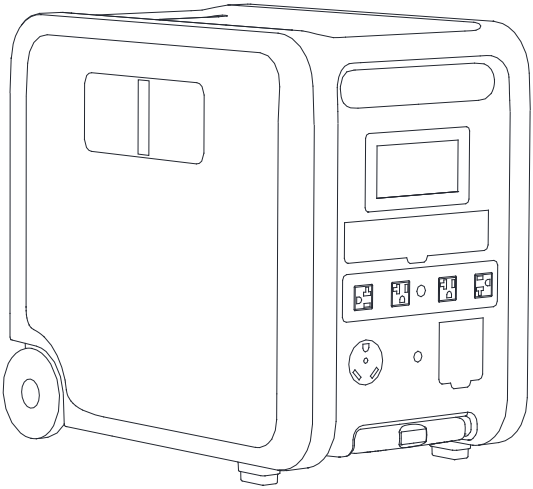
Pion Power™

Large Portable Power Station: Trek 4200

User Manual



Content

Before transporting, installing and using this product, please read and strictly follow the contents of this manual, any failure to comply with the product manual may result in damage to the product and personal injury.

Specifications

AC Output (N5-20×4，TT30×1，Hybrid port×1)	
Nominal AC output voltage	120Vac
Nominal AC output frequency	60Hz
Max.Continuous AC output current	20A(N5-20);30A(TT30);35A(Hybrid port)
Nominal AC output power	4200VA
AC output peak power	7500VA
DC Output	
USB-A×4	5V/9V/12V (30W Max)
Type-C×2	5V/9V/12V/15V/20V (100W Max)
RV Output	12.6V/30A
DC5521×2	12V/3.1A
Cigar Lighter Output	12.6V/10A
AC input(AC charging port,Hybrid port*1)	
Nominal AC input voltage	120Vac/240Vac
Nominal AC input frequency	50Hz(49.5Hz-50.5Hz)/60Vac(59.5Hz-60.5Hz)
Input voltage range(Vac)	108~132V(120V);216~264V(240V)
Nominal AC input current	12.5A@240Vac;15A@120Vac
AC Charging power	3000VA
Hybird port charging power	4200VA
Input power factor rating	>0.99
PV input	
Max Input voltage	135Vdc
Range of PV voltage	9-135Vdc
Max PV input current	15A
Max input short circuit current	18A
No.of MPPT/Strings per MPPT	1/1
Range of MPPT voltage	9-108V
Max.PV input power	1600W

Battery	
Battery Type	LFP
Nominal volatge(Vdc)	51.2V
Nominal capacity(Wh)	6144Wh
Cycle Life(25℃)	4000 cycles≥80% capacity
Range of DC charging/discharging voltage(Vdc)	43.2-58.4V
Max.charging/discharging current(Adc)	95A/105A
Max.charging/discharging power(W)	4200W/4200W(Hybird port)
Temperature	
Optimal Operating Temperature	20℃~30℃(68°F~86°F)
Discharging Temperature	-20℃~60℃(-4°F~140°F)
Charging Temperature	0℃~55℃(32°F~131°F)
Storage Temperature	0℃~45℃(32°F~113°F);0°C~25°C(32°F~77°F)
Others	
Weight	66.6kg(147 lbs)
Dimension(L×W×H)	570×350×515mm(22.4×14×20 in)
Cooling Method	Air cooling
Update	USB or APP
Enclosure	NEMA-1
Number of parallel	2
Number of extra battery ports	2

2. Pion Power App Download

Scan the QR code on the left to download the App. You can also search for "PionPower" on the Google Play Store or Apple Store to download the App for free.

3. PionPower App Introduction

After the Trek 4200 is connected to PionPower App.

a. The main interface can display the internal temperature of Trek 4200 and the remaining capacity of the Trek 4200.
b. Select input information to display AC input power, PV input power, saved carbon dioxide, hybrid input switch and power.
c. Select output information to switch AC, USB, and DC output. USB output includes USB-A and TYPE-C output, and DC output includes RV output, Cigar Lighter port, and DC5521 output.
d. The constant power output can be turned on in the AC output module.

In the App settings interface, you can set the following parameters.

a. Turn on or off Trek 4200.

b. Silent mode setting,

c. Trek 4200 Trek 4200 automatic off time, screen sleep time, output frequency, LED switch.

d. Set the AC charging power and maximum charging current.

e. Set the AC output time, minimum discharge SOC, maximum charging capacity.

f. Set the charging power of the hybrid port.

h. Firmware upgrade and Trek 4200 information.

For more App introduction, please visit: https://pionpowertech.com/.

