OSTART

MODEL

Alpha 700

USER MANUAL

700W MAX
AC
ON OFF
POWER SAING

OUT AC DC USB OUT

DC
OUT
DC5521
130W MAX
DC5525

USB
QUICK CHARGE 5V/2.4A USB-C118W
QUICK CHARGE 5V/2.4A USB-C2100W

12-30V MPPT
150W Max IN
Battery connector

ON/OFF
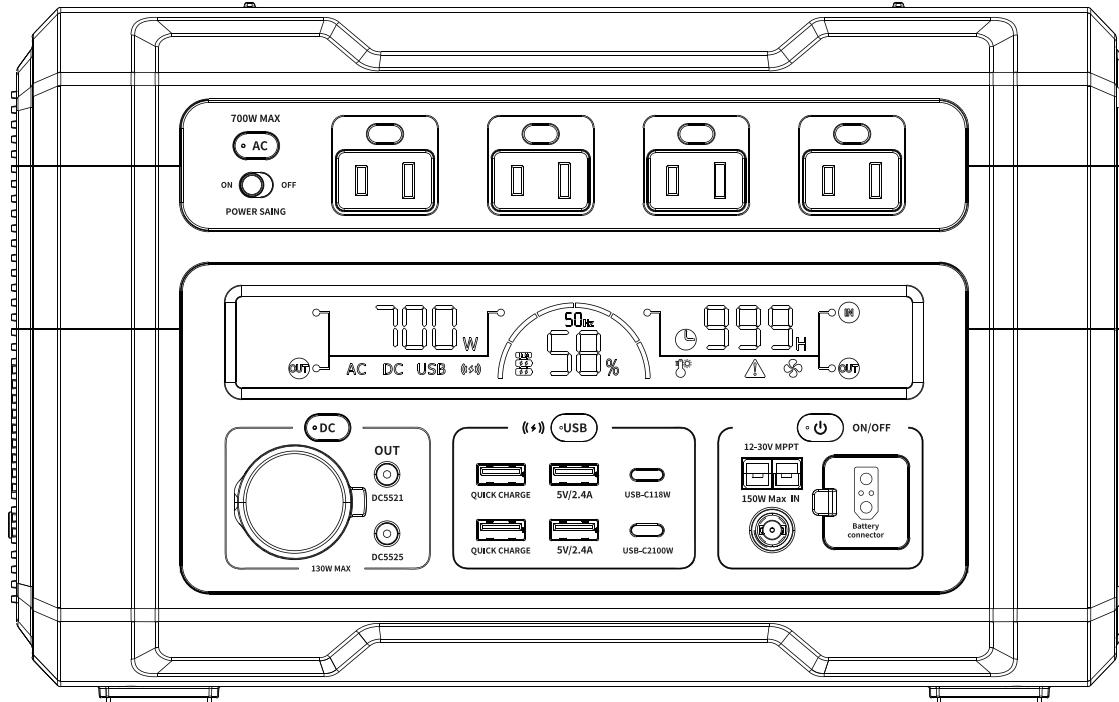
⚠ **WARNING**

1. Keep OSTART "Alpha 700" and the accessories dry. DO NOT expose the product and accessories to high heat.
2. Never disassemble,puncture,shock,damage,or incinerate the product.
3. Recycle and dispose of Alpha 700 in accordance with local laws and regulations.
4. Pay attention to safety when handling the Alpha 700.
5. Children or people with disabilities should use the product under adult supervision.

Contact us:
www.ostartpower.com

Glossary

The following terms are used in this document to indicate various levels of potential harm that may be caused by improper operation.

NOTICE

The instructions, if not properly followed, may result in property damage and minor physical damage.

CAUTION

The instructions, if not properly followed, may result in property damage and serious physical damage.

WARNING

The instructions, if not properly followed, may result in property damage, major accident and serious injury.

> ⚠ **WARNING**
>
> Read the ENTIRE User Manual before operating. Failure to operate the product correctly may result in damage to the product or personal property and cause serious injury. OSTART will not assume any legal responsibility. DO NOT use the product with incompatible components or alter the product in any way without following the instructions provided by OSTART. Failure to follow these instructions will render OSTART after-sales services and the product warranty void. These Safety Guidelines include instructions for safety, operation and maintenance. It is important to read and follow all the instructions and warnings in the user manual before assembly, setup, or use.

Product Safety Guidelines

> ⚠ **WARNING**
>
> Improper use may result in fire, property damage, or personal injury. Make sure to use the product according to the following safety rules and guidelines.

Product Disclaimer

Read all safety tips, warning messages, terms of use and disclaimers carefully. Refer to the terms of use and disclaimer at user manual stickers on the product before use. Users take full responsibility for all usage and operations. Familiarize yourself with the related regulations in your area. You are solely responsible for being aware of all relevant regulations and using OSTART products in a way that is compliant.

Product Use:

1. DO NOT expose the product to any liquids. DO NOT immerse the product in water. DO NOT leave the batteries out in the rain or near a source of moisture. Moisture in the Alpha 700 could cause short circuits, component failure, fires or even explosions.
2. Never use non-OSTART parts. Go to https://ostartpower.com/ to purchase new parts. OSTART takes no responsibilies for any damage caused by the use of non-OSTART parts.
3. Never install or remove other modules from the Alpha 700 when it is turned on. DO NOT plug or unplug other modules when the power of the product is turned on, otherwise the power interface may be damaged.

