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BLUETTI AC50B

BLUETTI Solar Generator AC50B User Manual

Model: AC50B | Brand: BLUETTI

1. INTRODUCTION

The BLUETTI AC50B Solar Generator is a versatile and portable power station designed to provide reliable electricity for various applications, including camping, road trips, and emergency power outages. Featuring a durable LiFePO4 battery, multiple output ports, and fast charging capabilities, the AC50B ensures your essential devices remain powered wherever you are.

2. PRODUCT FEATURES

2.1 Power Output and Capacity

The AC50B boasts a 448Wh LiFePO4 battery capacity, providing substantial power for your needs. It offers 700W of continuous AC output, with a Power Lifting Mode capable of handling up to 1000W for resistive loads like kettles and electric blankets. This makes it an ideal companion for powering phones, laptops, and various camping gear.



Figure 1: BLUETTI AC50B Solar Generator with its display and ports.

It's for Short Trips

448Wh / 700W



17 Times

Phone (10Wh)



15 Hours

Lamp (12W)



5.7 Hours

Mini-Fridge (60W)



40 Min

Kettle (500W)



Power Lifting*: 1000W

*Suitable for pure resistive loads like kettles, electric blankets, etc.

Figure 2: The AC50B is suitable for short trips, capable of charging phones 17 times, powering a 12W lamp for 15 hours, a 60W mini-fridge for 5.7 hours, or a 500W kettle for 40 minutes.

2.2 Battery Technology and Safety

Equipped with LiFePO4 batteries, the AC50B offers an extended lifespan of 3500+ charge cycles, equating to approximately 10 years of use. The integrated BLUETTI AI-BMS (Battery Management System) provides comprehensive protection against overcharging, over-discharging, short circuits, and overheating, ensuring both user safety and optimal battery performance. The unit also features proper grounding for enhanced safety.

Reliable and Long-Lasting

Your trusted power solution



* Original capacity remains 80% after 3,000+ cycles,
6-8 times longer than conventional batteries.

Figure 3: Illustration of the durable LiFePO4 batteries and the BLUETTI AI-BMS for safe and stable operation.

2.3 Charging Options

The AC50B offers multiple flexible charging methods:

- **AC Charging:** Activate Turbo Charging Mode via the BLUETTI App for a rapid 580W AC input, allowing 0-80% charge in just 45 minutes.
- **Solar Charging:** Supports up to 200W solar input, achieving a full charge in approximately 3 hours with optimal

sunlight.

- **Car Charging:** Conveniently charge the unit using your vehicle's 12V/10A car port.
- **Generator Charging:** Compatible with external generators for charging.



Figure 4: The AC50B supports fast AC charging, reaching 80% in 45 minutes.

2.4 Connectivity and Ports

The AC50B features 6 versatile output ports to power a wide range of devices:

- 2 x 700W AC Outlets
- 1 x 15W USB-A Port
- 2 x 65W USB-C Ports (for fast charging devices like cameras and drones)
- 1 x 12V/10A Car Port

The BLUETTI App allows for remote control and monitoring of real-time power consumption, battery status, and OTA (Over-The-Air) upgrades.

6 Ports for You

Charge multiple devices at a time.



2 x 700W
AC Outlets



2 x 65W
USB-C



1 x 15W
USB-A



1 x 120W
Car Port



Figure 5: Overview of the 6 available ports on the AC50B for charging multiple devices simultaneously.

2.5 Portability and Design

Weighing only 14.8 lbs, the AC50B is highly portable and easy to carry, making it convenient for outdoor adventures and travel. Its compact dimensions (11" L x 7.9" W x 8.7" H) ensure it fits easily into your gear.

Easily Pick up by One Hand

Only 14.8 lbs



Figure 6: The AC50B's compact size and light weight make it easy to transport with one hand.

2.6 UPS Functionality

The AC50B features a 20ms UPS (Uninterruptible Power Supply) response time, enabling seamless power switching during outages to keep essential devices like Wi-Fi routers and desktop PCs running without interruption.