4. Security Instructions

1. Avoid bringing the product close to any heat source, such as fire or hot stove, etc.
2. Avoid contact with any liquids
3. Do not place the product to water or fire.
4. Do not use or store the product in rainy or humid conditions.
5. Do not use the product in an environment where static electricity exists.
6. Do not use the product in a strong magnetic environment.
7. Do not use sharp objects to pierce the product.
8. Do not use any metal or other conductive objects into the product socket
9. Avoid using third-party accessories.
10. Do not use any object to cover the product when it is working.
11. Do not use any object inserted into the fan while the power station is working.
12. Avoid stacking heavy objects on top of the product.
13. Avoid being hit or dropped during use and transportation.
14. Please turn off the power of the product when transporting.
15. Obey the temperature range specified in the manual, high temperature may lead to fire or explosion.
16. If the product is not used for a long time, please charge the portable power station every 6 months.

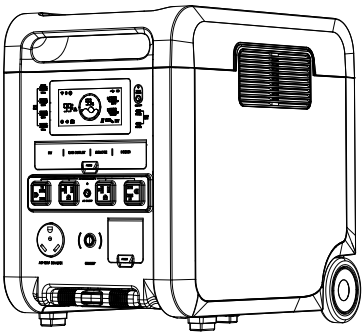
5. Recycling Guide

1. To protect the environment, please ensure that the battery is fully discharged before disposing of it in the designated battery recycling bin. Since the batteries in this product contain potentially hazardous chemicals, please do not dispose of them in the regular trash. For other details, please refer to your local laws and regulations regarding battery recycling and disposal.

2. If the battery cannot be fully discharged due to a malfunction, please do not dispose of it directly in the battery recycling bin. In this case, the best option is to contact a professional battery recycling company for further processing.

3. If the battery cannot be charged, please contact customer service or a professional battery recycling company for further processing.