Product Use:

4. Using the product in environments above 140°F (60℃)may cause fires or explosions. Using the product below 14°F(-10℃) will severely affect the performance of the product. Allow the product to return to a normal operating temperature before using it.
5. DO NOT use the batteries in strong electrostatic orelectromagnetic environments. Otherwise, the battery control board may malfunction and cause a serious accident during use.
6. Never disassemble or puncture the product in anyway. Otherwise, it may leak, catch on fire, or explode.
7. DO NOT use the product if it was involved in a crash, accident, or a forceful jolt.
8. If the product falls into the water during use, take the product out immediately and put it in a safe and open area. Keep a safe distance from it until it is completely dry. Never use it again and dispose it properly as described in the Battery Disposal section below. If the product catches fire, it is recommended to use fire extinguishing equipment in the following order: water or water mist, sand, fire blanket, dry powder fire extinguisher, and carbon dioxide fire extinguisher.
9. DO NOT put the product in a microvvave over or in a pressurized container.
10. DO NOT allow pins, wires, or other metal pieces to erter the Alpha 700 case, outlets, or controls. Metal pieces may short circuit the product.
11. Avoid collisions. DO NOT place heavy objects on top of the Alpha 700.
12. If there is dirt on any plug or outlet surface, use a dry cloth to clean it. Otherwise, it will cause abrasion and result in energy loss or the inability to charge.
13. Store the product in a dry and ventilated place.
14. It is recommended to use moisture barrier bags in wet environments (for example, places by the sea or waterways) to prevent the product from getting soaked. If water is found inside the product, it must not be used or turned on again. Please take anti-eletric shock measures before touching the product. Following this, place the product in a safe, waterproof and open area. Once complete contact OSTART Customer Service immediately.
15. This product is not recommended for powering medical emergency equipment related to personal safety, including but not limited to medical grade ventilators (hospital version CPAP: Continuous Positive Airway Pressure), artificial lungs(ECMO, Extracorporeal Membrane, Please follow your doctor's instructions and consult with the manufacturer for restrictions on the use of the equipment. If used for general medical equipment, please be sure to monitor the power status to ensure that the power does not run out.
16. When in use, power supply products will generate electromagnetic fields, which are likely to affect the normal operation of medical implants or personal medical equipment such as pacemakers, cochlear implants, hearing aids, defibrillators etc. If these types of medical equipment are being used, please contact the manufacturer to inquire about any restrictions on the use of such equipment. These measure are fundamental to ensure a safe distance between the medical implants (for example, pacemakers, cochlear implants, hearing aids, defibrillators etc.) and this product while in use.
17. When the power supply is connected in normal mode to a refrigerator, power fluctuations may cause the power supply to automatically shut down. When connecting the power supply to a refrigerator that stores medicine, vaccines or other valuable items, it is recommended to set the AC output power saving mode to "off" . This helps support a continuous power supply and ensures a safe and efficient power consumption state.
18. There will be errors in the remaining discharge time of low power output.
19. DO NOT touch Cigarette Lighter Socket directly with your body, When the product working, the temperature of the Cigarette Lighter Socket will be very high.

Product Charging:

1. Always use OSTART approved charging cables. OSTART does not take any responsibilities for any damages caused by using non-OSTART charging cables.
2. When charging, please place the product on the ground with no flammable or combustible materials around it. To prevent accidents, never leave the device unattended during charging.
3. DO NOT charge the device immediately after a long heavy load, because the device temperature may become too high. DO NOT charge the device until it cools down to room temperature.

Product Storage and Transportation:

1. Keep the product out of the reach of children. If any clild accidentally swallows any parts, please seek medical attention immediately.
2. If a low-battery warning appears, charge the product before storing it. Otherwise, long-term storage may cause damage to the batteries in the product. Batteries in the product will enter hibernation mode if they are depleted and stored for a long time. Recharging the product can bring the battery out of hibernation.
3. DO NOT place the product near a heat source, such as inside a car in direct sunlight, a fire source, or an operating stove.
4. Store the product in dry environments. Please keep it away from water.
5. Make sure no objects can fall on or around the product while it's being stored.
6. Never ship a product with a battery power level higher than 30%.

Product Battery Disposal:

1. Dispose of Alpha 700 in specific recycling boxes only after a complete discharge. Batteries are hazardous chemicals. Please strictly follow your local regulattions regarding the battery disposal and recycling.
2. Dispose of the product if it cannot be powered on after over-discharging.

Travel Notice:

DO NOT bring this product on flights.

Product Maintenance:

1. Temperature for normal use and storage of this produlct is 14°F to 104°F(-10℃ to 40°C) and temperature for optimal use and storage of this product is 68°F to 77°F (20℃ to 25°C).
2. If the product is not used for a longtime, the battery life may be reduced.
3. Discharge Alpha 700 to 30%, then charge to 85% every 3 months to keep the battery healthy.

Alpha 700 Usage and Safety Guide

Congratulations!

You are now an OSTART Alpha 700 user. This brief pamphlet is meant to help you. Please take some time to read it carefully before using the product.

👁 **NOTICE**

To turn Alpha 700 on or off, you need to PRESS and HOLD the ON/OFF System Power Button. To turn on the AC power outlet, you need to PRESS the AC Button after turning on Alpha 700. Users can turn off AC power when they don't need it and save power. Please follow this step-by-step introduction to understand Alpha 700's Product Structure, LCD Display, and more. Please fully charge(100%) Alpha 700 before using it.

FCC Statement:

This product complies with Part 15 of the FCC Rules.Operation is subject to the following two conditions:
(1) This product may not cause harmful interference, and
(2) This product must accept any interference received, including interference that may cause undesired operation.

⚠ **WARNING**

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

👁 NOTICE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1.Orient or relocate the receiving antenna.
2.Increase the separation between the equipment and receiver.
3.Connect the equipment into an outlet on a circuitdifferent from that to which the receiver is connected.
4.Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement:

The equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. During the operation of device a distance of 15 cm surrounding the device and 20 cm above the top surface of the device must be respected.

