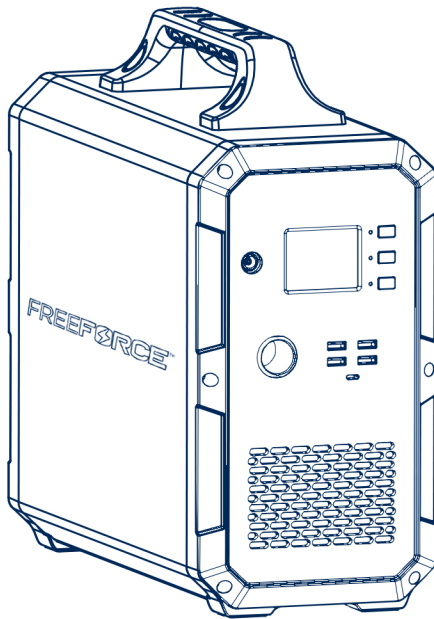


# FREEFORCE™

## ULTRALITE 1800

POWERFUL PORTABLE POWER STATION



## USER MANUAL

- What's in the Box
- How to Charge
- Features
- Technical Specifications
- Warranty Information
- Contact Information



### Charge Me!

Begin charging your FreeForce Ultralite 1800 by connecting it to the power supply provided.

The purpose of this manual is to help you use your product to its full capability! Please contact us directly if you have further questions about your FreeForce product here:

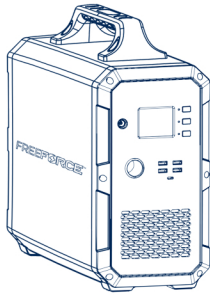
 [hi@freeforcepower.com](mailto:hi@freeforcepower.com)

 888-984-2762

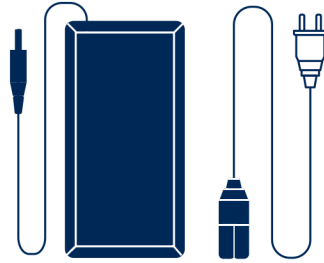
 [www.freeforcepower.com](http://www.freeforcepower.com)

# WHAT'S IN THE BOX

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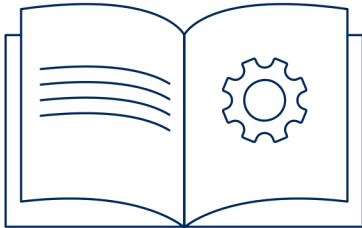
**Freeforce Ultralite 1800**



**47" AC Wall Charger & 47" AC Input Charging Cable**



**79" PV Solar Charge Cable (7909 to MC4)**



**User Manual**

# HOW TO CHARGE YOUR PRODUCT

## Charge with AC power

Insert one end of the adapter into wall outlet and insert the other end to the input port of the product. As the product charges you can monitor the battery status by checking the battery icon on the LCD screen. When the battery is fully charged, it will stop charging itself automatically.

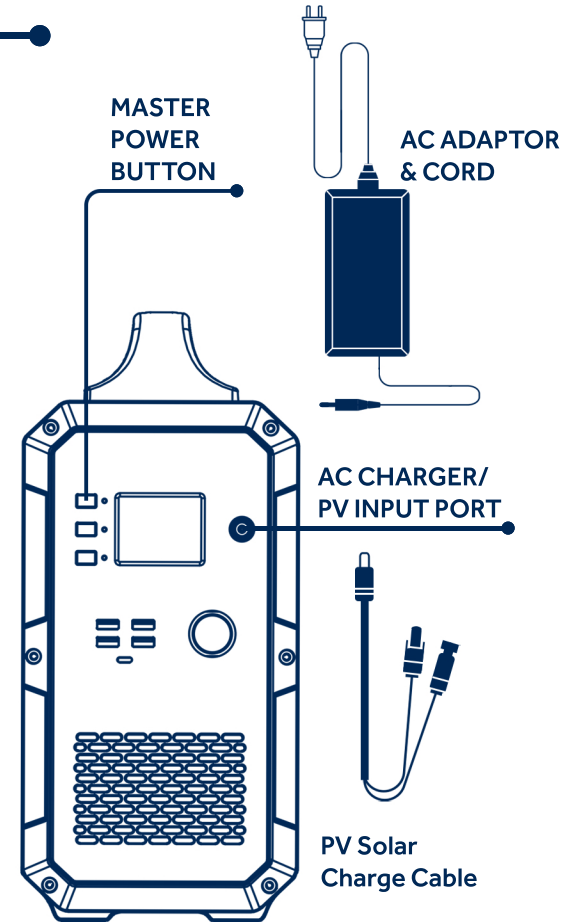
## Charge with solar power

**BEFORE YOU CHARGE:** Turn off generator, connect PV (or charger) to charge and activate PV charge function. The first column on screen will light up and show input power. Now the generator is in charging state and cannot support AC and DC functions. To open AC and DC functions, press the master power button for more than 1 second to turn on the generator, the screen will light up when the generator is turned on. After start-up, connect PV (or charger) to start charging, the screen will show input power wattage and now you can open AC and DC functions.

