

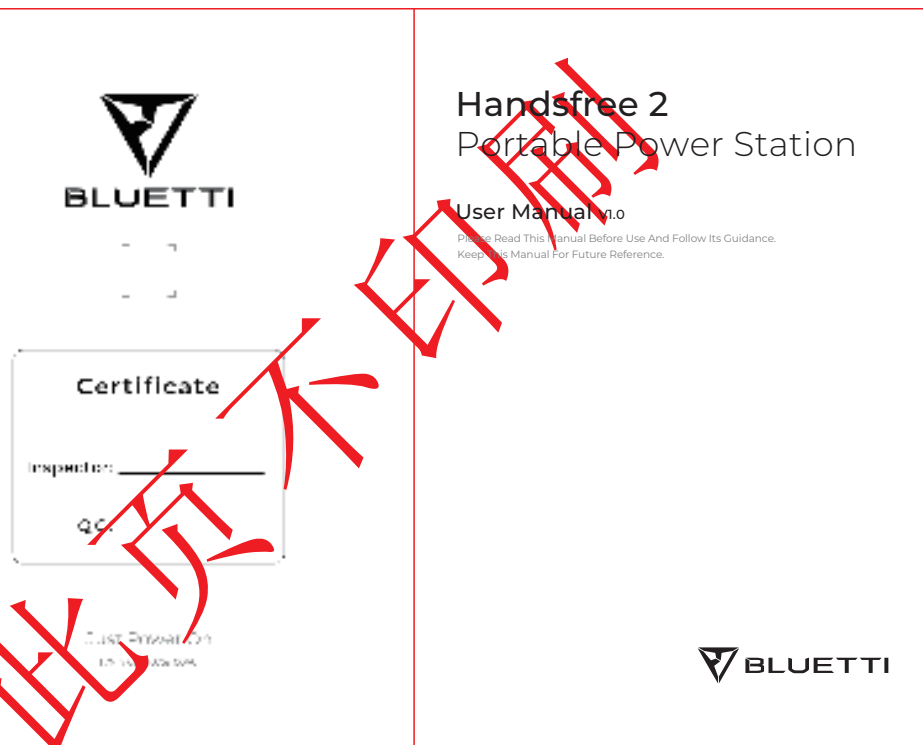
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A2			

封底

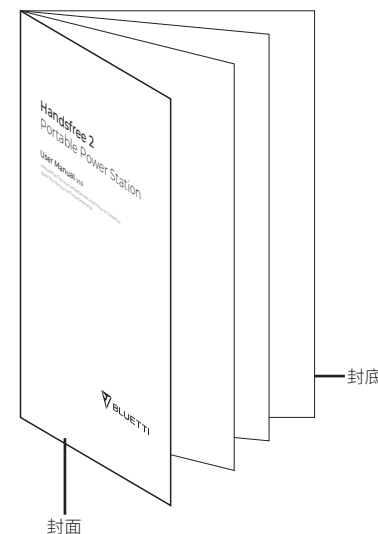
封面

143

210



说明书示意图



样品承诺书要求:

- 01、封面 (供应商&我司承认会签)
- 02、图纸/规格
- 03、尺寸报告
- 04、包装说明
- 05、试验报告 (如纸张, 胶水, 装订环保证明等)
- 06、材质分解表 (如纸张纸的克重品牌, 材质克重和胶水品牌型号等)
- 07、材质证明、MSDS (如有第三方正式机构的证明也附上)
- 08、IQC检验报告

页数共32P

技术要求:

成品尺寸:A5(143*210mm)

材质:80g书写纸封面封底内页, 双面印刷, 装订;

颜色:单黑印刷;

所用材质需符合RoHS;

