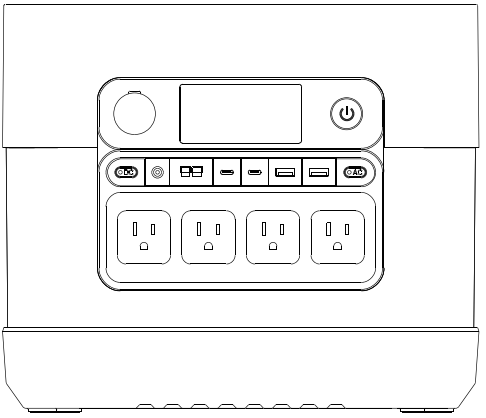
ZERO BREEZE

ElecHive 2200
Portable Power Station

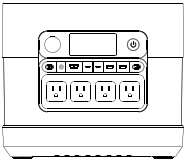
USER MANUAL V1.2



Congratulations on your new ElecHive 2200

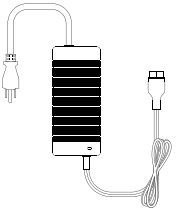
CONTENT

WHAT’S IN THE BOX

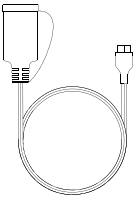


ElecHive 2200

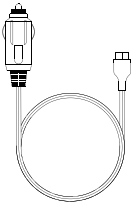
User manual



240W power supply



12V Outlet adapter

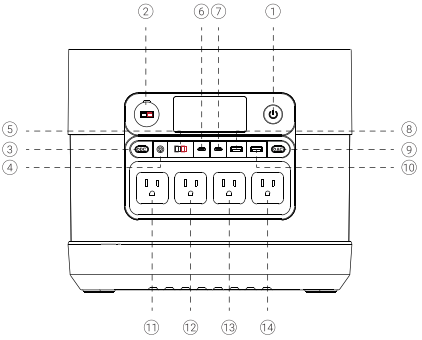


Car Outlet
charging cable

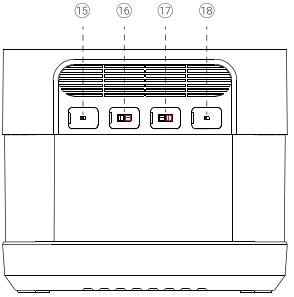
FEATURES

The ElecHive 2200 is a game-changer in the world of generators! Thanks to its advanced battery pack technology, the ElecHive 2200 has definitely reached the ultimate energy density for a product of its kind. This is very important because it means it's nearly impossible to find a product that can have the same battery capacity at a smaller size. Its powerful battery can provide 2,200W of power output, just like a standard wall socket! And it packs a massive 2,500Wh capacity, which means all your devices will stay powered for hours and hours, so you'll never be stranded without power.

We designed the ElecHive to charge from as many options as possible, so you'll never feel stranded. You can connect your solar panels, car charger, dedicated charger, or more efficiently use our high power of 1250W professional charger.



1. Main power button
(Long press to turn on/off the power station.)
2. Anderson port with 24V output
3. DC power button
(Short press to turn on/off the DC output.)
4. DC5521 port with 12V output
5. Anderson port with 12V output
6. TypeC USB port with 100W Bi-direction full PD
7. TypeC USB port with 18W output
8. 10. Type A USB port with 18W output
9. AC power button
(Long press to turn on/off the AC output.)
11/12/13/14. AC outlet



15. Auto-sleep switch (US)/AC frequency(JP) switch
16. Anderson port for 1250W max fast charging
17. Anderson port for 240W max normal charging
18. 90% or 100% Charge/Discharge switch

Buttons

Main Power Button ⏻

Long press this button to turn on/off the ElecHive power station. Both DC and AC outputs only work after the power station is turned on.

The charging function is not affected, which means even when the ElecHive power station is turned off, it still can be charged. However, if you want to see more charging data, it needs to be turned on.

This button can also be short pressed to turn off the LCD backlight. The LCD backlight can then be turned on by short pressing any button.

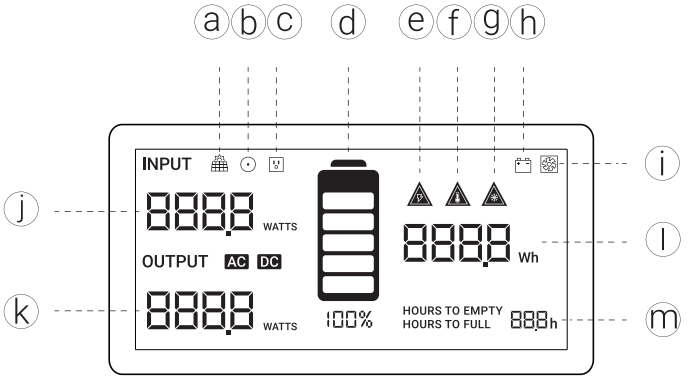
DC Power Button DC

Short press this button to turn on/off the DC output. The 12V DC, 24V DC, and USB outputs are all controlled by this button.

AC Power Button AC

Long press this button to turn on/off the AC output.