6. Packing List



A

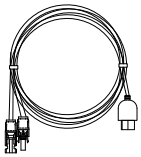
A. Portable power station*1

B. MC4 to XT60 cable*1

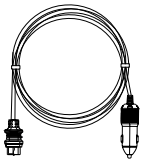
C. Cigar Lighter to XT60 cable*1

D. AC charging cable*1

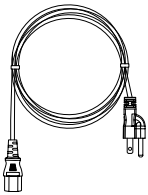
E. User manual*1



B



C

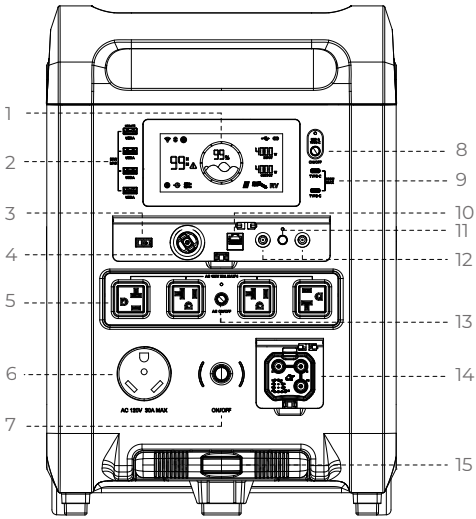


D

E

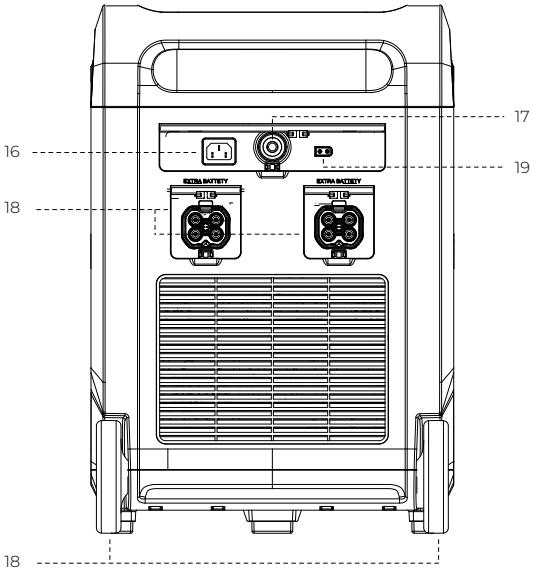
7. Panel Introduction

7.1. Front View



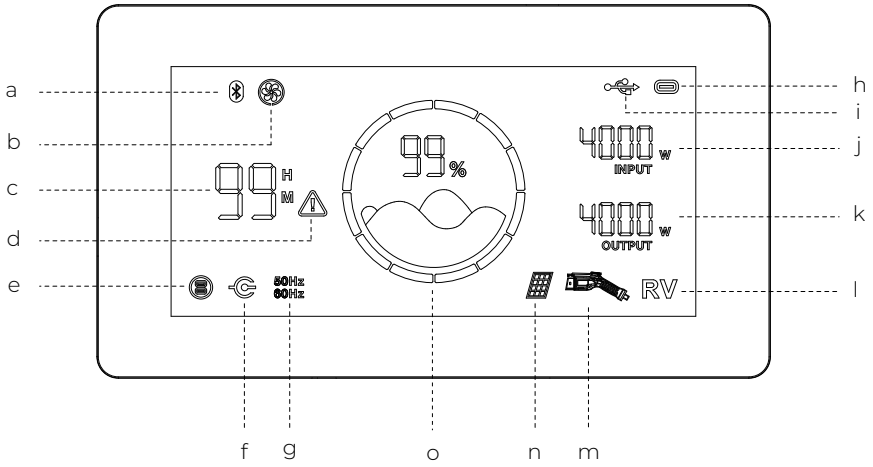
1. LCD display *1
2. USB port *4
3. RV output *1
4. Cigar Lighter port *1
5. N5-20 socket*4
6. TT30 socket*1
7. Main power button *1
8. USB & Type-C power button *1
9. Type-C *2
10. Maintenance port *1
11. DC power button *1
12. DC5521*2
13. AC power button *1
14. Hybrid port *1
15. Auxiliary Tie Rod *1

7.2. Back View



16. AC charging port*1
17. AC charging overload reset button *1
18. Extra battery access port*2
19. PV input port *1
20. Auxiliary Wheel *2

7.3. LCD Display

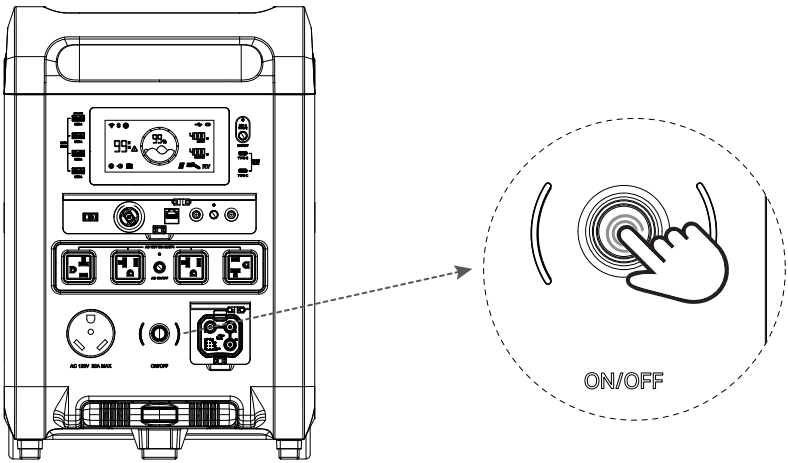


NO.	Icon	Description
a		This icon will light up when the App is connected to the portable power station via Bluetooth
b		When the internal temperature is too high or the output power is high, the icon lights up to indicate that the fan is started.
c		When there is no alarm, it is the remaining available time. When there is an alarm, it is the alarm code
d		Steady light indicates a fault, flashing light indicates an alarm, please see page 17 for more information.
e		This icon lights up when the Cigar lighter port has output.
f		This icon lights up when the Type-C port has output.
g		This icon lights up when the USB port has output.
h	4000 W INPUT	Sum of all input powers.
i	4000 W OUTPUT	Sum of all output powers.
j	RV	This icon lights up when the RV port has output.
k		This icon lights up when the EV Charger is plugged in.
l		This icon lights up when the PV panel is connected.
m		The remaining power of the battery. The outer ring will flash when charging.
n		This icon lights up when the DC5521 port has output.
o	50Hz 60Hz	The frequency of AC output (50Hz or 60Hz) can be set on the App.

8. Methods Of Use

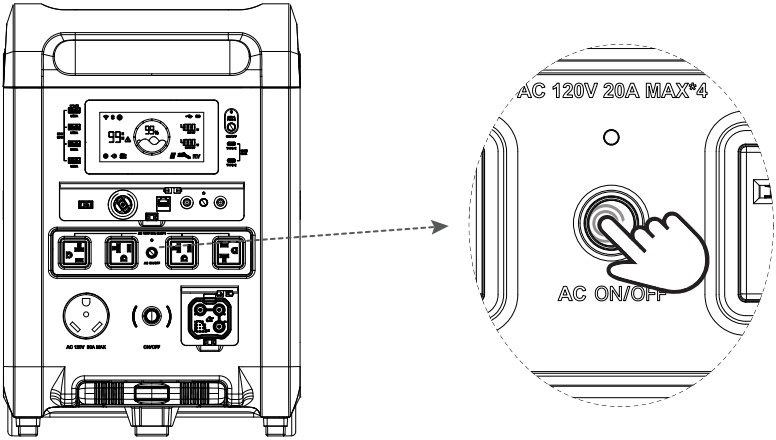
8.1. Power on and off

Press and hold the main power button (7) for 3 seconds to turn on the power station, and the screen and the power indicator will light up;
Press and hold the main power button (7) for more than 3 seconds to turn off the power station, and the screen will goes off.