注:印刷需清晰, 不能有模糊, 脏污, 脱墨, 花点, 重影, 印歪,

纸张不平整等不良。

深圳市德兰明海科技有限公司 Shenzhen PowerOak Newener Co., Ltd				
材料		表面处理		无特殊说明, 长度单位: mm 未标注尺寸公差按: x. (没有小数位) ± 0.2 x.x (一位小数位) ± 0.1 x.xx (两位小数位) ± 0.05 x° (角度) $\pm 0.5^\circ$ * 一重要尺寸 0—参照尺寸
型号	Handsfree 2	比例: 1:1 /A4	图纸编号/版本 PLP017-6d01A0	
名称	英文说明书 (美规BLUETTI)			
设计	杨振华 2024.05.06	审核	批准	
物料编号				17.0303.0753-00
				共 张/第 张

Handsfree 2

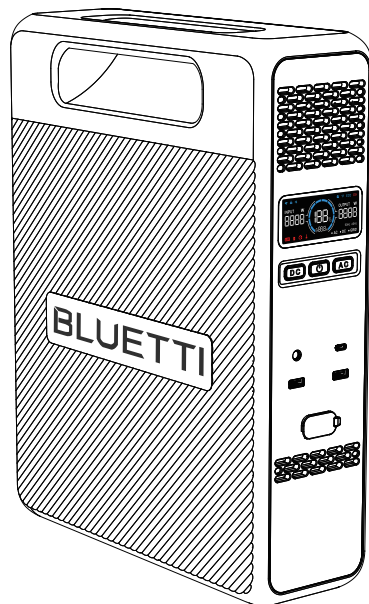
Portable Power Station

User Manual v1.0

Please Read This Manual Before Use And Follow Its Guidance.

Keep This Manual For Future Reference.





Warning

1. Charge the unit before first use.
2. Do not use solar panels with open circuit voltage higher than 45V. Solar input voltage range for the unit is 12V-45V.
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.



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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.

Shenzhen PowerOak Newener Co., Ltd.

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Web: <https://www.bluettipower.com>

About the Manual

Introduction

This manual provides information on the functionality, basic operation and safety instructions of the Handsfree 2 portable power station. Please read and understand all instructions in this manual before use.

Target Audience

- Technical support engineer
- End-user

Symbol Conventions

This manual uses the following symbols to highlight important information:

Symbol	Category	Description
	Danger / Warning / Attention	It indicates a hazardous situation which, if not avoided, could result in death or serious injury.
	Notice	It indicates a potentially hazardous situation which, if not avoided, could cause substantial damage to property and the environment.

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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.
- The installation and ambient conditions must comply with the requirements in the relevant international, national, or regional standards.
- Avoid unauthorized disassembly, component replacement, or modification of software codes.

BLUETTI shall not be liable for the following circumstances:

- Damage resulting from 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 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.
- The product doesn't fulfill power supply needs for power-reliant equipment in critical sectors like atomic energy, aviation, medical, and other domains where safety is paramount. BLUETTI assumes no liability for incidents involving personal safety, fire, equipment malfunction, or any adverse aftermath resulting from using this product with such equipment.
- Damage caused by adjustments, changes, or removal of labels in violation of this manual.
- This product is not intended for use 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. BLUETTI shall not be liable for any data loss, equipment damage, or personal injury resulting from the violation of this requirement.

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:

- 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.
- To reduce the risk of electric shock, unplug the product from the outlet before attempting any instructed servicing.
- The USB-C port, categorized as PS3 according to the IEC 62368-1 standard, should take into account the fire safety measures of the connected devices or accessories (such as fire-resistant casings).
- This product can be used alone. When used with a backpack, only the BLUETTI BP2 backpack is allowed.
- 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.
- **WARNING:** Avoid contact with seawater, which may cause corrosion of metal parts.

- 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

This product must be grounded when connected to the grid. 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 Moving instructions

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 User Maintenance and 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.
- 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.

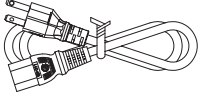
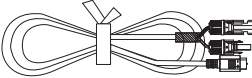
- Connect the product to a socket-outlet that has an earthing connection using the power cord provided.
- The socket-outlet should be installed near the product and easily accessible for safety purposes.
- Never dispose of a battery by throwing it into fire or a hot oven, or by mechanically crushing 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.

