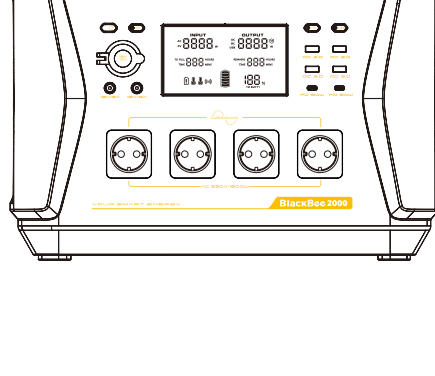


USER MANUAL

BlackBee 2000



service.pps@alpha-ess.com

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I WARNING & ATTENTION

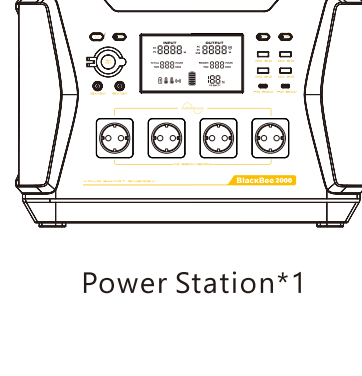
WARNING

- ◆ Do not put the unit in a high temperature environment, or explode in the sun.
- ◆ Do not place the unit in water or rain outdoors.
- ◆ Do not place the unit on its side or upside down when in use or storage.
- ◆ Do not use the unit in an environment outside the scope of the use environment.
- ◆ Do not use the unit if the power cord is damaged or broken.
- ◆ Do not let children use the unit. Keep the unit away from children and pets.
- ◆ Do not recharge the unit via power supply systems that operate outside of 200-240V.

ATTENTION

- ◆ Keep the power vents open.
- ◆ Do not cover this product with objects, such as towels, clothing during use.
- ◆ Turn off any output ports (AC/DC/USB) that are not being used in order to conserve power.
- ◆ Use the original or certified charger and cables.
- ◆ Non-technical professionals should not disassemble the unit.
- ◆ Not permitted on aircraft.
- ◆ To preserve the battery lifetime, please use and recharge at least every 3 months.

II PACKAGE LIST



- AC power cable*1
- Warranty card*1
- User manual*1

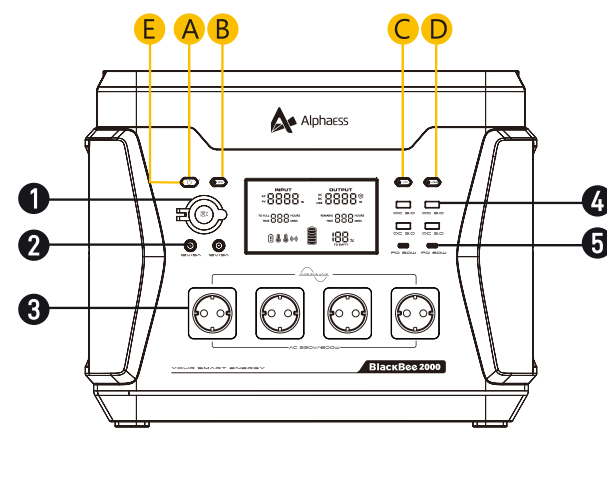
Power Station*1

III SPECIFICATION

BATTERY	
Cell Chemistry	Lithium Ion
Energy Storage Capacity	2,203.2Wh
Lifecycles	≥1600 cycles
Shelf-life	Up to 6 months after full charge; re-charge every 3 months
Wattage Compatibility	Total Output: 2040W
	AC: 1600W Continuous, 3000W Peak
	DC+USB: 440W in total