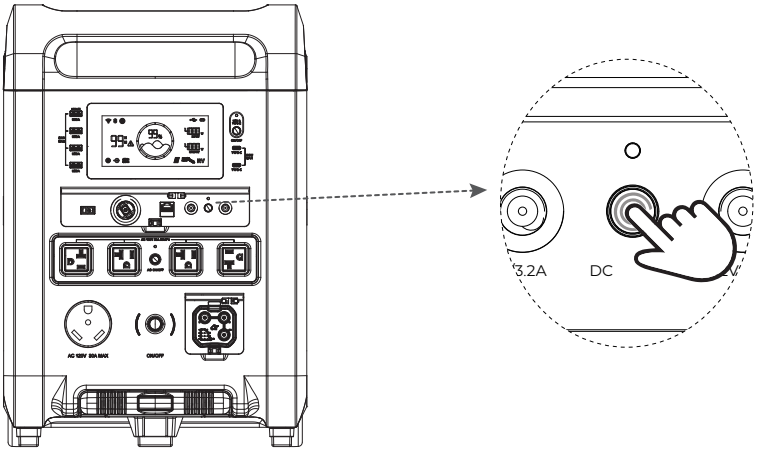


8.2. Powering Your Devices

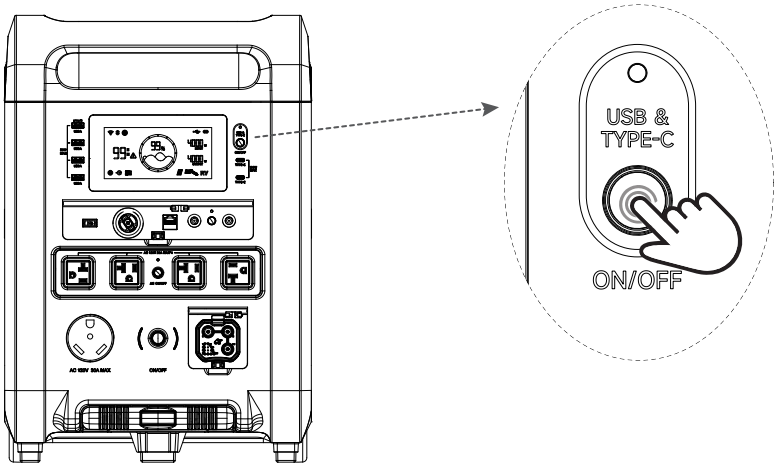
Press and hold the AC power button (13), DC power button (11) or USB & Type-C power button (8) for more than 3 seconds to turn on the AC/DC/USB&Type-C port outputs, and the corresponding indicator will light up.
Press the button again to turn them off.



Press and hold the AC power switch (13) for 3 seconds to turn on the AC sockets output.
Press again to turn off.



Press and hold the DC power button (11) for 3 seconds to turn on the DC ports output. Press again to turn off.



Press and hold the USB&TYPE-C power button (8) for 3 seconds to turn on the USB&TYPE-C ports output. Press again to turn off.

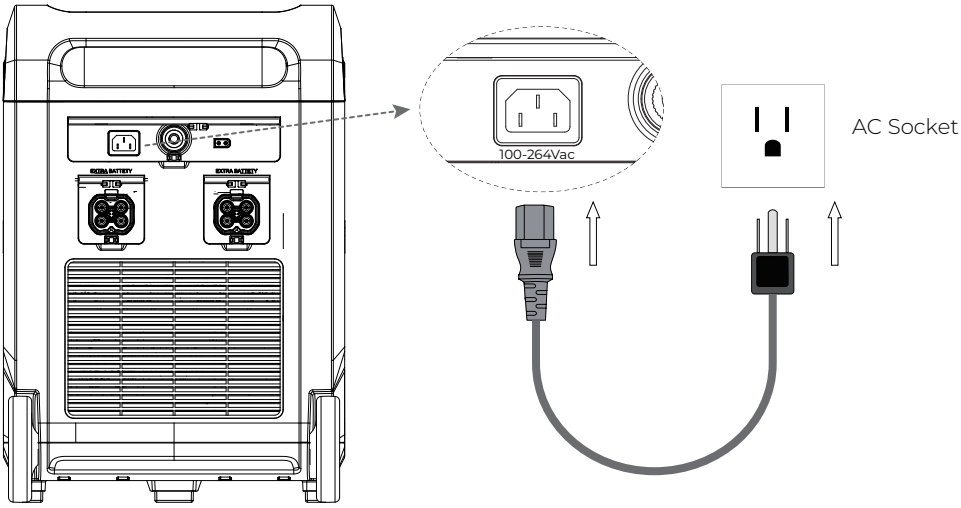
NOTE:

1.For heating devices, please use the App to turn on the constant power mode when the normal mode can not be used. This mode is only suitable for heating equipment.
2. If the AC output is under overload protection, please reduce the load power and press the AC power button to clear the overload.
3. If the AC socket is not in use, the AC power supply will automatically turn off after 30 minutes.
4. The DC power output will not automatically turn off when not in use.
5. If the power station is not in use, the screen will enter sleep state after 1 minute. Press any button to wake it up. The power station will automatically shut down after 1 hour in sleep state.

9. Charge the Trek 4200

9.1 AC Charging

The default of AC charging is fast charging.
When using 120V AC charging, the charging power is 1800W.
When using 240V AC charging, the charging power is 3000W.
Charging power can be adjusted from 0% to 100% via the APP.



AC Charging Cable

NOTE:

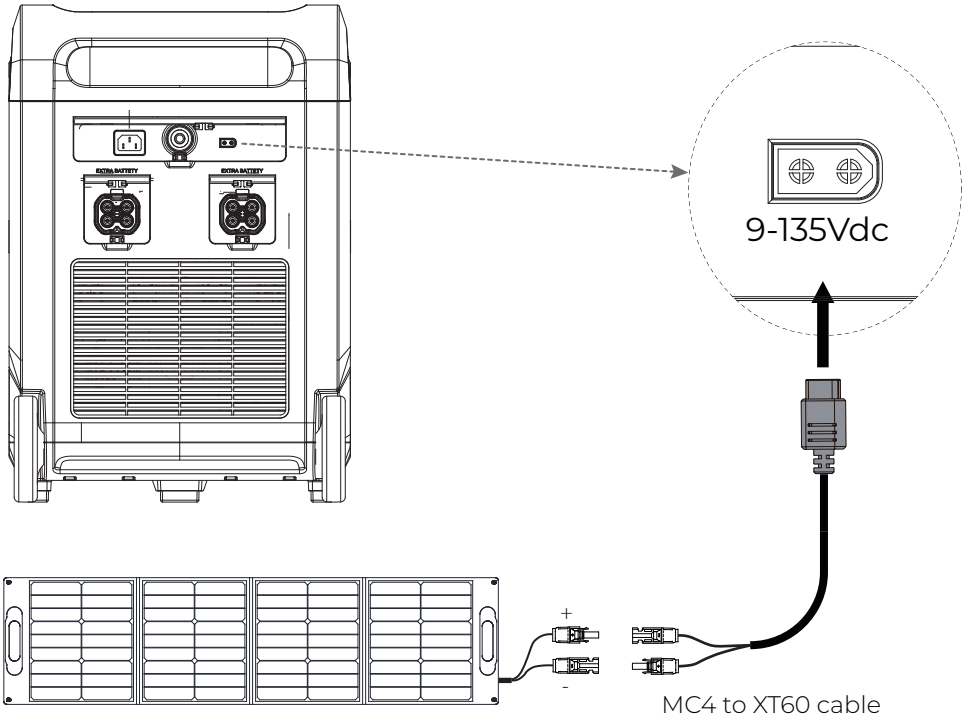
1. When the AC charging voltage is 120V, the AC output port can be used; When the AC charging voltage is 240V, the AC output port cannot be used.
2. Please use the AC charging cable provided by PionPower. Do not use other non-PionPower charging cables. PionPower does not assume any responsibility or warranty for malfunctions and losses caused by third-party accessories to the power station.
3. AC charging overload reset button: If AC charging power overload occurs, please reduce the AC charging power and press the overload reset button.
4. If the product is not used for a long time, please charge the portable power station every 6 months.

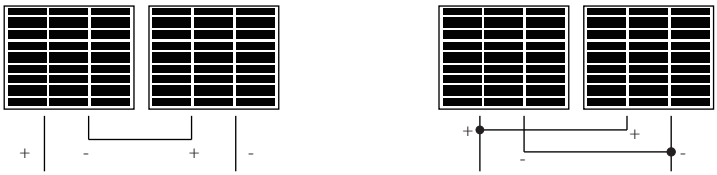
9.2. PV Charging

The power station can be charged using PionPower solar panels. PionPower solar panels need to be purchased separately.

Note: The voltage of the solar panel should be 9~135V, and the maximum charging power of the solar panel is 1600W.