### NOTICE:

1. If Master Power Button is not turned on, AC button and DC button are in off status, no AC output and DC output.
2. If Master Power Button is turned on, AC button and DC button are still in off status, no AC output and DC output. You need to turn on AC power button and DC power button separately.

Insert the solar charging cable or AC adapter into the input port of the product. The display screen will light up and charging power will be displayed. Product can be charged in both on and off position, but it is advisable to begin charging with the product off so you can see the charging has started when the charging indicator light turns on.



## RECHARGING TIMES

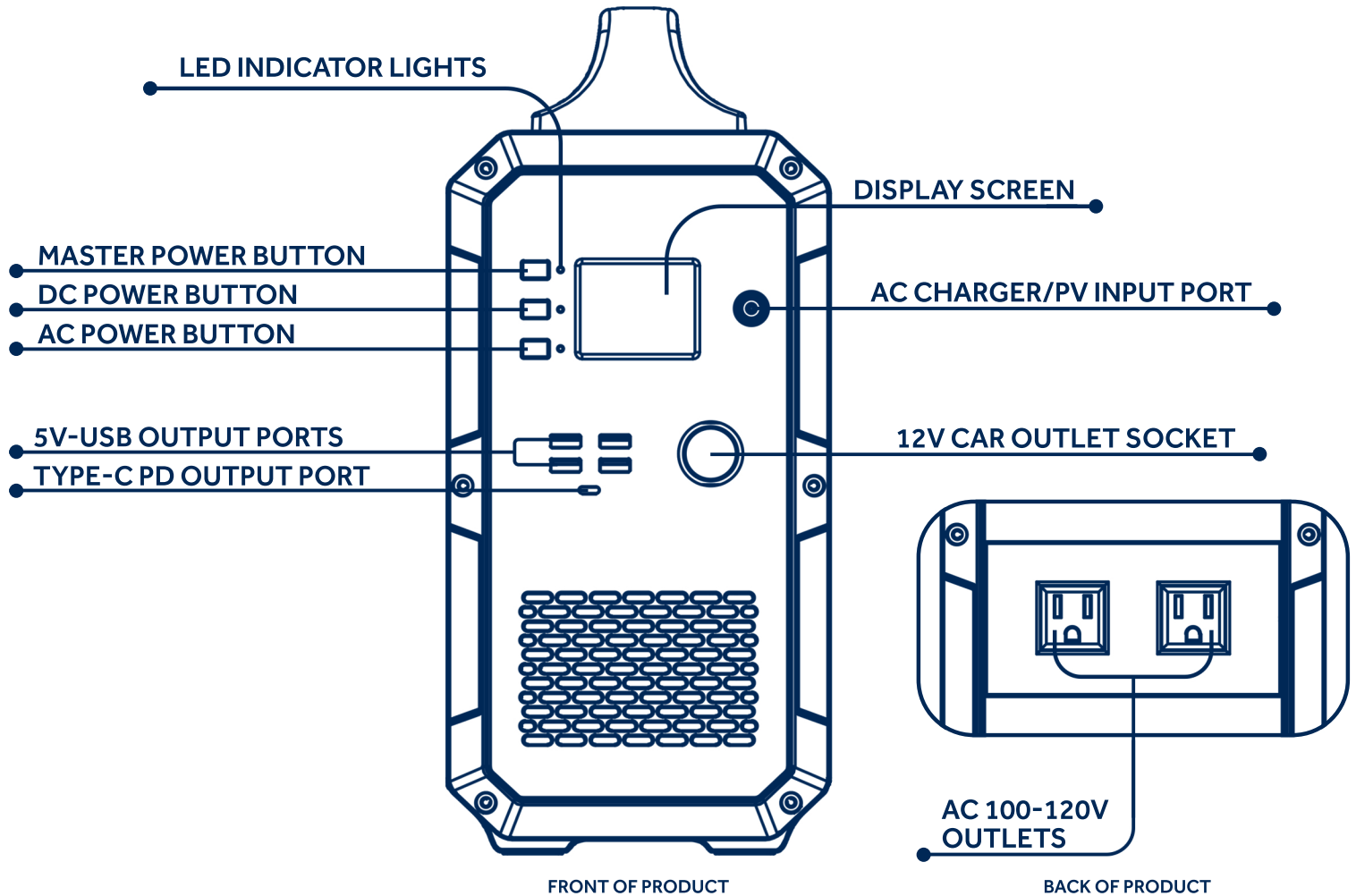


Wall Charger  
