AC70P
Portable Power Station

User Manual

Please Read This Manual Before Use And Follow Its Guidance.
Keep This Manual For Future Reference.

BLUETTI

⚠ Warning

1. Charge the unit before first use.
2. Do not use solar panels with open circuit voltage higher than 58V. Solar input voltage range for the unit is 12V-58VDC.
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

BLUETTI's products, services, and features are subject to the agreed-upon terms and conditions during purchase. Please note that some products, services, or features described in this manual may not be available under your purchase contract. Unless otherwise specified in the contract, BLUETTI makes no representations or warranties of any kind, express or implied, with respect to the contents of this manual.

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.

Contents

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 SAFETY INSTRUCTIONS

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

a. Read all the instructions before using the product.

b. To reduce the risk of injury, close supervision is necessary when the product is used near children.

c. Do not put fingers or hands into the product. And do not insert foreign objects into any ports of the product.

d. Use of an attachment not recommended or sold by the manufacturer may result in a risk of fire, electric shock, or injury to persons.

e. To reduce the risk of damage to the electric plug and cord, pull the plug rather than

the cord when disconnecting the product.
f. 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.
g. Do not operate the product with a damaged cord or plug, or a damaged output cable.
h. 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.
i. To reduce the risk of electric shock, unplug the product from the outlet before attempting any instructed servicing.
j. 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.
k. PERSONAL PRECAUTIONS
1) Wear complete eye protection and clothing protection. Avoid touching eyes while working near the battery.
2) NEVER smoke or allow a spark or flame in the vicinity of the battery or engine.
3) 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.
l. When charging the internal battery, work in a well ventilated area and do not restrict ventilation in any way.
m. 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.
n. Do not expose the product to fire or excessive temperature. Exposure to fire or temperature above 130°C may cause an explosion.
o. Have servicing performed by a qualified repair person using only identical replacement parts. This will ensure that safety is maintained.
p. DO NOT operate in wet conditions. If the product becomes wet, please thoroughly dry it before using.
q. Please ensure proper ventilation while in use and do not obstruct fan openings. Inadequate ventilation may cause permanent damage to the product.
r. 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.

s. In case of fire, use only a dry powder fire extinguisher appropriate for the product.
t. 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.
u. To avoid contact with any liquids, do not use this product in the rain or high humidity.

1.3 Grounding Instructions

This product must be grounded. 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 a 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 Storage Instructions

a. When the SoC drops to 5%, please charge the product immediately.
b. Before storing the product, charge it to 40% to 60% SoC to keep it in optimal condition. In addition, power off the unit and disconnect all electrical connections from it.
c. Store the product in a cool and dry place, keeping it away from flammable or combustible materials and gases.
d. The product can be safely stored within a temperature range of -20℃ to 40℃ (-4℉ to 104℉). However, if the storage duration exceeds one month, it's recommended to maintain an ideal storage temperature of around 30℃ (86℉).
e. Fully cycle the product every 3 months to maintain the battery's health. It's NOT recommended to store the unit 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 24 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.

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

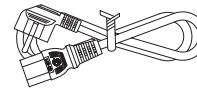
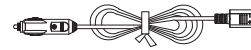
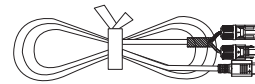
SAVE THESE INSTRUCTIONS

⚠ 🕮 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.

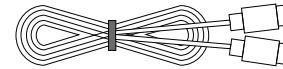
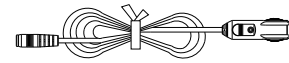
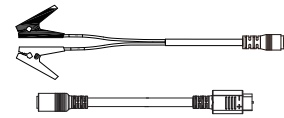
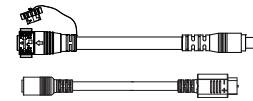
2. Packing List

Standard Packaging

Item	Picture	Qty.
Portable Power Station		1
AC Charging Cable		1
Car Charging Cable		1
Solar Charging Cable		1
Grounding Screw (M5×10)		1
User Manual		1
Warranty Card		1