LCD



a. Solar panel charging
b. 12V DC and 100W typeC charging
c. 24V/36V/48V power adapter charging from wall outlet
d. Battery power indicator
e. Overload/short circuit protection indicator
f. Over temperature protection indicator
g. Low temperature protection indicator
h. Low power protection indicator
i. Fan turns on indicator
j. Total input power
k. Total output power
l. Remaining battery capacity
m. Hours to Empty/Full (*When the input power is greater than the output power, the time required to fully charge is displayed. When the input power is less than the output power, the remaining battery working time is displayed automatically.)

SPECIFICATIONS

Category	Item	Parameter	Protection*	Note
DC Output	12V Anderson Port	10.5~13.4V, 300W/25A Max	Overload, overcurrent, short circuit, over-temperature, low temperature	The output is regulated at 13.4V. It may decrease a little bit with big load especially when the battery is in low capacity. It triggers overload protection when the output power is over 300W. It triggers over-current protection when the output current is over 25A.
	24V Anderson Port	19.5~25.2V, 500W/25A Max	Overload, overcurrent, short circuit, over-temperature, low temperature	The output is unregulated from the battery with switch and protection. It changes along the battery capacity. It triggers overload protection when the output power is over 500W. It triggers overcurrent protection when the output current is over 25A.

SPECIFICATIONS

Category	Item	Parameter	Protection*	Note
DC Output	12V DC5521 Port	10.5~13.4V, 120W/10A Max	Overload, overcurrent, short circuit, over-temperature, low temperature	The output is regulated at 13.4V. It may decrease a little bit with big load, especially when the battery is in low capacity. It triggers overload protection when the output power is over 120W. It triggers overcurrent protection when the output current is over 10A.
	2 x USB-A	5/9/12V, 18W QC3.0	short circuit, overtemperature, low temperature	
	1 x USB-C Bi-direction full PD	5/9/12/15/20V, 100W/5A Max	Overload, overcurrent, short circuit, over-temperature, low temperature	The input power may not reach 100W, which depends on if the customer uses the proper charger with 100W full PD ouput capacity and the cable. The cable length also affects the charging and discharging power.
	1 x USB-C	5/9/12V, 18W Max	short circuit, overtemperature, low temperature	

SPECIFICATIONS

Category	Item	Parameter	Protection*	Note
AC Output	4 x US wall outlet or 3 x Universal wall outlet	110V, 60Hz, 2200W/20A max Continuous, or 230V, 50Hz, 2200W/10A max continuous, 4400W Surge Peak	Overload, overcurrent, short circuit, over-temperature, low temperature, low voltage	110V is for 100-120V region, and 230V is for 220-240V region. It can output max continuous 2200W AC, and it triggers the overload protection if the load is more than 2200W. This function does not support all electrical devices with higher power rating, please test to confirm before use.
Input/ Charge **	Normal Charging (Anderson Port)	Solar (Open Circuit Voltage) 240W/10A Max (~11hours to full)	Overload, overcurrent, short circuit, over-temperature, low temperature	This input port is for 12-30V solar panels, other DC power like the power from 12V Cigarette socket. The max power it can accept is 240W, while the max current it draws is 10A.
		DC Charger 12~30V 240W/10A Max (~11hours to full)		

SPECIFICATIONS

Category	Item	Parameter	Protection*	Note
Input/ Charge **	Fast Charging (Anderson Port)	Solar (Open Circuit Voltage) 30~75V 1250W/26A Max (~3hours to full)	Over-voltage, reverse connection, over-tempera-ture, low temperature	This input port is for 30~75V solar panels and other DC power. The max power it can accept from the solar panels is 1250W. The max power it can accept from a 30~38V DC charger is 600W, while the max current it draws is 16.7A. The max power it can accept from a 42~60V DC charger is 1250W, while the max current it draws is 26A. When the battery is discharging and charging at the same time, the overall power is restricted to 2200W. And the charging power will be decreased if the total power is over 2200W.
		DC Charger 30~38V 600W/16.7A Max (~5hours to full)		
		DC Charger 42~60V 1250W/26A Max (~2.5hours to full)		

SPECIFICATIONS

Category	Item	Parameter	Protection*	Note
Mode	Auto-sleep switch /AC frequency(JP)	ON/OFF (US) 60Hz/50Hz (JP)	When the auto-sleep mode is ON, if each DC or AC output port is drawn less than 100mA, the ElecHive unit will shut down after 12 hours. When the auto-sleep mode is OFF, the ElecHive unit will not shut down until the battery is completely discharged. For Japan: The auto-sleep mode is always ON. The AC frequency can be switched to 50Hz or 60Hz. Before you set it up, you need to understand the specifications of your electrical device, otherwise you will be responsible for any damage caused.	
	Charge/Dis-charge Percentage	90%/100%	If you choose 90%, it means the battery will be charged or discharged 90% of its full capacity, which will extend the lifetime of the battery.	