SAVE THESE INSTRUCTIONS

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

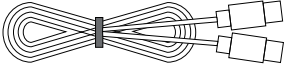
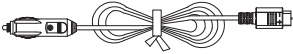
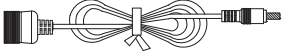
2. Packing List

Standard Packaging

Item	Picture	Qty.
Portable Power Station		1
AC Charging Cable (1.8m / 5.9ft)		1
Solar Charging Cable (MC4-XT60, 1.5m / 4.9ft)		1
Grounding Screws		1
BP2 Backpack		1
User Manual		1
Warranty Card		1

Optional Accessories

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

Item	Picture
USB-C to USB-C Cable (Output)	
Car Charging Cable	
DC5521 to Cigarette Lighter Cable	
Lead-acid Battery Charging Cable (Charge the Handsfree 2 via a lead-acid battery.)	

3. Product Introduction

The Handsfree 2 portable power station is designed to keep you powered while on the move. Equipped with a 700W pure sine wave inverter and a 512Wh/20Ah lithium iron phosphate (LFP) battery.

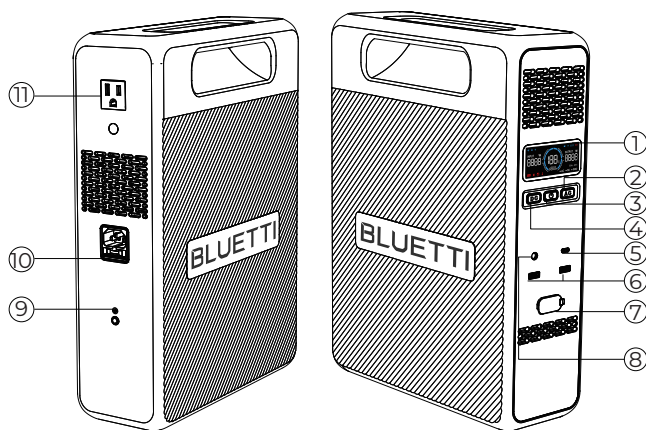
When set to Turbo Charging mode, the Handsfree 2 can reach an 80% charge in just 45 minutes under normal room temperature conditions. With a combined output power of 700W (AC+DC), it effectively supports devices within this power range.

For more detailed specifications of the Handsfree 2, please refer to Chapter 11 "Specifications".

Attention

- Do not connect the AC output of Handsfree 2 to the grid.
- To prevent tipping, please place Handsfree 2 horizontally for use.

4. Product Overview



① LCD Display

② AC Power Button

③ Power Button

④ DC Power Button

⑤ USB-C Port

⑥ USB-A Port

⑦ DC Input

⑧ DC5521 Port

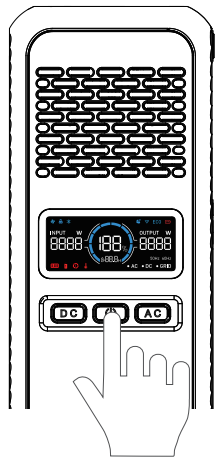
⑨ Grounding Terminal*

⑩ AC Input

⑪ AC Output

* Refer to Appendix 3 for specific grounding guidelines.

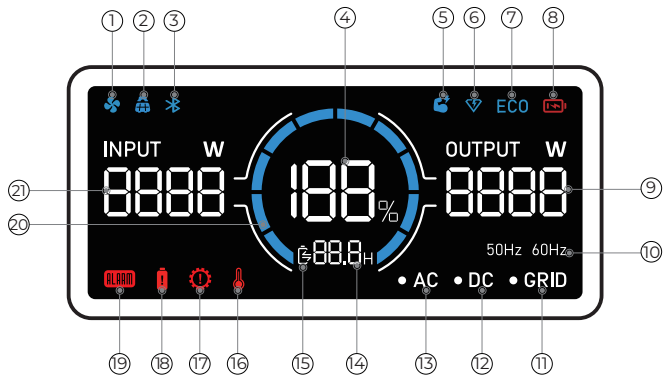
5. Power ON/OFF



- **Power ON:** Press the power button once. When the Handsfree 2 is on, press the power button again to turn on / off the LCD display.
- **Power OFF:** Press and hold the power button for about 2 seconds.
- **Restart:** Power off the Handsfree 2 first, then press the power button to restart.
- If there's no output from both DC and AC for more than 1 minute, the unit will shut down automatically.