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# What's in the Box
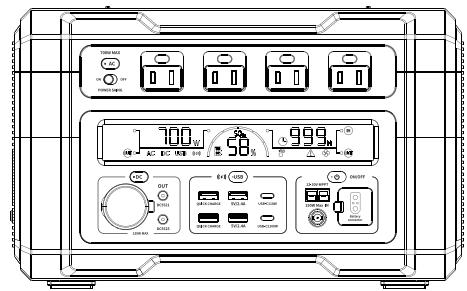
Alpha 700
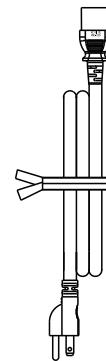
AC power line
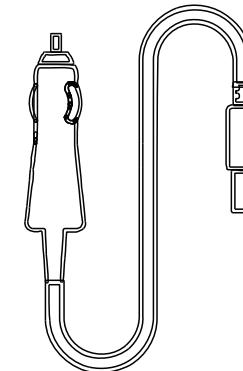
Vehicle charge
connection cable
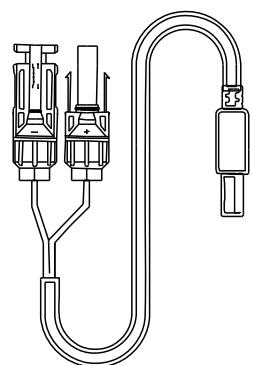
Anderson
connection cable
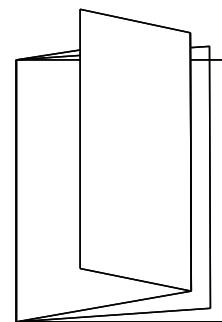
Operation Manual
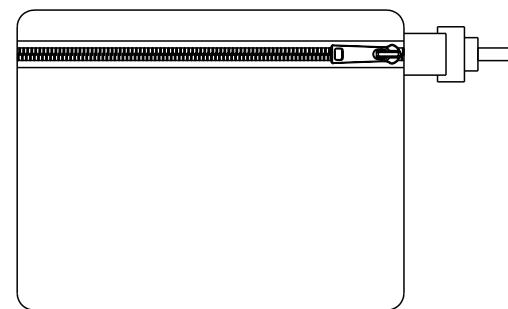
Storage bag