10 - 12 hours



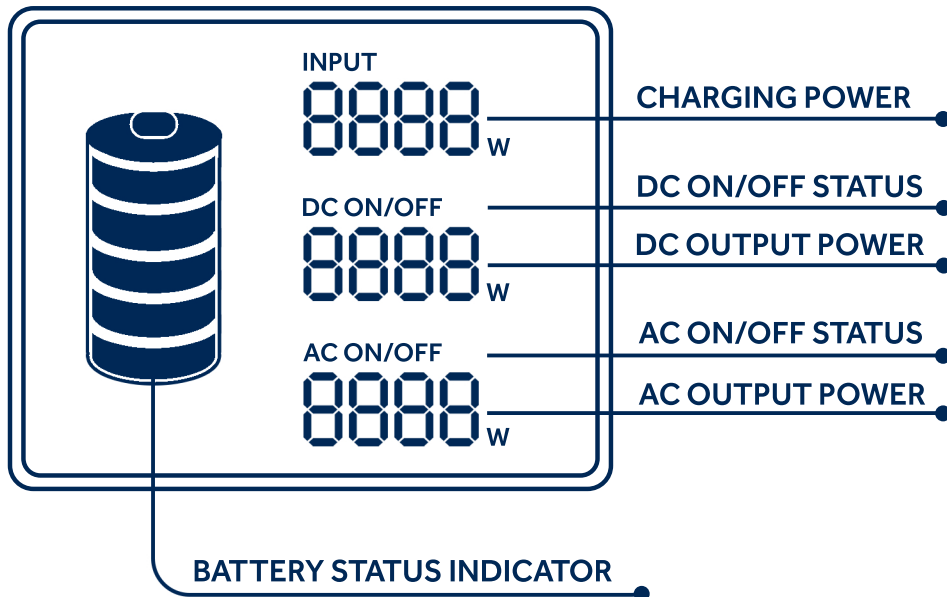
Solar Charger  
8 - 10 hours  
(In case of  
max. 500W  
solar panel)

# GETTING TO KNOW YOUR PRODUCT





# LCD DISPLAY



**BATTERY STATUS INDICATOR**  
Icon flashes while being charged. When the battery is fully charged, the icon will stop flashing and all 5 segments will be filled.

## NOTE:

1. If the product malfunctions, error codes will be displayed on screen.
2. When product is powered on, but not in use, the product will turn off by itself after 60seconds of inactivity.
3. When the product is powered on and the AC/DC output is turned on, the backlight would turn off by itself after a period of inactivity. To turn on the backlight again, press any button.

