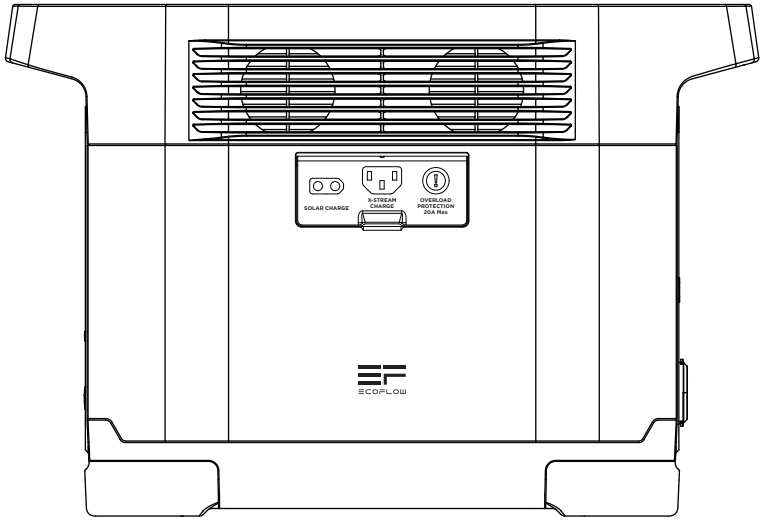
ECOFLOW

User Guide



Contact us:
www.ecoflow.com

WARNING

1. Keep dry and do not expose to high heat.
2. Never disassemble, puncture, shock, crash, short or incinerate.
3. Recycle and dispose of EF DELTA in accordance with local regulation.

IMPORTANT SAFETY INSTRUCTIONS

WARNING – When using this product, basic precautions should always be followed, including the following :

a) Please read the instruction manual before using this product.
b) To reduce the risk of injury, close supervision is necessary when using this product near children.
c) Do not put fingers, hands or any body part into the product.
d) Use of an unrecommended attachment or third-party power station manufacturer may result in a risk of fire, electric shock or injury.
e) Do not use a damaged or modified battery pack or appliance.
f) Do not operate the power station with a damaged cord, plug or output cable.
g) When service or repair is required, do not disassemble the power pack yourself. Take the unit to a qualified service provider. Incorrect reassembly may result in a risk of fire or electric shock.
h) In order to reduce the risk of electric shock when the product fails, disconnects the portable power station from the power supply before performing any instructive maintenance operations.
i) Charge the internal battery in a well-ventilated area. Do not restrict ventilation.
j) Under harsh conditions, liquid may be ejected from the battery. Avoid contact with the battery and liquid. If contact accidentally occurs, flush with water. If liquid contacts eyes, seek additional medical help.
k) Do not expose the unit to fire or excessive heat.
l) Have servicing performed by a qualified repair person only.
m) The US and Japan versions only support charging with a 100-120V (50/60Hz) power supply. Do not exceed the specified AC voltage. Otherwise, the company will not be liable to provide free repair service.

SAVE THESE INSTRUCTIONS

EF DELTA USE CARE AND SAFETY GUIDE

Congratulations! You now own the best quality Portable Battery Generator in the world. This pamphlet is short and is meant to help you. Please take a few moments to read it and follow along on the unit itself. One pass and you will be a pro!

If you are the type of person that doesn't read instruction manuals, please at least note this :

To turn ON/OFF EF DELTA, you need to PRESS & HOLD the Power Button. To turn on the AC power outlet, you need to PRESS & HOLD the AC Button when EF DELTA, is on. This is designed purposefully. It will save the battery life so your EF DELTA's power is available when you need it.

EF DELTA's Features : Get to know your EF DELTA. Follow this step-by-step introduction to each of EF DELTA's ports, buttons, display screens and more.