Please use a solar panel with correct parameters to charge Trek 4200. PionPower does not assume any responsibility or warranty for malfunctions and losses due to failure to follow the instructions.





in series

in parallel

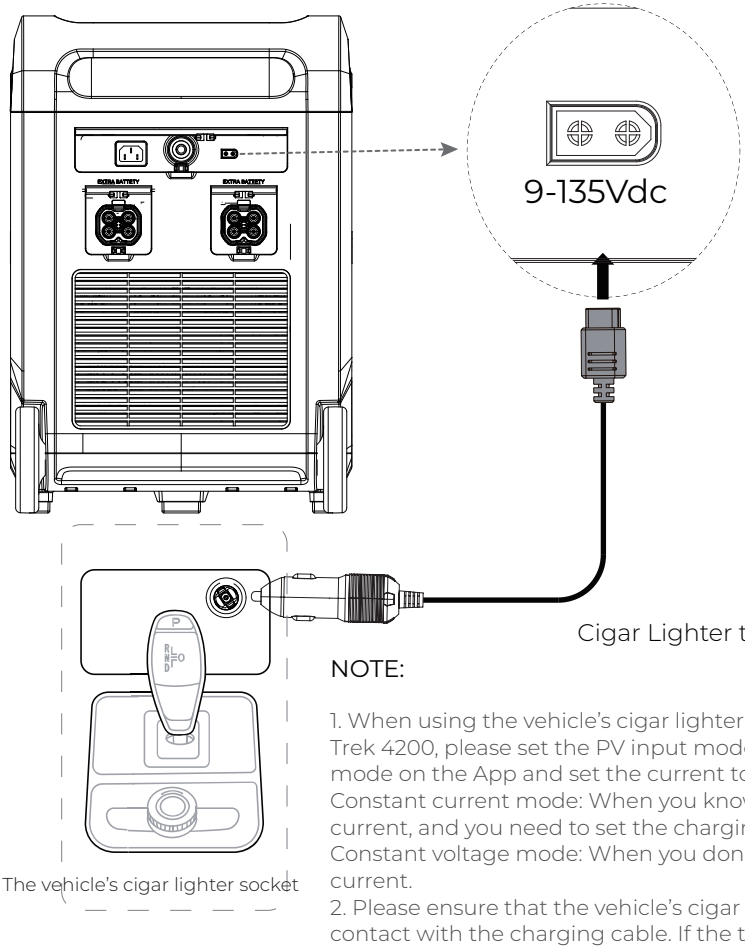
NOTE:

1.When using other DC sources for charging, you need to change the PV input mode to constant voltage mode or constant current mode on the APP.

2.When using PionPower 200W solar panel to charge Trek 4200, you can choose 1 ~ 8pcs solar panels in series or 1 ~ 6pcs solar panels in parallel. The total PV voltage after series and parallel connection should be 9-135V.

9.3. Charging by the vehicle

The Trek 4200 can be charged by the vehicle's cigar lighter socket.
Please use the vehicle's cigar lighter socket to charge the Trek 4200 after vehicle is started to prevent the vehicle's battery being depleted and unable to start.
Also, make sure there is good contact between the vehicle's cigar lighter socket and the charging cable.
We are not responsible for any damage caused by failure to follow the operating instructions.



Cigar Lighter to XT60 cable

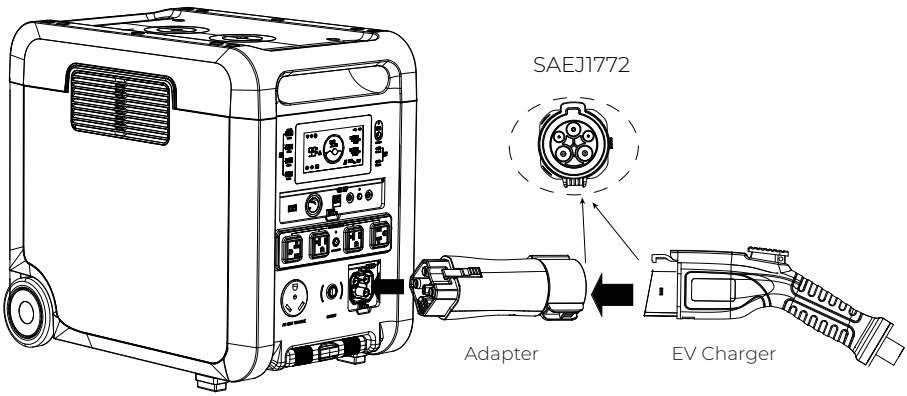
NOTE:

1. When using the vehicle's cigar lighter socket to charge the Trek 4200, please set the PV input mode to constant current mode on the App and set the current to below 10A.
Constant current mode: When you know the DC charging current, and you need to set the charging current.
Constant voltage mode: When you don't know the DC charging current.
2. Please ensure that the vehicle's cigar lighter socket is in good contact with the charging cable. If the temperature is too high during charging, please stop charging.