Battery Management System (BMS)	Input undervoltage protection, Output over voltage protection, Overload protection, Short circuit protection, Overtemperature protection
INPUT PORTS	
DC(Solar) INPUT(Anderson*2)	11V-45V, 10A/300W MAX each
AC Port	200-240V, 1200W
OUTPUT PORTS	
USB Port(6)	USB-C*2, PD60W each(5V=3A; 9V=3A; 12V=3A; 15V=3A; 20V=3A) USB-A*4, QC3.0 36W each(5V=3A; 9V=3A; 12V=3A; 15V=2.4A; 20V=1.8A)
DC Port(5525)(2)	12V=5A; 12V=3A
Car Port(1)	12V=10A
AC Port(4)	230VAC, 50Hz, Pure Sine Wave 1600W Continuous, 3000W Peak
Wireless Charging(2)	10W*2
GENERAL INFO	
LCD display - info relates watt input/output, battery status, warning symbol display	
Dimensions(LxWxH)	17.2*13.4*11.4 inch(438 x 340 x 283 mm)
Weight	48.5lbs(22kg)
Recharging Temperature	14-113°F(-10-45°C)
Operating Temperature	14-113°F(-10-45°C)
Certification	FCC, CE, RoHS, UN38.3, MSDS, PSE, RCM
Warranty	24 months

IV PRODUCT TOUR & FUNCTIONS



- 1 Car Port Output
- 2 DC Output Port(5525)
- 3 AC Output Port
- 4 USB-A Output Port
- 5 USB-C Output Port
- A Master Power Switch
- B DC Power Button
- C AC Power Button
- D USB Power Button
- E Recharging Indicator

V RECHARGE & DISCHARGE

WARNING SYMBOL DISPLAY

IF YOU OPERATE THE POWER STATION IN AN IMPROPER WAY, THERE WILL BE APPEARING SYMBOLS ON LCD SCREEN.

When the input voltage of recharging is too high or too low, this symbol will be displayed and the input charging will be paused. Please press the Master Power Switch(A) to restart your BlackBee 2000. If the symbol still exists, please contact customer support for further solutions.

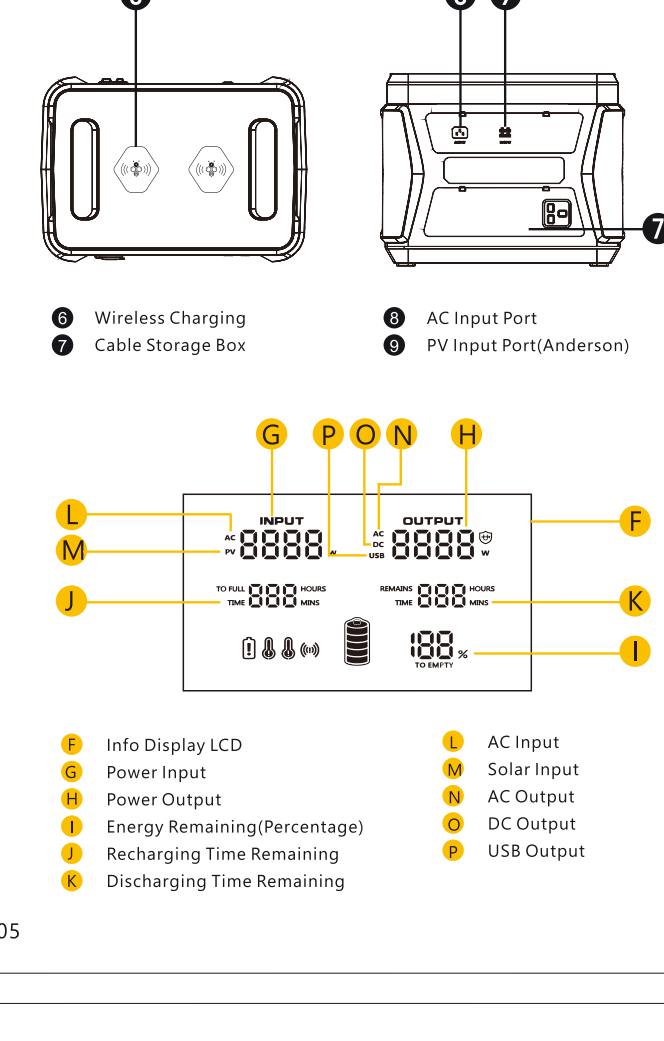
This symbol indicates your BlackBee 2000 is under overload protection. Disconnect the output load to release the protection and the symbol will disappear.