6. LCD Display

The Handsfree 2 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.



LCD Instructions

No.	Icon	Description
①	Fan Status	When it lights up, the fan is activated and working properly. If it flashes, there may be a problem with the fan.
②	PV Input	The Handsfree 2 is charging from solar panel(s) or a car.
③	Bluetooth Connection	The Handsfree 2 connects to BLUETTI app via Bluetooth.
④	Battery Capacity (SoC)	The remaining battery capacity.
⑤	Power Lifting Mode	The Handsfree 2 is operating in Power Lifting Mode.
⑥	Turbo Charging	The Handsfree 2 is charging in Turbo Charging Mode.
⑦	ECO Mode	The ECO Mode is enabled to save power.
⑧	Low Battery Alert	The SoC drops below 5%.
⑨	Output Power	The real-time total output.
⑩	Output Frequency	The real-time output frequency.
⑪	Grid Connection	The Handsfree 2 is charging from the home grid.
⑫	DC Output	The DC output is turned on.
⑬	AC Output	The AC output is turned on.
⑭	Charge / Discharge Remaining Time	The remaining time of charging or discharging.
⑮	Charge / Discharge Status	 : Charging  : Discharging
⑯	High Temperature Alert	The temperature inside the unit is too high.
⑰	Overload Alert	The Handsfree 2 is overloaded.
⑱	Overcurrent Alert	The Handsfree 2 is drawing too much current, which can cause damage to the unit or any connected devices.
⑲	Fault Alert	There's an issue with the Handsfree 2, which may require troubleshooting or repair.
⑳	Charge / Discharge Progress	The bar increases during charging and decreases during discharging.
㉑	Input Power	The real-time total input power.

7. Charging

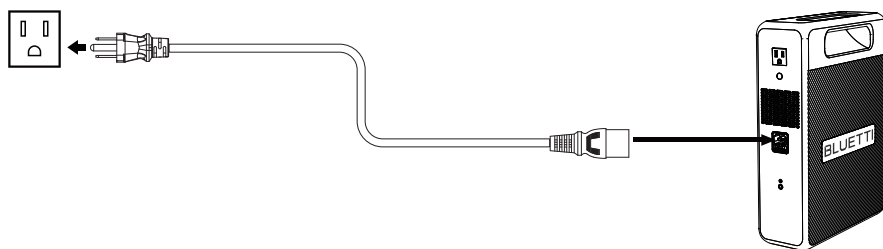
Handsfree 2 supports four charging methods: AC, solar, car, and generator.

Attention

- Double-check that all cables are firmly plugged in.
- Avoid getting the plug and socket wet to prevent any potential damage.

7.1 AC Charging

Plug the Handsfree 2 into a standard wall outlet and start charging. It will automatically shut down if there is no operation within one minute after charging is completed. 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°C (77°F).

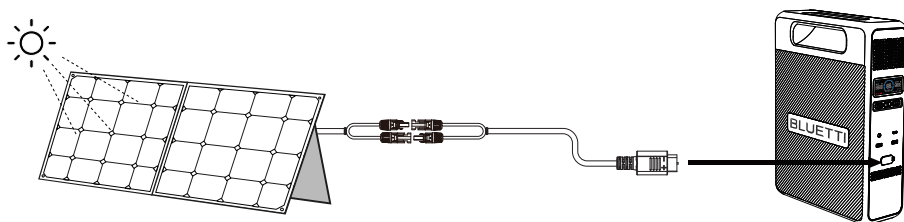


7.2 Solar Charging

Connect the solar panels (in series or parallel) to Handsfree 2 via the solar charging cable. When receiving a continuous input of 350W, the Handsfree 2 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 panel(s) meet the following requirements:

Voc: 12V-45V Current: 8.2A Power: 350W

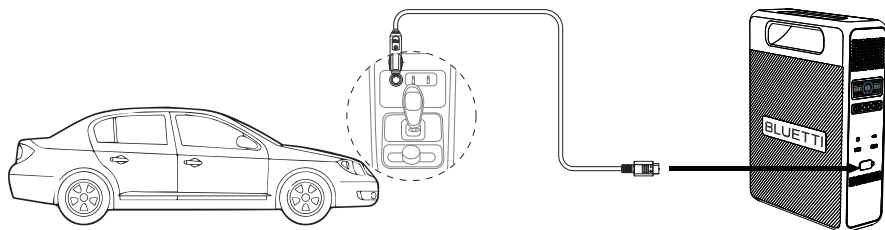


7.3 Car Charging

Connect the Handsfree 2 to the vehicle's 12V / 24V cigarette lighter port via the car charging cable. It will automatically shut down if there is no operation within one minute after charging is completed. It can charge at a maximum of 96W with a 12V port and 192W with a 24V port.

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.

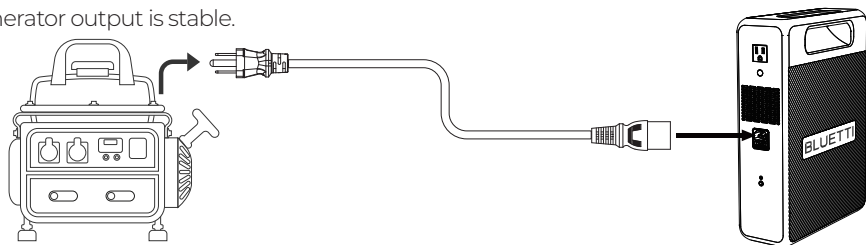


Notice:

The Handsfree 2 has a low-voltage disconnect function designed to protect your vehicle's battery during charging. When the car battery is low, the unit will automatically stop charging to prevent over-discharging and potential damage to the battery.

7.4 Generator Charging

Connect the Handsfree 2 to a generator via the AC charging cable. It will automatically shut down if there is no operation within one minute after charging is completed. It takes approximately 2 hours to reach a full charge at an ambient temperature of 25°C (77°F) if the generator output is stable.



Note:

- Make sure your generator delivers the AC output with charging voltage and frequency that meet Handsfree 2's specifications.
- If the total power demand of your connected devices exceeds the generator's output capacity, please turn on the Grid Self-adaption Mode to ensure a seamless charging experience.
- To switch charging voltage and frequency, and enable the Grid Self-adaption Mode, please refer to 《Handsfree 2 BLUETTI App User Manual》.

8. Discharging

8.1 AC Discharging

Port	Specifications	Compatible Loads
1 × AC Outlet	100V / 120V / 220V 50Hz / 60Hz	Appliances up to 700W power.

Note: Do not apply Handsfree 2 to loads higher than 700W, as this may cause damage to Handsfree 2 and your devices.

8.2 DC Discharging

Port	Picture	Specifications	Compatible Loads
DC5521×1		12V / 7A	12V DC appliances up to 84W power.
USB-A×2		5V / 3A Total / 15W Total	Mobile phones and other small loads.
USB-C×1		5 / 9 / 12 / 15 / 20V, 3A ; 20V, 5A	Mobile phones, laptops, etc.

Note:

- Turn on the DC power button after connecting the load, and turn it off before disconnecting.
- 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.

9. Settings

The Handsfree 2 offers the convenience of adjusting its settings either via physical buttons or the 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 Handsfree 2.

9.1 Enter Setting Mode

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

9.2 Frequency Switching

The output frequency (50Hz / 60Hz) is displayed in the lower right corner of the display. In the Setting Mode, press the DC power button to navigate to page P01; the current frequency will appear. Then, press the AC power button to switch the frequency options based on your requirements.

9.3 AC Charging Mode

The Handsfree 2 supports 3 AC charging modes - Standard, Turbo, and Silent, all configurable via the app. Alternatively, in the Setting Mode, navigate to page P03 using the DC power button; the (♡) icon will start flashing on the display. Then, press the AC power button to enable or disable the Turbo charging mode.

