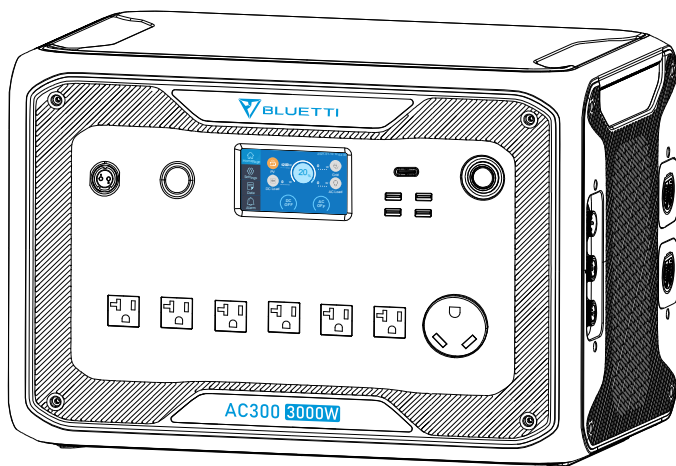


BLUETTI

AC300 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.

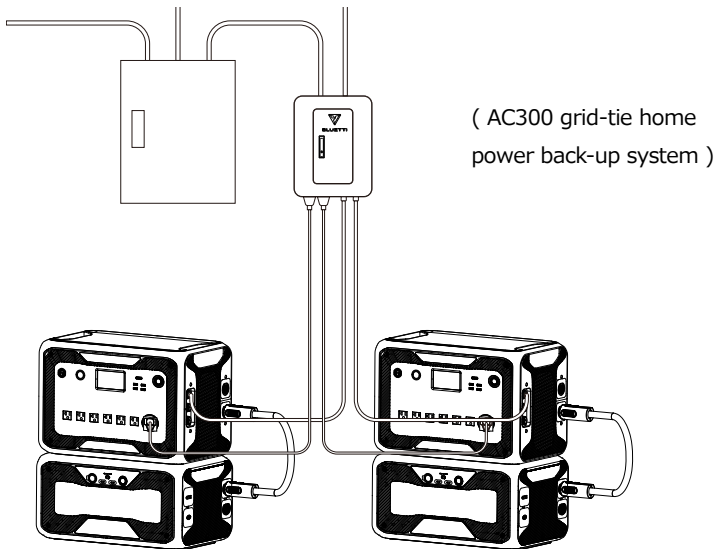
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01. AC300 Introduction

1.1. Introduction

- The AC300 system 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 (Bidirectional topology, supporting AC reverse fast charging), the DC-to-DC module. AC300 does not have a built-in battery pack. You must match it with the B300 portable power station. AC300 supports up to 4 B300 battery packs connected in parallel.
- 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 in your home.



1.2. Abbreviation

- BMS: Battery management system
- MPPT: Max. power point tracking
- UPS: Uninterruptible power supply

- AC: Alternating current
- DC: Direct current
- PV: Solar panels charging
- Grid: Home electricity circuit
- T500: 500W additional charger
- DOD: Depth of discharge
- ECO Mode: Power saving function for power station, turn off the AC output port automatically if the power of AC output of the load is less than 30W in 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 involves connecting the wires of critical equipment 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 user 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 either in storage or while in use. DO NOT move the unit while operating as vibrations and impacts may lead to poor connectivity to hardware inside.
- Warning:
 - DO NOT insert foreign objects into any ports of AC300 (both AC & DC & ventilation holes). The power station generates the same potentially lethal AC power as 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 those who operate the equipment, please keep others away from the equipment.
- 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 terminated immediately.
- Please do not power on the device if the device has not been installed or confirmed by relevant experts.

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 and all debris which may have landed on the equipment should be removed and cleaned in a timely manner.

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 below air-conditioning vents, vents, outlet windows in the computer room and other places that are prone to water leaks in order to prevent liquids from entering into the equipment. Equipment failure or a short circuit could occur.
- If liquid is found inside the device, please turn off the power immediately and notify the administrator.
- The equipment room must have good heat insulation, and the walls and floors must be damp-proof. Add a rat-proof baffle at the door of the machine room.

03. What`s in the Box

Standard Accessories

No.	Category	Quantity
1	AC300 Power Station	1
2	AC Charging Cable	1
3	PV Charging Cable	1
4	User Manual	1
5	Warranty Card	1
6	Certificate of QC PASS	1

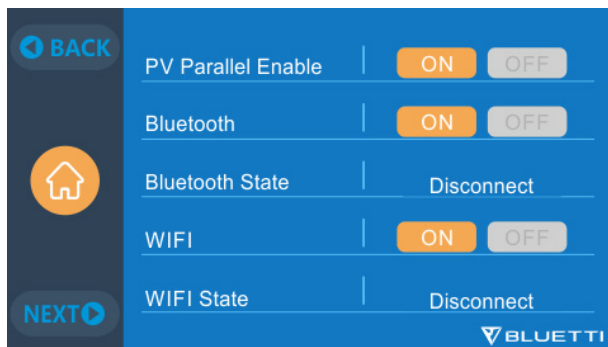
Additional Purchase Accessories

Sold on BLUETTIPOWER.COM

No.	Category
1	Split Phase Fusion Box
2	Output Cable for Split Phase Fusion Box
3	Communication Cable for Split Phase Fusion Box
4	12V/30A RV Cable
5	Generator Charging Cable
6	Sub Panel
7	PV Step Down Module
8	Additional T500 Adapter

04. APP User Guide

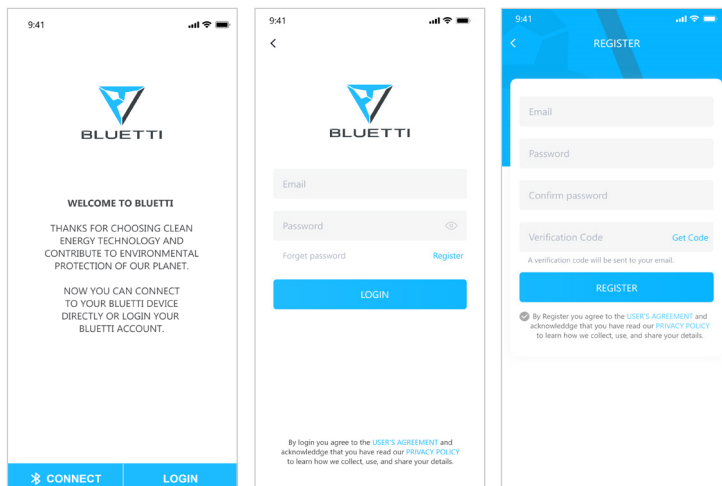
Please make sure the Bluetooth & Wi-Fi State is “ON” before connecting AC300 with BLUETTI App.



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

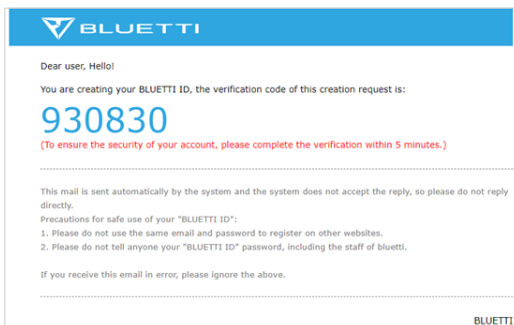
Step 1:

- Please search “BLUETTI” on the App Store (for IOS devices) or Google Play (for Android devices) to download the BLUETTI App to remotely control your AC300.
- AC300 can be controlled via Bluetooth or Wi-Fi. To activate the remote control, please open the BLUETTI App, and click the “LOGIN” icon to register your BLUETTI account. Fill with your related information to go on.



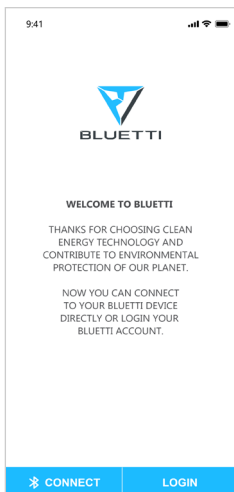
- Check your email account you used in the BLUETTI App for the verification

code sent from BLUETTI and fill in the activation code located within the email to activate your BLUETTI account.

