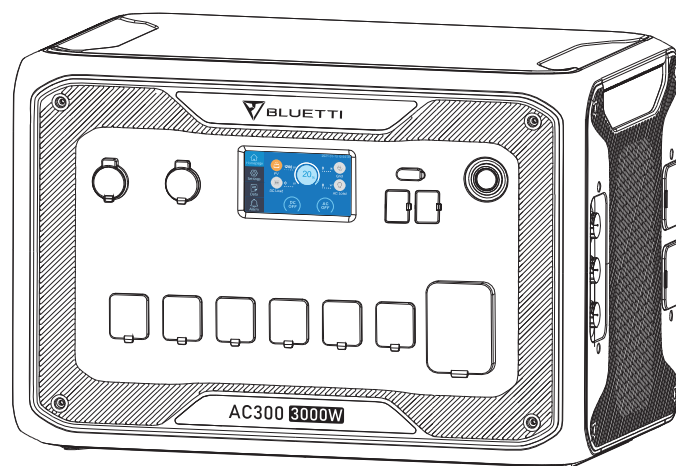




AC300 PORTABLE POWER STATION

Please read this manual before use and follow its guidance. Keep this manual for future reference.



User Manual

Please read this manual before use and follow its guidance. Keep this manual for future reference.

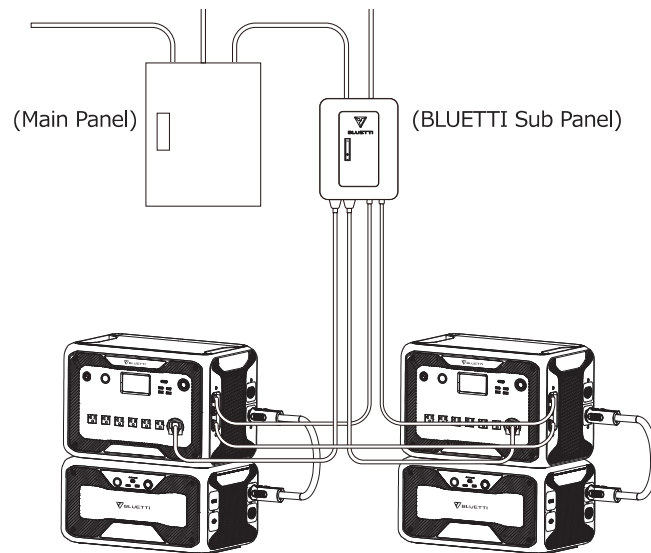
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01. AC300 INTRODUCTION

1.1. Introduction

- The AC300 uses a dual-core controller (ARM controller + DSP controller) which combines digital and analog signals perfectly to manage and control the MPPT module, the AC Inverter module which uses a bidirectional topology supporting AC reverse fast charging, and the DC-to-DC module. The AC300 does not have a built-in battery pack, requires at least one B300 connected, and supports up to four B300 battery packs connected.
- This product integrates a solar charge controller, AC charge controller, AC inverter, lithium battery and battery management system into one. It converts clean and environmentally friendly solar energy and grid electricity into clean electricity and sends it to all of your connected loads.



(AC300 grid-tie home power back-up system)

1.2. Abbreviation

- BMS: Battery Management System
- MPPT: Maximum Power Point Tracking
- UPS: Uninterruptible Power Supply
- AC: Alternating Current
- DC: Direct Current

- PV: Solar Panel(s) Charging (Photovoltaic)
- Grid: Home Power Supplied by Utility
- T500: 500W Charger
- DOD: Depth of Discharge
- ECO Mode: A power saving mode for the AC300+B300. The AC output ports are automatically turned off if the load is less than 30W over a span of 4 hours.

02. GENERAL SAFETY INSTRUCTIONS

Please read this manual before operating.

- A licensed electrician is required to install the grid-tie power system as it involves connecting the wires of critical loads from your main electrical box to the BLUETTI Sub Panel (Optional Purchase).
- DO NOT place the power station near heat sources. It is prohibited to place the equipment in an environment with flammable, explosive gas, or smoke. It is also prohibited to operate the equipment in this environment.
- DO NOT attempt to replace the internal battery or any other component of the equipment by anyone other than authorized personnel. There are no enduser serviceable components.
- DO NOT operate in wet conditions. If the equipment becomes wet, please let the unit dry completely before using.
- Please ensure proper ventilation while in use and do not obstruct fan openings. Inadequate ventilation may cause permanent damage to the equipment.
- DO NOT stack anything on top of the power station while in storage or while in use.
- DO NOT move the unit while operating as vibrations and sudden impacts may lead to poor connections to the hardware inside.
- Warning: DO NOT insert foreign objects into any ports of the AC300+B300 (both AC & DC & ventilation holes). The power station generates the same potentially lethal AC power as a household wall outlet. Please use carefully and keep children away from it.
- If necessary, only dry powder fire extinguisher is suitable for the product.
- For safety purposes, please use only the original charger and cables designed for the equipment. We are not liable for damage caused by third-party equipment and may render your warranty, invalid.

2.1. Installation (for grid-tie system)

- Before touching any conductor surface or terminal, measure the voltage of the contact point to confirm that there is no danger of electric shock.
- After the equipment is installed, empty packaging materials such as cartons, foam, plastic, cable ties, etc. should be removed from the equipment area.
- Except for those who operate the equipment, please keep others away from operating AC300.
- The handling of any tools being used needs to be insulated and protected from shock, or use insulated tools.
- All wiring holes need to be sealed. Use fire-resistant mud to seal the wiring holes that have been routed and use the cover of the cabinet.
- It is strictly forbidden to alter, damage or obscure the logo and nameplate on the equipment.
- When installing the device, please use the appropriate tools to tighten any screws.
- Live operation is strictly prohibited during installation.
- Paint scratches during equipment transportation and installation must be repaired in a timely manner. Long-term scratches are strictly prohibited and may cause damage.
- Before operation, the equipment should be secured onto a floor or other stable objects, such as walls or possibly mounting brackets if needed.
- It is prohibited to clean any electrical components inside and outside the cabinet with water.
- Do not change or modify the structure, installation sequence, etc. of the equipment without prior authorization.