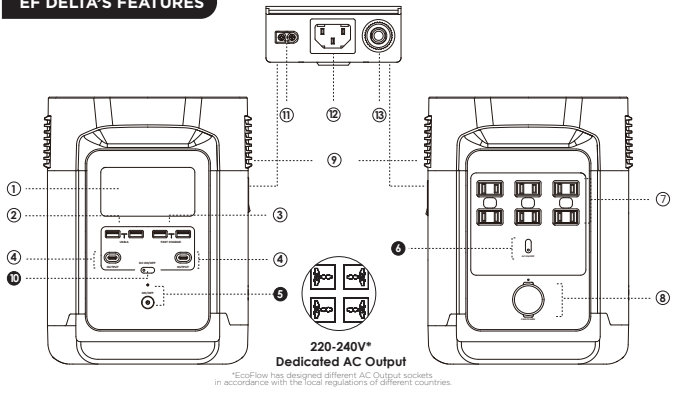
Technical Specifications : Understanding the specs that make EF DELTA such an advanced piece of technology.

How to Charge EF DELTA : Everything you need to know about recharging your EF DELTA via AC Cable, car charge cable or solar charge cable (if applicable).

FAQs : Answers to your most important questions about how to care for your EF DELTA, store your EF DELTA, and safely use your EF DELTA.

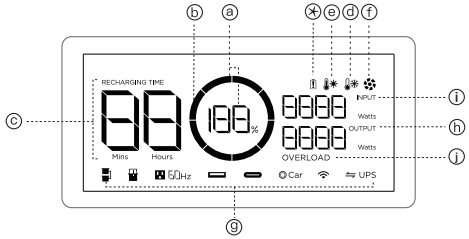
What's in the Box : What your purchase of EF DELTA should include. If your purchase does not include these items, please contact us at support@ecoflow.com.

EF DELTA'S FEATURES



1. LCD Display
2. USB-A Output Ports
3. Fast Charge USB-A Output Ports
4. USB-C Output Port
5. **Power Button & LCD Display Screen ON/OFF Power Indicator Light**
6. **AC Power Button (PRESS & HOLD for ON/OFF) AC Output Indicator Light**
7. 6 AC Output Sockets (100-120V) 4 AC Output Sockets (International Version 220-240V)
8. Car Power Output Port Car Power Output Indicator
9. Ventilation Vents
10. **DC Power Button (PRESS & HOLD to switch ON/OFF) DC Output Indicator**
11. Solar Charge/Car Charge Input Port
12. X-STREAM AC Charge Input Port
13. Overload Protection Switch

1. LCD Display



a. Battery Level Indicator – Shows the remaining battery percentage. If your battery drops below 0%, the battery segment on the screen will begin to blink. When this happens, please immediately recharge your EF DELTA.

b. Battery Failure Warning – If the circle icon on EF DELTA's display is flashing, please contact our Product Experts at support@ecoflow.com.

c. Remaining Charge Time – Minute-level accuracy of the amount of charge time left in EF DELTA based on the current output level.

d. Low temperature indicator – Indicates that the battery temperature of EF DELTA is too low. All inputs and outputs will stop functioning at this state.Please bring the EF DELTA to a warmer location and wait for the temperature to return to within the working range before restarting the EF DELTA.

e. High Temperature Indicator – Indicates that EF DELTA's battery temperature is too high. All input and output functions will stop and the fan will start. Once the battery cools, EF DELTA will automatically resume operating.

f. Fan indicator – The fan speed of the EF DELTA directly correlates to the load and ambient temperature. The higher the load or ambient temperature, the higher the fan speed.

g. Port Usage Indicators – Indicates when each port is in use.In addition, press and hold the AC ON/OFF button for 15s to switch between 50/60Hz.

h. Current Output – Shows EF DELTA's current power output level in watts.

i. Current Intput – Shows EF DELTA's current power input level in watts.

j. Overload Warning –There are two types of overload protection. The first type protection: in the DC area, when any port is powering devices that exceed maximum current limit, or the output power of the AC jack exceeds the maximum AC power output (Overload 1%-10% will work 3mins overload 11%-30% will work 1min; overload 31%-49% will work 1s; overload 50%-100% will work 100ms), and when the vehicle power supply output exceeds the maximum current, the overload indication and the corresponding interface indicator will flash simultaneously for 15 seconds. The output of the interface will be automatically shut down immediately, and other ports will continue to work.Second type of protection: When the power output from the DC or AC jack, and the vehicle power outlet exceeds the battery maximum power output, the overload indicator and the corresponding port indicator will flash simultaneously for 15 seconds. EF DELTA will automatically shut down immediately. After an overload occurs, remove the overloaded device first, and then restart EF DELTA to resume work.