SPECIFICATIONS

Category	Item	Parameter	Protection*	Note
Battery	Capacity	2500Wh		
	Cell Chemistry	NMC(Lithium-Nickel-Manganese-Cobalt-Oxide)		
	Recharging Temperature	32-104°F/ 0-40°C		
	Operating Temperature	-4-104°F/ -20-40°C		
	Shelf Life	More than 2 Years (After fully charged)		
	Life Span	2300 Cycles (80%)	Means the ElecHive still has around 2000Wh, capacity after 2300 cycles.	
	Weight	40lbs/18.3kg		
	Size	12.9*9.6*11.3inch /32.8*24.4*28.7cm		
	Storage Temperature & Humidity	-40-140°F/-40-60°C, <95%RH		

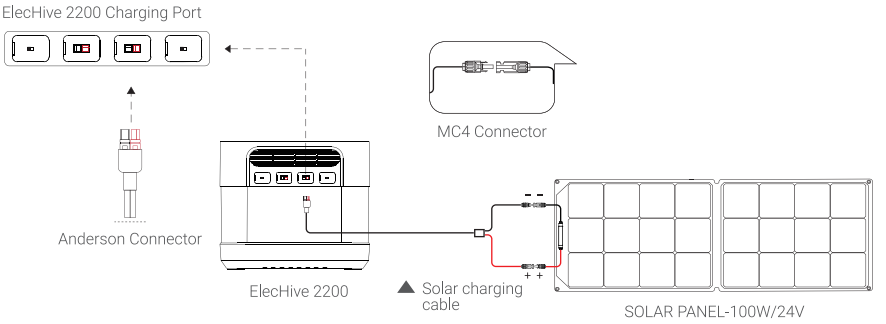
* When the DC or USB output protection happens, the DC or USB output will turn off automatically. After removing the factors that lead to protection, you need to press the DC power button again to recover the output.
When the AC output protection happens, the AC output will turn off automatically. After removing the factors that lead to protection, you need to press the AC power button again to recover the output.
When the charging protection happens, the battery cuts off, and all inputs and outputs will turn off. After removing the factors that lead to protection, you need to press the main power button and then the AC or DC button again to recover the output.

* * The LCD will automatically turn on when there is a new charge input.

CHARGE

Charge with one 100w solar panel

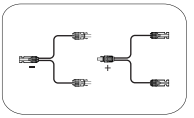
The open circuit voltage and the rated voltage from one solar panel is 24V and 20V. (The open circuit voltage and working voltage of a 100w solar panel from different manufacturers may vary.) The max output power would be 100W. (Assume that the maximum output power of each solar panel is 100W.)
Plug into the normal charging port to charge the ElecHive 2200.



Charge with two 100w solar panels in parallel

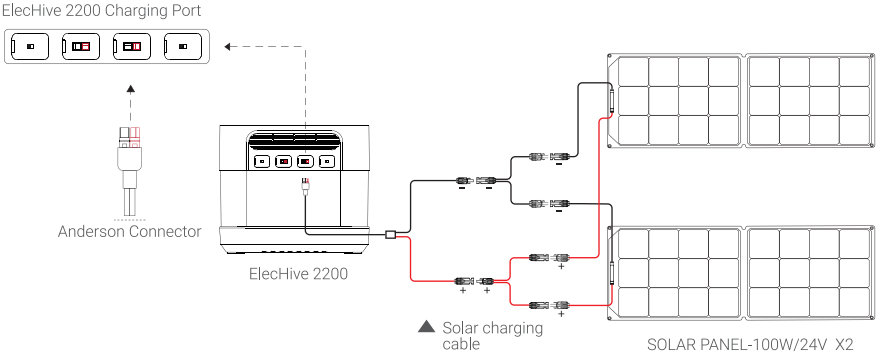
The open circuit voltage and the rated voltage from two solar panels in parallel is 24V and 20V. (The open circuit voltage and working voltage of a 100w solar panel from different manufacturers may vary.) The max output power would be 200W. (Assume that the maximum output power of each solar panel is 100W.)

Plug into the normal charging port to charge the ElecHive 2200.



Solar MC4 parallel connection cable

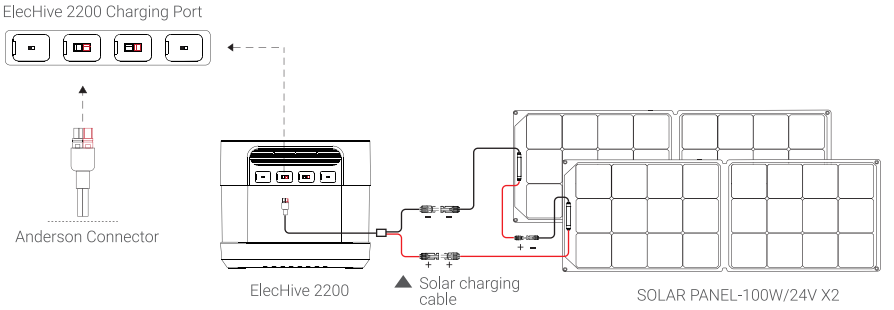
* Users need to buy the solar panels and related parallel connection accessories on their own.



Charge with two 100w solar panels in series

The open circuit voltage and the rated voltage from two solar panels in series is 48V and 40V. (The open circuit voltage and working voltage of a 100w solar panel from different manufacturers may vary.) The max output power would be 200W. (Assume that the maximum output power of each solar panel is 100W.)