Optional Accessories

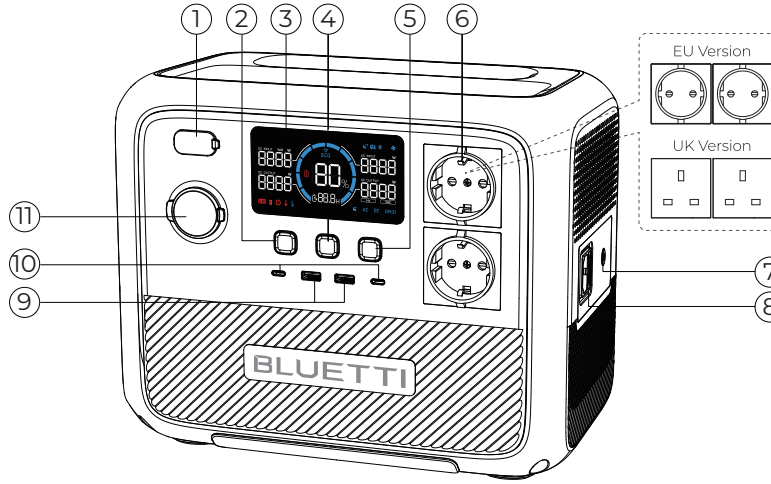
(Available on official BLUETTI website)

Item	Picture
USB-C to USB-C Cable (Output)	
Cigarette Lighter to DC5521 Cable (For 12V devices with DC5521 port, such as routers, cameras, etc.)	
Lead-acid Battery Charger (Charge a 12V/10A lead-acid battery via AC70P. For gasoline vehicle batteries only.)	
Lead-acid Battery Charging Cable Kit (Charge the AC70P via a lead-acid battery.)	
Battery Connection Cable Kit (Charge the AC70P via an expansion battery in Power Bank mode.)	

3. Product Overview

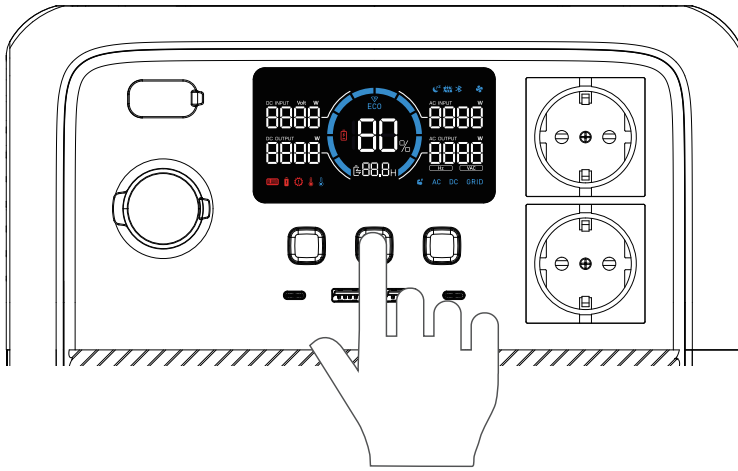
Meet the AC70P portable power station - the ultimate companion for your travel and adventure needs. With a 1000W pure sine wave inverter and 864Wh $LiFePO_4$ battery, it offers ample power for all your outing gadgets like phones, laptops, car refrigerators, and air conditioners. When you require even more power, it boasts the innovative Power Lifting mode to tackle higher resistive demands of up to 2000W, perfect for hairdryers, kettles, and other heating appliances. Thanks to Turbo Charging technology, you can enjoy the convenience of an 80% charge in just 45 minutes, and a full charge in 1.5 hours.

Whether you're embarking on outdoor adventures, road trips, or camping trips with friends, the AC70P is built to accompany you every step of the way. So, go ahead and embrace your travel plans with confidence, knowing that the AC70P will provide reliable power whenever you need it.



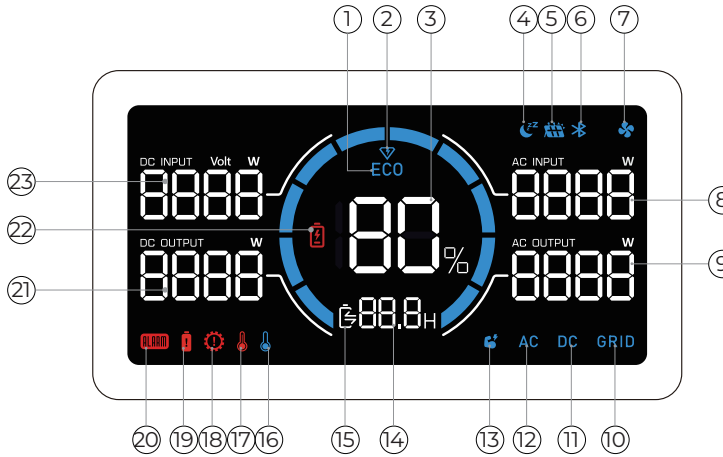
① DC Input
② DC Power Button
③ LCD Screen
④ Power Button
⑤ AC Power Button
⑥ AC Output
⑦ Grounding Pole
⑧ AC Input
⑨ USB-A Port
⑩ USB-C Port
⑪ Cigarette Lighter Port