2. USB-A Output Ports – Charge a wide array of devices such as your iPhone, tablet, GoPro, speakers, or anything else that charges through USB-A Port. The USB-A Output Indicator Light will automatically light up when a USB-A port is in use.

3. Fast Charge USB-A Output Ports – Charge devices at 2x the speed using these ports. The USB-A Output Indicator Light will automatically light up when a USB-A ports is in use. If your device does not support fast charge, the device will charge at its normal speed.

4. USB-C Output Port – Charge MacBook Pro, supported Android mobile phones and other devices using the USB-C port.When the USB-C port is in use, the USB-C output indicator will light up.

5. Power Button & LCD Display Screen ON/OFF Power Indicator Light – Press and hold the power button to turn EF DELTA on or off. When EF DELTA is turned on the LCD Display Screen will light up. To turn ON/OFF LCD Display Screen and keep EF DELTA working, press the Power Button. The Power Indicator Light will automatically light up when EF DELTA senses any of the output ports is in use. The Power Indicator Light will flash when none of EF DELTA's output ports is in use, meaning EF DELTA is in the Idle State. After 5 minutes' in the Idle State, EF DELTA's screen will enter into the sleep mode(the battery is still running). After 30 mins of not using in Idle State, EF DELTA will automatically shut down to protect its batteries.

6. AC Power Button (PRESS & HOLD for ON/OFF) – The AC power button controls the AC output of the EF DELTA. The AC power needs to be turned on manually. To enable AC power, press the AC power button. When AC power is not in use to charge a device, press the AC power button to turn off the AC power. Make sure to unplug the power cord from the AC port. When the AC power of the EF DELTA is enabled, the AC indicator will light up. If the AC power is not used for more than 12 hours, he product will turn off automatically. In addition, for users in selected countries, please press and hold AC ON/OFF for 15s to switch between 50 and 60Hz.

7. 6 AC Output Sockets (100-120V region) / 4 AC Output Sockets(International Version 220-240V) – Charge devices that require 100-120V AC (230V for 220-240V edition) wall chargers such as laptops, TVs, mini refrigerators, vacuums etc.

8. Car Power Output Port & Car Power Output Indicator – Charge devices such as drone batteries, that require a car port. The Car Output Indicator Light will automatically light up when the car port is in use.

9. Ventilation Vents – The vents prevent EF DELTA from overheating.

10. DC Power Button (PRESS & HOLD to switch ON/OFF) & DC Output Indicator – Press DC ON/OFF to turn on or off EF DELTA DC power. The DC ON/OFF button controls the EF DELTA's DC output. EF DELTA could not recognize when low-power devices, such as earphone, is charging. So EF DELTA is designed to keep the DC power on for 24 hours. The DC power will go off after 24 hours of not using it. If you want to extend your standby time to 24 hours, turn the DC button on.

11. Solar Charge/Car Charge Input Port – Supports a maximum of three 110W solar panels to be connected in series. Do not put more than two solar panel for parallel connection. EF DELTA has a limit input of 400W. Supports car charge with a maximum input of 10A.

12 X-STREAM AC Charge Input Port – Plug in an AC cable with a universal three-pin plug (one that can withstand an effective current of 15A) into the port and connect the cable to an AC power source. Please note that U.S. and Japan versions only support chargings in 100-120Vac (50/60Hz). International version supports 220-240Vac (50/60Hz) EF DELTA's X-STREAM system supports entry-level UPS function, user can use the EF DELTA AC socket while the device is connected to a wall socket with AC power supply (the AC power comes from the grid, not the battery). When the grid loses power suddenly, the device can automatically switch to EF DELTA battery power mode in <=30ms to ensure your work is not interrupted. This is an entry-level grade UPS function that does not support 0ms switching.