2.1.1. Personal Safety

- During the operation of the equipment, if a malfunction that may cause personal injury or equipment damage is found, it should be powered off immediately.
- DO NOT power on the device if the device has not been properly installed or confirmed by all relevant personnel.

2.1.2. Personnel Requirements

- The personnel responsible for the installation and maintenance of the equipment must first undergo rigorous training to understand various safety

precautions and grasp the correct method of operation.

- Trained personnel: personnel who have undergone corresponding technical training and have the necessary experience to be aware of the danger that may be brought to him during the operation, and can take measures to reduce the danger to himself or other personnel to at the lowest limit.
- The replacement of equipment or parts (including software) must be done by professionals or authorized personnel.

2.1.3. Anti-static requirements

When installing the sub-panel with your main panel, you must wear anti-static gloves or an anti-static wrist strap before touching the device. The other end of the anti-static wrist strap should be properly grounded. Do not touch any bare components directly with your hands.

2.1.4. Drilling

The following safety precautions are to be considered when drilling holes on the wall or into the ground:

- It is strictly forbidden to drill holes into the equipment. Drilling will alter and damage the electromagnetic shielding performance of the equipment, internal components, and cables. The risk of metal shavings entering the device can cause short circuits on the circuit board.
- Wear goggles and protective gloves when drilling holes.
- The equipment should be shielded and protected during the drilling process to prevent debris from falling into the equipment. After drilling, any debris which may have landed on the equipment should be removed and cleaned on time.

2.2. Installation environment requirements



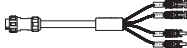
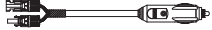



- When the equipment is running, please do not block the vents or the heat dissipation system in order to prevent high temperatures and/or fires.
- The equipment should be installed in an area away from liquids. It is forbidden to install it near or below water pipes, air outlets and other locations that are prone to water condensation.
- It is forbidden to install the unit underneath pipes, windows or other similar areas that are prone to water leaks in order to prevent liquids from entering into the equipment. Failure to do so may result in a short circuit.

Just Power On








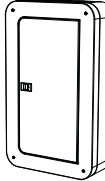
- If liquid is found inside the device, user must turn off the power immediately.
- The equipment room must be properly insulated and the walls and floors must be damp-proof.

03. IN THE BOX

Standard Accessories

No.	Category	Quantity
1	 AC300 Power Station	1
2	 AC Charging Cable (15A Charge the AC300 with B300)	1
3	 Multifunctional DC Charging Cable For solar, car, lead-acid battery charging.	1
4	 Car Charging Cable Charging AC300+B300 with cable No3.	1
5	 User Manual	1
6	 Warranty Card	1
7	 Certificate of QC PASS	1

Additional Purchase Accessories
Sold on BLUETTIPOWER.COM

No.	Category	
8	 30A Charging Cable Full speed charging from L14-30 receptacle.	
9	 Lead-acid Battery Charging Cable Charging AC300+B300 via Lead-acid battery.	
10	 PV Drop Down Module (D300S) Connect to rigid panels.	
11	 12V/30A XT60 to Aviation Plug	For 30A DC Output
12	 XT60 to SPC45 To support DC power supply for RV.	
13	 100W USB-C to USB-C To charge electronics with USB-C port.	
14	 AC Charging Cable for Split Phase Charging two AC300 connected in split phase mode via wall outlet.	
14	 Sub Panel Integrate the power station to your home circuit as backup UPS.	

04. APP USER GUIDE

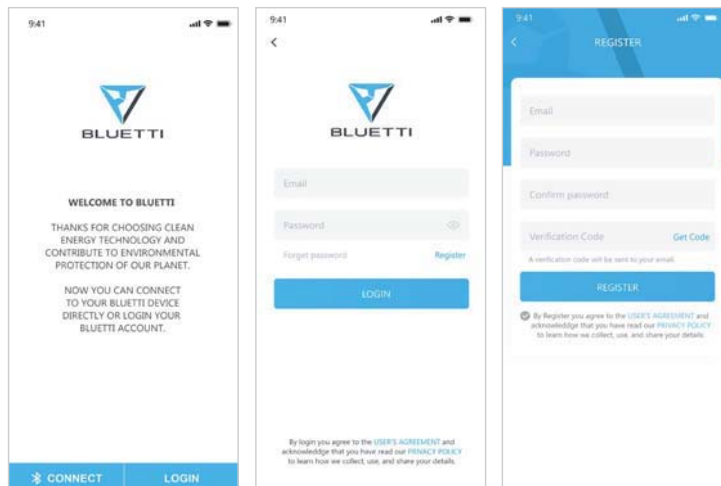
Please make sure the Bluetooth & Wi-Fi State is “ON” (set on touchscreen of AC300) before connecting AC300+B300 to BLUETTI App.



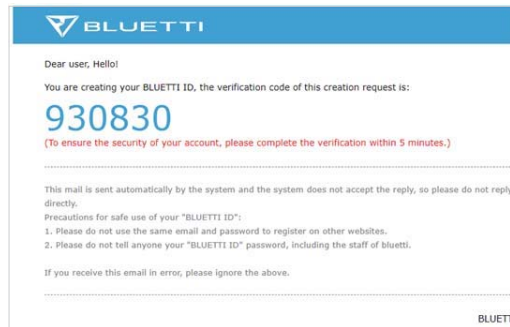
(Main Interface - Settings - Next - Next - Next)

Step 1:

- Search for “BLUETTI” in the App Store (for iOS devices) or Google Play (for Android devices) to download the BLUETTI App to remotely control your AC300+B300. The AC300+B300 system can be controlled via either Bluetooth or Wi-Fi. In order to access the AC300+B300, please launch the BLUETTI App once downloaded and installed, and tap the “LOGIN” icon to register your BLUETTI account. Fill with your related information to continue.