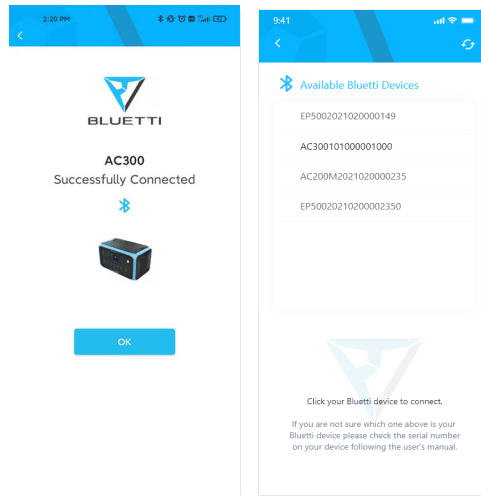


Step 2 :

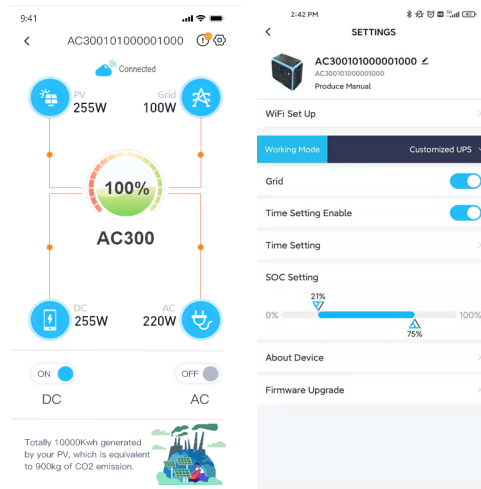
- Scan the unique QR code on AC300 to add the unit on the available device list on the App, and fill it with the password of your Wi-Fi network to activate the communication function of AC300 for data syncing.



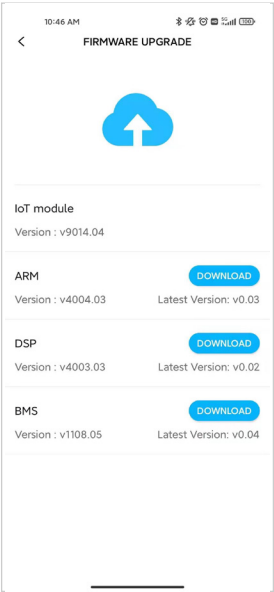
- For Bluetooth Connecting, click "CONNECT" at the homepage to connect AC300 with your phone via Bluetooth, select the SN number of your devices. Please press "settings-product info" on AC300 to view the SN number of your unit.



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

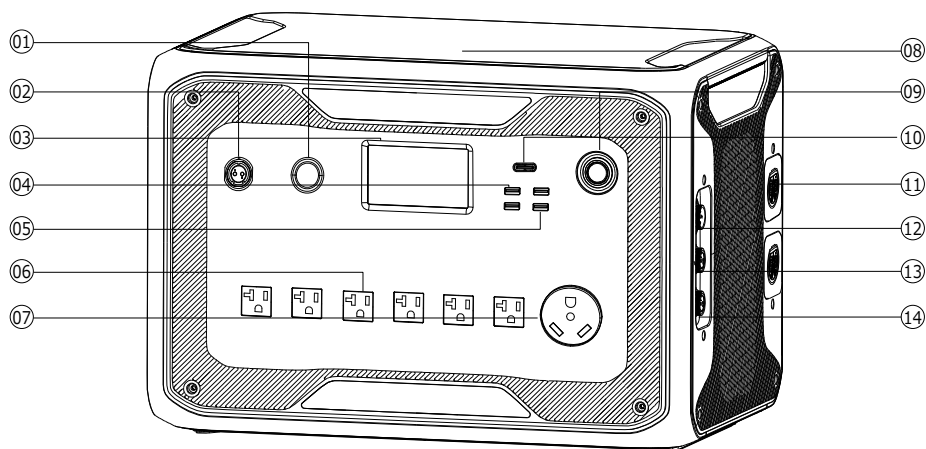


- BLUETTI App supports “Firmware Update” function to access the latest version of firmware for a better user experience.



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

05. Features of AC300



01 12V/10A Cigarette Lighter Port

02 12V/30A Port

03 Touchable Screen

04 USB-A

05 USB-A

06 AC Output Port(20A MAX)

07 AC Output Port(30A MAX)

08 Wireless Charging Pad (QI protocol supported)

09 Power Button

10 USB-C(PD3.0 protocol supported)

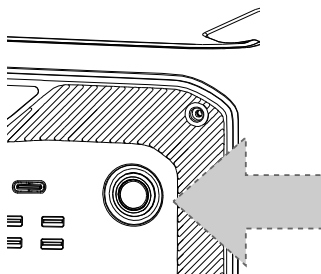
11 Battery connection port

12 AC Input Port

13 PV1/PV2 Input Port

14 Communication Interface

06. Start up & Power off



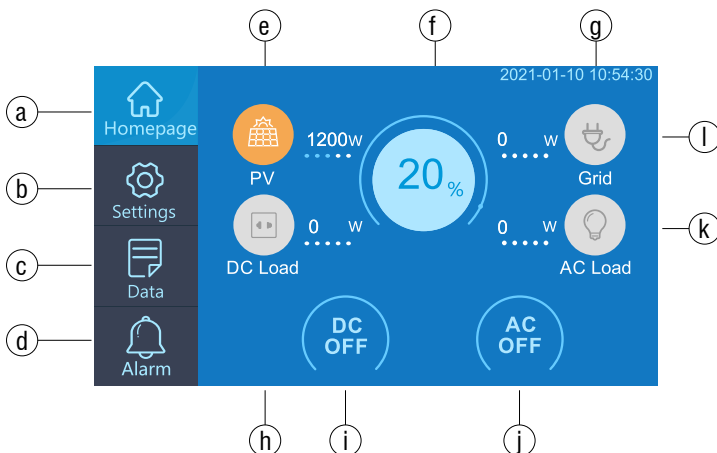
- Turn on the main power switch on the back of AC300.
- Power On AC300: Short press the power button. The power button indicator will illumination.
- Power Off AC300: Long press the power button for 2 seconds. The power button indicator light will turn off.
- DC power switch and AC power switch are accessible 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 will turn on automatically from Power Off status when either grid charging and/or PV charging is applied to the unit.
- Through the power button on B300,you can also control the power on and power off of the system.

07. User Interface

7.1. Main Interface

Tip:

The LCD display is a resistive touchscreen. It is recommended when operating the touchscreen that you press lightly with the edge off your fingernail until it "beeps" when it registers a press. **(NOTE: Touchscreen sounds can be disabled in the Settings menu).**



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

7.2. Settings

- You can customize the working mode of AC300 and tweak the equipment's 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.

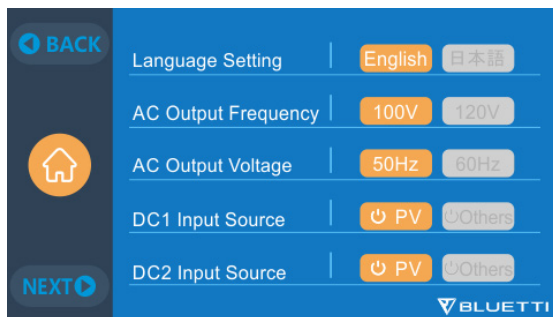
7.2.1. AC Output Voltage & Frequency

- Here are the list of standard output voltage and frequency in 5 regions or countries. You may click on the screen to set the parameters as needed.