Do not connect devices with high uninterrupted power supply requirements. Please perform multiple tests to confirm compatibility before connecting devices, such as data servers and workstations to EF DELTA. EcoFlow will not be responsible for any loss of data or equipment damage caused by customers' failure in following the instruction.

13. Overload Protection Switch – When the input current continuously exceeds 20A during a charge, the AC charging port will trigger overload protection (the button will pop out). When the device is confirmed to be normal, press the button to continue charging.

✶ **. Protection Information Instruction**-EF DELTA display screen indicates various device protection scenarios with different icons and their combination.

OVERLOAD **. USB-A Overload Protection –** UAB-A icon flashes together with Overload icon. Resume normal operation automatically by pulling out electrical appliances and waiting for 10 seconds.

. USB-C High Temperature Protection – USB-C icon flashes together with High-temperature icon. Resume normal operation of interface automaticallyby cooling it.

OVERLOAD **. Product Overload –** Overload icon flashes. Resume device to normal operation by pulling out electrical appliances and restarting.

RECHARGING TIME **. High Temperature Recharge-protection –** Recharging time, Exclamation and High-temperature icons flash together, frequently occurring after heavy battery use. Recharging can be resumed after battery cooling down.

. High Temperature Discharge-protection – Exclamation and High-temperature icons flash together. Power supply can be resumed after battery cooling down.

RECHARGING TIME **. Low Temperature Recharging-protection –** Recharging time, Exclamation and Low-temperature icons flash together. Recharging can be resumed by warming up battery moderately.

. Low Temperature Discharge-protection – Exclamation and Low-temperature icons flash together. Power supply can be resumed soon after moving device to a warmer place.

RECHARGING TIME OVERLOAD **. Overload Recharging-protection –** Recharging time, Exclamation and Overload icons flash together. Resolve the problem by pulling out plug, restarting device and replugging. If not solved, please contact our product specialists via support@ecoflow.com.

OVERLOAD **. Overload Discharging-protection –** Exclamation and Overload icons flash together. Resume operation by pulling out electrical appliances and restarting device. Electrical appliances should be operated within rated power.

. Communication Failure between Main Board and BMS – Exclamation icon always being on. Try to restart device. If still invalid, please contact our product specialists via support@ecoflow.com.

. Battery Cells Failure – Exclamation icon always being on. Try to restart device. If still invalid, please contact our product specialists via support@ecoflow.com.

60Hz **. Communication Failure between Main Board and AC –** AC icon flashes. Try to restart device. If still invalid, please contact our product specialists via support@ecoflow.com.

60Hz OVERLOAD **. Inverter Output Overload –** AC and Overload icons flash together. Resume operation by press ON/OFF to restart AC 10 seconds later. Electrical appliances should be operated within rated power.

60Hz **. Inverter High Temperature Protection –** AC and High-temperature icons flash together. Resume normal operation of interface automatically by cooling it.

60Hz **. Inverter Low Temperature Protection –** AC and low-temperature icons flash together. Recharging can be resumed by warming up EF DELTA moderately.

60Hz **. Fan Blockage –** AC and Fan icons flash together. Please check if fan is blocked by foreign matters. If indeed, shut down device to clean and restart to check operation effect. If still invalid, please contact our product specialists via support@ecoflow.com.

Car OVERLOAD **. Car Charger Overload –** Car and Overload icons flash together. Resume operation by restarting device. Electrical appliances should be operated within rated power.

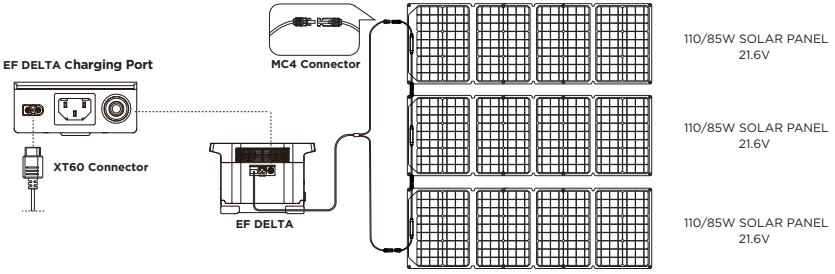
Car **. Car Charger Over –** temperature/XT60 Interface Recharging at High Temperature – Car and High-temperature icons flash together. Resume normal operation of interface automatically by cooling it.