Product Structure

700W MAX

B3 — AC

B4 — ON OFF — POWER SAING

O1

A1

B5 — DC

USB

ON/OFF

B1

OUT
DC5521

QUICK CHARGE   5V/2.4A   USB-C118W

12-30V MPPT

150W Max IN

I3

DC5525

QUICK CHARGE   5V/2.4A   USB-C2100W

Battery connector

130W MAX

AC   DC   USB

O2   O3   O4   O5   B6   O6   O7   O8   I1   I2
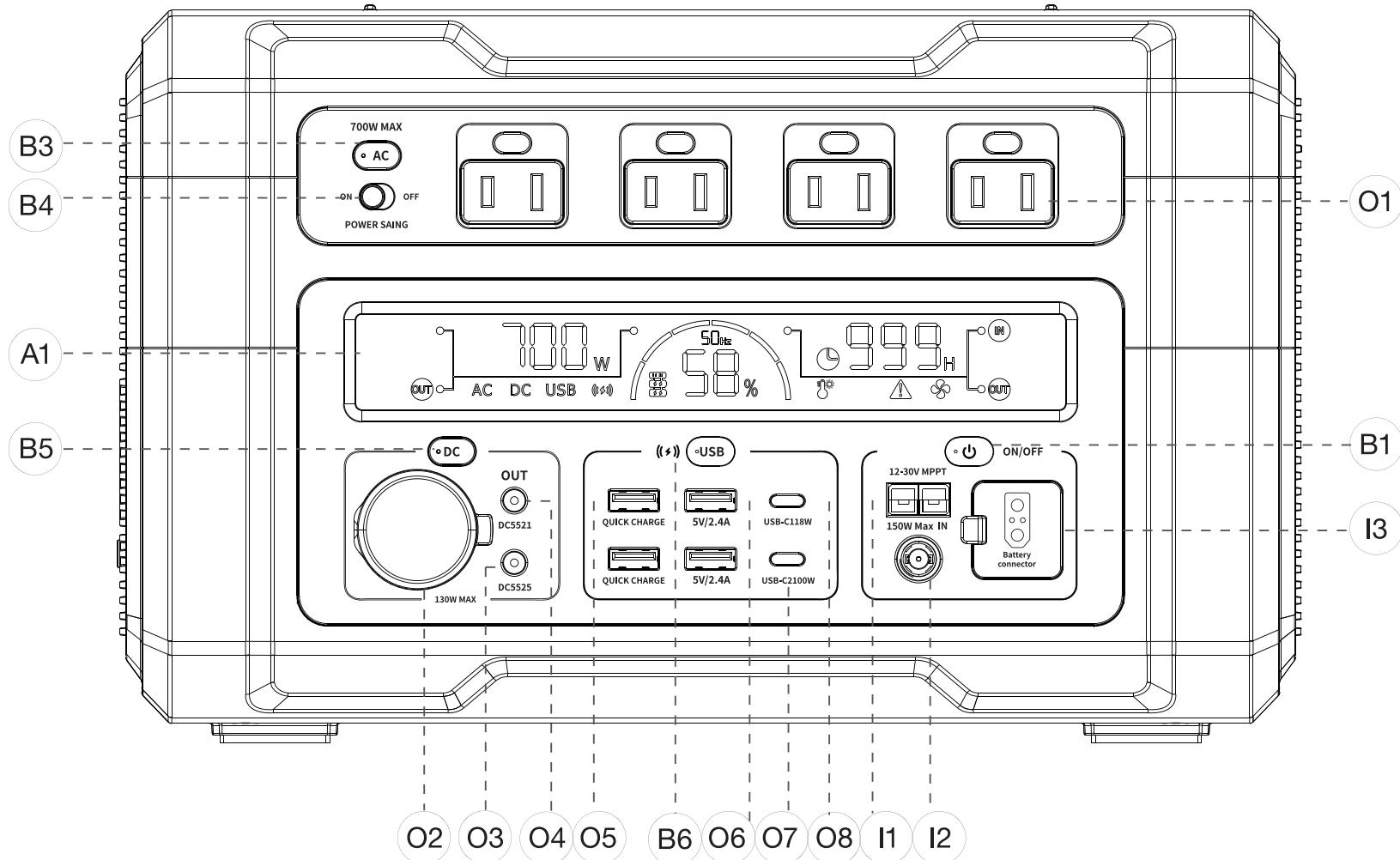
Product Structure
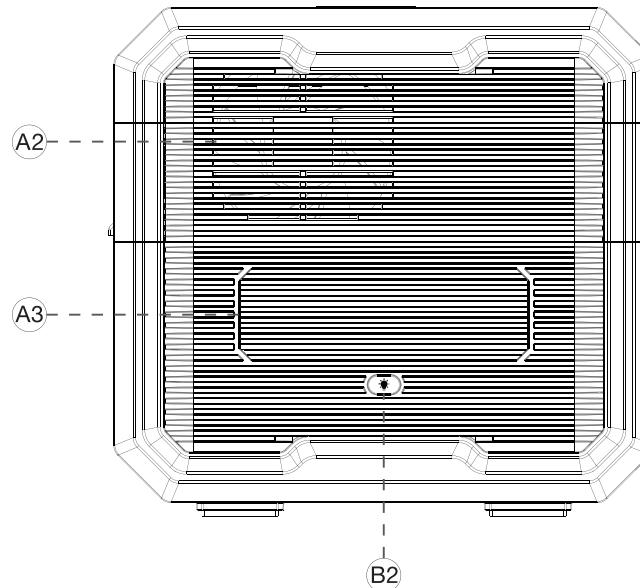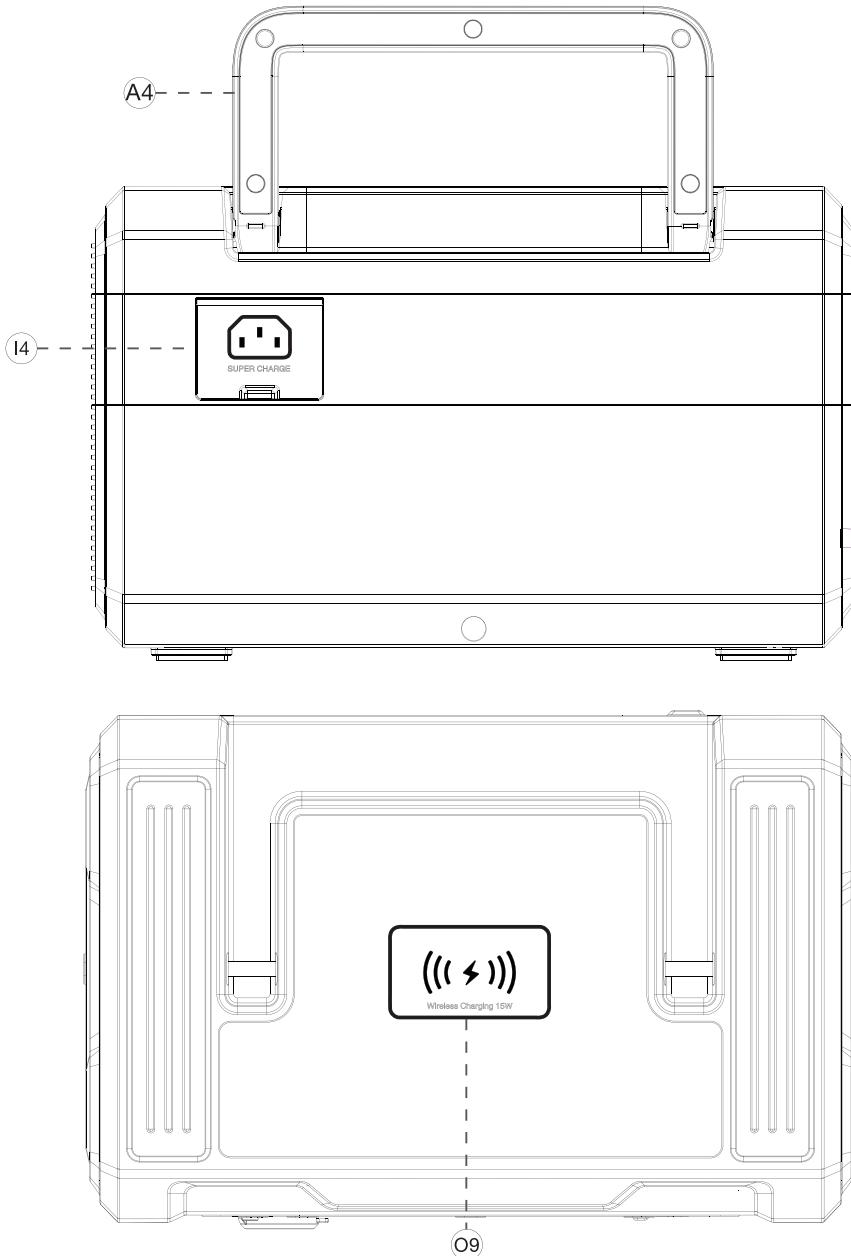
Button:
B1. Power ON/OFF Button
B2. Ambient Light ON/OFF Button
B3. AC Output ON/OFF Button
B4. Power Saving Mode Button
B5. DC Output ON/OFF Button
B6. USB Output ON/OFF Button
Output Port:
O1. AC Output Ports
O2. Cigarette Lighter Socket
O3. DC5525 Output Port
O4. DC5521 Output Port
O5. Fast Charge USB-A Output Ports
O6. USB-A Output Ports
O7. USB-C 100W Output Port
O8. USB-C 18W Output Port
O9. Wireless Charging Area
Input Port:
I1. Anderson Input Port
I2. DC7909 Input Port
I3. Alpha 700E Input Port
I4. AC Intput Port
Other:
A1. LCD Display
A2. Ventilation Fan
A3. Ambient Light
A4. Handle