4. Power ON/OFF



- Power ON: Press and hold the ⏻ for about 2 seconds to turn AC70P on. When the AC70P is on, press the ⏻ again to turn on / off the LCD screen.
- Power OFF: Press and hold the ⏻ for 2 seconds to turn off the unit.
- AC ON / OFF: When the AC70P is on, press the AC power button to turn it on / off.
- DC ON / OFF: When the AC70P is on, press the DC power button to turn it on / off.

5. LCD Screen



① ECO Mode

② Turbo Charging

③ Battery Capacity (SoC)

④ Silent Charging

⑤ DC Input

⑥ Bluetooth Connection

⑦ Fan

⑧ AC Input Power

⑨ AC Output Power

⑩ Grid Connection

⑪ DC Output

⑫ AC Output

⑬ Power Lifting Mode

⑭ Charge / Discharge Remaining Time

⑮ Charge / Discharge Status

⑯ Low Temperature Alert

⑰ High Temperature Alert

⑱ Overload Alert

⑲ Overcurrent Alert

⑳ Fault Alert

㉑ DC Output Power

㉒ Low Voltage Alert

㉓ DC Input Power

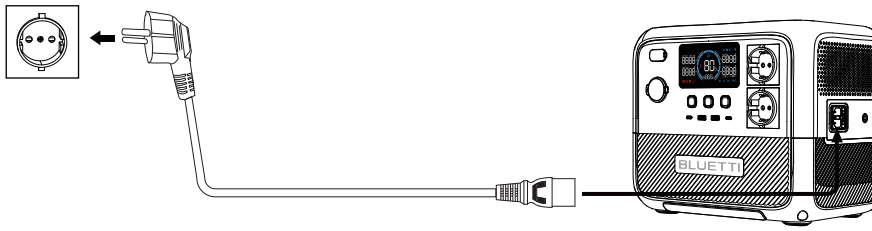
LCD Instructions	
Startup	LCD lights up
Shutdown	LCD lights off
ECO Mode enabled	ECO displays
Turbo Charging enabled	displays
State of Charge	188%
Silent Charging enabled	displays
DC input	displays
Bluetooth connected	displays
Fan on or abnormal	displays or flashes
AC input power	AC INPUT W 8888
AC output power	AC OUTPUT W 8888
AC input	GRID displays
DC output enabled	DC displays
AC output enabled	AC displays
Power Lifting Mode enabled	displays
Remaining charge / discharge time (hour)	88.8H displays
Charging or discharging	displays
Abnormal temperature	displays
Connected device(s) overheating	displays
Overload	displays
Overcurrent	displays
Error code report	ALARM displays
DC output power	DC OUTPUT W 8888
Battery low (below 5%)	displays
DC input power	DC INPUT VOLT W 8888 displays

6. Charging

AC70P supports four charging methods: AC, solar, car, and generator.

6.1 AC Charging

Plug the AC70P into a standard wall outlet and start charging. Once it's fully charged, the AC70P automatically stops charging to prevent overcharging. For a fast charge, you can enable Turbo Charging in the BLUETTI App, which allows for an 80% capacity in just 45 minutes at an ambient temperature of 25℃ (77 °F).

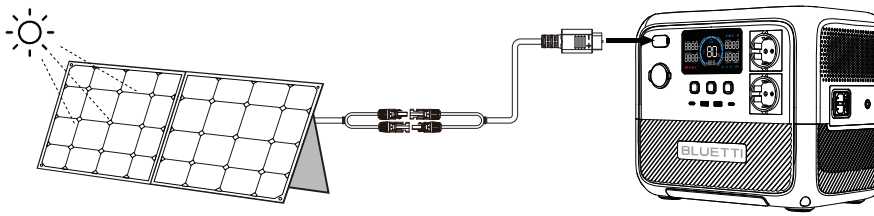


6.2 Solar Charging

Connect the solar panels (in series or parallel) to AC70P via the solar charging cable. When receiving a continuous input of 500W, the AC70P will automatically stop charging within 2 hours. However, please be aware that the charging time may vary based on weather conditions, sunlight intensity, panel orientation, and other variables.