This symbol on display means the wireless charging is powered on. And if it is flashing, it means the wireless charging is malfunctioning. Please check the wireless charging panel or restart the wireless charging.

This symbol indicates that the product is in a low power state(less than 20%). Please kindly charge it to 100% and then use it.

This symbol indicates that the device is under high-temperature(Red icon) or low-temperature (Blue icon) protection and the protection will be released if the icon does not display.

BATTERY SYMBOL DISPLAY



- 6 Wireless Charging
- 7 Cable Storage Box
- 8 AC Input Port
- 9 PV Input Port(Anderson)

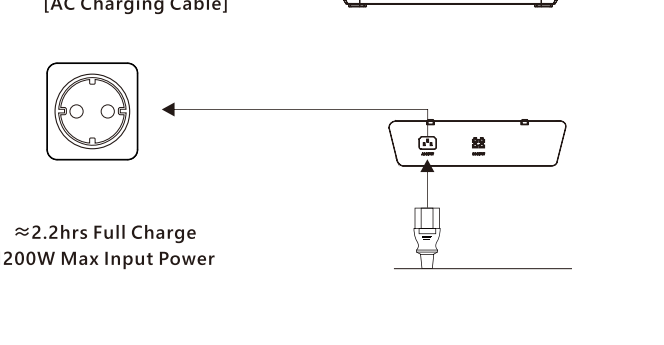


- F Info Display LCD
- G Power Input
- H Power Output
- J Energy Remaining(Percantage)
- I Recharging Time Remaining
- K Discharging Time Remaining
- L AC Input
- M Solar Input
- N AC Output
- O DC Output
- P USB Output

RECHARGE(INPUT)

Charging Method 1: From Wall Outlet (by AC charging cable)

Connect BlackBee 2000 from the AC input port(8) via charging cable to the AC wall outlet @1200W Max., the charging process will automatically stop when it reaches 100% capacity.

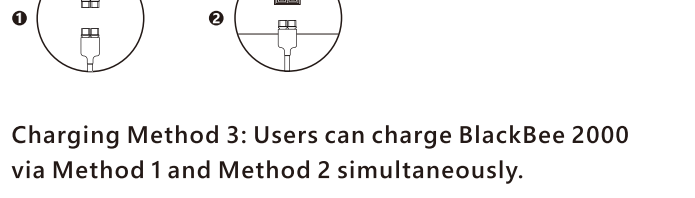


≈2.2hrs Full Charge
1200W Max Input Power

Charging Method 2: Solar Panels (via Anderson cable)

Max Current: 10A
Voltage Range: 11-45V
Max. Input Power: 600W Max (each input port: 300W Max)
Connect 2 pieces of AlphaESS SP300 solar panels(optional) to recharge BlackBee 2000.

- a. Connect the Anderson port of solar panels to Anderson Extension cables (figure 1).
- b. Connect the other end of Anderson cables to the Anderson 30A input port of BlackBee 2000 (figure 2).



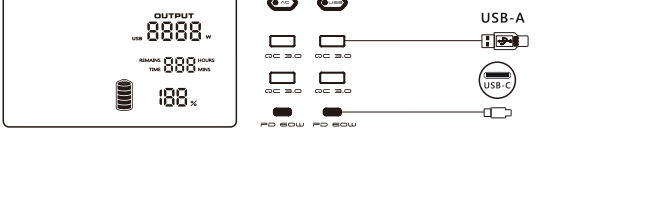
Charging Method 3: Users can charge BlackBee 2000 via Method 1 and Method 2 simultaneously.

DISCHARGE(OUTPUT)

Press Master Switch(A) for 3 seconds to turn on/off the product.