LCD Display
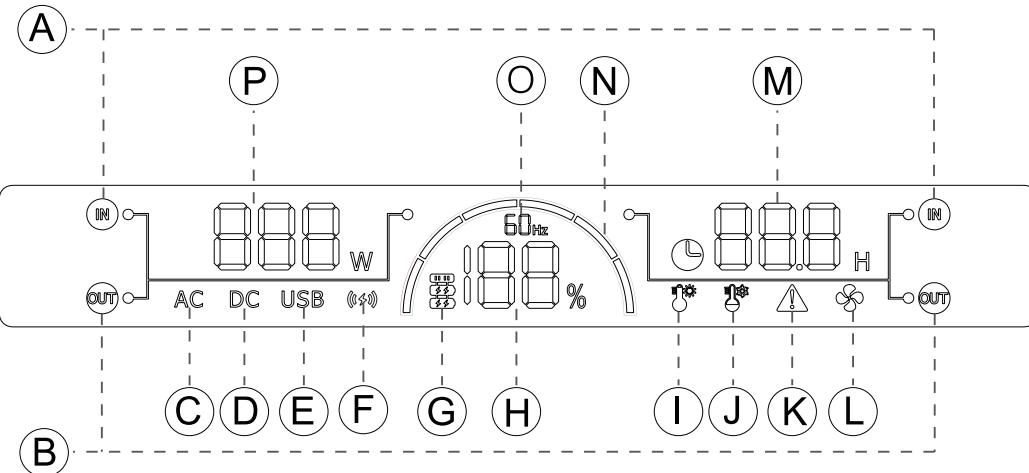
(A) Input
Shows the recharge status of Alpha 700.

(B) Output
Shows the discharge status of Alpha 700.

(C) AC output
Shows the AC discharge status of Alpha 700.

(D) DC output
Shows the DC discharge status of Alpha 700.

(E) USB output
Shows the USB discharge status of Alpha 700.

(F) Wireless output
Shows the Wireless discharge status of Alpha 700.

(G) Battery recharge
Shows Battery recharge when Alpha 700 is successfully connected to Alpha 700E

(H) Battery level percent
Shows the remaining power (%). If the display shows 0%, please charge Alpha 700 immediately.

(I) High Temperature Warning
When the temperature of the Alpha 700 is too high, a high-temperature warning icon appears on the screen. Please cool down the product before use.

(J) Low Temperature Warning
When the temperature of the Alpha 700 is too low, a low-temperature warning icon appears on the screen. Please warm up the product properly before use.

(K) Protection Information
When the Alpha 700 is abnormal, a protection icon will appear on the screen. Please follow the instructions to remove the protection.

(L) Fan Indicator
Show the fan working status when the machine temperature exceeds 113°F (45°C) or the power exceeds 180W.

(M) Remaining Charge/Discharge Time
This number indicates the remaining charge/discharge time (mins) for Alpha 700.

(N) Battery Level Indicator
Shows the remaining power. If the remaining power is less than 15%, the icon will flash to indicate a low battery warning. In this case, recharge the product.

(O) Output rate
Shows the current output rate of Alpha 700.

(P) Current Power
Shows the current input/output power of Alpha 700 in watts.

Protection Information

The Alpha 700 display screen showcases different icons to indicate prompts. Read the information below to understand the icons and what to do when they appear.

| NO	Project	Describe
1	Battery High Temperature	Code E1 release method, suspend use and wait for temperature recovery
2	Battery Low Temperature	Code E2 release method, suspend use and wait for temperature recovery
3	Battery Overvoltage	Code E3 release method, suspend use and wait for battery voltage to recover
4	Input Overvoltage	Code E4 release method, stop charging and recheck the charging voltage
5	Protection Board Mos High Temperature	Code E5 release method, suspend use and wait for temperature recovery
6	Protection Board Mos Low Temperature	Code E6 release method, suspend use and wait for temperature recovery
7	Inverter Detects Battery High Temperature	Code E7 release method, suspend use and wait for temperature recovery
8	Inverter Front Stage High Temperature	Code E8 release method, suspend use and wait for temperature recovery
9	Inverter Rear Stage High Temperature	Code E9 release method, suspend use and wait for temperature recovery
10	Inverter Detects Battery Low Temperature	Code E10 release method, suspend use and wait for temperature recovery
11	Inverter Pre-Stage Low Temperature	Code E11 release method, suspend use and wait for temperature recovery
12	Low Temperature After Inverter	Code E12 release method, suspend use and wait for temperature recovery
13	USB-A or USB-C overcurrent or short circuit	Code E13 release method, Disconnect all electrical appliances and press the USB button to restore
14	QC overcurrent or short circuit	Code E14 release method, Disconnect all electrical appliances and press the USB button to restore
15	Wireless overcurrent or short circuit	Code E15 release method, take off the wireless charging device and press the USB button to restore
16	DC overcurrent or short circuit	Code E16 release method, press the DC key to restore after removing the connected device
17	AC overcurrent or short circuit	Code E17 release method, Disconnect all electrical appliances and press AC button to restore
18	The total power is greater than 900W	Code E18 release method, Disconnect all electrical appliances and press AC button to restore
19	Abnormal inverter communication	Code E19 release method, detection of the cable before connecting each appliance again.
20	DC output high temperature protection	Code E20 release method, suspend use and wait for temperature recovery
21	DC output low temperature protection	Code E21 release method, suspend use and wait for temperature recovery