- **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 and vice-versa. Output frequency and voltage can only be tweaked when the AC is OFF (tap the AC icon at main interface to turn off AC output if it's ON).**

- JP Output: 100V/50Hz
- US Output: 120V/60Hz

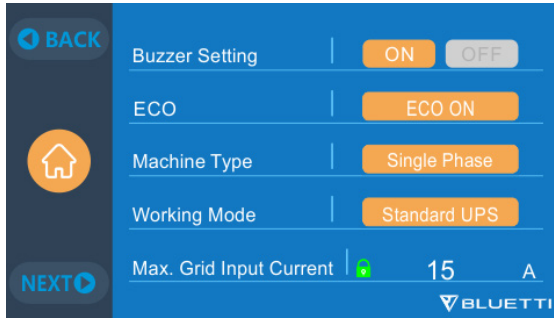
- AU Output: 240V/50Hz
- EU/UK Output: 230V/50Hz



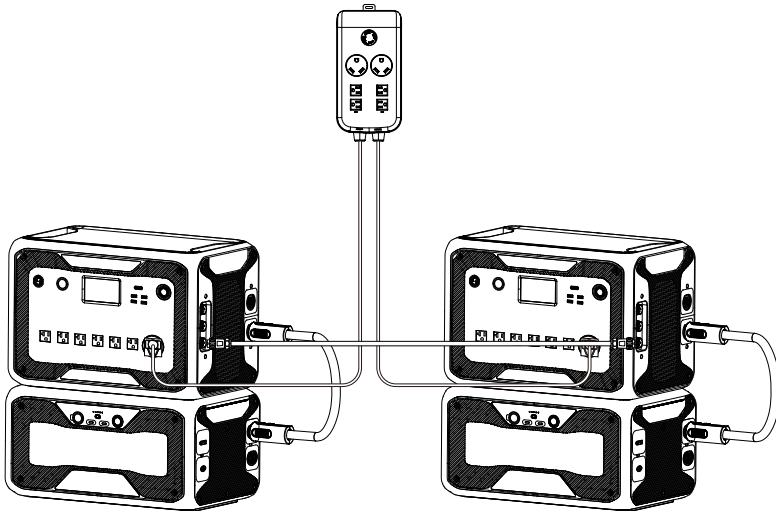
7.2.1. Language Setting & ECO Mode

Press “English” or “Japanese” icon to set as the system language display of your AC300.

ECO: This is a power saving mode where the unit will turn off automatically to conserve energy if the AC load is less than 30W over 4 hours. This saves more than 30% of energy potentially being lost in the event the unit was left on inadvertently.



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



“Single Phase” is set as the default machine type if you are operating a single AC300. This is the only and correct setting if a single AC300 is being used.

Machine type is just used to set for Split Phase, "Split Phase" is only used for connecting both *2 AC300 (exclusive for 100-120V Version) bonded 2 pairs of AC300 to one power system to double the output power, voltage, so as to capacity.

Please refer to Split Phase setting for detailed information.

7.2.4. Working Mode

Tips: AC300 will be set as the UPS Mode.

There are altogether four 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.

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

Customized UPS Mode: Customized the parameters for a better user experience.

Please refer to UPS setting for detailed information.

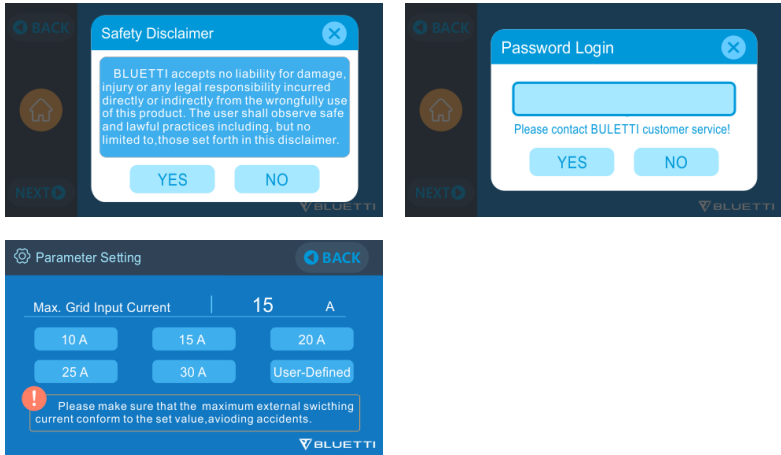
7.2.5. Max. Grid Input Current

- 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. current of the tied grid, when the current exceeds the preset value, AC300 will take in charge to be the power source of the circuit.

Note: Only take effective when AC300 has been connected into grid.

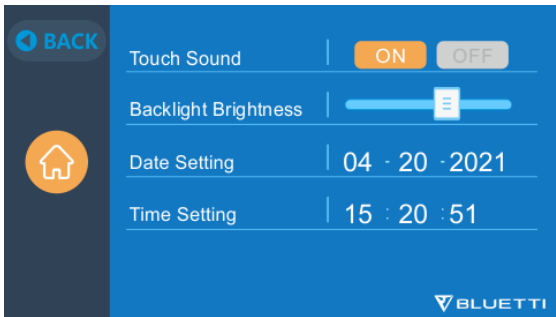
The value is preset at 15A.

- Safety Password of Max. Current: 159873



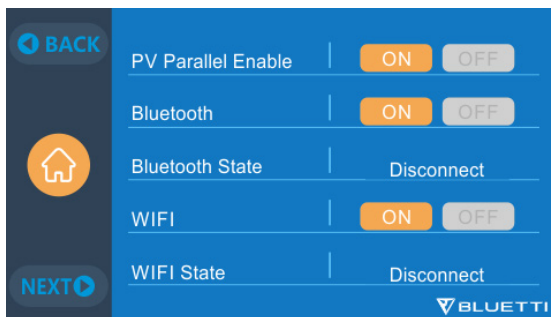
7.2.6. Date and time & Touch Sound & Backlight Brightness

- 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 sounds.
- You may change the Backlight Brightness of the Touchscreen LCD by using the slider on the screen.



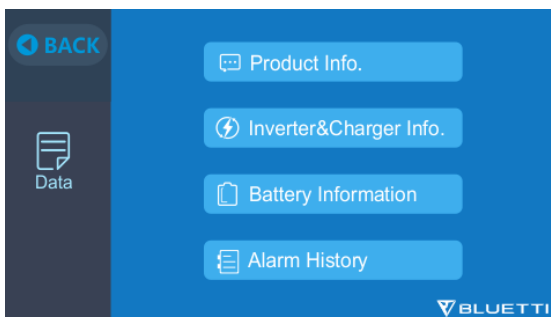
7.2.7. Bluetooth & Wi-Fi Connection

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



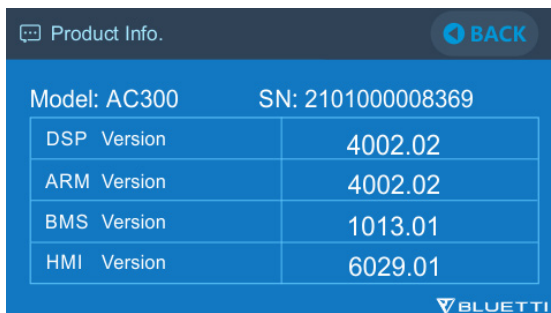
7.3. Data

In the Data section, you may view Product Info, Inverter & Charger Info, BMS Maintenance, and Alarm/Fault History by selecting each respective button.



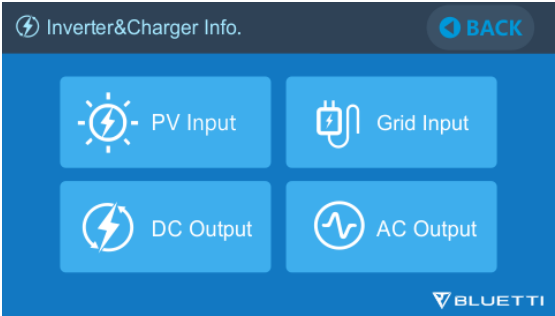
7.3.1. Product Info

- 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.



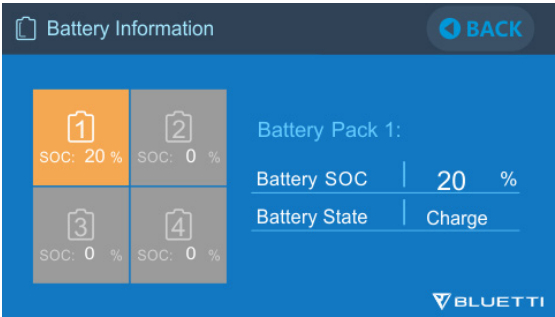
7.3.2. Inverter & Charger Info

When you select the “Inverter & Charger Info” button, you can view the PV charging switch operation and the adapter operation status, DC out operation and AC out operation. This section can also be accessed directly from the shortcut icon on the main interface.