Car **. Communication Failure between Main Board and MPPT –** Car icon flashes. Try to restart device. If still invalid, please contact our product specialists via support@ecoflow.com.

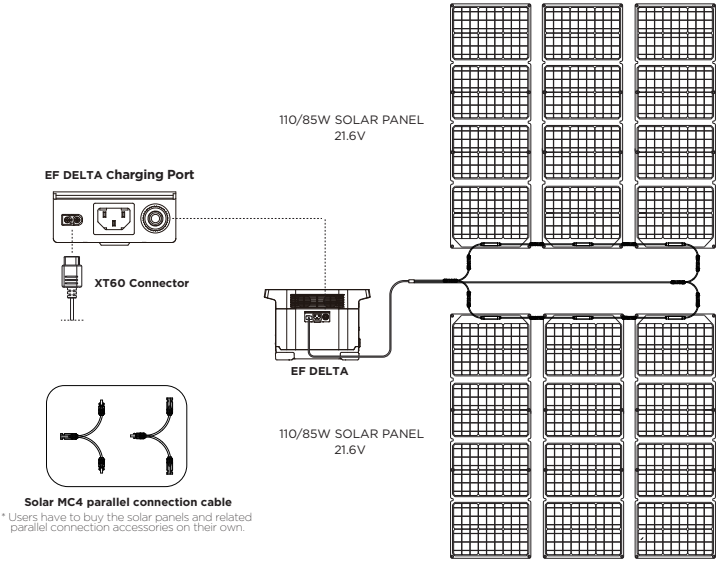
SOLAR PANEL CONNECTION

How to recharge the EF DELTA using solar panels? – For connection of a single panel, refer to the instructions of the solar panel.These instructions are intended for the serial or parallel connection of three of six solar panels.The EF DELTA can accept DC input of 10-65V.When the input exceeds 65V, the EF DELTA will trigger overload protection. Excessive voltage may cause damage to the product. Users should follow these instructions.If the number or connection of the solar panels are not compliant our with specifications, we will not be responsible for providing free repair services for any damage to the product even during the warranty period.

1. Serial connection (recommended) – Users can connect 1-3 pieces of solar panels (up to a maximum of 3 panels) in series as shown in the figure. Connect the panels to the MC4 port and connect them to our MC4 to XT60 conversion cable. Connect the XT60 cable to the EF DELTA's XT60 input to charge the device.



2. Serial and parallel connection (professional solution) –Users can connect up to 2 sets of solar panels in parallel to the MC4 port as shown in the figure. If you want to connect 6 solar panels, you can put them into 2 sets of 3 solar panels connected in series and then connect the 2 sets of solar panels in parallel. Connect them with our MC4 to XT60 conversion cable and connect XT60 cable to the EF DELTA's XT60 input to charge the device. The parallel connection cable is an optional accessory needs to be purchased separately.



3. The EF DELTA supports the use of third party solar panels (DIY solution) – Users can buy universal solar panels of MC4 connection standard on their own to power the EF DELTA. As long as the voltage and current (10-65V DC,10A max) comply with the specifications of the EF DELTA, the panels will be able to recharge EF DELTA through the MC4 to XT60 conversion cable. However, the company will not be responsible for providing free repair services for any damage to the product caused by the quality issue and improper operation of such third party solar panels even during the warranty period.