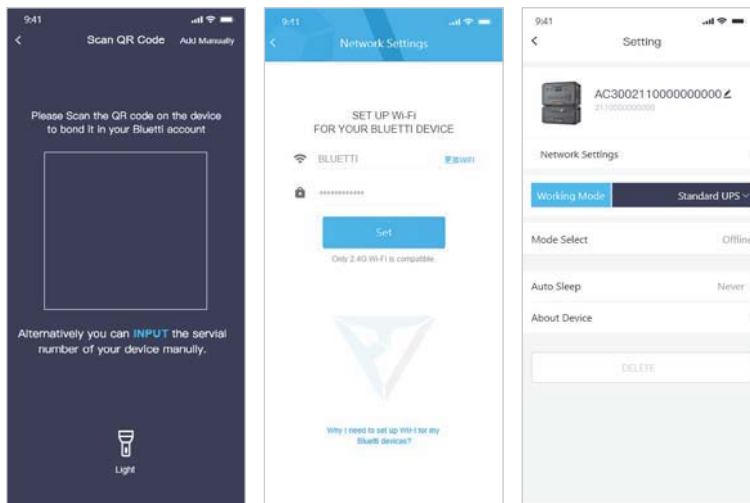


- Check your email account you used in the BLUETTI App for the verification code sent from BLUETTI server and fill in the activation code located within the email to activate your BLUETTI account.



Step 2 :

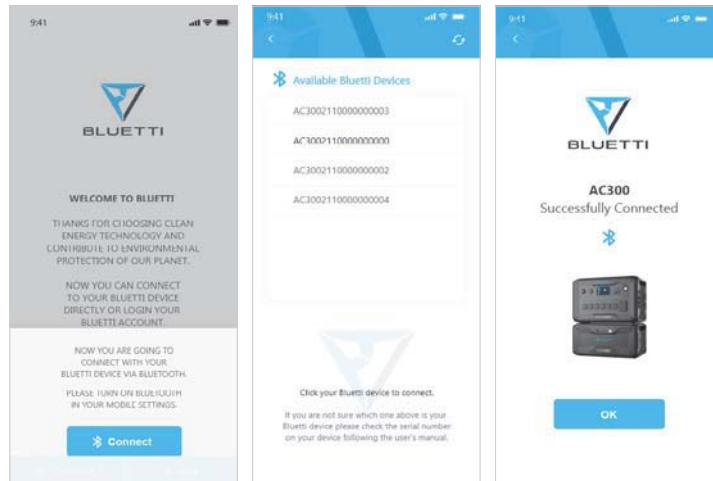
- Connect AC300 with B300. Scan the unique QR code on AC300 to add the unit on the available device list on the App, and fill it with the password of your 2.4GWi-Fi network to activate the communication function of AC300 for data syncing.



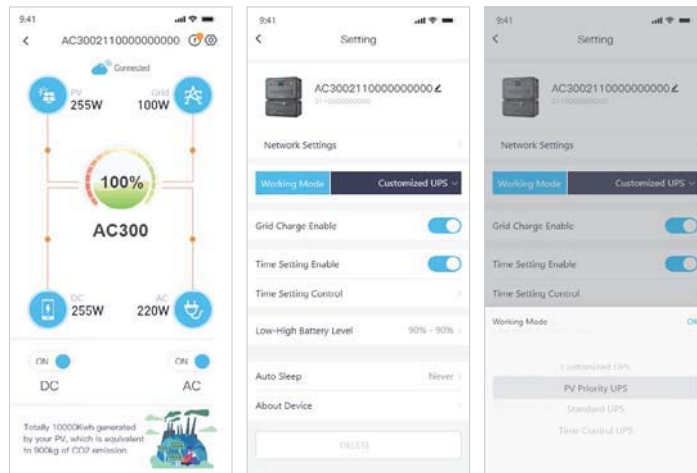
- For Bluetooth Connecting, tap "CONNECT" at the homepage to connect AC300+B300 with your phone via Bluetooth, select the SN number of your devices.

Just Power On

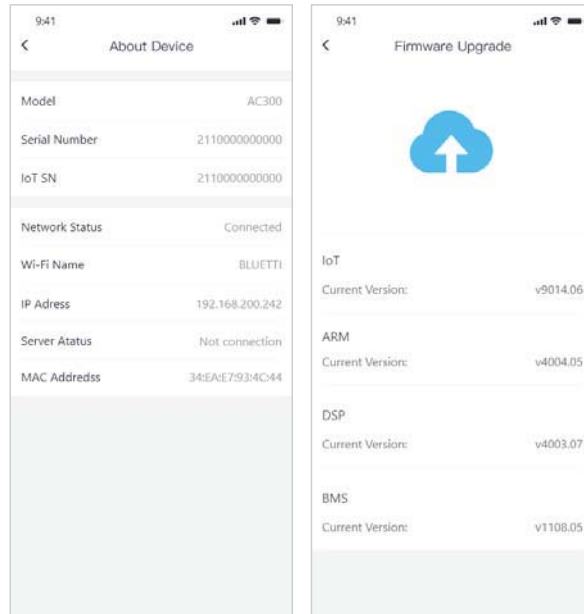
Please tap "settings-product info" on AC300 to view the SN number of your unit.



● The basic information can be viewed after the unit is connected with App successfully. Tap "gear icon" to customize the current working mode and parameters of your AC300 under "Settings".



● The BLUETTI App supports a "Firmware Update" function which allows access to the latest software upgrades for continued features, improvements and fixes.



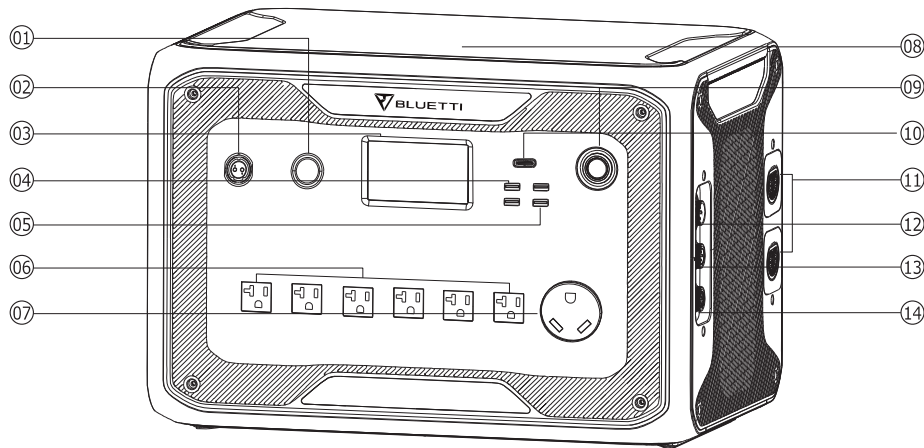
Note: Please keep your phone 5m/16.4ft within the AC300+B300 for a better connection during update.