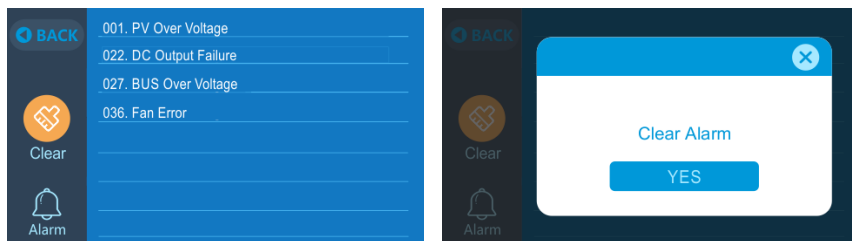
7.3.3. BMS Maintenance

When you select the “BMS Maintenance” button, you can view the operational information of the BMS. This section can also be accessed directly from the shortcut icon on the main interface.



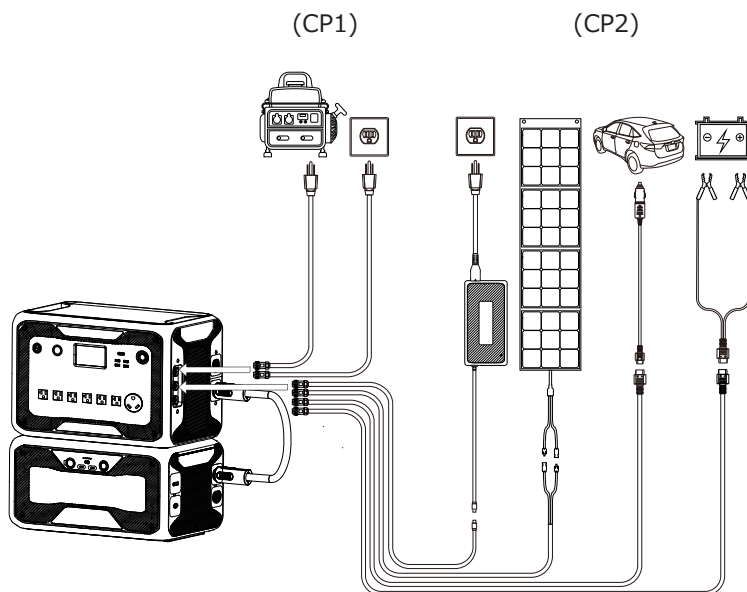
7.3.4. Alarm History

Click the “Alarm History” button, you can view all the alarm information generated by the machine. You can turn to the troubleshooting page to check the corresponding solutions.



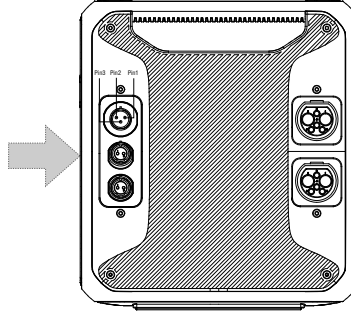
08. How to Recharge AC300 (INPUT)

- The AC300 includes 2 charging ports which can be recharged in 5 different methods. They will be covered in three different sections according to which port(s) are being used.
- The ports are named Aviation Port 1 [CP1] and Aviation Port 2 [CP2] up the PV1/PV2 input port.



8.1. CP1 (1st Charging Port)

Pin1:L
Pin2:N
Pin3:PE

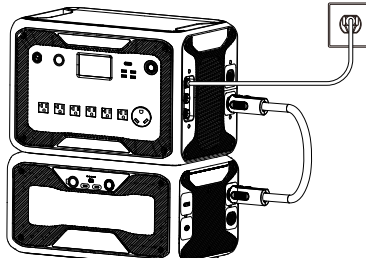


8.1.1. Charging Method 1: From Wall Outlet (by AC charging cable)

Connect AC300 from CP1 via AC charging cable to the AC wall outlet

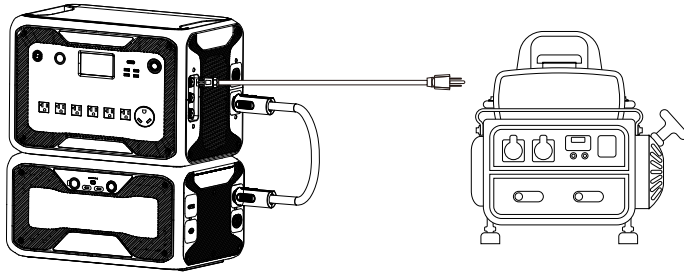
@1500W/100Vac, @1800W/120Vac Max., the charging process will automatically stop when it reaches 100% capacity.

In addition, you can choose to access the AC power distribution cabinet, and the maximum charging power can reach 3000W.



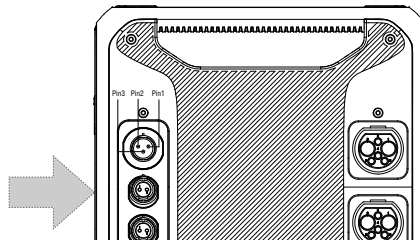
8.1.2. Charging Method 2: From Generator (gasoline, propane, or diesel)

- 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:PV1+
Pin2:PV2+
Pin3:PV1-
Pin4:PV2-

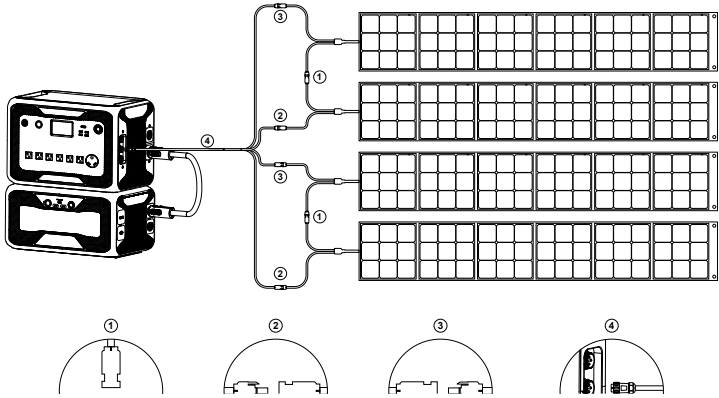


8.2.1. Charging Method 3: Solar Panels (via 4pin aviation-MC4 cable)

●For regular solar panels:

AC300 Supports two PV inputs, Single PV Max. input current of solar charging is 12A, the charging voltage should be between 12-150V. AC300 can achieve Max. 2400W solar input.

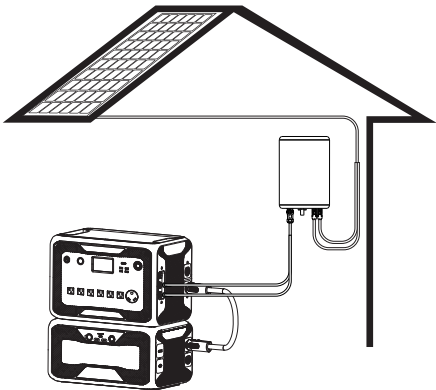
- User can connect 8-16 pieces of solar panels in series (figure 1).
- Connect the MC4 port of solar panels to the MC4-Aviation cable (figure 2/3).
- Plug the Aviation cable to the middle input port on AC300.



(Easy steps to solar charging)

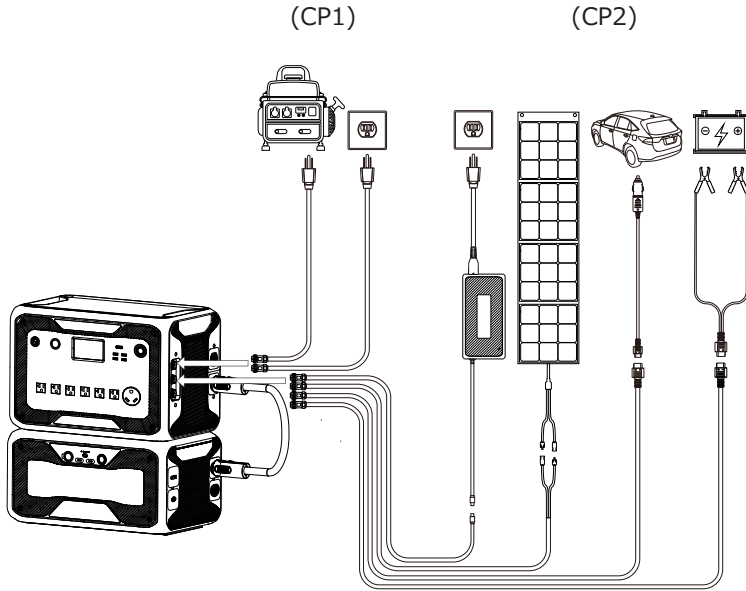
● For Roof Panels:

If you choose roof panels to be the solar power source to recharge AC300, easily connect your roof panel with MC4-Aviation to AC300 will finish the installation.
PV Module (additional accessories) is required to drop down the voltage if the open circuit voltage produced by your roof panels exceeds the limit of AC300 can handle: 12-150VDC, 12A*2.
This PV module doesn't work with solar panels that have built-in microinverters, and open circuit voltage over 550V.
Please check BLUETTI Youtube channel: BLUETTI Official for detailed instruction video.