Mode	Charging Power			Recharging Time	Note	Icon
	AC	PV	AC+PV			
Standard	350W Max.	350W Max.	350W Max.	2 hours	More friendly to Handsfree 2's battery.	None
Turbo	600W Max.	350W Max.	600W Max.	80% charge in 45 minutes; full charge in 80 minutes	Comes in handy when recharging time is a priority.	
Silent	150W Max.	150W Max.	150W Max.	4.5 hours	Offers a quiet, low-power operation for long battery life.	None

9.4 Power Lifting Mode

Power Lifting Mode allows Handsfree 2 to handle high-power resistive loads up to 1200W, including electric blankets, kettles, hairdryers, and other heating devices. In the Setting Mode, navigate to page P04 using the DC power button. Then, press the AC power button to enable or disable the mode. The (🔥) icon will appear on the display when it's enabled.

📖 Notice:

- The Power Lifting Mode is disabled by default and is only suitable for resistive loads with a power rating between 700W-1200W.
- Although the Handsfree 2 can handle higher power demands, its actual operating power remains at 700W.

9.5 ECO Mode

The Handsfree 2 has two ECO modes that help you save power and extend battery life:

- AC-ECO Mode
In this mode, if the AC power output falls below or remains at a certain level for a set period of time, the AC power will automatically turn off.
- DC-ECO Mode
In this mode, if the DC power output falls below or remains at a certain level for a set period of time, the DC power will automatically turn off.

📖 Notice:

- The AC-ECO and DC-ECO modes are enabled by default to save energy, and it's recommended to keep them enabled at all times.
- Use the BLUETTI App to enable or disable AC-ECO Mode and DC-ECO Mode separately. If you use the LCD display, they'll be turned on or off at the same time.
- To avoid any interruption in charging, disable ECO Mode when charging a small device that consumes less than 10W of power.

In the Setting Mode, navigate to page P05 using the DC power button; the **ECO** will start flashing on the display. Then, press the AC power button to enable or disable the mode.

9.6 Bluetooth On/Off

In the Setting Mode, navigate to page P06 using the DC power button; the () icon will start flashing on the screen. Then, press the AC power button to turn the Bluetooth on or off.

9.7 Grid Self-adaption Mode

If you're charging the Handsfree 2 using an unstable generator or grid voltage, and the total power demand of your connected devices exceeds the Handsfree 2's input power, it is recommended that you enable the Grid Self-adaption Mode through the BLUETTI app to ensure a stable, safe charging experience for both the Handsfree 2 and your devices.

9.8 Exit Setting Mode

To save your Handsfree 2 settings and exit the Setting Mode, press and hold both the AC and DC power buttons at the same time.

Notice:

If you do not perform any operation in 1 minute, the Handsfree 2 will automatically exit the Setting Mode, and no changes will be saved.

10. 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 《Handsfree 2 BLUETTI App User Manual》.

11.Specifications

Model	Handsfree 2			
Country / Region	JP	US	CN	EU
Battery Capacity	512Wh / 20Ah			
Cell Type	Lithium Iron Phosphate (LFP)			
AC + DC Input Charging	600W Max.			
Net Weight	About 7.5kg / 16.5lbs			
Dimensions (L × W × H)	305mm × 105mm × 385mm / 12in × 4.1in × 15.2in			
Charging Temperature	0°C to 40°C / 32°F to 104°F			
Discharging Temperature	-20°C to 40°C / -4°F to 104°F			
Storage Temperature	-20°C to 40°C / -4°F to 104°F			
Working Humidity	10% to 90%			
AC Output				
Power	700W			
Voltage	100V	120V	220V	230V
Current	7A	5.8A	3.2A	3A
Frequency	50Hz / 60Hz			
DC Output				
DC5521 Port × 1	12V / 7A			
USB-A × 2	5V / 3A			
USB-C × 1	5 / 9 / 12 / 15 / 20V, 3A; 20V / 5A			
AC Input				
Voltage	100V	120V	220V	230V
Max. Current	8A	8A	5A	5A
Frequency	50Hz / 60Hz			
UPS	Switching time ≤20ms			
Charging Power.	600W Max. (0%-80% in 45 minutes @ 10°C-30°C / 50°F-86°F)			
Input Power	Bypass 700W Max.			
DC Input				
Interface	XT60PM-M			
Power	350W			
Current	8.2A			
Voltage	12V to 45V			