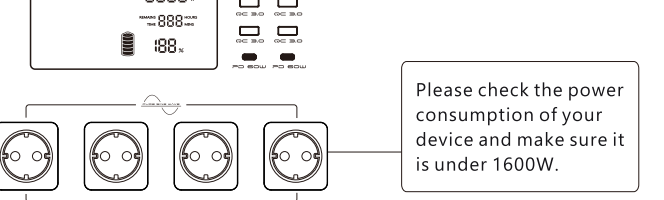
1. USB OUTPUT

With the Master Power Switch(A) turned on, short press the USB Power Button to turn on/off USB output.



2. AC OUTPUT

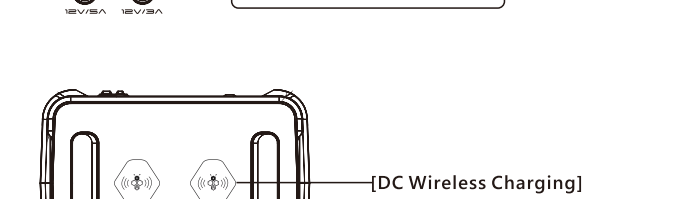
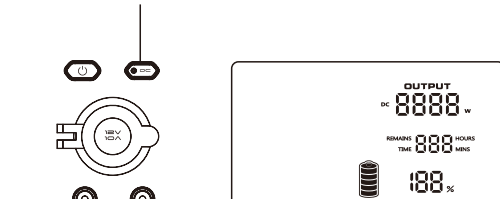
With the Master Power Switch(A) turned on, short press the AC Power Button to turn on/off AC output.



Please check the power consumption of your device and make sure it is under 1600W.

3. DC OUTPUT (INCLUDE WIRELESS CHARGING)

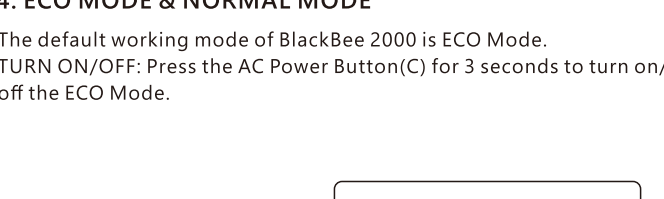
With the Master Power Switch(A) turned on, short press the DC Power Button to turn on/off DC output.



* For power saving, please turn off the Master Power Switch(A) when the BlackBee 2000 is not in use.

4. ECO MODE & NORMAL MODE

The default working mode of BlackBee 2000 is ECO Mode. TURN ON/OFF: Press the AC Power Button(C) for 3 seconds to turn on/off the ECO Mode.



Mode	Output	Output Power	Defaults	"L" Icon on the screen
ECO Mode	AC Output	≤6W	The device will automatically shut down after 4 hours	NO
	DC+USB Output	≤2W	The device will automatically shut down after 12 hours	
Normal Mode	BlackBee 2000 will not shut off automatically			YES

BATTERY MANAGEMENT SYSTEM(BMS)

It is an electronic system that manages the charging of battery to ensure safety, including input under voltage protection, output over voltage protection, overload protection, short circuit protection, over current protection, over temperature protection.

Q2: Can the BlackBee 2000 be recharged while using?

A: Yes, but please note BlackBee 2000 only supports pass-through charging while it is charged by the solar panel.

Q3: Can the BlackBee 2000 be used as UPS?

A: No, the BlackBee 2000 can't be used as UPS.

Q4: How to know the working time for my device?

A: Working time=Capacity*DOD*n /device load W
η indicates local inverter efficiency. DOD=95%, η=95%.

E.g.: Calculate the operating times for a 500W device:
2,203.2Wh*95%/95%/500W=4 Hours

Q5: Does the BlackBee 2000 include a built-in MPPT controller?

A: Yes, BlackBee 2000 has 2 built-in MPPT charge controllers.