(PV Step Down Module)

8.3. Dual Charging



Charging Method 5: Supports charging the AC300 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 Source1 selects PV on the touch screen)

Method 4: T500 charging adaptor(DC Input Source1 selects Others on the touch screen)

Method 5: 12V CAR Charger/Storage battery(DC Input Source1 selects Others on the touch screen)

Method 6: 24V CAR Charger/Storage battery(DC Input Source1 selects Others on the touch screen)



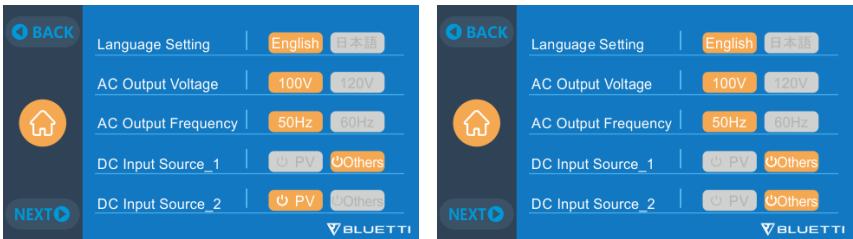
DC Input2:

Method 7: Solar panels (DC Input Source2 selects PV on the touch screen)

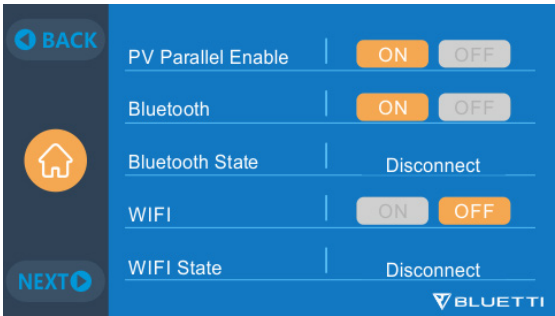
Method 8: T500 charging adaptor(DC Input Source2 selects Others on the touch screen)

Method 9: 12V CAR Charger/Storage battery(DC Input Source2 selects Others on the touch screen)

Method 10: 24V CAR Charger/Storage battery(DC Input Source2 selects Others on the touch screen)



Method 11: PV Parallel (PV parallel needs to be enabled on the touch screen)



8.4. How to calculate the recharging time of AC300

E.g. : The total recharging power is 5400W(3000W+2400W) recharged by AC and 2nd PV at same time, the estimation time will be 1.25-1.75Hrs.(AC300 with two B300 in parallel)

09. Discharge (OUTPUT)

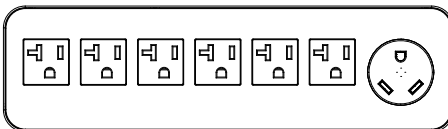
The operational time of the AC300 is subject to many different factors such as ambient temperature, discharge rate, remaining battery capacity, and other factors.

9.1. The Output Port

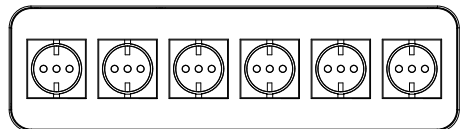
9.1.1. AC Output Port

- AC300 is equipped with *7 AC(US, JP version) / *6 AC(AU,EU,UK) outputs with a continuous 3000W Max. power of output in total, and the ability to support surges up to 6000W.
- Please make sure the combined power requirements of your appliances does not exceed the 3000W limit when operational.

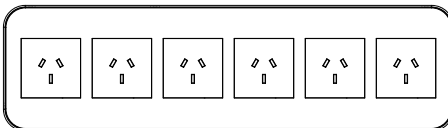
JP/US Version
7 * 100-120V/20A



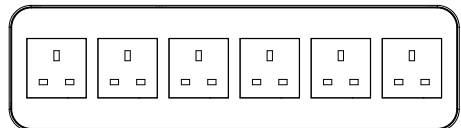
EU Version
6 * 220-240V/20A



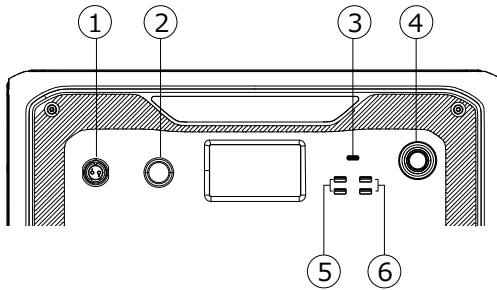
AU Version
6 * 220-240V/20A



UK Version
6 * 220-240V/20A



9.1.1. DC Output Port



1. *1 RV port
2. *1 Cigarette lighter port
3. *2 USB-C (PD 100W)
4. Power button
5. *2 USB-A (fast charging)
6. *2 USB-A

9.2. Operation Time Estimation

AC300 with two B300 in parallel.

●Kitchen Equipment



Refrigerator
150W(1200W)
30-33 Hrs



Electric Fry Pan
1500W
3.3 Hrs



Microwave Oven
1000W
5.0 Hrs



Washer
500W(1000W)
5-10 Hrs

●Home Equipment



Space Heater
1500W
3.3 Hrs



Air Conditioning
8000Btu
6.3-17.3 Hrs



Smart Phone
15Wh
330+ Times



Laptop
49Wh
100+ Times



Desktop
300W
16.5 Hrs



CPAP
40W
124.4Hrs

●Tools



Bench Grinder
1400W
3.5 Hrs



Welding Machine
1800W
2.8 Hrs



Circular Saw
1400W(2300W)
2.8 Hrs

●Transportation



Electric Vehicle(16A)
1800W
12-18 Miles



E-Bike
500W
120-170 Miles

(The estimation operating time is only for reference)

9.3. How to Calculate the Operation Time

- What is the depth of discharge (DoD)?

To extend the battery-life, the power station set the 90% DOD, which means that only 90% of the battery capacity can be discharged. 10% of the energy is reserved to avoid damage to the battery due to over-discharge.

η indicates local inverter efficiency. $DOD=90\%$, $\eta =90\%$.

10. UPS

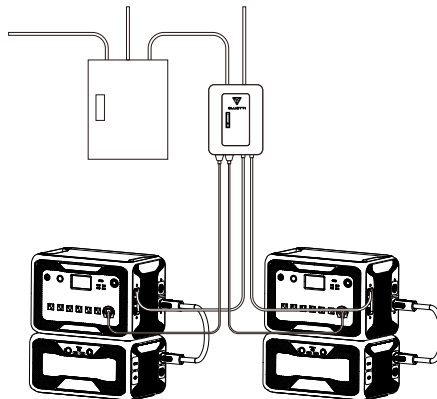
10.1. UPS Description

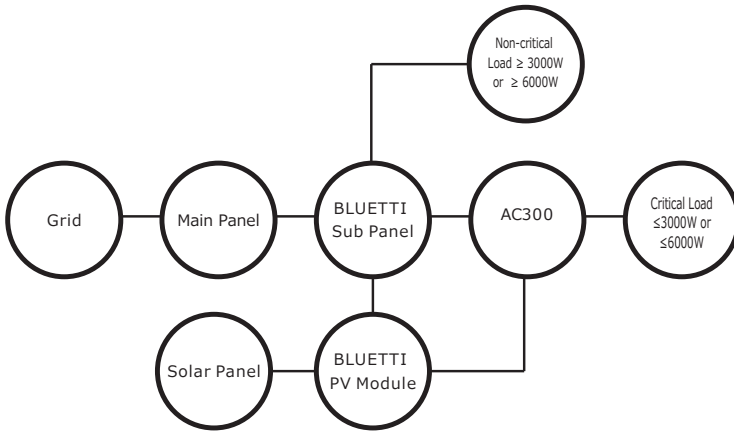
An uninterruptible power supply or uninterruptible power source (UPS) is an electrical apparatus that provides emergency power to a load when the input power source or mains power fails. A UPS differs from an auxiliary or emergency power system or standby generator in that it will provide near-instantaneous protection from input power interruptions, by supplying energy stored in batteries, supercapacitors, or flywheels.