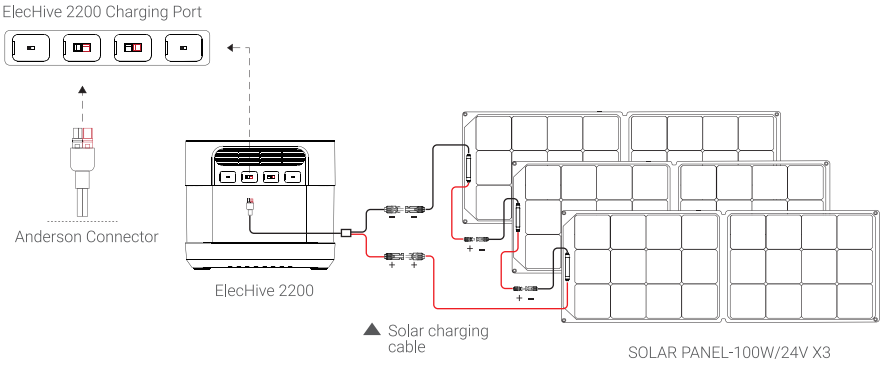
Plug into the fast charging port to charge the ElecHive 2200.



Charge with three 100w solar panels in series

The open circuit voltage and the rated voltage from two solar panels in series is 72V and 60V. (The open circuit voltage and working voltage of a 100w solar panel from different manufacturers may vary.) The max output power would be 300W. (Assume that the maximum output power of each solar panel is 100W.)

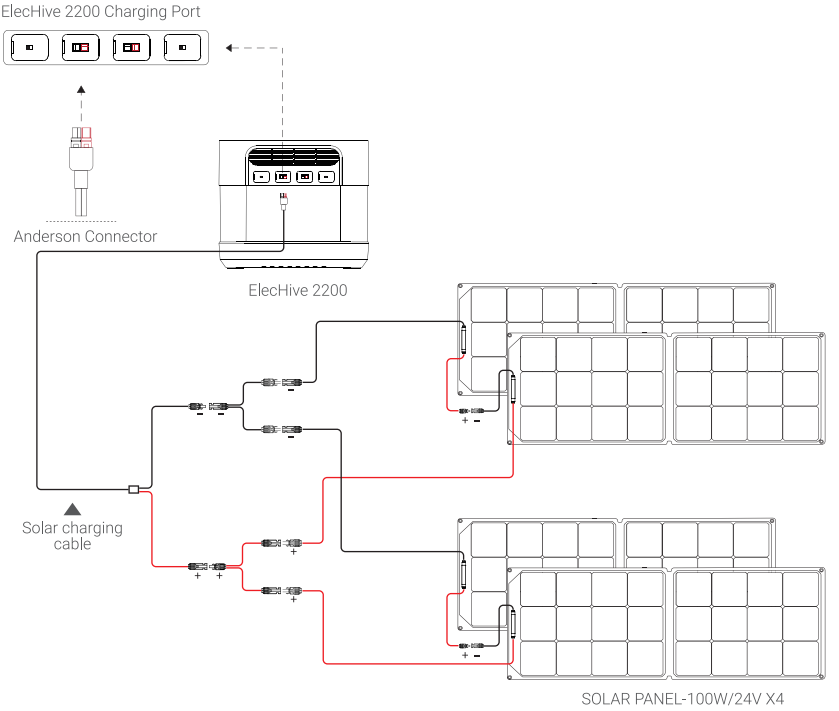
Plug into the fast charging port to charge the ElecHive 2200.



Charge with four 100w solar panels two in series and group in parallel

Put 4 solar panels, 2 in series to form a group, and then connect them in parallel. The open circuit voltage and the rated voltage is 48V and 40V. (The open circuit voltage and working voltage of a 100w solar panel from different manufacturers may vary.) The max output power would be 400W. (Assume that the maximum output power of each solar panel is 100W.)

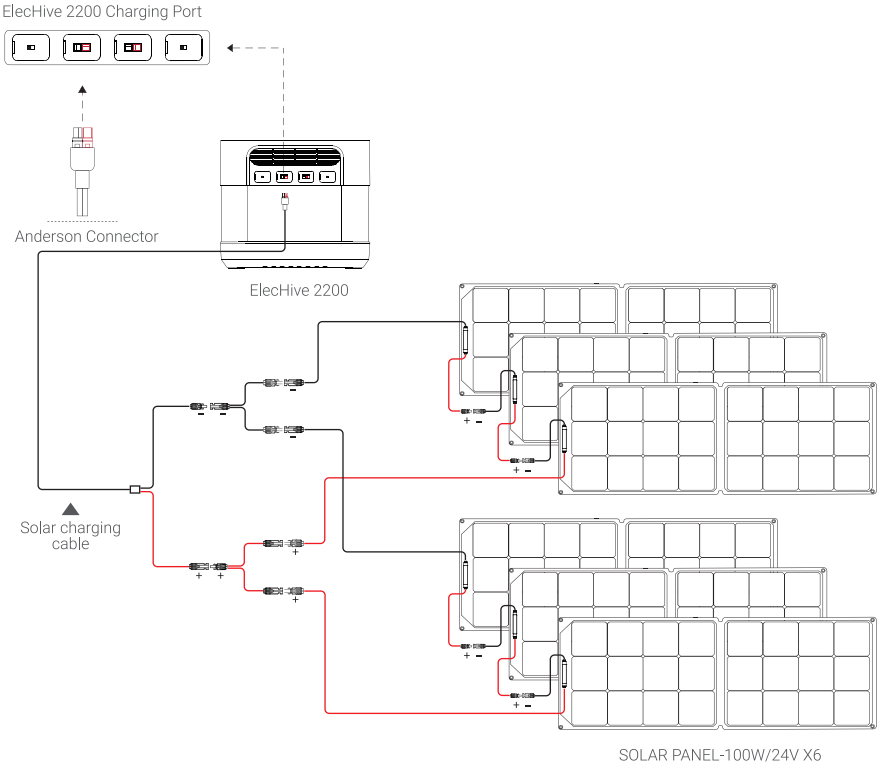
Plug into the fast charging port to charge the ElecHive 2200.