User cannot turn on AC300 via BLUETTI App.

Also, if BLUETTI APP fails to connect to the Internet. Tap "Settings" on the mainpage of your phone and scroll down until the BLUETTI App shows up(IOS). Tap "Settings" on mainpage of your phone, tap "Application Management" and select BLUETTI(Android).

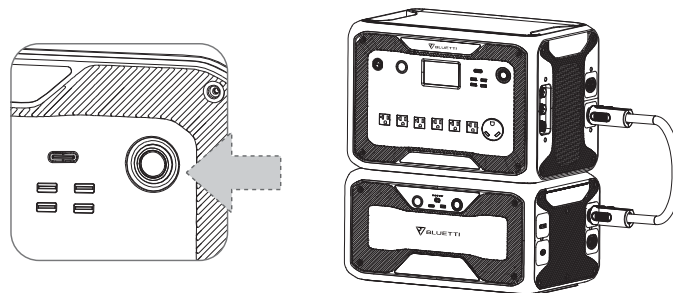
Tap the BLUETTI icon and verify that "Wireless and Data" permissions are enabled.

05. FEATURES OF AC300



- | | |
|-----------------------------------|------------------------------------|
| 01 24V/10A Cigarette Lighter Port | 08 Wireless Charging Pad |
| 02 12V/30A Port | 09 Power Button |
| 03 LCD Screen | 10 USB-C(PD3.0 protocol supported) |
| 04 USB-A (fast charging) | 11 Battery connection port |
| 05 USB-A | 12 AC Input Port |
| 06 AC Output Port(20A MAX) | 13 DC1/DC2 Input Port |
| 07 AC Output Port(30A MAX) | 14 Communication Interface |

06. STARTUP & POWER OFF



- Connect AC300 with B300. Please follow the steps on B300 User Manual.
- Power On AC300: Long press the power button for 1 second. The power

button indicator will illuminate.

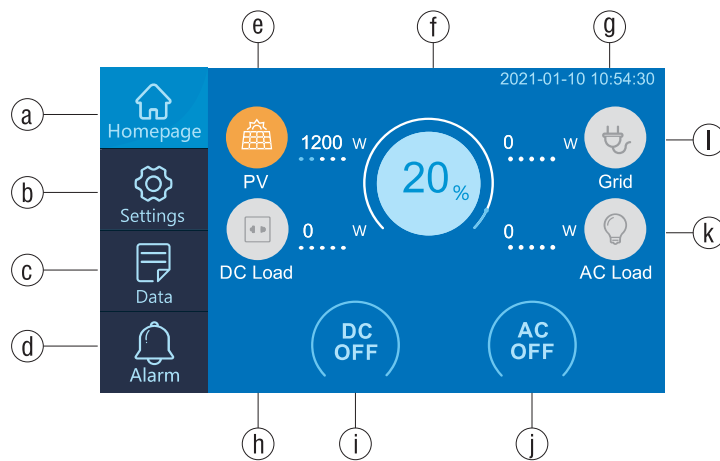
- Power Off AC300: Long press the power button. The power button indicator light will turn off.
- DC power switch and AC power switch are accessible via the Touchscreen LCD. Press the "DC ON/OFF" button and/or "AC ON/OFF" button on the screen to turn ON/OFF the DC/AC output.
- AC300+B300 will turn on automatically from Power Off status when either grid charging and/or PV charging is applied to the unit.
- User can also power ON/OFF of the system by turning ON/OFF B300.
- AC300+B300 will turn off in 4 hours under:
 - a: No Input and Output
 - b: AC and DC switch at OFF state

07. USER INTERFACE

7.1. Main Interface

Tip:

The LCD resistive touchscreen, recommended to press lightly with the edge of your fingernail until it "beeps" when it registers a press. **(NOTE: Touchscreen sounds can be disabled in the Settings menu).**



Just Power On

- | | |
|----------------------------|-----------------------------|
| a. Homepage | g. Date/Time |
| b. Settings | h. DC load Information |
| c. Data | i . DC ON/OFF |
| d. Alarm | j . AC ON/OFF |
| e. PV Charging Information | k. AC load Information |
| f . BMS Information | l . AC Charging Information |

7.2. Settings

- You can customize the working mode of AC300+B300 and tweak the parameters such as language, voltage, frequency, current (UPS In-Grid Mode), working type, date/time, etc.
- Click the Settings Button in the homepage to enter the setting interface.

7.2.1. AC Output Voltage & Frequency

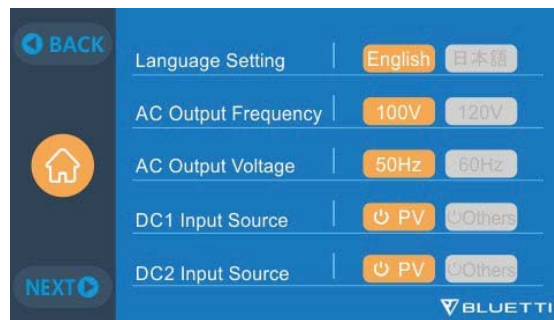
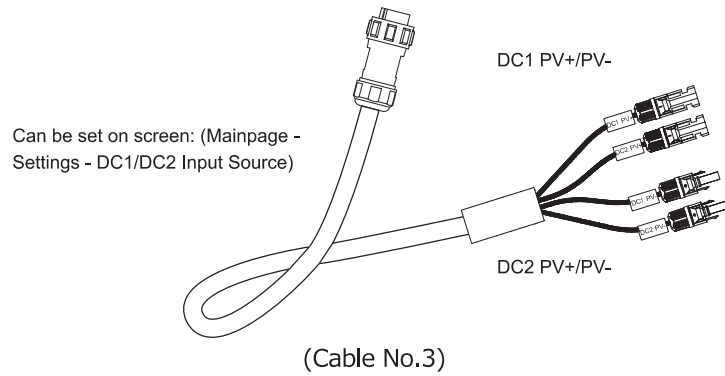
- **NOTE: Please check the output voltage, frequency, and other parameters BEFORE using for the first time. The AC300 100-120V AC version cannot be set to 220-240V AC output. Users can tap the screen to set the parameters as needed. Output frequency and voltage can only be tweaked when the AC is OFF (tap the AC icon at homepage to turn off AC output).**
- The list of standard output voltage and frequency in 5 regions or countries.