10.1.1. FYI (For Your Information)

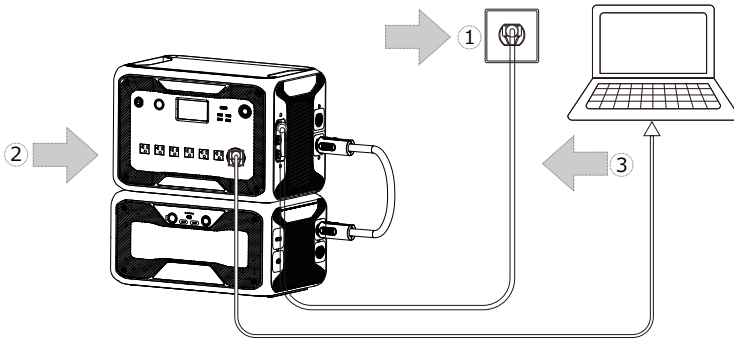
Max. capacity retention indicates the limit of capacity of the unit that can be recharged by grid, if you set the Max. battery capacity at 80% at Time Control UPS Mode and Customized UPS Mode then AC300 could be charged to 80% via grid. The rest of the 20% capacity will be recharged via solar panels.

10.1.2. UPS working system introduction





(AC300 grid-tied home power back-up system with Sub Panel and roof panels)



(Plug-in UPS system)

Step1: Plug the AC charging cable into wall outlet

Step2: AC charging cable into AC input port(left one)

Step3 : Connect the load to AC300 via AC output port

Note: The output power in Plug-in UPS Mode is subject to the specification of the current and voltage from home circuit.

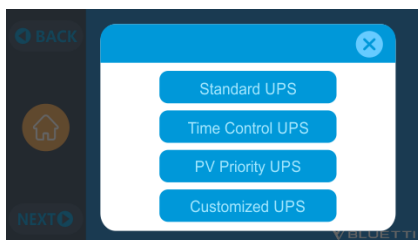
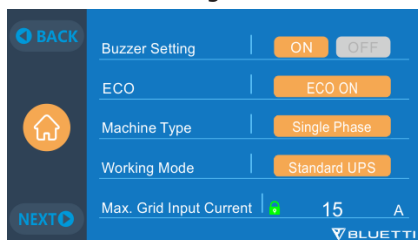
a, Standard UPS Mode. b, Time Control UPS Mode.

c, PV Priority UPS Mode. d,Customized UPS Mode.

E.g.: Current (15A) X Voltage (120V) = 1800W (in US)

10.1.3. Turn On UPS Function

- Select “Setting” on the main touchscreen interface. Select “Next” and select “Working Mode” to choose UPS Mode.
- The default working mode is “Standard UPS Mode”.

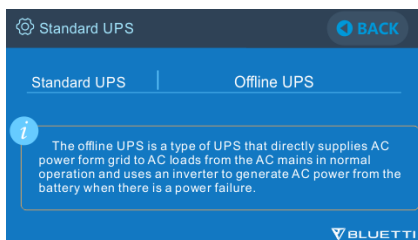
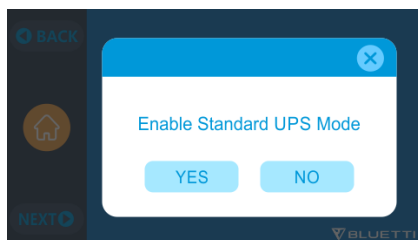


10.2. Enable UPS Running Mode

10.2.1 Standard UPS Mode

- Offline UPS: Basic working mode

AC300 will power your load or grid only when the power failure happened, or AC300 will always be on standby and keep the capacity stayed at 100%.



10.2.2. Time Control UPS Mode

- Set the times of the AC300 to be charged via grid power and the times to run loads from its battery.

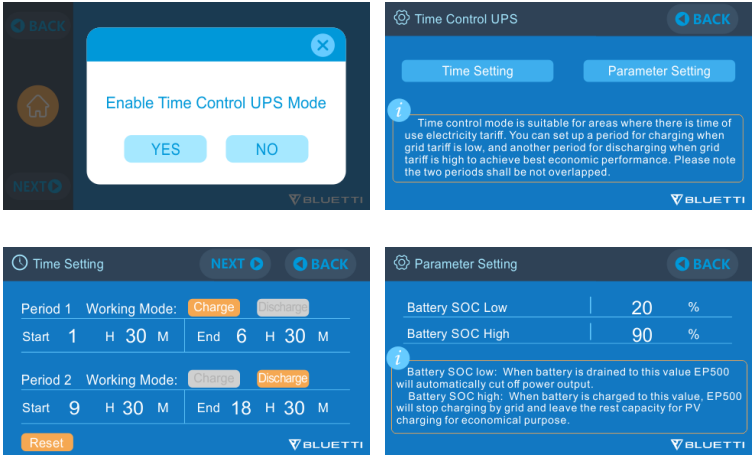
Charge Time: set the time of AC300 when to be recharged by grid to avoid the higher electricity bills charged.

Discharge Time: the time to generate power from its inside battery pack to power the loads connected on Sub Panel(optional purchase).

- Parameter Setting:

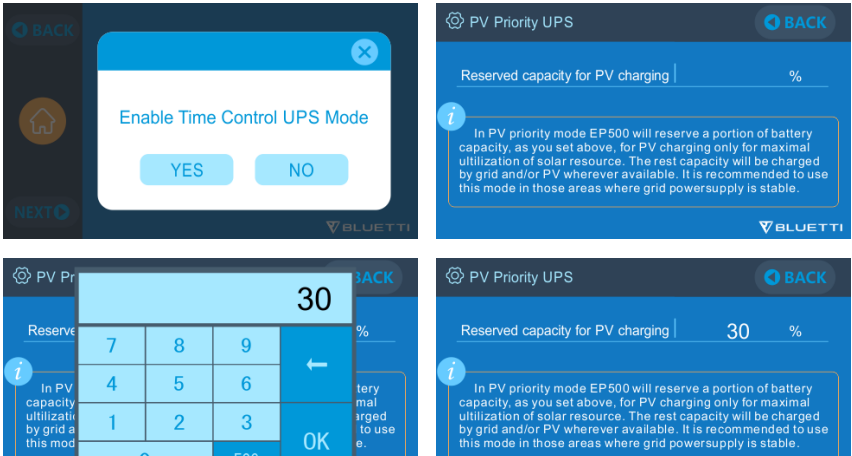
Min. Capacity Retention: When the remaining capacity of AC300 is under the preset Min. capacity state, AC300 will stop powering loads connected to Sub Panel.

Max. Capacity Retention: The maximum capacity AC300 can be charged via grid, AC300 will be charged to 100% via solar power or 2nd adapter only.



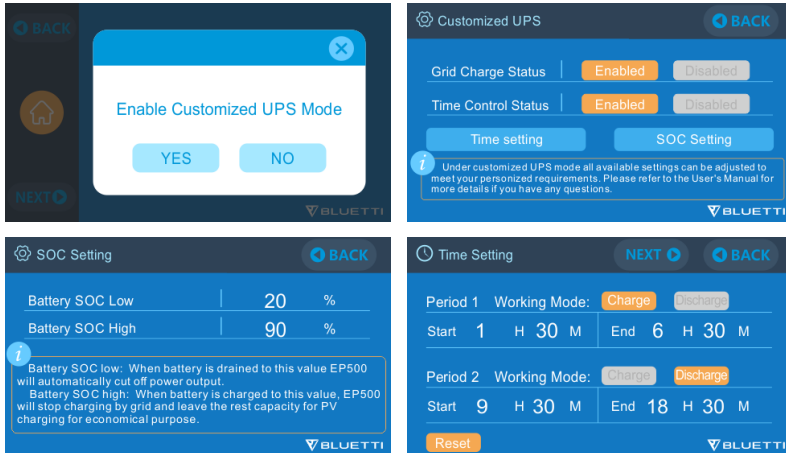
10.2.3. PV Priority UPS Mode

- **PV Priority UPS Mode:** recommended for areas in stable power supply, the battery will be recharged mainly via PV for power saving.
- **Note:** In PV Priority UPS Mode AC300 can only be recharged via grid to 80% capacity, and discharge to 80% of the capacity (you can tweak it to 100% for full grid charging manually on screen or App) as the Min. Retention Setting in PV Priority UPS Mode. And rest of the capacity will be fully charged by solar power and 2nd adaptor only.
- You can set the Min. Capacity Retention at 100% to let AC300 always be charged to 100% capacity via both grid and solar power.

