

AC2A Portable Power Station

User Manual V1.0

Please read this manual carefully before use and keep it for future reference.





- 1. Charge the unit before first use.
- 2. Do not use solar panels with open circuit voltage higher than 28V. Solar input voltage range for the unit is 12V-28VDC.
- 3. Charge the unit immediately when the SoC drops below 5%. If the SoC drops to 0, power off the unit and charge it for at least 30 minutes before restarting.
- 4. The unit is for off-grid use only. Do not connect its AC output to the grid.
- 5. If not used for more than 3 months, charge the unit to 40%-60% SoC and store it with the power off. For optimum battery life, discharge and charge the unit every 3 months.

Thank You!

Thank you for making BLUETTI a part of your family.

From the very beginning, BLUETTI has tried to stay true to a sustainable future through green energy storage solutions while delivering an exceptional eco-friendly experience for our homes and our world.

That's why BLUETTI makes its presence in 100+ countries and is trusted by millions of customers across the globe.



Notice

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The contents of this manual are subject to change without notice. Please get the latest version from: https://www.bluettipower.com/pages/user-guides

If you have any questions or concerns about this manual, please contact BLUETTI

support for further assistance.

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1. Safety Instructions

Read this manual for instructions on the proper use and safety information for the product. The safety instructions provided herein are for illustrative purposes that include but are not limited to those listed in this manual. Actual operation shall comply with all applicable safety standards. If you have any questions, feel free to contact BLUETTI support or your local BLUETTI dealers.

1.1 Statement

To ensure a safe operation, it's crucial to observe and adhere to the following conditions:

- · Always operate or store the product in the conditions specified in this manual.
- Avoid unauthorized disassembly, component replacement, or modification of software codes.

⚠ BLUETTI shall not be liable for damages resulting from the following circumstances:

- · Force majeure events such as earthquakes, fires, storms, floods, or mudslides.
- · Damage caused by the customer's own transportation.
- · Damage resulting from inadequate storage conditions as specified in the manual.
- · Damage caused by customer negligence, improper operation, or intentional actions.
- · System or hardware damage caused by third parties or customers, including but not limited to improper handling and installation not in accordance with the instructions in this manual.
- · Usage of the product with devices that require a high-performance Uninterruptible Power Supply (UPS), including but not limited to data servers, workstations, medical equipment, and other similar devices.

1.2 General Requirements

INSTRUCTIONS PERTAINING TO RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS

IMPORTANT SAFFTY INSTRUCTIONS

WARNING.

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

- · Read all the instructions before using the product.
- To reduce the risk of injury, close supervision is necessary when the product is used near children.
- · Do not put fingers or hands into the product. And do not insert foreign objects into any

ports of the product.

- · Use of an attachment not recommended or sold by the manufacturer may result in a risk of fire, electric shock, or injury to persons.
- To reduce the risk of damage to the electric plug and cord, pull the plug rather than the cord when disconnecting the product.
- Do not use a battery pack or appliance that is damaged or modified, as they may exhibit unpredictable behavior resulting in fire, explosion, or personal injury.
- · Do not operate the product with a damaged cord or plug, or a damaged output cable.
- Do not attempt to replace the internal battery or any other component of the product by anyone other than authorized personnel. There are no end-user serviceable components. Do not disassemble the product, take it to a qualified service person when service or repair is required. Incorrect reassembly may result in a risk of fire or electric shock.
- \cdot To reduce the risk of electric shock, unplug the product from the outlet before attempting any instructed servicing.
- WARNING RISK OF EXPLOSIVE GASES. To reduce the risk of battery explosion, follow these instructions and those published by the battery manufacturer and manufacturer of any equipment you intend to use in the vicinity of the battery. Review cautionary markings on these products and engines.
- · PERSONAL PRECAUTIONS

a. Wear complete eye protection and clothing protection. Avoid touching eyes while working near the battery.

b. Never smoke or allow a spark or flame in the vicinity of the battery or engine.

- c.Be extra cautious to reduce the risk of dropping a metal tool onto the battery. It might spark or short-circuit the battery or other electrical parts which may cause an explosion.
- · When charging the internal battery, work in a well ventilated area and do not restrict ventilation in any way.
- · Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help. Liquid ejected from the battery may cause irritation or burns.
- Do not expose the product to fire or excessive temperature. Exposure to fire or temperature above 130°C (266°F) may cause an explosion.
- · Have servicing performed by a qualified repair person using only identical replacement parts. This will ensure that safety is maintained.