Charge with six 100w solar panels two in series and group in parallel

Put 6 solar panels, 3 in series to form a group, and then connect them in parallel. The open circuit voltage and the rated voltage is 72V and 60V. (The open circuit voltage and working voltage of a 100w solar panel from different manufacturers may vary.) The max output power would be 600W. (Assume that the maximum output power of each solar panel is 100W.)

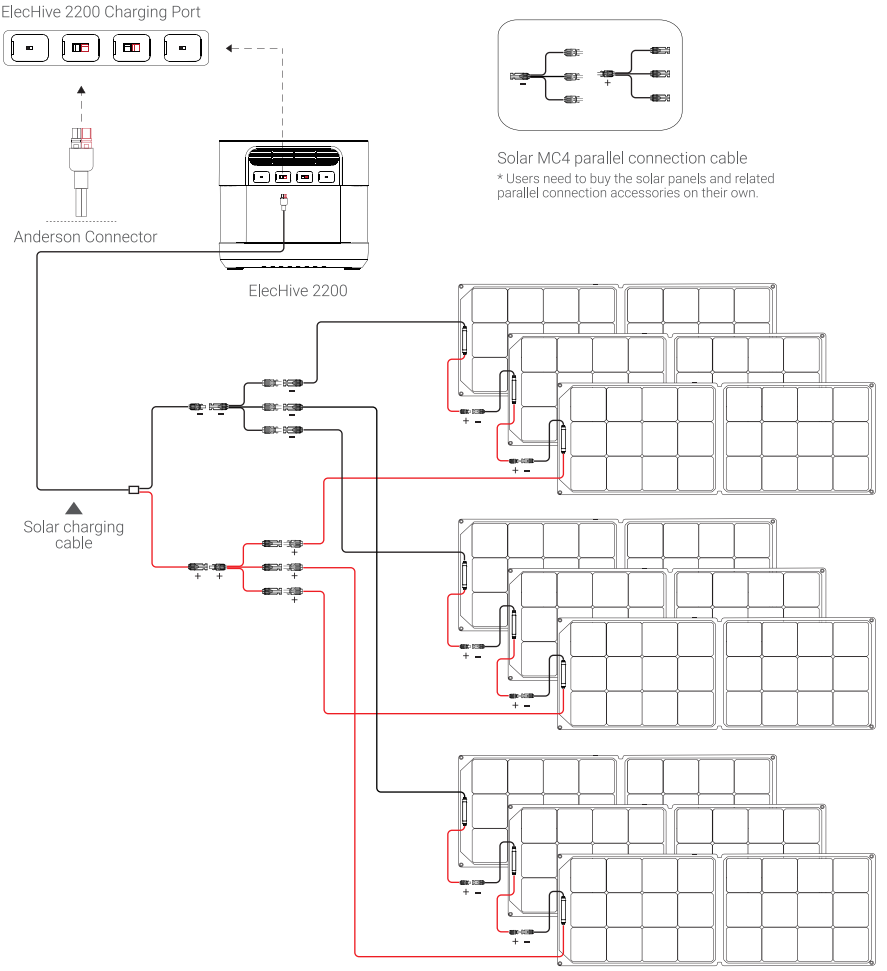
Plug into the fast charging port to charge the ElecHive 2200.



Charge with nine 100w solar panels three in series and group in parallel

Put 9 solar panels, 3 in series to form a group, and then connect them in parallel. The open circuit voltage and the rated voltage is 72V and 60V. (The open circuit voltage and working voltage of a 100w solar panel from different manufacturers may vary.) The max output power would be 900W. (Assume that the maximum output power of each solar panel is 100W.)