# USING YOUR PRODUCT FOR AC ELECTRICAL APPLIANCES



## Laptop, Electric Kettle, Small TV, Lamp, Fan

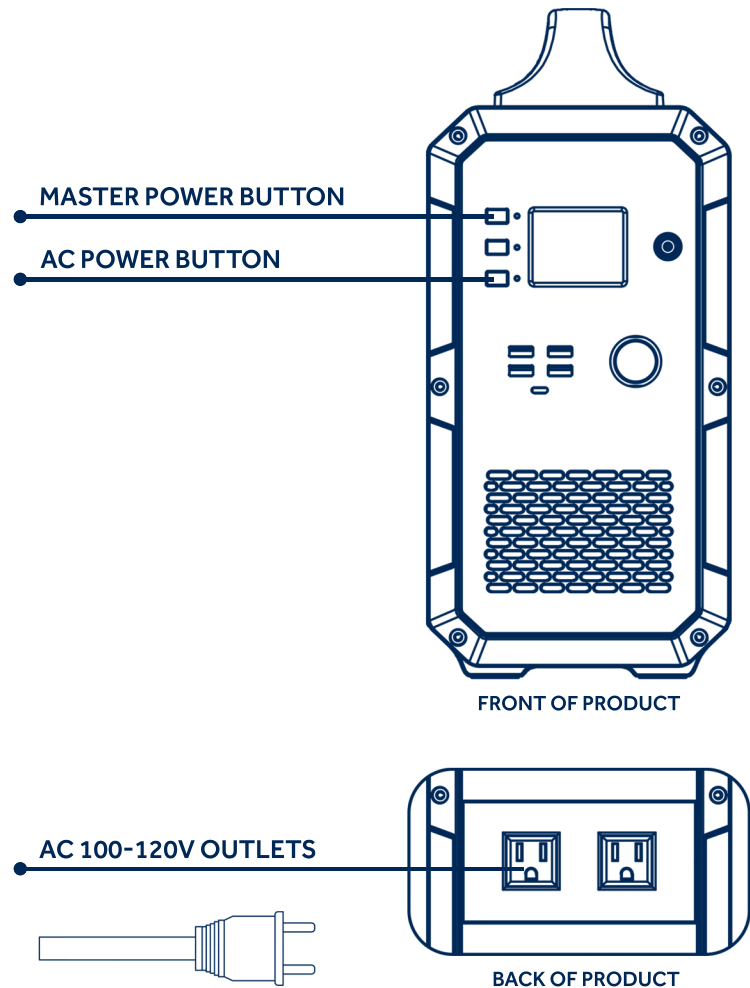
### Turning the Product On/Off

Press and hold the master power button about 2 seconds to turn the product off or on. The LED indicator light and the display screen will light up or turn off accordingly.

### AC Output

**NOTE:** Check to make sure the product is turned on. Otherwise, you cannot turn on AC output.

1. Turn on AC output: press and hold the AC power button to turn on the product. The corresponding LED indicator light would light up and the display screen would show "AC ON."
2. Turn off AC output: press and hold the AC power button to turn off the product. The LED indicator light would turn off and the display screen would show "AC OFF"



# USING YOUR PRODUCT FOR DC ELECTRICAL APPLIANCES



## Computer, Car Vacuum, Router, Phone and most 12V and 19V devices.

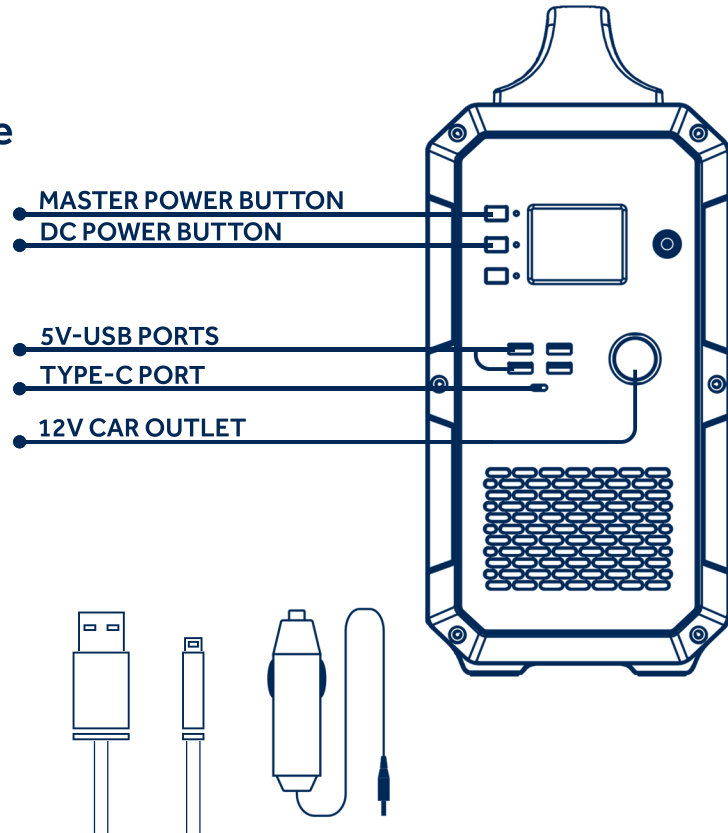
### Turning the Product On/Off

Press and hold the master power button about 2 seconds to turn the product off or on. The LED indicator light and the display screen will light up or turn off accordingly.

### AC Output

**NOTE:** Check to make sure the product is turned on. Otherwise, you cannot turn on DC output.

1. Turn on AC output: press and hold the DC power button to turn on the product. The corresponding LED indicator light would light up and the display screen would show "DC ON."
2. Turn off AC output: press and hold the DC power button to turn off the product. The LED indicator light would turn off and the display screen would show "DC OFF"