- Do not stack anything on top of the product while in storage or use. Do not move the product while operating as vibrations and sudden impacts may lead to poor connections to the hardware inside.
- · In case of fire, use only a dry powder fire extinguisher appropriate for the product.
- WARNING RISK OF ELECTRIC SHOCK. Never use the product to supply power tools to cut or access live parts or live wirings, or materials that may contain live parts or live wirings inside, such as building walls, etc.

1.3 Grounding Instructions

The product is designed for portable use and typically does not require earth grounding. However, if you connect it to the power grid, it's important to ensure proper grounding for safety. If it should malfunction or break down, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This product is equipped with an AC power cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into an outlet that is properly installed and grounded in accordance with all local codes and ordinances.

WARNING:

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician if you are in doubt as to whether the product is properly grounded. Do not modify the plug provided with the product - if it does not fit the outlet, have a proper outlet installed by a qualified electrician.

1.4 Handling Requirements

During transportation or storage, take care to avoid dropping, violently impacting, or tilting the product as it may result in internal damage. If necessary, use mechanical assistance such as carts or adjustable height workbenches to ensure safe handling.

Recommended Number of People Based on the Weight of Product

Weight	Number of people
<18kg (39.7lbs)	1
18kg~32kg (39.7lbs~70.5lbs)	2
32kg~55kg (70.5lbs~121.3lbs)	3
>55kg (121.3lbs)	4 or a cart

1.5 Storage Instructions

- · When the SoC drops to 5%, please charge the product immediately.
- Before storing the product, charge it to 40% to 60% SoC to keep it in optimal condition. In addition, power off the product and disconnect all electrical connections from it.
- · Store the product in a cool and dry place, keeping it away from flammable or combustible

materials and gases.

- \cdot The product can be safely stored within a temperature range of -20°C to 40°C (-4°F to 104°F). However, if the storage duration exceeds one month, it's recommended to maintain an ideal storage temperature of around 30°C (86°F).
- Fully cycle the product every 3 months to maintain the battery's health. It's NOT recommended to store the product for extended periods of time, as it may affect its performance and overall lifespan.

If the SoC drops to 0 (during storage or upon startup), take the following actions to safely restart the product:

- · Shut down immediately.
- · Charge within 48 hours.
- Keep it at an ambient temperature of 5°C to 35°C (41°F to 95°F) for 6 hours before charging. It's recommended to charge the product via an AC source. If charging via solar energy, ensure that your solar system provides an output of more than 100W.

The symbol displayed is intended to remind you to read the instructions in the literature accompanying the product before operation and maintenance.

- Connect the product to a socket-outlet that has an earthing connection using the power cord provided.
- The socket-outlet should be installed near the product and easily accessible for safety purposes.
- Never dispose of a battery by throwing it into fire or a hot oven, or by mechanically crushing or cutting it, as these may cause it to explode.
- · Avoid leaving batteries in extremely high-temperature environments, as this can result in an explosion or the leakage of flammable liquid or gas.
- The battery subjected to extremely low air pressure may result in an explosion or the leakage of flammable liquid or gas.
- · Attention should be drawn to the environmental aspects of battery disposal.
- Please refer to the information on the exterior bottom enclosure for electrical and safety information before installing or operating the apparatus.

SAVE THESE INSTRUCTIONS

⚠ BLUETTI shall not be liable for any equipment damage caused by the violation of the above instructions.

2. Packing List

Standard Accessories

Item	Picture	Qty.
AC2A Portable Power Station		1
AC Charging Cable		1
Solar Charging Cable		1
Grounding Screws		1
Product Documentation	And the second fraction fracti	1

Optional Accessory

(Available on the official BLUETTI website: https://www.bluettipower.com)

Item	Picture
Car Charging Cable	

3. Product Introduction

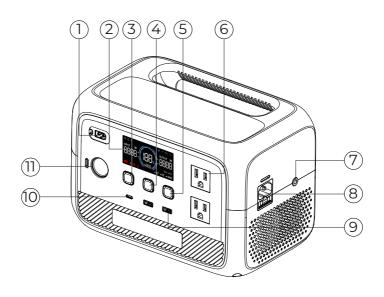
Introducing the BLUETTI AC2A, your perfect partner for lightweight and minimalist travel. With its 204.8Wh capacity and 300W output, it effortlessly charges smartphones, cameras, lights, laptops, drones, and more. Pair it with solar panels to extend its usage time, ensuring you stay powered up throughout your trip. Even if your plans change and you decide to stay longer, a 90-minute fast charge can bring unexpected joy and convenience.