Note: Make sure your solar panels meet the following requirements:

Voc: 12V-58V Current: 10A Max. Power: 500W Max.

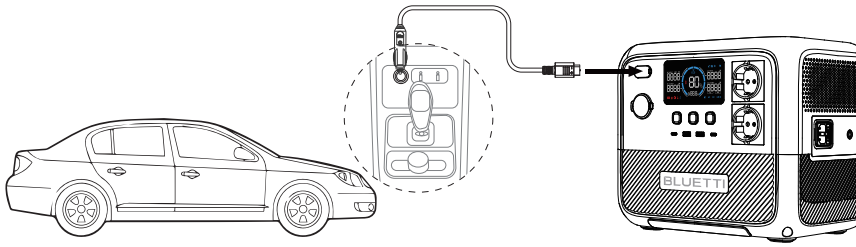


6.3 Car Charging

Connect the AC70P to the vehicle's 12V / 24V cigarette lighter port via the car charging cable. The AC70P also automatically stops charging when it's fully charged. On average, it takes about 7-9 hours to refill the AC70P using a 12V port and 4-5 hours with a 24V port at an ambient temperature of 25℃ (77 °F).

Note: Make sure your vehicle meets the following conditions for charging:

- The vehicle is capable of supplying power.
- The vehicle's engine is running during the charging process.

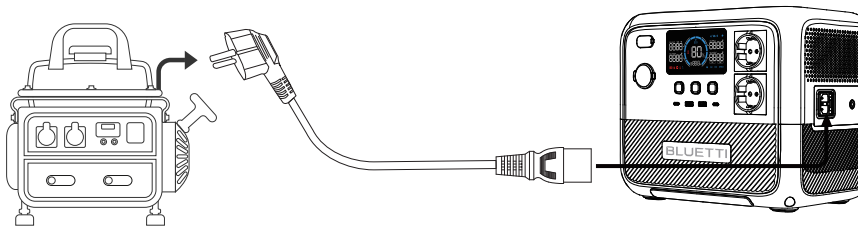


6.4 Generator Charging

Connect the AC70P to a generator via the AC charging cable. Under optimal conditions, it takes approximately 2 hours to reach a full charge at an ambient temperature of 25℃ (77 °F).

Note: Make sure your generator meets the following conditions for charging:

- The generator boasts a stable power output that exceeds the charging requirement of the AC70P.
- The generator delivers a pure sine wave AC output with voltage and frequency that meet AC70P's specifications.



⚠ For stable and efficient charging, avoid using unreliable power sources like wind turbines. Also, it's not recommended to run your devices with AC70P while it's charging with a generator.

7. Discharging

7.1 AC Discharging

Item	Specifications	Compatible Loads
2 × AC Outlet	230V 50Hz / 60Hz	Appliances up to 1000W power. e.g., air conditioners, refrigerators

Note: Do not apply AC70P to loads higher than 1000W, as this may cause damage to AC70P and your devices.

7.2 DC Discharging

Item	Specifications	Compatible Loads
Cigarette Lighter Port	12V / 10A	12V DC appliances up to 120W power. e.g., car refrigerator, air conditioner
2 × USB-A Port	5V / 2.4A	Mobile phones and other small loads.
2 × USB-C Port	5 / 9 / 12 / 15 / 20V, 3A; 20V, 5A	Mobile phones, laptops, etc.

Note: To ensure optimal performance, avoid short-circuiting the ports and keep them dry during use or storage. Additionally, do not block or cover the ports while ensuring proper ventilation.

8. Settings

The AC70P offers the convenience of adjusting its settings either via physical buttons or BLUETTI App. With the buttons located on the device itself, you have direct control over various settings such as ECO Mode, output frequency, charging modes, and other functionalities. Additionally, by using the BLUETTI App, you can access a user-friendly interface on your phone to conveniently monitor and control the AC70P.

8.1 Setting Mode

When the AC70P is powered on, press and hold the AC and DC power buttons for about 2 seconds till the frequency indicator flashes to enter Setting Mode.