9.4. Charging by EV Charger

To use a charging pile to charge Trek 4200, you need to use a SAEJ1772 to Trek 4200 hybrid port adapter and a charging pile (both of which need to be purchased separately at the PionPower store).

First, please make sure that this function is turned on (the default is on, if not, please turn it on in the App and refer to the App manual).
Then plug the adapter into the hybrid port of Trek 4200.
Finally, charge the Trek 4200 according to the instructions of the EV Charger.



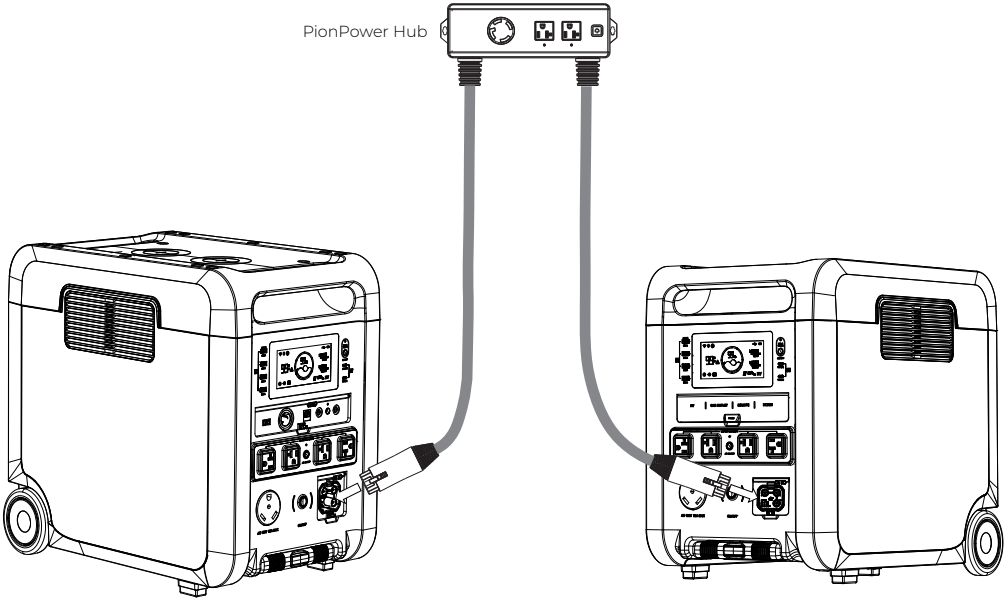
NOTE:

1. After the EV Charger is connected to the Trek 4200, check whether the EV Charger icon lights up on the screen. If not, please check that there is good contact between the charging handle, Trek 4200 and the adapter.
2. When the EV Charger is charging Trek 4200, the AC output port cannot output.
3. AC charging port charging and EV Charger charging cannot be used at the same time. Prioritize charging to the AC charging port.

10. Parallel Of Two Trek 4200s

Two Trek 4200s can be used in parallel by the PionPower Hub. (PionPower Hub needs to be purchased separately in PionPower store)
After two Trek 4200s are connected in parallel, the maximum output power of the Hub is 8400W, and the voltage is 240V.

First, install the PionPower Hub box on a suitable wall.
Then, plug the two wires of the Hub into the Trek 4200 hybrid port
Finally, turn on Trek 4200 and HUB, and plug the load into the socket of the HUB.



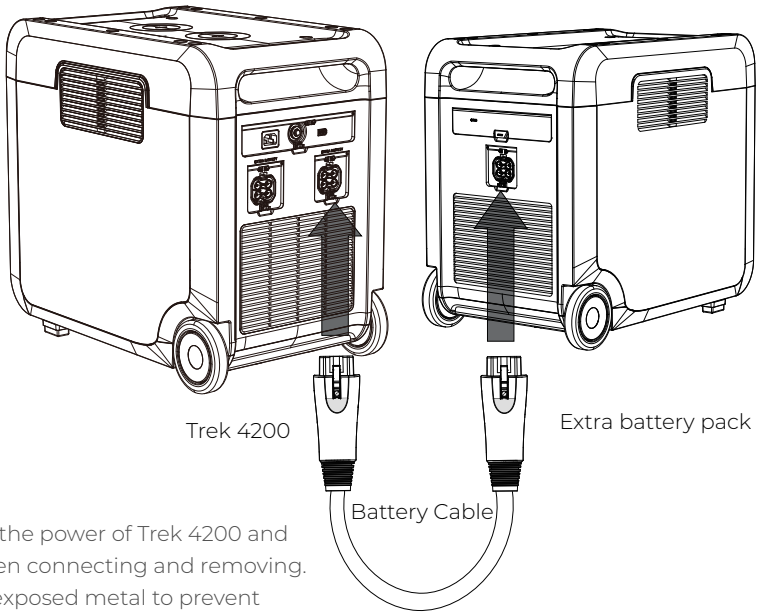
Trek 4200 Trek 4200

NOTE:

1. After paralleling, if any Trek 4200 is turned on, the other Trek 4200 will also be turned on.
2. When an additional battery pack is connected to the Trek 4200, the additional battery pack can also be charged by Trek 4200. There is no need to charge the battery pack separately.