But it's not just for travel - it's also ideal for gatherings at home. Power your favorite devices, whether it's music speakers, ambient lighting, or other entertainment gadgets, to create an unforgettable delightful atmosphere. Get ready to experience the true potential of portable power with the AC2A!

⚠ Danger:

Do not connect the AC output of AC2A to the grid.

4. Product Overview



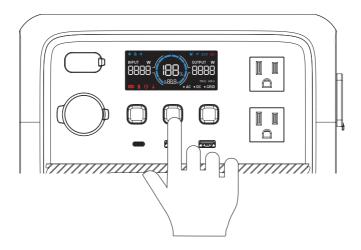
- ① DC Input
- ② LCD Display
- ③ DC Power Button
- ④ POWER Button
- ⑤ AC Power Button
- ⑥ AC Outlet

- 7 Grounding Pole
- AC Input
- 9 USB-A Port
- 10 USB-C Port
- (1) Cigarette Lighter Port

5. Power ON / OFF

Attention:

Please place the unit on the platform firmly and stably.



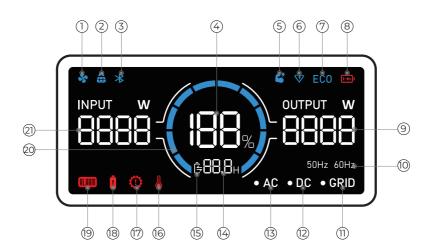
- · Power ON: Press and hold the POWER Button for about 2 seconds, the button lights up indicating that the AC2A is now on standby.
- · Power OFF: Press and hold the POWER Button for about 2 seconds to turn off the unit.
- · AC ON / OFF: When the AC2A is on, press the AC Power Button to turn it on / off.
- · DC ON / OFF: When the AC2A is on, press the DC Power Button to turn it on / off.
- · Restart: Power off the AC2A first, then press the POWER Button to restart.

Note: When the AC2A is on, you can activate the LCD display by interacting with any of the buttons

When AC and DC is off for more than 1 minute, the AC2A will be off automatically.

6. LCD Display

The AC2A features an informative LCD display that offers easy access to all the essential information about the unit's status and performance. When you power on the unit, the LCD display lights up, and when you power off the unit, the display turns off as well.



(T)	Fan	Status

- 8 Low Battery Alert
- (5) Charge / Discharge Status

2 PV Input

- Output Power
- (6) High Temperature Alert

- (3) Bluetooth Connection
- 10 AC Output Frequency
- (17) Overload Alert

- 4 Battery Capacity (SoC)
- (11) Grid Connection
- (18) Overcurrent Alert

- **5** Power Lifting Mode
- 12 DC Output

(9) Fault Alert

- **6** Turbo Charging
- (13) AC Output

② Charge / Discharge **Progress**

(7) ECO Mode

- (4) Charge / Discharge Remaining Time
- (21) Input Power

LCD Instructions		
Startup	LCD lights up	
Shutdown	LCD lights off	
When it lights up, the fan is activated and working properly.		
If it flashes, there may be a problem with the fan.	**	
The AC2A is charging from solar panels.	â	
The AC2A connects to BLUETTI App via Bluetooth.	*	
The remaining battery capacity.	188%	
The AC2A is operating in Power Lifting Mode.	ď	
The AC2A is charging in Turbo Charging Mode.	\$	
The ECO Mode is enabled to save power.	ECO	
The SoC drops below 5%.	120	
The real-time total output power.	8888	
The real-time AC output frequency.	50Hz 60Hz	
The AC2A is charging from the home grid.	GRID	
The DC output is turned on.	DC	
The AC output is turned on.	AC	
The remaining time of charging or discharging.	88.8 _H	
: Charging : Discharging	Ē	
The temperature inside the unit is higher than 70°C (158°F).	₽	
The AC2A is overloaded.	0	
The AC2A is drawing too much current, which can cause damage to the unit	Ō	
or any connected devices.	u u	
There's an issue with the AC2A, which may require troubleshooting or repair.	ALARM	
The bar increases during charging and decreases during discharging.	\bigcirc	
The total input power.	INPUT W	