Press and hold the AC and DC power buttons at the same time to exit Setting Mode.

Note: If you do not perform any operation in 1 minute, the AC70P will automatically exit Setting Mode and no changes will be saved.

8.2 ECO Mode

ECO Mode is a power-saving mode that is enabled by default. When operating on ECO Mode, the AC / DC output will automatically turn off if the AC70P is bearing low (less than 40W or the set power) or no load for a while.

Note: When connecting a small power device, disable the ECO Mode for a successful and uninterrupted charge experience.
In the Setting Mode, use the DC power button to navigate until the **ECO** icon starts flashing on the screen. Then, press the AC power button to enable or disable the mode.

8.3 Frequency Switching

The current output frequency (50Hz / 60Hz) is displayed in the lower right corner of the screen. To change the frequency, access the Setting Mode, press the DC power button and the frequency starts flashing. Then, press the AC power button to switch between the available frequency options.

8.4 Power Lifting Mode

Power Lifting Mode allows AC70P to handle high-power resistive loads up to 2000W, which is disabled by default. In the Setting Mode, use the DC power button to navigate until the icon starts flashing on the screen. Then, press the AC power button to enable or disable the mode.

This mode is particularly useful when using the AC70P with demanding heating devices such as kettles, electric blankets, and hairdryers. If the screen reads "OVERLOAD" while operating such devices, activating Power Lifting mode allows the AC70P to tackle these tasks effectively.

Note: The resistive loads should have a power rating between 1000W and 2000W. Although the AC70P can handle higher power demands, its actual operating power remains at 1000W.

8.5 Bluetooth On/Off

In the Setting Mode, use the DC power button to navigate until the icon starts flashing on the screen. Then, press the AC power button to turn the Bluetooth on or off.

8.6 AC Charging Mode

The AC70P supports three AC charging modes - Standard, Turbo, and Silent to fit your specific needs. In the Setting Mode, use the DC power button to navigate until the or icon starts flashing on the screen. Then, press the AC power button to enable or disable these two modes.

AC Charging Instructions

Icon	Mode	Recharging Time	Note
None	Standard	2 hours	Reduces battery wear and tear for long battery life.
	Turbo	1.5 hours 0-80% in 45 mins	Convenient when recharging time is a priority.
	Silent	4 hours	Offers a quiet, low-power operation.

9. BLUETTI App

Scan the QR code below or search "BLUETTI" in the App Store or Google Play to download the BLUETTI App.

For more details, please refer to BLUETTI APP INSTRUCTIONS.

10. Specifications

Model	AC70P			
Country / Region	JP	US	CN	EU / UK / AU
Battery Capacity	864Wh			
Cell Type	$LiFePO_4$			
AC + DC Input	1000W Max.			
Net Weight	10.2kg / 22.5lbs			
Dimensions (L*W*H)	314mm × 209.5mm × 255.8mm / 12.4in × 8.2in × 10.1in			
Charging Temperature	0°C-40°C / 32°F-104°F			
Discharging Temperature	-20°C-40°C / -4°F-104°F			
Storage Temperature	-20°C-40°C /-4°F-104°F			
Working Humidity	10%-90%			

Country / Region	JP	US	CN	EU / UK / AU
AC Output				
Power	1000W in total			
Voltage	100VAC	120VAC	220VAC	230VAC
Current	10A	8.3A	4.5A	4.3A
Frequency	50Hz / 60Hz			
DC Output				
Cigarette Lighter Port	12VDC / 10A			
USB-A *2	5VDC / 2.4A each port			
USB-C *2	5 / 9 / 12 / 15 / 20VDC, 3A; 20VDC, 5A each port			
Wireless Charging	5W/7.5W/10W/15W			
AC Input				
Voltage	100VAC	120VAC	220VAC	230VAC
Max. Current	9A	9A	6A	6A
Frequency	50Hz / 60Hz			
UPS	Switching time ≤20ms			
Power	850W Max. (0%-80% in 45 minutes @ 10℃-40℃ / 50°F-104°F)			
DC Input				
Interface	XT60PM-M			
Power	500W Max.			
Current	10A Max.			
Voltage	12V-58VDC			
Bluetooth 5.0 / 5.1				
Max. Transmission Frequency	125kbps			
Max. RF Transmission Power	+12dBm			
Receiver Sensitivity	-99dBm / 1Mbps			
Wireless Charging				
Transmission Frequency Range	110k-205kHz			
Max. RF Transmission Power	15W			

11. Troubleshooting

In the Setting Mode, press and hold the DC power button until an error code appears on the screen. Please refer to the table below for helpful guidance.