Q6: How do I know the BlackBee 2000 is recharged?

A: The input indicator will be flashing when the BlackBee 2000 is being recharged or you can check if the LCD screen shows the input watts.

Q7: Why it takes so long to recharge the power station from 90% to 100%?

A: When the power station is charged at low power, the charging power is the largest. With the increase of the power, the internal battery pack voltage of the energy storage gradually increases to the charging limit voltage and then enters the trickle charging stage with a lower charging rate, which can protect the battery from high current impact to damage the internal structure, so the charging speed will slow down.

VI TROUBLESHOOTING

1. PROBLEM WITH INPUT(AC)

- * Make sure the ORIGINAL AC power cable is connected firmly and correctly.
- * Check if the charging indicator is ON.
- * Check if the LCD shows INPUT WATTS.

2. PROBLEM WITH SOLAR CHARGING

- * Make sure the cable is connected firmly and correctly.
- * Remove the dust or dirt on the solar panel with a soft cloth.
- * Make sure there is NO shadow cast on the panel.
- * Test it under midday STRONG sunlight.
- * Try to unplug and plug several times.

Note:

Test if the power station can be recharged via the AC Power normally, if yes, please check if something is wrong with the solar panel.

3. PROBLEM WITH OUTPUT(AC/DC/USB/LCD SCREEN)

- * Press and hold the Master Power Switch(A) for 3 seconds to turn off, and turn it on after about 30 seconds.
- * Recharge the power station to 100% and test it again.

VII FAQ

Q1: What devices can BlackBee 2000 power?

A: Please note that the total output of BlackBee 2000 is 2040W (AC 1600W and DC+USB 440W), which means it can power any AC devices under 1600W.

Q8: Can I find any video about recharging the BlackBee 2000?

A: Please kindly check the video in the following instructions:
1. Go to www.alphaess-pps.com
2. Click the "Support", and then choose "FAQs"
3. Check "Product Video"

Q9: Is the voltage of the output ports regulated?

A: Yes, the voltage of the output ports in AlphaESS power stations is regulated. The voltage won't change when the battery power decreases.

Q10: Can the battery inside be replaceable?

A: No, the batteries inside of AlphaESS power station are not replaceable.

More questions, please kindly find the answer in the following way:
1. Go to www.alphaess-pps.com
2. Click the "Support", and then choose "FAQs"

VIII WARRANTY

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.

AFTER-SALES SERVICE

AlphaESS will repair or replace (at AlphaESS' option) any AlphaESS 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, AlphaESS, at its option, will either (1) replace the product, or (2) exchange the product with a product that is of equal value.

NOT APPLICABLE CONDITIONS

AlphaESS's warranty does not apply to:
1) Any product that has been misused, abused, modified, accidentally damaged or used for anything other than normal consumer use as authorized in AlphaESS's current product literature;
2) Disassembly and repair by anyone other than professional service personnel of AlphaESS;
3) Damage caused by force majeure (such as lightning, fire, earthquake, flood and other natural disasters).

IX PHYSICS TECHNICAL TERM REFERENCE

Voltage(U)	Volt(V)
Current(I)	Ampere(A)
Power(P)	Watt(W)= Voltage*Current(P=UI)
Capacity	Ampere hour(Ah) / Milliampere hour(mAh) 1Ah= 1000mAh Rated energy(Wh)= Capacity(Ah)*Voltage(V) DC output: size/direction does not change with time AC output: current whose size and direction change periodically

X WARRANTY CARD

PLEASE SEND BACK INFORMATION REQUIRED BELOW, WHICH WILL BE HELPFUL FOR US TO HAVE A FAST SOLUTION FOR YOUR ISSUE.
CUSTOMER SUPPORT: service.pps@alpha-ess.com

WARRANTY	
CONTACT INFO	
Buyer name	Email address
ORDER DETAILS	
Order ID	
Serial number	
Issue details	
Upload proof of purchase & photos of the device itself with AlphaESS logo showing.	