Entry-Level UPS and series mode

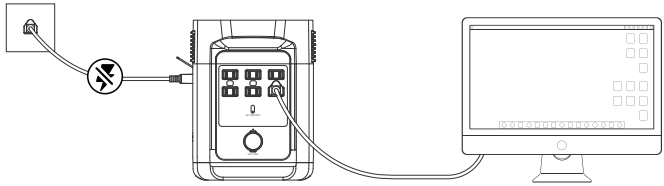
Precautions when using EF DELTA UPS and series mode

When EF DELTA has UPS or series mode on, EF DELTA's X-STREAM system supports an entry-level UPS function. You can use the EF DELTA AC socket while the device is connected to a wall socket with AC power supply (The AC power comes from the grid, not the battery). When the grid suddenly loses power, the device can automatically switch to EF DELTA battery power mode in <=30ms to ensure your work is not interrupted. Series mode is a multi-level power series solution developed based on the UPS function.It allows users to connect two EF DELTAs in series to get continuous power that is two times more than a single machine. The principle of using it is when the power of a EF DELTA is used up, the next machine can immediately replace it to continue the power supply. This a entry-level UPS function that does not support 0ms in switching power.

Do not connect devices require high continuing power supply. Otherwise, please run multiple tests to confirm it's compatibility before connecting devices, such as data servers and workstations, with EF DELTA. EcoFlow do not take responsibility for any data loss or equipment damage caused by customers' failure in following the instruction.

1.Entry-Level UPS user guide

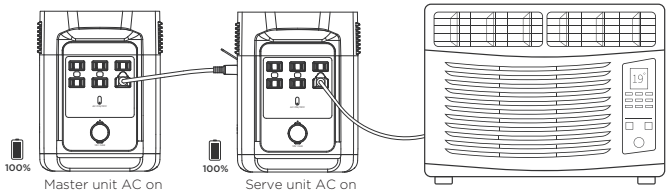
Users can connect the EF DELTA AC charging cable to the power grid and connect a electricity device to EF DELTA turn on the AC switch and automatically enter the entry-level UPS mode. When the external power is cut off, battery will immediately supplied power to protect your device.



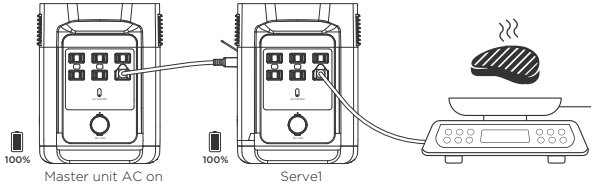
2 . Series mode user guide(recommended for power users; all machines must be fully charged)

Users can connect no more than 2 fully-charged EF DELTAs in series using the AC charging cable to get continuous power and supply appliances with high output requirements for up to 1.8 hours. In this mode, do not connect EF DELTA to the power grid using an AC charging cable, or the overcurrent protection (<20A) may be triggered. Connect EF DELTA to a home power grid and charge each EF DELTA separately. We do not recommend you to charge more than two EF DELTA at the same time. Otherwise, the excessive load may cause damage to the home power grid. To use this function, you need to set one EF DELTA as the Master and the others as Serve 1. Connect one AC cable to the AC output port of the master unit and the other side to the input port of Serve 1. After connecting the EF DELTA, turn all the AC switches on EF DELTA on to activate multi-machine series mode. **Finally, connect all the appliances to the AC sockets of the Serve 1. Then you can charge your devices by using EF DELTA and enjoy the benefits from extended powering time.**

Example 1 :



Example 2 :



TECHNICAL SPECIFICATIONS

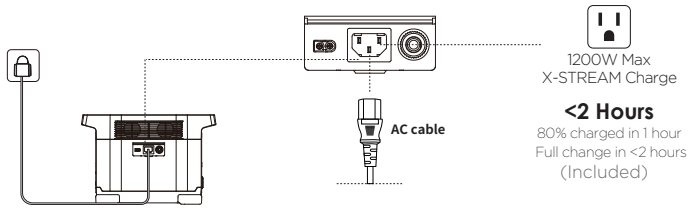
General Specs	
Net Weight	30.9lbs (14kg)
Dimension	15.7 x 8.3 x 10.6in (40 x 21 x 27cm)
Capacity	1008Wh / 1260Wh (50.4V)
Testing and certification	UL CE FCC RoHS PSE