- | | |
|-----------------------------|--------------------------|
| ●JP Output: 100V/50 or 60Hz | ●AU Output: 240V/50Hz |
| ●US Output: 120V/60Hz | ●EU/UK Output: 230V/50Hz |

7.2.2. DC Input Source

DC Input Source: AC300 integrates dual MPPT and separates the DC input source into DC1 and DC2 in parallel. DC1 indicates the first group of DC input source as the labels written on MC4 plug of PV charging cables: DC1 PV+ and DC1 PV-, DC2 PV+ and DC2 PV-.

DC1/DC2 consist of both positive pole and negative pole of the MC4 plugs. Both DC1 and DC2 input source can be set on touchscreen: (Mainpage - Settings - DC1/DC2 Input Source).

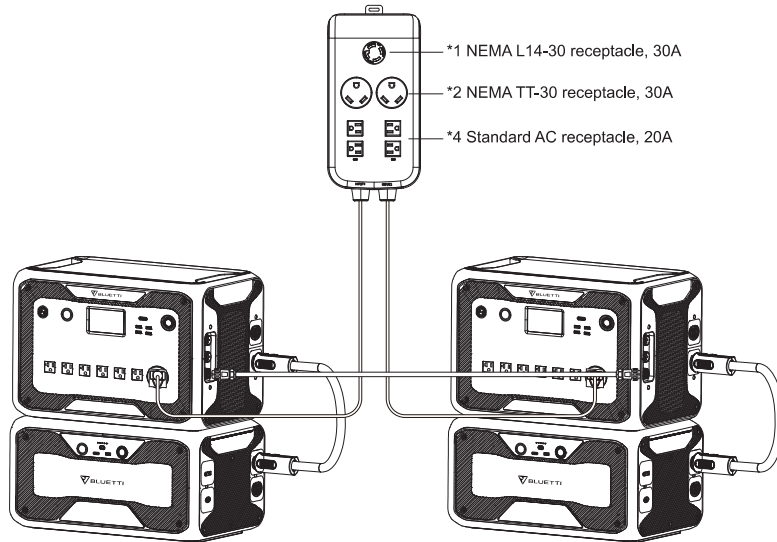


7.2.3 Language Setting & ECO Mode

- Press "English" or "Japanese" icon to set as the system language display of your AC300.
- ECO: The power saving mode of the unit to turn off the AC output to conserve energy if the AC load is less than 30W over 4 hours.



7.2.4. Machine Type (for split phase setting, exclusive for 100-120V Version)



(Split Phase for *2 AC300 + B300)

7.2.5. Working Mode

Tip: The AC300+B300 defaults to Standard UPS Mode.

There are 4 working modes you can select in settings:

Standard UPS Mode: Default working mode.

Time Control UPS Mode: Suitable for areas with peak and off-peak time-of use rates in order to save money.

PV Priority UPS Mode: Recommended for areas in stable power supply.

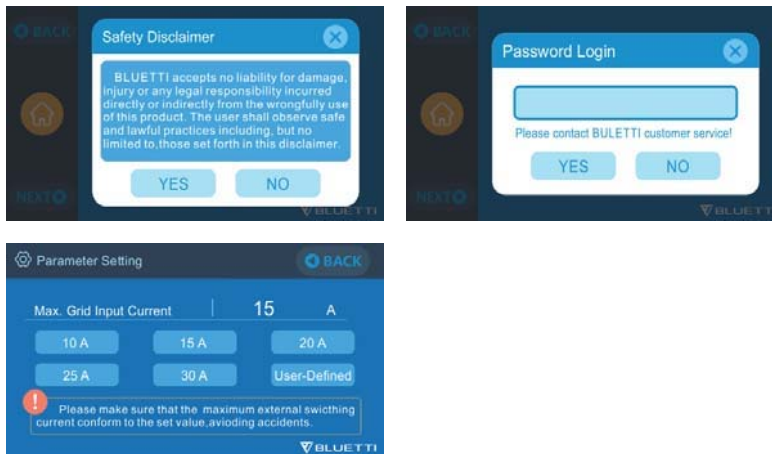
Customized UPS Mode: Customized the parameters for a better user experience. For more details on each UPS Mode setting, please read Chapter 10. UPS.

7.2.6. Max. Grid Input Current

- Please check the specification of your grid, sockets, connections, wires, etc. to determine the maximum allowable current that can be drawn by the AC300. BLUETTI is not liable for any damages, injuries, or any other legal responsibility incurred directly or indirectly from changes made to this setting.

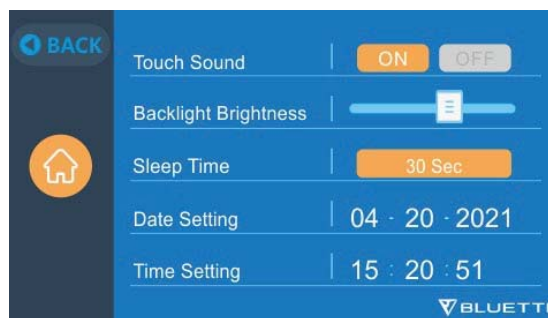
- Max. Grid Input Current: limit the Max. input current of the **tied grid**, when the current exceeds the preset value, AC300 will take charge to be the power source of the circuit.

Note: Only take effect when AC300 has been connected into grid. The value presets at 15A. Email the render for safety password to unlock the Max. grid input current limit.



7.2.7. Date and time & Touch Sound & Backlight Brightness

- Tap each respective date and time setting in order to set the date and time as applicable to your local time zone.
- Tap to Enable/Disable touch sound.
- You may change the Backlight Brightness of the LCD by using the slider on the screen.



7.2.8. Bluetooth & Wi-Fi Connection

The Bluetooth and Wi-Fi connection can be turned ON or OFF by tapping the ON and OFF icon for either function.