How to charge other devices

● **Open the Power Button**

Press and hold for 3S to turn on or off the Alpha 700, the indicator light will turn red when it is working, and the indicator light is off when it is turned off.
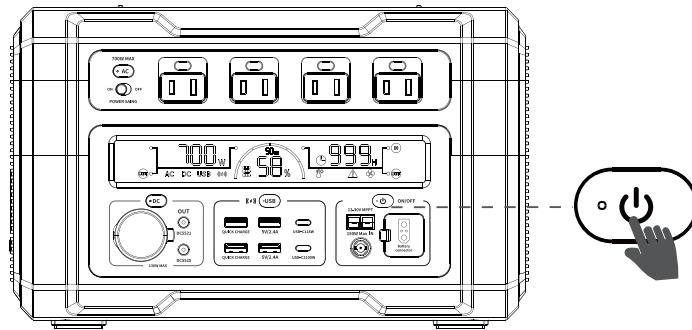
*If all output modules are not turned on after Alpha 700 is turned on, Alpha 700 will automatically shut down after 360s and the screen will trun off.

● **Open the AC/DC/USB Button**

Press the AC/DC/USB button to turn on the output modules of the corresponding module, the indicator light turns red when it is working, and the indicator light is off when it is turned off.
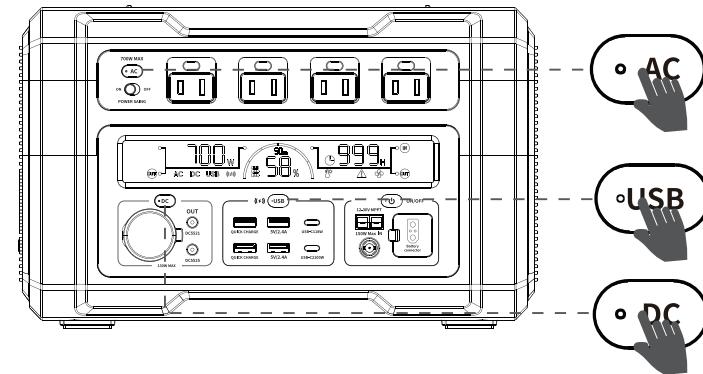
*If the POWER SAVING is on, if the AC output power is lower than 3W, the AC output will be automatically turned off after 600s.If using low power devices, it is recommended to turn off POWER SAVING.

*If the the output power is lower than 3W, the Alpha 700 will be automatically turned off after 6 hours.

● **Connect charging device**

Lighting lamp

UAV

Game machine

Mini refrigerator

Smart phone

Laptop

TV

Carmera
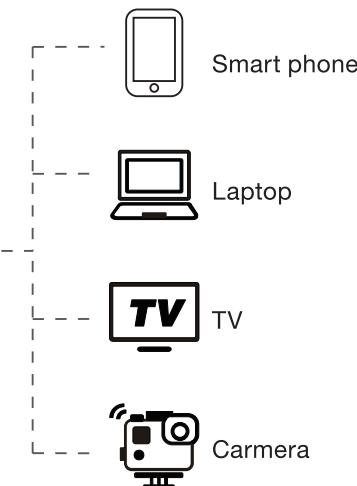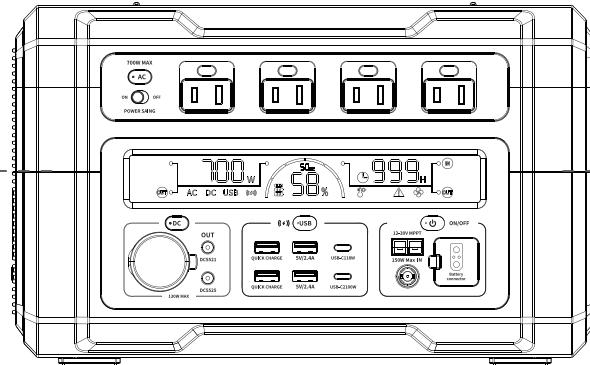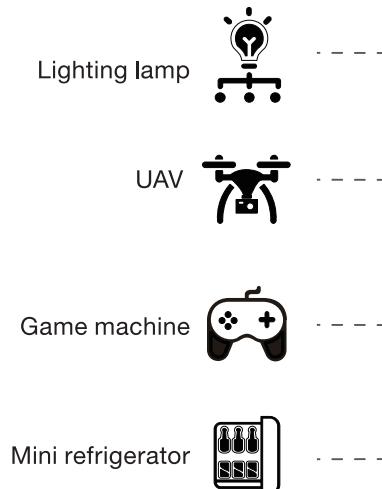
How to recharge


AC Please use the adapter to charge the device. When the LCD shows that the battery power is 100%, it means the battery is fully charged.