2.7 Expandability

The AC50B's capacity can be doubled with the optional BLUETTI B80 (P) expansion battery, extending its runtime for longer adventures. The Aviation to XT60 battery expansion cable is sold separately.

3. INCLUDED COMPONENTS

Your BLUETTI AC50B Solar Generator package includes:

- BLUETTI AC50B Power Station
- AC Charging Cable
- Solar Charging Cable
- Car Charging Cable
- User Manual

4. SETUP

4.1 Initial Charging

Before first use, fully charge your BLUETTI AC50B. Connect the AC charging cable to a wall outlet. For fastest charging, enable Turbo Charging Mode via the BLUETTI App. Alternatively, use the solar, car, or generator charging cables as needed.

4.2 Connecting Devices

Once charged, open the protective covers for the desired output ports. Plug your devices into the appropriate AC outlets, USB-A, USB-C, or 12V/10A car port. Ensure devices are within the power station's output limits.

5. OPERATING INSTRUCTIONS

5.1 Basic Operation

To power on the unit, press the main power button. The display will illuminate, showing battery status and power information. Press the DC or AC buttons to activate the respective output ports. Press again to turn them off.

5.2 Using the BLUETTI App

Download the BLUETTI App from your smartphone's app store. Pair your AC50B via Bluetooth. The app provides detailed real-time data on power consumption, battery health, and allows for remote control of outputs and charging modes (e.g., Turbo Charging, Silent Charging).

5.3 Power Lifting Mode

For devices requiring higher wattage (up to 1000W), activate Power Lifting Mode through the BLUETTI App. This mode is specifically designed for resistive loads and should be used with caution.

6. MAINTENANCE

6.1 Battery Care

To maximize battery lifespan, avoid fully discharging the unit regularly. Store the AC50B in a cool, dry place away from direct sunlight. For long-term storage, charge the unit to approximately 50-80% and recharge every 3-6 months.

6.2 Cleaning

Wipe the exterior of the unit with a soft, dry cloth. Do not use abrasive cleaners or immerse the unit in water.

7. TROUBLESHOOTING

- Unit not turning on:** Ensure the battery is charged. If not, connect to a power source.
- No output from ports:** Check if the AC/DC output buttons are activated. Ensure the device's power consumption does not exceed the port's maximum output.
- Overload warning:** Disconnect high-power devices. The unit will automatically reset after a short period.
- Overheating:** Ensure proper ventilation around the unit. Disconnect devices if the unit feels excessively hot.

8. SPECIFICATIONS

Feature	Detail
Model Name	BLUETTI AC50B
Battery Type	LiFePO4
Battery Capacity	448Wh
AC Output	2 x 700W (1000W Power Lifting)
USB-A Output	1 x 15W
USB-C Output	2 x 65W
Car Port Output	1 x 12V/10A
AC Input (Turbo)	580W (0-80% in 45 mins)
Solar Input	200W Max
Weight	14.8 lbs
Dimensions (L x W x H)	11" x 7.9" x 8.7"
UPS Transfer Time	20ms

9. WARRANTY AND SUPPORT

The BLUETTI AC50B Solar Generator comes with a 5-year warranty. For technical support, troubleshooting, or warranty claims, please contact BLUETTI customer service through their official website or the BLUETTI App.

10. PRODUCT VIDEOS

Below are official product videos from the seller demonstrating various features and uses of the BLUETTI AC50B.

BLUETTI AC50B: Road Trip Power Essential (Preview)

Your browser does not support the video tag.

This short video highlights the BLUETTI AC50B as an essential power source for road trips, showcasing its portability and convenience for on-the-go charging needs.

BLUETTI AC50B is Ideal for Camping

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This video demonstrates how the BLUETTI AC50B serves as an ideal power solution for camping, providing reliable energy for various outdoor activities and equipment.