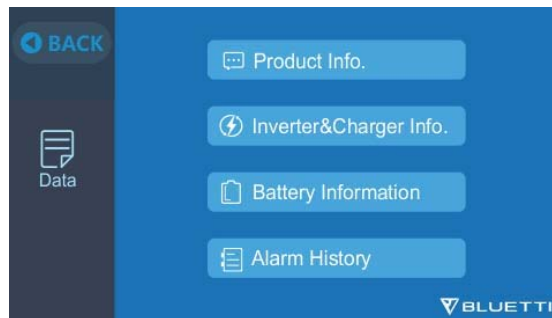
User cannot connect AC300+B300 to BLUETTI App when both of the Wi-Fi and Bluetooth function is disabled.

Just Power On



7.3. Data

In the Data section, you can check the Battery Status of B300, Product Info, Inverter & Charger Info, and Alarm/Fault History.



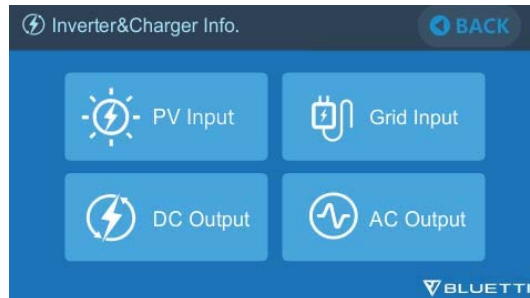
7.3.1. Product Info

- When you select the “Product Info” button, you can view the product model, serial number (SN), control software version, monitoring software version, BMS monitoring software version and display software version.
- The Serial Number (SN) can also be used to pair to BLUETTI APP manually.



7.3.2. Inverter & Charger Info

By tapping the “Inverter & Charger Info” button, user can view the PV charging, adapter charging, DC output and AC output working status. This section can also be accessed directly from the shortcut icon on the homepage.



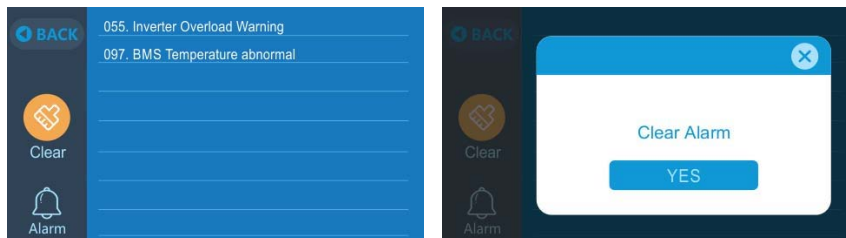
7.3.3. Battery Information

By tapping the “Battery Information” button, user can view the live information of the status of the B300 battery pack. This section can also be accessed directly from the shortcut icon on the homepage.



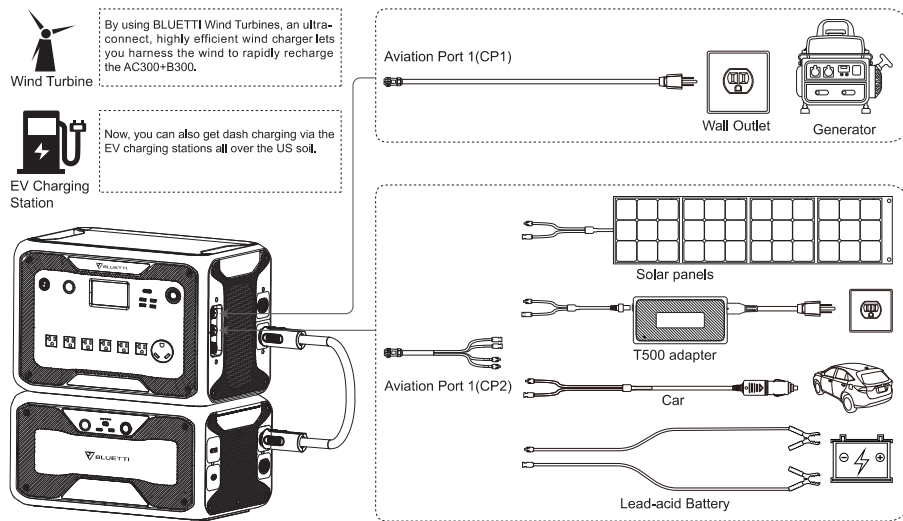
7.3.4. Alarm History

Tap the “Alarm History” button, user can view all the alarm information generated by the machine. User can turn to the **Chapter 14 Troubleshooting** to check the corresponding solutions.



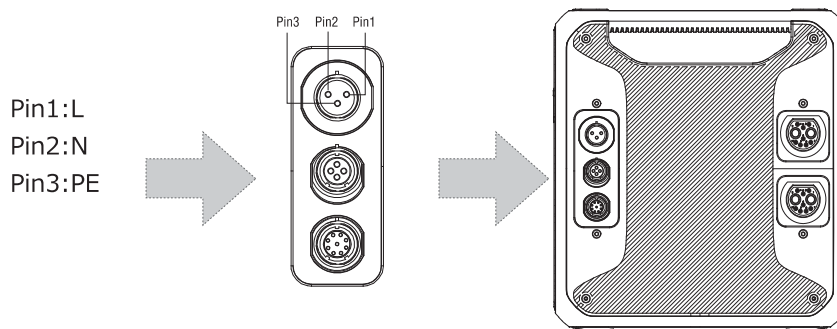
08. HOW TO RECHARGE AC300+B300 (INPUT)

- The AC300 includes two charging ports which can be recharged in different methods . They will be covered in three different sections according to which port(s) are being connected.
- The two ports are named as Aviation Charging Port 1 [CP1] and Aviation Charging Port 2 [CP2].



- AC300+B300 supports AC, generator, solar, additional adapter, car, lead-acid battery, EV, wind turbine and DUAL charging through Aviation Port 1 [CP1] and Aviation Port 2 [CP2].

