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BLUETTI AC2A

BLUETTI AC2A Solar Generator

USER MANUAL

1. Introduction

This manual provides essential information for the safe and efficient operation of your BLUETTI AC2A Solar Generator. Please read this manual thoroughly before using the product and retain it for future reference.



Figure 1.1: BLUETTI AC2A Solar Generator Overview

The BLUETTI AC2A is a portable and powerful solar generator designed for various applications, including outdoor adventures, camping, RV trips, and home backup. It features a 300W AC inverter, 204Wh LiFePO4 battery capacity, and multiple output ports.

2. Safety Instructions

Always adhere to the following safety guidelines to prevent injury or damage to the unit:

- Do not disassemble, repair, or modify the unit.
- Keep the unit away from heat sources, direct sunlight, and flammable materials.
- Ensure proper ventilation during use and charging.
- Do not expose the unit to water or excessive humidity.
- Use only BLUETTI-approved charging cables and accessories.
- Store the unit in a cool, dry place when not in use.

3. Product Components

Your BLUETTI AC2A package includes the following:

- BLUETTI AC2A Solar Generator Unit
- AC Charging Cable
- Solar Charging Cable (MC4 to XT60)
- User Manual

The unit features multiple input and output ports to meet diverse power needs:

6-in-1

Meet your various charging needs



2 × AC Outlets



1 × Type-C



1 × Cigarette Lighter



2 × USB-A



Figure 3.1: AC2A Input and Output Ports

- **DC/PV Input:** For solar panel or car charging (12V-28V/200W Max).
- **AC Output:** Two 120V/300W (600W Power Lifting) AC outlets.
- **DC Output:** 12V/10A cigarette lighter port.
- **USB-C Output:** 100W Power Delivery port.
- **USB-A Output:** Two 5V/2.4A ports.

4. Setup and Initial Charging

Before first use, fully charge your BLUETTI AC2A.

4.1 AC Charging

Connect the AC charging cable to the AC input port on the unit and then to a wall outlet. The unit supports 270W Turbo Charging, allowing it to charge from 0-80% in approximately 40 minutes and 100% in 70 minutes.



Figure 4.1: AC Charging

4.2 Solar Charging

Connect compatible solar panels (optional, sold separately) to the DC/PV input port using the provided solar charging cable. The AC2A can accept up to 200W of solar input and can be fully charged in 1.5-2.0 hours under optimal sunlight conditions.

5X Capacity

Connect B80 to increase usage time



Figure 4.2: Solar Charging

4.3 Car Charging

The unit can be charged via a 12V/8.2A car socket. Connect the appropriate car charging cable (not included) to the DC/PV input port. Full charge takes approximately 2 hours.

7.9 lbs Lightweight

Portable power, anywhere



Figure 4.3: Car Charging

4.4 Capacity Expansion

The AC2A can be expanded with a BLUETTI B80 expansion battery (sold separately) to increase its total capacity. A connection cable (Aviation Plug - XT60) is required for this setup.

LiFePO4 Battery

Safe and durable, 6X longer life*

3000+ Life Cycles



* Capacity remains at 80% of original capacity after 3000 cycles,
6-8 times longer than conventional batteries.

Figure 4.4: AC2A with B80 Expansion

5. Operating Instructions

5.1 Powering On/Off

Press and hold the main power button to turn the unit on or off. The LCD display will illuminate, showing battery status and output information.

5.2 Using AC Outlets

Press the AC button to enable or disable the AC output. Plug your devices into the AC outlets. The AC2A provides 300W continuous power.

5.3 Power Lifting Mode

The Power Lifting mode allows the AC2A to power resistive loads up to 600W, such as hair dryers or electric kettles, by dynamically adjusting the output voltage. Activate this mode via the unit's display or the BLUETTI App.

5.4 Using DC Outputs

Press the DC button to enable or disable the DC output. Connect your 12V devices to the cigarette lighter port or USB devices to the USB-A and USB-C ports.

5.5 ECO Mode

Activate ECO mode to conserve power and extend battery life. When enabled, the AC2A will automatically shut down if the output power remains below a certain threshold for a set period. This prevents unnecessary power drain.

5.6 BLUETTI App Control

Download the BLUETTI App to monitor the unit's status, control charging/discharging modes, and perform OTA updates via Bluetooth. This provides convenient remote management of your power station.

204Wh / 300W

Best buddy for lightweight travel



Slow Cooker (200W)



Laptop (60W)



Cell Phone (10W)



Projector (100W)

0.8 Hours

2.2 Hours

7.8 Times

1.6 Hours



Figure 5.1: Typical Device Runtimes

6. Maintenance

Proper maintenance ensures the longevity and performance of your AC2A:

- **Battery Care:** For optimal battery health, discharge and recharge the battery every 3 months if not in regular use.
- **Cleaning:** Use a dry, soft cloth to clean the unit. Do not use abrasive cleaners or solvents.
- **Storage:** Store the unit in a cool, dry, and well-ventilated area, away from direct sunlight and extreme temperatures. Ensure the battery is charged to 50-80% before long-term storage.

7. Troubleshooting

If you encounter issues with your BLUETTI AC2A, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Unit does not power on	Battery fully depleted; Power button not held long enough	Charge the unit; Press and hold the power button for 3 seconds
No AC output	AC output not enabled; Overload; Overheating	Press AC button; Reduce load; Allow unit to cool down
Slow charging	Charging mode not set to Turbo; Insufficient solar input	Enable Turbo Charging in App; Adjust solar panel angle/position
App connection issues	Bluetooth off; Unit out of range	Ensure Bluetooth is on; Move closer to the unit

For more complex issues or error codes displayed on the LCD, please consult the full user manual or contact BLUETTI customer support.

8. Specifications

Feature	Detail
Model Name	AC2A
Battery Type	LiFePO4
Capacity	204Wh
AC Output	2 x 120V/300W (600W Power Lifting)
USB-C Output	1 x 100W Max
USB-A Output	2 x 5V/2.4A
DC Output	1 x 12V/10A (Cigarette Lighter Port)
AC Input	270W Max (Turbo Charging)
Solar Input	200W Max (12V-28V)
Car Charging	12V/8.2A
Life Cycles	3000+ to 80% capacity
Weight	7.9 lbs (3.6 kg)
Dimensions (L x W x H)	10" x 7" x 8" (25.4cm x 17.8cm x 20.3cm)

9. Warranty and Support

The BLUETTI AC2A comes with a 5-year warranty, demonstrating BLUETTI's commitment to quality and durability. For technical support, warranty claims, or any questions regarding your product, please visit the official BLUETTI website or contact their customer service team directly.

You can find more information and support resources at: www.bluettipower.com

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