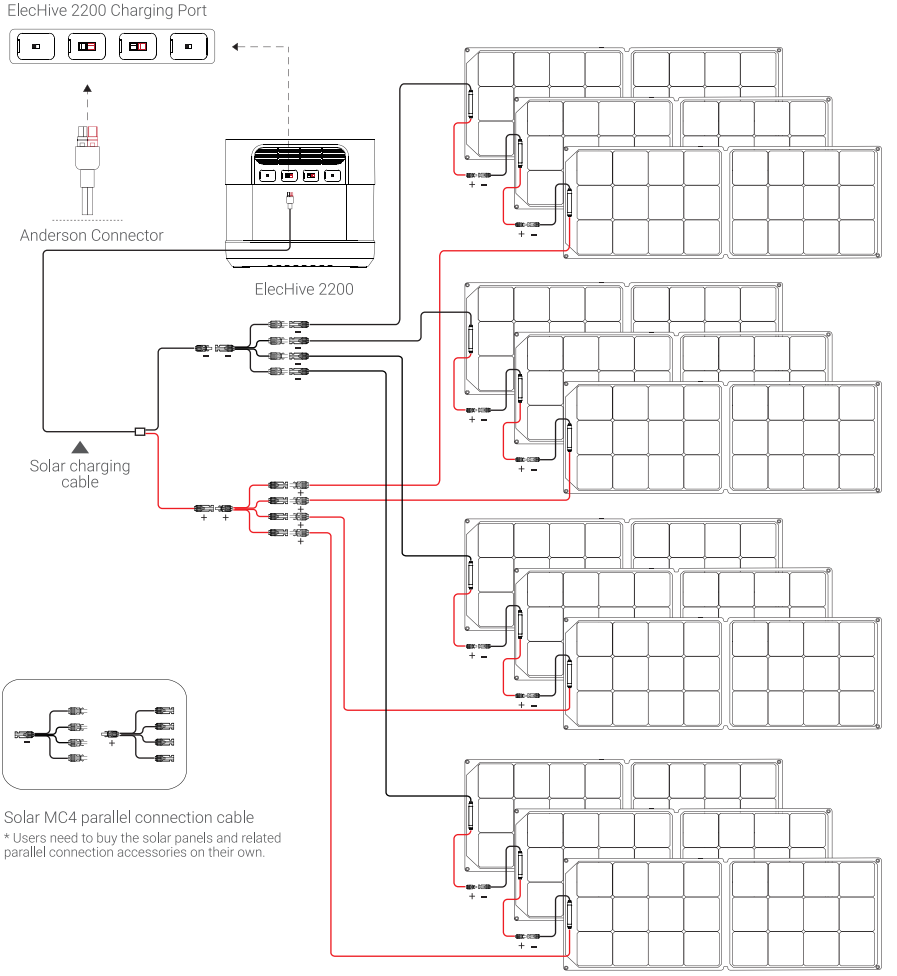
Plug into the fast charging port to charge the ElecHive 2200.



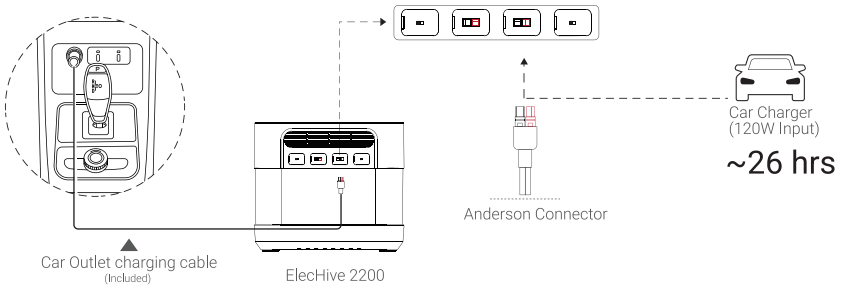
Charge with twelve 100w solar panels three in series and group in parallel

Put 12 solar panels, 3 in series to form a group, and then connect them in parallel. The open circuit voltage and the rated voltage is 72V and 60V. (The open circuit voltage and working voltage of a 100w solar panel from different manufacturers may vary.) The max output power would be 1200W. (Assume that the maximum output power of each solar panel is 100W.)

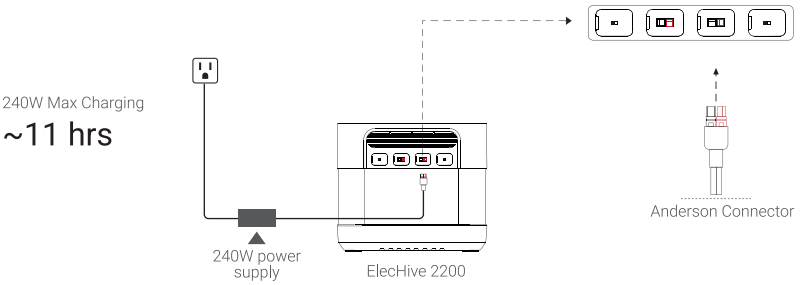
Plug into the fast charging port to charge the ElecHive 2200.