Vehicle charging
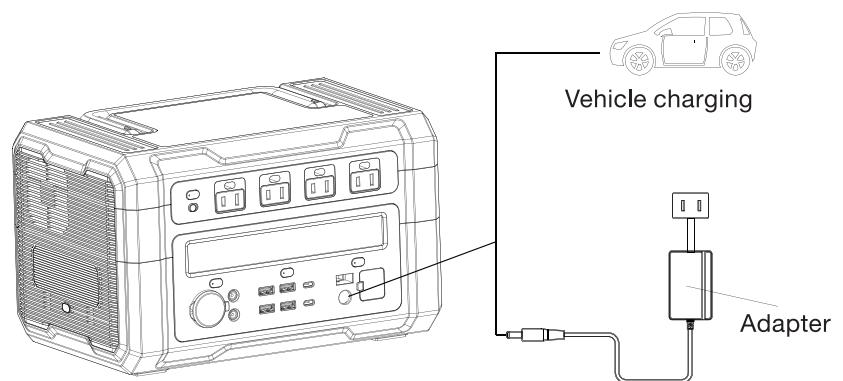
Adapter

DC Please use the adapter to charge the device. When the LCD shows that the battery power is 100%, it means the battery is fully charged.
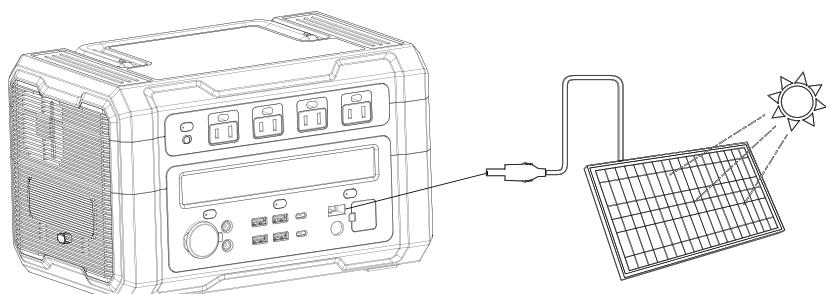

(The accessory is not included)

Solar Panel

1. The output voltage of the solar panel should be lower than 30V
2. Support 60W/80W/100W/120W/150W solar panel charging, the charging time is determined by the intensity of sunlight.
3. Place the solar panel in direct sunlight as much as possible.

Alpha 700 connect with Alpha 700E battery

Get the Alpha 700, Alpha 700E Battery and Power Cable ready. Then turn off the power of Alpha 700 and Alpha 700E Battery. Follow the steps below. If the devices are not turned off, they cannot be successfully connected.

1.Open the dust cover of the AC port of Alpha 700 to expose the Power Port. Connect the Power Cable to the port.
2.Open the dust cover of Alpha 700E Battery to expose the Power Port. Connect the other end of the Power Cable to the port.
3.Turn on the power button of Alpha 700 or Alpha 700E Battery. If the display of Alpha 700 shows the Battery Charge icon, the connection is successful. When connecting the devices for the first time, it is recommended to fully charge them first. Fully charge Alpha 700 and Alpha 700E Battery and ensure that the voltage of both devices are consistent to maximize the performance of Alpha 700E Battery.
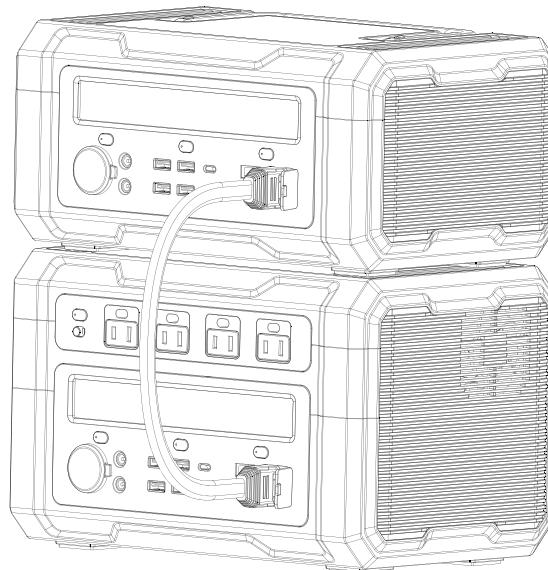
Parallel Operation Connection

Alpha 700 Ambient Light Operation

1.Press the Ambient Light button for the first time to turn on the LED at 50% brightness
2.Press the Ambient Light button for the second time to adjust the brightness to 100%
3.Press the Ambient Light button for the third time to turn on the SOS mode
4.Double-press Ambient Light botton to turn on the red flashing mode
5.In flashing mode and SOS mode, the LED will be turned off after pressing the button.

Entry-Level UPS

## Alpha 700 Entry-level UPS Use Reminder

Alpha 700's BMS system supports an entry-level UPS function. You can use the Alpha 700 AC socket while the Alpha 700 is connected to an AC power source (your devices or appliances connected the Alpha 700 AC socket will get power from the AC power source, not the Alpha 700 battery). When the AC power source loses power suddenly, the Alpha 700 will switch to provide power to the devices and appliances connected to it in <30ms.
DO NOT connect devices with strict uninterrupted power supply requirements. Perform multiple tests to confirm compatibility before connecting devices such as data servers and workstations with Alpha 700. OSTART will not be responsible for any loss of data or equipment damages caused by customers' failure in following the instruction. In accordance with the UL2743 standard, the AC outlets off the Alpha 700 are in a double blade, ungrounded configuration, it is recommended to use the UPS function only for temporary emergency usage rather than for long-term usage. DO NOT connect the Alpha 700 to devices or electrical appliances with bare metal when charging to avoid the risk of electric shock.