11. Add extra batteries

Up to two additional battery packs can be connected to a single Trek 4200 to expand capacity.
(The battery pack and battery cable needs to be purchased separately in PionPower store)
First, power off the Trek 4200 and battery pack.
Then, use the battery cable to connect the "extra battery" port on the Trek 4200 and the port on the back of the battery pack.
Finally, power on the Trek 4200 and battery pack.



NOTE:

1. Please turn off the power of Trek 4200 and battery pack when connecting and removing.
2. Do not touch exposed metal to prevent electric shock.
3. If there is dirt on the exposed metal, please wipe it with a dry cloth after powering off.

12. Troubleshooting

Error Code	Fault Name	Action
01	Overvoltage of the battery cell	1. Leave it for 30 minutes. 2. Discharge for one cycle. 3. If the problem persists, please contact PionPower customer service.
02	Low-voltage of the battery cell	1. Leave it for 30 minutes. 2. charge for one cycle. 3. If the problem persists, please contact PionPower customer service.
03	Battery PACK Overvoltage	1. Leave it for 30 minutes. 2. Discharge for one cycle. 3. If the problem persists, please contact PionPower customer service.
04	Battery PACK undervoltage failure	1. Leave it for 30 minutes. 2. Charge for one cycle. 3. If the problem persists, please contact PionPower customer service.

06	Low Temperature Failure of Battery Cells	1. The ambient temperature is too high, please use it in a lower temperature environment. 2. Leave it for a period of time. 3. If the problem persists, please contact PionPower customer service.
07	BMS discharge overcurrent fault	1. Reduce load power. 2. If the problem persists, please contact PionPower customer service.
08	BMS charging overcurrent fault	1. Please contact PionPower customer service.
15	24V over temperature	1. Check if the fan is covered.
18	PV over temperature	1. Check if the fan is covered.
19	Low battery voltage	1. Charge for one cycle. 2. If the problem persists, please contact PionPower customer service.
1A	Battery overcurrent	1. Reduce the load power. 2. If the problem persists, please contact PionPower customer service.
1B	Battery overvoltage too high	1. Leave it for 30 minutes. 2. Discharge for one cycle. 3. If the problem persists, please contact PionPower customer service.
21	Overload	1. Reduce the load power. 2. If the problem persists, please contact PionPower customer service.
33	PCS overheating	1. The ambient temperature is too high, please use it in a lower temperature environment. 2. Check if the fan is covered.
34	parallel operation error	1. Restart the Trek 4200. 2. Unplug the battery cable. 3. If the problem persists, please contact PionPower customer service.
3D/3E	utility frequency failure	1. The output or input frequency is outside the specified range. 2. If the problem persists, please contact PionPower customer service.
3F/40	Utility voltage faults	1. The output or input voltage is outside the specified range 2. If the problem persists, please contact PionPower customer service.

41	EV Charger frequency abnomal	1. Check that there is good contact between Trek 4200, adapter and EV Charger. 2. Check that the input frequency of the EV Charger is within the specified range. 3. If the problem persists, please contact PionPower customer service.
42	EV Charger voltage abnormal	1. Check that there is good contact between Trek 4200, adapter and EV Charger. 2. Check that the input voltage of the EV Charger is within the specified range. 3. If the problem persists, please contact PionPower customer service.
44	PV overcurrent	1. restart the Trek 4200. 2. If the problem persists, please contact PionPower customer service.
46	PV Voltage Abnormal Alarm	1. Check that the input voltage of PV is within the specified range. 2. Restart the Trek 4200. 3. If the problem persists, please contact PionPower customer service.
51/52/53/54	Fan failure	1. Check if the fan is stuck. 2. If the problem persists, please contact PionPower customer service.
59	Charge handle unplugged alarm	1. The EV Charger is not plugged in. 2. Check that there is good contact between Trek 4200, adapter and EV Charger. 2. If the problem persists, please contact PionPower customer service.

PION POWER

ONTARIO, CANADA
Address: 3761 Victoria Park Ave #9, Scarborough, ON M1W 3S2
Phone: +1 (416) 756-9210

Email: support@pionpowertech.com
http://www.pionpowertech.com

V1.0.240221