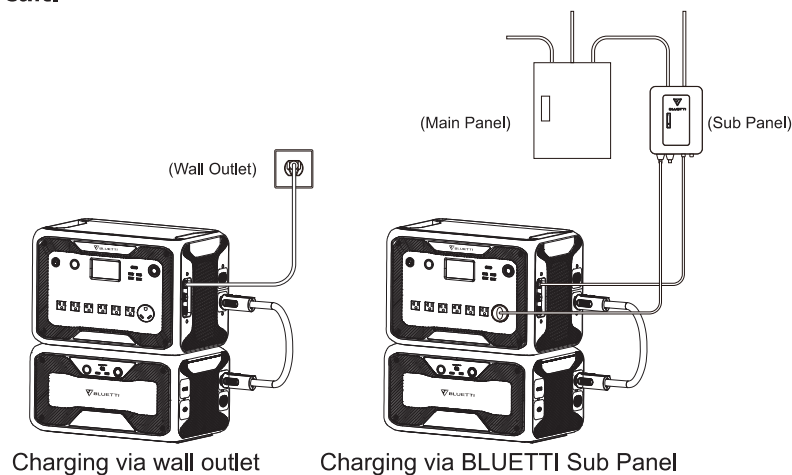
8.1. CP1 (1st Charging Port)



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

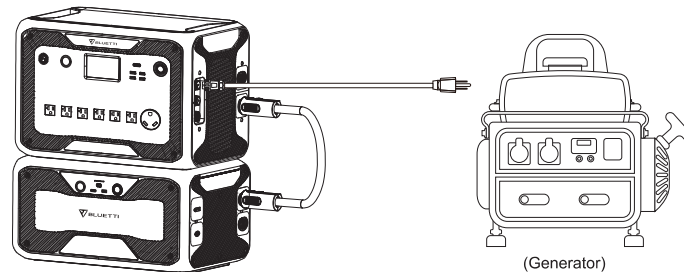
Connect the AC300+B300 from CP1 via the AC charging cable to the wall outlet @1500W/100Vac, @1800W/120Vac Max. The charging process will automatically stop when it reaches 100% capacity. Additionally, you can choose to access the BLUETTI Sub Panel or the L14-30 receptacle, the maximum charging power allowed will be up to 3000W.

DO NOT charge the JP/US version(100-120V) AC300+B300 through 220-240V circuit.



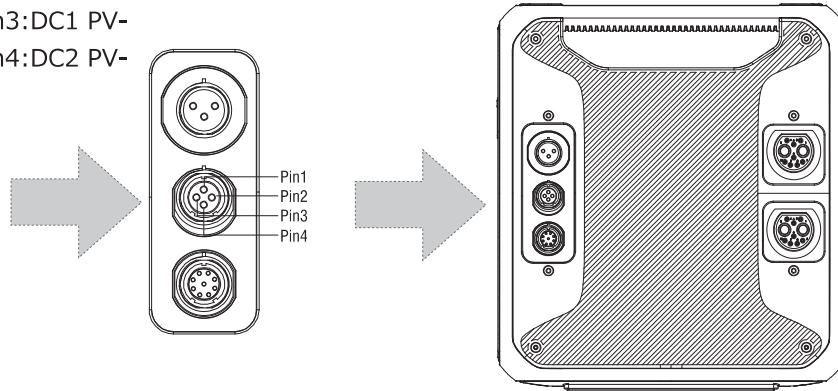
8.1.2. Charging Method 2: From Generator (gasoline, propane, or diesel)

- Connect the AC300 from CP1 via the generator charging cable (sold separately) to the AC output of the generator. The charging process will automatically stop when it reaches 100%.
- The required output power of your generator has to exceed the Max. input power of the AC input port of the AC300. Also a generator with a pure sine wave output is recommended (e.g. Inverted-based Generators) Voltage limit: 85-110VAC/JP(100VAC),102-132VAC/US(120VAC), 207-253VAC/EU/UK/AU. Frequency limit: 47Hz-53Hz(50Hz),57Hz-63Hz(60Hz).



8.2. CP2 (2nd Charging Port)

- Pin1:DC1 PV+
- Pin2:DC2 PV+
- Pin3:DC1 PV-
- Pin4:DC2 PV-

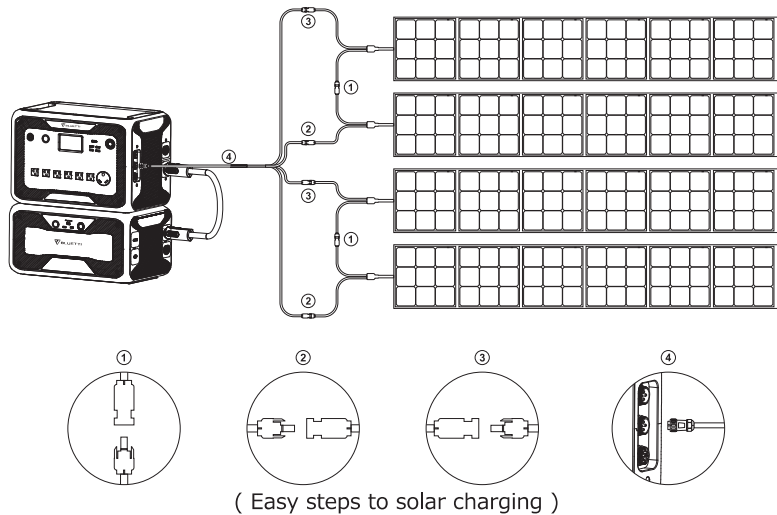


8.2.1. Charging Method 3: Solar Panels (via 4pin aviation-MC4 cable)

- For regular solar panels:

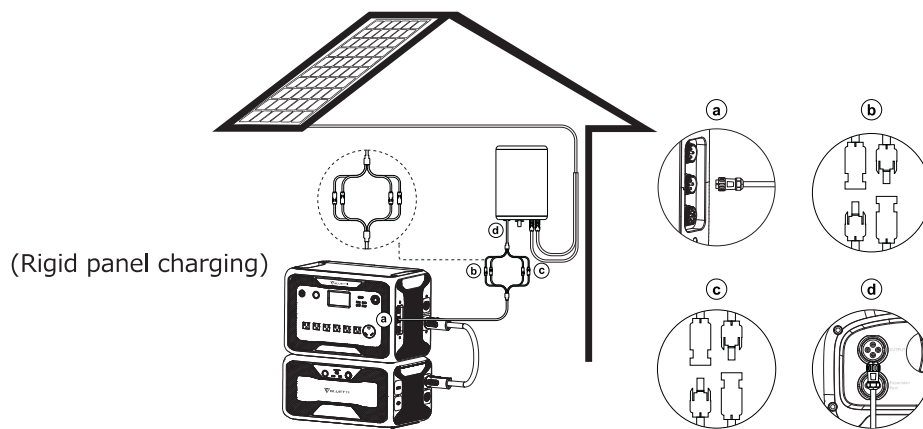
The AC300+B300 supports two PV inputs. Each individual input supports up to 12A and the charging voltage should be between 12-150V. The AC300+B300 can achieve a combined maximum of 2400W of total solar input.