Error Code	Error Description	Troubleshooting
E001	Inverter overload	Check if the power consumption of your devices is too high. Reduce the load if necessary.
E002	Temperature protection	Check if any of your devices are overheating. Allow them to cool down before use.
E003	Inverter short circuit	Check if any of your electrical devices are causing a short circuit. Disconnect and resolve the issue.
E004	Output failure	The output voltage is abnormal. Inspect the machine for any malfunctions or irregularities.
E016	Fan failure	Check if the fan is blocked, unplugged, or not functioning properly. Ensure proper ventilation.
E033	PV overvoltage	Make sure the PV input voltage is within the range of 12V-58VDC.
E065	Cigarette lighter output short circuit	Check if the power consumption of your devices is too high. Reduce the load if necessary.
E068	Cigarette lighter output overtemperature	Wait for the device connected to the cigarette lighter port to cool down.
E085	Charging temperature too high	Wait for the unit to cool down before charging.
E086	Charging temperature too low	Make sure the unit is placed in an ambient temperature of 0℃-40℃ (32°F-104°F).
E087	Discharging temperature too high	Wait for the unit to cool down before discharging.
E088	Discharging temperature too low	Make sure the unit is placed in an ambient temperature of 0℃-40℃ (32°F-104°F).
E113	Grid overvoltage	Check if the grid voltage is too high. Contact your local power provider if necessary.
E114	Grid undervoltage	Check if the grid voltage is too low. Contact your local power provider if necessary.
E115	Grid overfrequency	Check if the grid frequency is too high. Contact your local power provider if necessary.
E116	Grid underfrequency	Check if the grid frequency is too low. Contact your local power provider if necessary.
E117	Grid oscillation	Disconnect the grid input and contact BLUETTI support for further assistance.
Others	/	Please contact BLUETTI support for assistance.

Appx. 1 Estimating Operation Time

To estimate the operation time of the AC70P, consider the load you're applying:

- For high-power loads (above 300W):
  Operation time = Battery Capacity (Wh) x DoD x η ÷ Load Power
- For small-power loads (below 300W):
  Operation time = Battery Capacity (Wh) x DoD x η ÷ (Load Power + Self-consumption of AC70P)

Note: DoD refers to depth of discharge. AC70P works at 90% DoD for longer battery life.
η is the conversion efficiency of the inverter, typically over 85% for AC70P.
The self-consumption of AC70P is approximately 15W.

E.g. If you have a 40W refrigerator, you can run it for about 12 hours.
Operation time = 864Wh × 90% × 85% ÷ (40W + 15W) ≈ 12 hours.

Please keep in mind that the estimated operation time provided is for only purposes and may vary based on actual usage conditions. Factors such as low temperature and excessive loads can significantly affect the battery capacity, leading to a reduction in the average operation time.

Appx. 2 FAQs

Q1: How do I know whether my devices will work well with this product?

A: Please evaluate the total constant load of your devices. If it doesn't exceed the Max. output power of AC70P (1000W), you can use this power station to run your devices. Note: Some devices with built-in motor or compressor may start at 2-4 times the rated power, which can easily overload the AC70P.

Q2: Can I use third-party solar panels to charge this product?

A: Yes, you can. However, make sure your solar panels have an open circuit voltage of 12V-58V and are equipped with MC4 connectors. It's also important not to mix different types of solar panels.

Q3: Can it charge and discharge at the same time?

A: Yes. It supports pass-through charging. The AC70P comes with the premium $LiFePO_4$ battery and proprietary Battery Management System to ensure that it can charge and discharge at the same time.

Q4: What is ECO Mode and can I turn it off?

A: ECO Mode helps save power, and you can turn it on or off on the screen. When operating on ECO Mode, the AC / DC output will automatically turn off if the AC70P is bearing low or no load for a while. You can set the power threshold of AC output and DC output to 10W-30W / 5W-10W, respectively, for 1, 2, 3, or 4 hours.

Q5: Why is the charging power often too low?

A: AC70P has a built-in intelligent BMS that automatically adjusts the charging power in response to the battery temperature and SoC, thus protecting the battery and extending its service life.