Output	
AC Output (x6)/(x4) Full Sine Wave	1600W (Surge 3100W)total,120Vac (60Hz)/230ac (50Hz) 1800W (Surge 3300W)total,120Vac (60Hz)/230ac (50Hz)
USB-A Output (x2)	5V DC,2.4A,12W Max,per port
USB-A Fast Charge (x2)	5V DC,9V DC,12V DC,2.4A,28W Max,per port
USB-C Output (x2)	5V DC,9V DC,15V DC,20V DC,3A,60W Max,per port
Car Power Output (x1)	10-8.8W,13.6V DC,8A max

Input	
AC Charge Input Power	X-STREAM Charge 1200W max
AC Charge Input Voltage	100-120Vac (50Hz/60Hz) ONLY! (International Version 220-240Vac ONLY!)
Solar Charge Input	400W 10-65V DC 10A max
Car Charger(Example 2)	12V/24V DC 10A max
Battery	
Cell Chemistry	Lithium-ion
Cell Type	18650
Discharge Temperature	-4-140°F (-20-60°C)
Charge Temperature	32-113°F (0-45°C)
Shelf Life	1 Year (after fully charged)
Life Span	800 Cycles (80%+)

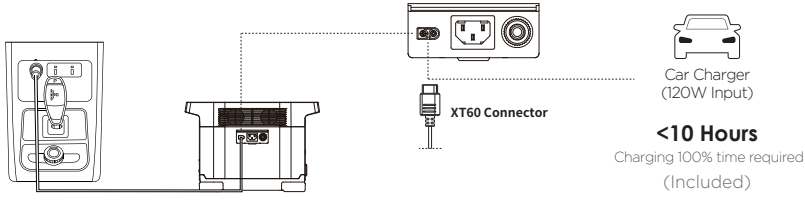
HOW TO RECHARGE EF DELTA

Example 1 :



Example 2 :

We reommend you to start the car before connect car charger to EF DELTA.



How do I recharge my EF DELTA?

Everything you need to know about recharging your EF DELTA via AC Cable, car charger or solar charger (if applicable).

Can EF DELTA power my devices while it's charging?

Yes, EF DELTA can be charging and outputing power in the same time. When you are charging EF DELTA, we do not recommend connecting an electrical appliance with a power over 800w for discharging, because the current capacity of the wall outlet is limited.

FAQs

How do I care for EF DELTA?

EF DELTA is designed for various uses. If you need to clean EF DELTA, please use a dry and non-abrasive cloth to clean the surface. You can use cleaners designed for mobile phones or computer screeens can to clean EF DELTA, but do not give it a bath!

How do I store EF DELTA?

1. EcoFlow offers a water-resistant, dustproof case and we recommend you to use it when you plan to store your EF DELTA for a long time.

2. Make sure to recharge EF DELTA to around 85%.

3. Put EF DELTA into the case

4. Please store your EF DELTA in a dry environment without surrounded by abrasive objects. For optimal battery health, store EF DELTA in room temperature.

5. Discharge EF DELTA to 30%, then charge to 85% every 3 month. This can help prolong the battery life and ensure your EF DELTA is ready to recharge the gears at all times. Without any external sources for power supply during storage, EF DELTA has a shelf life of over a year.

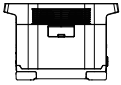
How do I use EF DELTA safely?

Please use EF DELTA in its operating temperature range. Using EF DELTA outside of its optimal operating temperature range can push the machine beyond its safe and effective limits. Do not submerge your EF DELTA in water. It is not waterproofed and this will void your warranty. If you want to protect EF DELTA against moisture and dust, use a EF DELTA protector (IP54) or safety box (IP68, which can be purchased from ecoflow.com). Do not block the ventilation Fan while using EF DELTA.

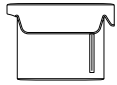
Warning! Do not charge the machine immediately after it is fully discharged. For safety, please cool the battery for 2-3 hours before charging!

If you attempt to charge the machine immediately after a full discharge, the machine will display RECHARGING TIME **as an overheating protection reminder. This is normal phenomenon. Please cool the machine for 2-3 hours before charging it.**

WHAT'S IN THE BOX



EF DELTA



EF DELTA Bag

1.5m AC Cable (Input)

1.5m Car Charge Cable (Input)

Solar Charge Cable (MC4 to XT60 Input)

User Manual & Warranty Card