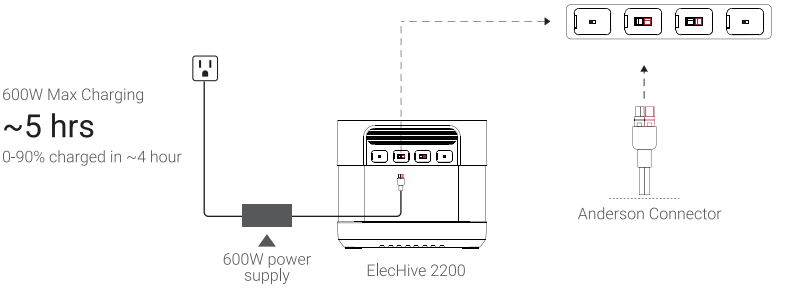
Charge with a car charger



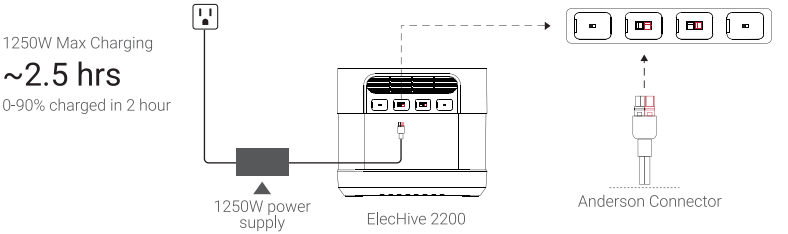
Charge with 240W power supply



Charge with 600W power supply



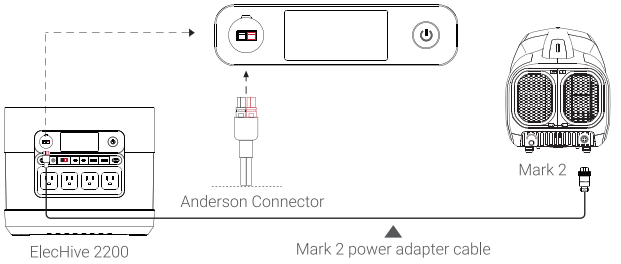
Charge with 1250W power supply



HOW TO USE THE ANDERSON OUTPUT PORTS

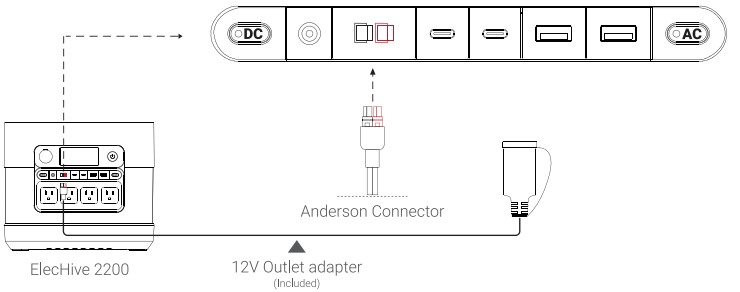
Power the Mark 2 Air Conditioner off the 24V Anderson output port

The max output power is 600W. This port outputs unregulated battery voltage, so when the battery has around 10% left, the Mark 2 AC will stop working, because the output voltage of this port drops to around 18.5v, which is lower than the least working voltage of the Mark 2 AC.



Power other 12V devices off the 12V Anderson output port

The max output power is 300W.



WARRANTY

Limited Warranty
ZERO BREEZE Tech Inc. warrants to the original consumer purchaser that the ZERO BREEZE product will be free from defects in workmanship and material under normal consumer use during the applicable warranty period identified in the “Warranty Period” section below, subject to the exclusions set forth below. This warranty statement sets forth ZERO BREEZE's total and exclusive warranty obligation. We will not assume, nor authorize any person to assume for us, any other liability in connection with the sale of our products.

Warranty Period
The warranty period is 24 months. In each case, the warranty period is measured starting on the date of purchase by the original consumer purchaser. The sales receipt from the first consumer purchase, or other reasonable documentary proof, is required in order to establish the start date of the warranty period.

Remedy
ZERO BREEZE will repair or replace (at ZERO BREEZE's option) any ZERO BREEZE product that fails to operate during the applicable warranty period due to defect in workmanship or material. If a valid claim is made during the applicable period, ZERO BREEZE, at its option, will either(1) replace the product, or (2) exchange the product with a product that is of equal value. A replacement product assumes the remaining warranty of the original product or ninety days from the date of replacement, whichever is greater. Customer is responsible for the return shipping costs.

Limited to Original Consumer Buyer
The warranty on ZERO BREEZE's product is limited to the original consumer purchaser and to any subsequent owner.

WARRANTY

Exclusions
ZERO BREEZE's warranty does not apply to (i) any product that is misused, abused, modified, damaged by accident, or used for anything other than normal consumer use as authorized in ZERO BREEZE's current product literature, or (ii) any product purchased through an online auction house. ZERO BREEZE's warranty does not apply to the battery cell unless the battery cell is fully charged by you within seven days after you purchase the product and at least every 6 months thereafter.

How to Receive Service
To obtain warranty service, contact our customer service team at support@zerobreeze.com

SAFETY INSTRUCTIONS

Read the following instructions to ensure safe usage:

⚠**DANGER:** Noncompliance may very likely lead to serious injury* or death

.DO NOT disassemble, repair or modify the unit or the battery.
.DO NOT place the unit close to or in a fire or expose it to heat. Keep out of direct sunlight.
.DO NOT charge, use or store the unit in a bathroom or in an area exposed to rain or moisture.
.Only use the output socket to power external devices. Never connect the output to mains power under any circumstances.
.DO NOT touch the unit or the plug-in points if your hands are wet.
.DO NOT connect any metallic objects to the AC input or output.
.DO NOT rub your eyes if fluid from inside the unit should get in your eyes.
.DO NOT dispose the unit together with household waste.
.DO NOT use any inappropriate power cords.
.DO NOT operate the unit above the specified input voltage.
.DO NOT use the unit if it is not functioning correctly.
.DO NOT move the unit if it is recharging or in use.
.DO NOT put fingers or hands into the product.
.DO NOT use a battery pack or appliance that is damaged or modified. Damaged or modified batteries may exhibit unpredictable behavior resulting in fire, explosion or risk of injury.
.DO NOT disassemble the power pack, take it to a qualified service person when service or repair is required. Incorrect reassembly may result in a risk of fire or electric shock.