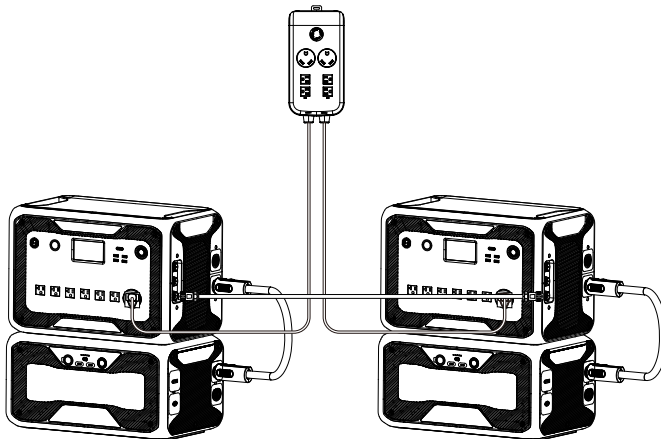


10.2.4. Customized UPS Mode

- Charge/discharge time, and Min./Max. Capacity can be set at Customized UPS Mode.
- Disable the grid charge setting, AC300 will not be able to be recharged by grid.
- Apart from Customized UPS Mode, the main switch of grid charging and time mode settings are involved. The setting of turning the grid/time setting ON/OFF will take effect on both Standard UPS Mode, Time Control UPS Mode, and PV Priority UPS Mode.



11. Split Phase Function



- The “Machine Type” is used to enable or disable Split Phase output. Split-Phase output is achieved by bonding two AC300 into one power system to double the available output power, voltage, and capacity.
- “Split Phase” is only used for connecting both *2 AC300 together (exclusive for the 100-120V version of the AC300). A Fusion Box is required (sold separately).
- Launch Split Phase Function:

Note: Only one touchscreen will be active when two AC300 units are connected.

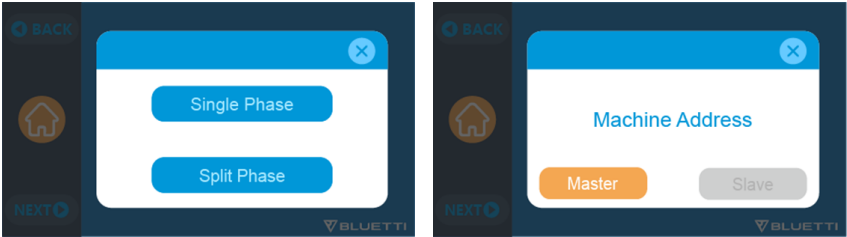
If one of the AC300 is out of power, the Split Phase Bonding function will not be valid.

Step 1: Plug the output cables from each of the two AC300 to the Split Fusion box.

Step 2: Plug the communication cables from each of the two AC300’s to the Split Fusion box.

Step 3: Set the Machine Type to "Split Phase" on AC300 either.

Step 4: Select "Master" or "Slave" on the operating AC300. Select "Master" will set the operating AC300 as the one to control both two AC300. Select "Slave" will set the operating AC300 as the other AC300 as the "Master" one.



12. Technical Specification

Model	AC300-JP	AC300-US	AC300-EU/UK/AU
Net Weight	20kg (44.1lbs)		
Dimensions	520*325*358mm (20.5*12.8*14.1in)		
Charge Temperature	0-40℃ (32-104 ℉)		
Discharge Temperature	-20-40℃ (-4-104 ℉)		

Storage Temperature	-25-40℃ (-13-104 ℉)		
Working Environment Humidity	10-90%		
Certification	PSE, FCC, CE, UN38.3, msds, UL, SAA and ROHS		
Capacity	3072-12288Wh (60-240Ah)		
Battery Type	LiFePO4		
Standard Battery Voltage	51.2VDC		
Battery Cell Voltage Range	44.8-57.6VDC		
Short-circuit Protection	Included		
Over-temperature Protection	Included		
MPPT	Built-in		
Over-temperature Protection			
Discharge Over-temperature	65℃		
Discharge Over-temperature Recovery	55℃		
Charge Over-temperature	55℃		
Charge Over-temperature Recovery	45℃		
AC Output			
AC Inverter	*7 3000W total		*6 3000W total
Rated Output Voltage	100VAC	120VAC	220-240VAC
Rated Output Frequency	50/60Hz		
Rated Continuous Power	3000W		
Rated Output Current	30A	25A	13A
Power of Over-load	3100W < load < 3750W, 2min; 3750W < load < 4500W, 5s; 4500W < load < 6000W, 500ms		
Efficiency	>88%		

THD	<5%		
DC Output			
Cigarette Lighter Port	*1 24VDC/10A		
USB-A	*2 5VDC/3A total		
USB-A	*2 3.6-12VDC/36W		
USB-C (Type-C)	*1 20VDC/5A; 5-15VDC/3A		
Wireless Charging Pad	*2 5W/7.5W/10W/15W		
RV Port	*1 12VDC/30A	408W>load, 2S	
AC Input			
Input Voltage	85-110VAC/JP	102-132VAC/US	207-253VAC EU/UK/AU
Input Frequency	47Hz-63Hz		
Max. Input Current	30A		
Configurable Input Current	15A/20A/30A Preset at 15A, can be changed on screen		
AC Charging Voltage Range	90-264VAC		
AC Charging Frequency Range	47Hz-63Hz		
Power of Charging	3000W Max		
PV Input			
Max. Input Voltage	150VDC		
MPPT Voltage Range	12-150VDC		
Max. Power of Input	1200W*2		
Rated Input Current	12A*2		

13. Storage and Maintenance

- Please turn off the unit and charge it to 50-70% capacity every time before storing it.
- To preserve the battery health, please discharge and fully charge the unit at least once every 6 months.

- Ensure proper ventilation in use or store and keep away from any combustible materials or gases.
- Do not stack anything on the top of the unit in storage or use.
- Avoid exposing the unit to rain or wet environment, and direct sunlight (32-113 °F , 0-45°C), clean and dry environment is strongly recommended.
- Dry, non-abrasive cloths to wipe will be perfect. The power station is a versatile tool for various adventures, simple cleaning would be required from time to time to keep the unit in a good condition.
- Keep the unit away from children and pets.

14. Troubleshooting

Error Code	Error List	Troubleshooting
001	D-AMCU Warning	Please contact with the dealer if the error still exists after rebooting the unit.
002	D-BMS Warning	Please contact with the dealer if the error still exists after rebooting the unit.
003	D-A Communication Error	Please contact with the dealer if the error still exists after rebooting the unit.
004	Battery Voltage High-Hardware	Please contact with the dealer if the error still exists after rebooting the unit.
005	BUS Voltage High-Hardware	Please contact with the dealer if the error still exists after rebooting the unit.
006	SPS Voltage Low-Hardware	Please contact with the dealer if the error still exists after rebooting the unit.
007	Fan Warning-Hardware	Clean or replace the fan to ensure proper ventilation. Please contact with the dealer if the error still exists after rebooting the unit.
008	OCP (Over Current Protection)- Hardware	Please contact with the dealer if the error still exists after rebooting the unit.
009	LLC Soft-Start Failure	Please contact with the dealer if the error still exists after rebooting the unit.

010	BUS Soft-Start Failure	Please contact with the dealer if the error still exists after rebooting the unit.
011	H-BUS Voltage High	Please contact with the dealer if the error still exists after rebooting the unit.
012	Bus Voltage High	Please contact with the dealer if the error still exists after rebooting the unit.
013	LLC-Bus Voltage High	Please contact with the dealer if the error still exists after rebooting the unit.
014	Bus Voltage Low	Please contact with the dealer if the error still exists after rebooting the unit.
015	DC Input Voltage High	Please contact with the dealer if the error still exists after rebooting the unit.
016	DC Input Voltage Low	Please contact with the dealer if the error still exists after rebooting the unit.
017	DC Input Over Current	Please contact with the dealer if the error still exists after rebooting the unit.
018	Inverter Output Over Current	The output power of load exceeds. Please contact with the dealer if the error still exists after rebooting the unit.
019	Inverter Voltage High	Please check if the output of load meets the specifications of the unit. Turn on the AC after rebooting, please contact with the dealer if the error still exists.
020	Inverter Voltage Low	Please check if the output of the load meets the specifications of the unit. Turn on the AC after rebooting, please contact with the dealer if the error still exists.
021	Grid Input Over Current	Please check if the input of the current meets the specifications of the unit. Turn on the AC after rebooting, please contact with the dealer if the error still exists.
022	Inverter Output Short circuit	Please disconnect the load to make sure the load has been connected properly. Click to clear the alarm history.