# SPECIFICATIONS

	OUTPUT SPECIFICATIONS	
INVERTER OUTPUT	Continuous Output Voltage	100-120Vac, 220-240Vac
	Rated Frequency	50/60Hz
	Continuous Output Power	1000W
	Power Factor	1
	THDV@0.7R (under nominal voltage)	<5%
	Overload protection	1000W ≤ Load < 1200W @ 2Min, 1200W ≤ Load @ 1s
	Power Loss (No Load & Turned off)	<20W
	Max Efficiency (>70% Load)	88%(100-120Vac), 90%(220-240Vac)
12V/9A CAR OUTLET OUTPUT	Continuous Output Voltage	12.2V(±1V)
	Continuous Output Current	9A
5V USB OUTPUT	Output Voltage Range	5V±0.3V
	Max Output Current	3A
	Note: The maximum output of a single USB port is 3A. The maximum output of 2 USB ports is 3A (top and down).	
TYPE-C PD OUTPUT	Supported Fast Charge	PD Protocol
	Output Voltage Range	5-20V(±5%) (5V by default)
	Continuous Output Voltage/Current	(5V/9V/12V/15V)3A(±0.3A), 20V/2.25A(±0.2A)

# SPECIFICATIONS

<b>INPUT SPECIFICATIONS</b>	
AC Adapter Charger	42V/200W
PV Max Input Power	500W
PV Input Voltage Range	16-60Vdc(OVP 73V±2V)
PV Max Input Current	10A
MPTT Efficiency	99.5%
Max Efficiency	>88%
Solar Charging Mode	MPPT
<b>BATTERY</b>	
Rated Voltage	14.8Vdc
Rated Capacity	1800Wh
Built-in Battery Cell	Li-ion
Battery Packing	4S45P
<b>MIN UNIT</b>	
IP Rating	IP 21
Operating Environment	Relative Humidity: 10%-90%, Operating Temperature: 0-40°C
Dimensions & Net Weight	393.5*, 165.4*, 364.7mm, 17 KG

Note: When the total output power exceeds 1000W, the DC output will be directly shut down. When the load is less than 30W, the output power would not be displayed. When a high-power appliance is attached to the product, the displayed output power and the actual output power could be different for up to 30W.

# PRECAUTIONS

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Before using this product, you should read the instructions carefully and be aware of the precautions. Warranty does not cover damage caused by failure to follow instructions.\

Check the power at each output port. For example, the power at AC output port is provided by the built-in inverter of the product, whose maximum continuous output power is 1000W. This means that it is only suitable for electronic device whose required power is no more than 1000W.

The product is equipped with high-voltage electricity. It is expected to use with caution in order to avoid any accidents.

This product is not permitted on aircrafts.

Use the original or certified charger and cables, charge it by the constant current and voltage, and prohibit reverse charging.

Please do not put this product in contact with fire, liquids, and direct sunlight. Avoid exposing the product to rain or using the product in humid environment.

In case of fire, use dry powder fire extinguishers for this product. Do not use water fire extinguisher, which may cause electric shock.

Do not install the product near heat sources, such as electric furnace and heaters. Place and store the product in a well-ventilated place.

Cold weather can influence battery capacity. In sub-zero temperature ( $<0^{\circ}\text{C}$ ), you may be able to discharge the product, but you should not charge it. Otherwise, the battery of the product would be greatly damaged and the capacity may not ever be recovered. When the product is charged at a temperature below  $0^{\circ}\text{C}$ , it will shut off and stop charging itself automatically. The product will reboot and start charging itself when the temperature rise to above  $10^{\circ}\text{C}$ . If the product is discharged at a temperature of  $-20^{\circ}\text{C}$ , it will turn off. The product will reboot and turn on output when the temperature rise to above  $-10^{\circ}\text{C}$ .

Avoid storing this product near metal objects like coins, jewelry, and keys to prevent short-circuiting.

Press the "RESET" button in case of temporary malfunctioning. The product will be reset and turned to normal conditions.

It's normal for this product to generate heat when it is being charged.

Make sure that the air inlet/outlet is not blocked.

This product is durable, has built-in lithium-ion batteries with a large capacity, and features a non-memory effect. (Recommended storage temperature:  $50^{\circ}\text{F}$  ~ $95^{\circ}\text{F}$ )

Do not disassemble the product. If the generator needs maintenance, please contact the local designated system

# WARRANTY INFORMATION

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Proper use helps to extend the life of this product. Please operate strictly according to the user manual and under the prescribed conditions. This product is intended for consumer use only.

Warranty is valid for 1 year from the date of purchase.

**During the warranty period, we will repair or replace the product at no cost, unless the damage is caused by:**

- Improper use or handling of the product (other than consumer use, rough use/dropping, improper charging)
- Disasters such as flood, fire or earthquake
- Unauthorized disassembling, repair, or modification of the product

# CONTACT US

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[hi@freeforcepower.com](mailto:hi@freeforcepower.com)



[www.freeforcepower.com](http://www.freeforcepower.com)



888-984-2762



@freeforcepower

**FREEFORCE™**

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**ULTRALITE 1800**

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