Entry-Level UPS User Guide

UPS is only applicable to electrical appliances below 700W. To avoid an Overload condition, do not attempt to power any equipment drawing more than 700W of power. OSTART will not be responsible for any loss of data or equipment damages caused by careless use orcustomers' failure to follow the instructions. Only one Alpha 700 can conduct the UPS function, the UPS function is not available when more than one Alpha 700 is connected together. Please follow the connection instructions below:

Users can connect the AC charging cable of Alpha 700 to an AC power source, connect a device to Alpha 700, and turn on the AC switch to automatically enter the entry-level UPS mode. When the AC power source is cut off, power will be supplied from the battery of Alpha 700 to power your device (as shown below).
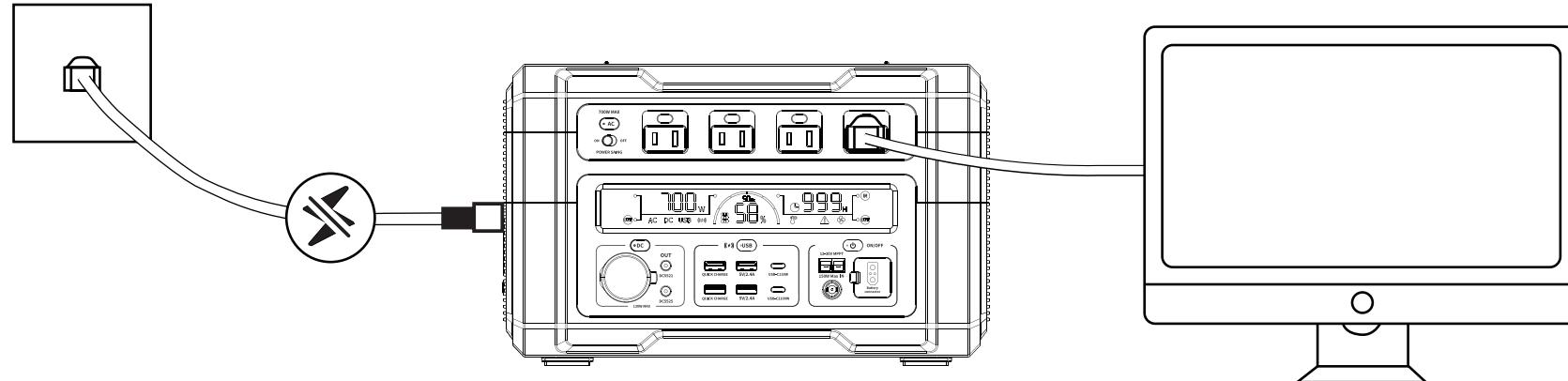
Technical Specifications

General Specs

Net Weigh	8.338kg±5%
Dimensions	304mm*204mm*189mm
Capacity	614.4 Wh (25.6V)
Testing and certification	FCC, CE, PSE, METI, RoHS, RCM

Output

AC Output(*4)	700W(Surge 900W) total, 120 Vac (50Hz/60Hz) / International Version 230 Vac (50Hz/60Hz)
DC Output(5521*1 / 5525*1)	130W, 13.6Vdc, 8A TYP
Cigarette Lighter Output	130W, 13.6Vdc, 8A TYP
USB-C Output (*1)	5Vdc, 9Vdc, 12Vdc, 15Vdc, 20Vdc, 5A Max, 100W Max
USB-C Output (*1)	5Vdc, 9Vdc, 12Vdc, 3A Max, 18W Max
USB-A Output (*2)	5Vdc, 9Vdc, 12Vdc, 3A Max, 18W Max
USB-A Output (*2)	5Vdc, 2.4A Max, 15W Max
Wireless Output (*1)	5Vdc, 3A Max, 15W Max

Input

AC Charge Input Voltage	85-135 Vac (50Hz/60Hz) / International Version 220-240 Vac (50Hz/60Hz)
AC Charge Input Power	600W Max
Solar Charge Input	150W Max, 10-25Vdc, 8A Max
DC Charge Input	150W Max, 10-25Vdc, 8A Max

Battery

Battery type	LPF
Storage temperature*	14°F to 104°F(+/- 5°F) / -10°C to 40°C(+/- 3°C)
Charge Temperature*	32°F to 113°F(±5°F) / 0°C to 45°C(±3°C)
Discharge Temperature*	14°F to 140°F(±5°F) / -10°C to 60°C(±3°C)
Cycle Life	3000 cycles

*Please Note: The following information has been obtained under supervised test conditions.

FAQ

How to Clean Alpha 700 ?
Alpha 700 is a versatile, durable power station that can be used in many types of applications. You can clean Alpha 700 using a dry, non-abrasive cloth. Use detergent that is used for cleaning mobile phones and computer screens if you need to clean Alpha 700 more thoroughly. DO NOT expose Alpha 700 to excessive amounts of liquid, as doing so can damage the product or result in injury.

How to Store Alpha 700?
Store Alpha 700 in a dry and cool environment, away from any abrasive objects. DO NOT store or place Alpha 700 near water. Please turn off the Alpha 700 and store it within its recommended use and storage temperature range. If you need to store the Alpha 700 for a long time, please discharge the Alpha 700 to 30%, then charge it to 85% every 3 months.

How to Use Alpha 700 Safely?
1.Please use Alpha 700 in its recommended operating temperature range. Using Alpha 700 out of the optimal operating temperature range may cause the power station to exceed safe and effective working limits.
2.Alpha 700 is not waterproof, DO NOT immerse Alpha 700 in water. Doing so will void the warranty.
3.If Alpha 700 is used to power electrical devices with heating elements for over 30 minutes, such as a hairdryer, the power station may enter a high-temperature protection mode. Please wait for about 1 hour before charging the Alpha 700, or using it to power devices again.

Can I connect the Alpha 700E Battery with a Alpha 700E Battery?
No.Alpha 700E is not compatible with Alpha 700E, which is designed to be used with Alpha 700 only. also Alpha 700 is not compatible with Alpha 700.