023	Inverter Over-load Protection	Please disconnect the load to make sure the output power of loads meet the limit of the unit. Click to clear the alarm history.
024	Phase Integration Error	Check the input wire and whether the "Master" unit or "Slave" unit can work well.
025	AC Relay Short Circuit	Please contact with the dealer if the error still exists after rebooting the unit.
026	AC Relay Open Circuit	Please contact with the dealer if the error still exists after rebooting the unit.
027	Load Relay Short Circuit	Please contact with the dealer if the error still exists after rebooting the unit.
028	Load Relay Open Circuit	Please contact with the dealer if the error still exists after rebooting the unit.
049	PV1 Over Current	Please contact with the dealer if the error still exists after rebooting the unit.
050	PV2 Over Current	Please contact with the dealer if the error still exists after rebooting the unit.
051	PV1 Over Voltage	Please check if the open circuit voltage of solar panels exceeds the input voltage standard of AC300.
052	PV2 Over Voltage	Please check if the open circuit voltage of solar panels exceeds the input voltage standard of AC300.
053	D-BAT Full	The battery is full.
054	D-BAT Drained	Empty of battery.
055	Inverter Overload Warning	The output power of load exceeds.
056	AC Overload Warning	The output power of load exceeds.
057	Grid Voltage High	Please check whether the grid voltage fits the input voltage standard of AC300.
058	Grid Voltage Low	Please check whether the grid voltage fits the input voltage standard of AC300.

059	Grid Frequency High	Please check whether the grid frequency fits the input frequency of AC300.
060	Grid Frequency Low	Please check whether the grid frequency fits the input frequency of AC300.
061	Multi Communication Error	Please check whether the communication cable is connected correctly. Clear the alarm history or restart the unit.
062	Multi Address Error	Please check whether the communication cable is connected correctly. Clear the alarm history or restart the unit.
063	Multi Synchronization Error	Please check whether the communication cable is connected correctly. Clear the alarm history or restart the unit.
064	Multi Brak Phase Error	Please check if the input of the AC voltage meets the specifications of the unit. Clear the alarm history or restart the unit.
081	BMS Communication Interrupt	Please contact with the dealer if the error still exists after rebooting the unit.
082	LCD Communication Interrupt	Please contact with the dealer if the error still exists after rebooting the unit.
083	EEPROM Read & Write Error	Please contact with the dealer if the error still exists after rebooting the unit.
084	DSP Configuration Error	Please contact with the dealer if the error still exists after rebooting the unit.
085	RTC Read & Write Error	Please contact with the dealer if the error still exists after rebooting the unit.
086	12V/30A Port OCP	Please disconnect the appliances on DC 12V/30A ports. Clear the alarm history or restart the unit.
087	24V/10A Port OCP	Please disconnect the appliances on DC 24V/10A ports. Clear the alarm history or restart the unit.
088	USB/TYPE-C/PD Port Current High	Please disconnect the appliances on USB ports. Clear the alarm history or restart the unit.

089	DC 12V/30A Output Current High	Please disconnect the appliances on DC 12V/30A ports. Clear the alarm history or restart the unit.
090	DC 24V/10A Output Current High	Please disconnect the appliances on DC 24V/10A ports. Clear the alarm history or restart the unit.
091	DC Output soft start Failure	Please contact with the dealer if the error still exists after rebooting the unit.
092	DC 12V/30A Output Short Circuit	Please disconnect the appliances on DC output ports.
093	DC 24V/10A Output Short Circuit	Please disconnect the appliances on DC output ports.
094	USB/TYPE-C/PD Port Locked	Please disconnect the load to make sure the output power of loads meet the limit of the unit. Please contact with the dealer if the error still exists after rebooting the unit.
095	12V/30A DC Port Locked	Please disconnect the load to make sure the output power of loads meet the limit of the unit. Please contact with the dealer if the error still exists after rebooting the unit.
096	24V/10A DC Port Locked	Please disconnect the load to make sure the output power of loads meet the limit of the unit. Please contact with the dealer if the error still exists after rebooting the unit.
097	BMS Temperature abnormal	Please store AC300 at the recommended temperature and leave it until the temperature inside back to the normal standard.
098	BMS Over Voltage	Please contact with the dealer if the error still exists after rebooting the unit.
099	BMS Low Voltage	Please contact with the dealer if the error still exists after rebooting the unit.
100	BMS Over Current	Please contact with the dealer if the error still exists after rebooting the unit.
101	BMS Precharge Error	Please contact with the dealer if the error still exists after rebooting the unit.

102	BMS Output Short Circuit	Please contact with the dealer if the error still exists after rebooting the unit.
103	BMS communication cable error	Please check whether the battery power cable is reliably connected. Please check whether the lock switch on the power cable has been turned on. Please contact with the dealer if the error still exists after rebooting the unit.
107	NTC Faulty	Please leave the unit at the recommended temperature few hours to recover. Please contact with the dealer if the error still exists after rebooting the unit.
108	Fan Faulty	Clean or replace the fan to ensure proper ventilation. Please contact with the dealer if the error still exists after rebooting the unit.

15. FAQ (Frequently Asked Questions)

●How to claim the warranty and extended warranty?

Please place your after-sale requirement as the warranty card written to the vendor where you order the product, the extended warranty(if purchased) will take effects after the default warranty is void.

●Can it be upgraded?

The firmware including ARM, DSP, IoT and BMS can be upgraded online through OTA, and the parameters of the machine will be adjusted and optimized.

●Can it be charged and discharged at the same time?

Yes, the unit supports pass-through charging function for both AC and DC outputs. We recommend to fully charge the unit at least once per month to extend battery life.

●How many UPS modes are there?

There are 4 types of UPS Mode you can choose freely, Economic Mode, UPS Mode, Peak-avoiding Mode and Advanced Mode.

There can both be set to work offline and online.

- What is the UPS switching latency?

There are two types of working conditions of UPS for AC300.

No delay for online UPS; 20ms from offline UPS.

- Can I connected my two AC300 with Fusion Box to achieve double the output power, voltage and capacity.

You can connect two AC300 OR two AC300 with a Fusion Box. The units must be of the same type and the correct Fusion Box (P020A for AC300, P030A for AC300). You cannot mix a AC300 and AC300 with a Fusion Box.

- Can I use third-party solar panels to charge the unit?

Yes, the third-party solar panels are available as long as they contain MC4 connectors, besides the voltage (in series or parallel) is between 55V to 145V and the maximum input power is 1200W.

If the open circuit voltage of the panels is less than 550V, you can choose PV Module to step down the voltage to achieve solar charging.

- How do I know whether my appliance can work well with the power station?

Calculate how much the continuous loads are for your appliances are in total. As long as they do not exceed the rated output power of the power station, it should work.

- How can I connect the product to my home circuit breaker box?

To install the grid-tie power system, an electrician with a professional technician certificate is required, connect the wires of critical equipment from your main electrical box to the BLUETTI Sub Panel (optional purchase).

16. Declaration

- Some changes may not be noticed specifically such as appearance or specifications due to the exterior material or hardware improvement of the product.
- Our company shall not be liable for any damage caused by force majeure such as fire, typhoon, flood, earthquake or the user's intentional negligence, misuse or other abnormal conditions.
- No compensation for damages shall be made for utilizing non-standard adapters and accessories.
- Our company will not bear all responsibilities if the damage is caused by not operating the product properly according to the use method in operation

manual.

- This unit is not suitable for use on the relevant equipment or machines involving:

Personal safety, such as atomic energy devices, aerospace devices, transportation devices, medical devices, etc., or any equipment or machines that require highly reliable power sources. We are not responsible for accidents, fires, or wrongful or negligent actions done to the machine and equipment which results in damage.