- a. User can connect solar panels in series(Figure 1).
- b. Connect the MC4 port of solar panels to the MC4-Aviation cable (Figure2/3).
- c. Plug the Aviation cable to the middle input port on AC300.(Figure 4)



- If you choose roof/rigid panels to be the solar power source to charge your AC300+B300, user can easily connect your rigid panels with the MC4-to-Aviation cable to your AC300+B300. The optional PV Module (additional accessory) is required to step down the voltage if the open circuit voltage produced by your roof panels exceeds the limit of AC300 can handle: 12-150VDC, 12A*2.

Note: This PV module doesn't work with solar panels that have built-in microinverters, and open circuit voltage over 550V.

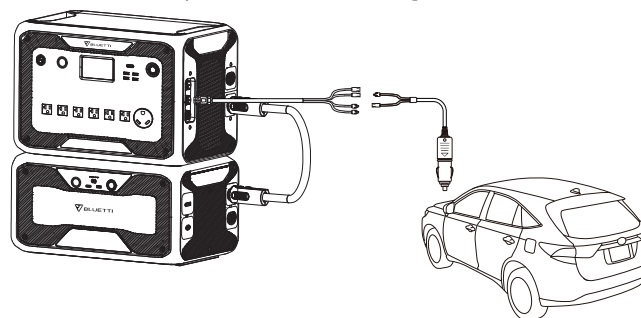


- a. DC Output Cable to AC300
- b. DC1 poles to PV1 poles

- c. DC2 poles to PV2 poles
- d. DC Output Cable to D300S

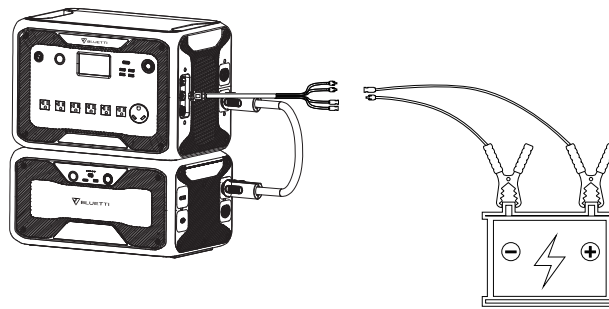
8.2.2. Charging Method 4 :Car Charging

- Press the power button and connect it to the cigarette lighter port through the car charging cable.
- Enter the setting interface as shown in through the display screen to set DC1/2 input source to others; The product can be charged with 8.2A maximum current.

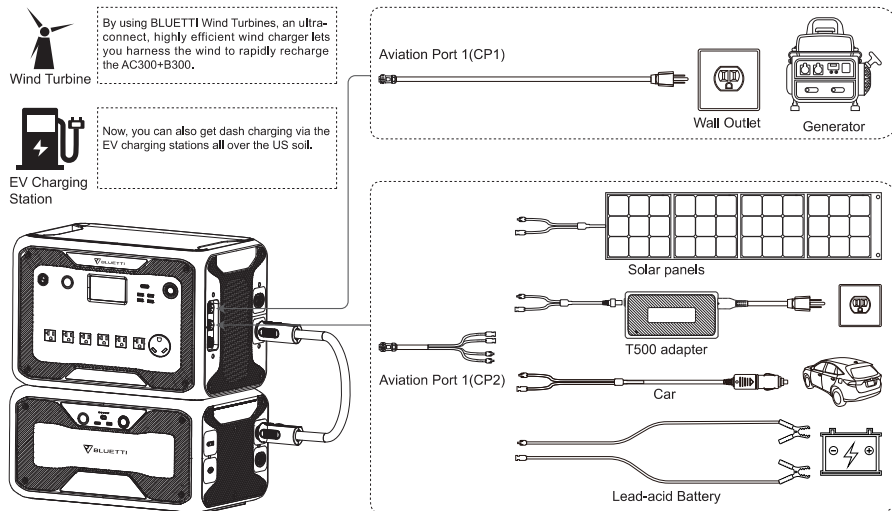


8.2.3. Charging Method 5 :Charging via Lead-acid battery

- Connect to the positive and negative poles of the battery through the provided solar charging cable(pay attention to distinguish the positive and negative poles of the battery, the red clamp indicates the positive pole, and the black one indicates the negative pole) .
- Tap “setting” at homepage to set DC1/2 input source to “Others” to charge from lead-acid battery.



8.3. Dual Charging



Charging Method 5: Supports charging the AC300+B300 with CP1 and CP2 at same time. You can use any charging methods listed previously, simultaneous, to maximize charging power input. They are listed here again for your convenience. Select one method for CP1 and one method for CP2 for simultaneous charging.

CP1 Charging Port Select:

Method 1: GEN charging cable

Method 2: AC charging cable

CP2 Charging Port Select:

DC Input1:

Method 3: Solar panels (DC Input Source 1, Select PV on the touchscreen)

Method 4: T500 charging adapter (DC Input Source 1, Select Others on the touchscreen)

Method 5: 12V Car Charger/Storage battery (DC Input Source 1, Select Others on the touchscreen)

Method 6: 24V Car Charger/Storage battery (DC Input Source 1, Select Others on the touchscreen)



DC Input2:

Method 7: Solar panels (DC Input Source 2, Select PV on the touchscreen)

Method 8: T500 charging adapter (DC Input Source 2, Select Others on the touchscreen)

Method 9: 12V Car Charger/Storage battery (DC Input Source 2, Select Others on the touchscreen)

Method 10: 24V Car Charger/Storage battery (DC Input Source 2, Select Others on the touchscreen)