⚠**WARNING:** Noncompliance may lead to serious injury**or death

Use and store the unit only in a clean and dry environment.
.DO NOT use and store in dusty and wet environment. Check the unit prior to every use.

.DO NOT use the unit if it is damaged, broken.
.DO NOT use the unit if the power cord is damaged or broken. Keep the unit away from children.
.DO NOT let children use the power supply unit. Keep this product away from pets.
.DO NOT use or store the unit in an area or environment with high temperature. Should fluid from inside of the unit come in contact with your skin or clothing, wash the affected areas with tap water. In a storm, unplug the power cord from the socket.
.DO NOT charge the unit via power supply systems that operate outside of 100~240V.
.DO NOT place the unit on its side or upside down while in use or storage.
.DO NOT use accessories for other usage.

WARNING-RISK OF EXPLOSIVE GASES.
To reduce 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 engine.

PERSONAL PRECAUTIONS
1)NEVER smoke or allow a spark or flame in the vicinity of a battery.
2)Be extra cautious to reduce the risk of dropping a metal tool onto the battery. It might spark or short-circuit the battery or other electrical part that may cause explosion.
3)DO NOT expose a power pack to fire or excessive temperatures. Exposure to fire or temperatures above 130 °C may cause explosion.

⚠DANGER: Noncompliance may lead to injuries and/or property damage***

.If rust, peculiar odors, overheating or other abnormal circumstances are observed, stop using the unit immediately and contact the dealer or our customer service center

.The unit complies with all legal requirements for transport of dangerous goods

.Make sure that the unit is properly secured when transporting it in a motor vehicle

.Only charge, use and store the unit within the specific temperature

.Switch the unit off immediately if it has accidentally fallen, was dropped or was exposed to vibrations

.Carefully read the instructions for the electric devices that you intend to connect to your power supply unit

.Make sure that the device you are connecting is switched off before you connect it.

* Serious injuries include blindness, burns, electric shock, fractures, poisoning, etc., which can lead to complications, hospitalization or permanent treatment.

** Injuries include burns, electric shock, etc., which do not lead to hospitalization or permanent treatment.

*** Property damage: includes buildings, belongings and pets, etc.

ATTENTION

	Not permitted on aircrafts.
	To preserve the battery lifespan, please use and recharge at least once every 6 months.
	Use original or certified charger and cables.
	Avoid extreme temperatures.
	Avoid dropping.
	Do not disassemble.
	It's not waterproof, do not expose to liquids.
	Please dispose off batteries and electronic goods in accordance with local regulations.

DISCLAIMER

.Our company cannot be held liable for damages caused by fire, earthquakes, use by a third party, other accidents, intentional misconduct on the part of the customer, abuse or other abnormal conditions.
·Do not repair any damage to the AC plug or power supply on your own.
·The warranty covers all terms and conditions of the warranty. Contents that are not specified in the warranty terms and conditions are beyond our responsibility.
·Our company assumes no liability for damages caused by incorrect use or non-compliance with this instruction manual.

Intended use: The ZERO BREEZE ElecHive 2200 portable power unit is intended as a power supply for electronic devices with a maximum power consumption of 2200W. Our product is not suitable to be used with equipments that relate to one's own personal safety and relies heavily on electricity, such as medical devices, equipment for nuclear facilities, the manufacture of air and spacecraft, etc. We therefore assume no liability for accidents involving personal safety, fires, or machine failures, caused by using our product with the aforementioned devices.

FAQS

What type of battery is in an ElecHive 2200?
The ElecHive 2200 battery pack consists of (6) high-density NMC lithium-ion battery cells.

How do I know if my ElecHive 2200 is charged?
To check the charge level of the ElecHive 2200, refer to the LCD Battery Display.

Can I charge the ElecHive 2200 while supplying power at the same time?
The ElecHive 2200 can power other devices while recharging.

How do I know if my device will work with the ElecHive 2200?
Check the amount of power your appliance or device requires.
The combined total Wattage being used by all of your appliances/devices cannot exceed 2200W.
If you do exceed the maximum wattage, ElecHive's battery management system will power down the generator.

Why the car cigarette lighter is not built in the ElecHive?
ElecHive provides a 12V 25A Anderson output interface, and is equipped with an Anderson to cigarette lighter adapter. The advantage of this design is that it not only meets the application of cigarette lighter equipment, but also meets the application of other high-power 12V equipment.

FAQS

Why is my ElecHive not charging, and the charging percentage has not changed?
The unit has the ability to self learn the capacity of the battery. Please try to discharge it to 0%, and then charge it to 100% with the power adapter coming with it. During the charging, the percentage data may not change for several hours, please don't worry about it, it will adjust by itself after several cycles.

Can I use a fast charger I already have or purchased elsewhere?
We offer two fast charge 600W and 1250W chargers, ElecHive uses special algorithm control for these two chargers to ensure that they can be used normally and safely at the same time with the MPPT algorithm for solar panels. We don't recommend using fast chargers purchased elsewhere, as this may not allow you to fast charge and may damage the ElecHive and the charger.

Video Tutorial

Visit our official website to watch a video tutorial at www.zerobreeze.com

Warning: Before using this product, please read this manual carefully and keep it for future reference. The design and specifications are subject to change without prior notice for product improvement. Consult with your dealer or manufacturer for details.