12. Button Operation Instructions

Operation	Function	Description
Press the AC power button	Turn on / off the AC output	/
Press the DC power button	Turn on / off the USB-A, USB-C, DC output, and the indicators	/
Press the AC and DC power buttons simultaneously and hold for more than 2 seconds till the output frequency flashes	Enter / exit the Setting Mode	In the Setting Mode, the icons for the currently enabled functions remain lit, except for the flashing output frequency icon. If you do not perform any operation in 1 minute, the Handsfree 2 will automatically exit the Setting Mode, and no changes will be saved.
Press the DC power button in the Setting Mode	Navigate through the setting items	The flashing setting item is selected and editable. In the Setting Mode, the corresponding codes will be displayed on the left side: P01: Output Frequency P03: Charging Mode P04: Power Lifting Mode P05: ECO Mode P06: Bluetooth
Press the AC power button when the setting item is flashing	Enable or disable the selected function.	/
Press and hold the DC power button in the Setting Mode	Switch the status page	You can view relevant information on the status page.  : Serial Number (SN)  : Error Code  : Fault History  : Version

13. Troubleshooting

In the Setting Mode, press and hold the DC power button for more than 2 seconds until the error code appears on the display. Please refer to the table below for helpful guidance.

Error Code	Alarm Icon	Description	Troubleshooting
E001		Inverter overload	Check if the power consumption of your devices is too high. Reduce the load if necessary.
E002		Inverter overtemperature protection, AC output off	Wait for about 10 minutes until the unit cools down, then turn on the AC output again.
E003		Inverter short circuit	1. Check if the power consumption of your devices is too high. 2. Check if any of your electrical devices are causing a short circuit.
E026		System Overload	Reduce AC and DC loads to 700W or less.
E033		PV overvoltage	Make sure the PV input voltage is within the range of 12V to 45VDC.
E039		PV overtemperature	Wait for about 10 minutes until the unit cools down, then re-enable the PV input.
E065		DC output short circuit	1. Check if the power consumption of your devices is too high. 2. Check if any of your electrical devices are causing a short circuit.
E067		DC output overcurrent	Check if the power consumption of your devices is too high. Reduce the load if necessary.
E068		DC output overtemperature	Wait for about 10 minutes until the unit cools down, then restart your devices.
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°C to 40°C (32°F to 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 -20°C to 40°C (-4°F to 104°F).
E113		Grid overvoltage	Check if the grid voltage is too high. Change the input source if necessary.
E114		Grid undervoltage	Check if the grid voltage is too low. Change the input source 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.
Others	/	/	Please contact BLUETTI support for assistance.

Appx. 1 Estimating Operation Time

Operation time = Battery Capacity (Wh) x DoD x η ÷ (Load Power + Handsfree 2 Self-consumption)

Note:

DoD refers to the depth of discharge. Handsfree 2 works at 90% DoD for longer battery life.

η is the conversion efficiency of the inverter, typically over 85% for Handsfree 2.

The self-consumption of Handsfree 2 is approximately 10W.

E.g. If you have a 40W refrigerator, you can run it for about 7.8 hours.

Operation time = 512Wh × 90% × 85% ÷ (40W + 10W) ≈ 7.8 hours.

Notice:

Please keep in mind that the estimated operation time provided is for reference 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 Handsfree 2 (700W), you can use this power station to run your devices.

Note: Some devices with built-in motors or compressors may start at 2-4 times the rated power, which can easily overload the Handsfree 2.

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-45V 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 Handsfree 2 comes with the premium LiFePO₄ battery and proprietary Battery Management System to ensure that it can charge and discharge at the same time.

Q4: Why is the charging power often too low?

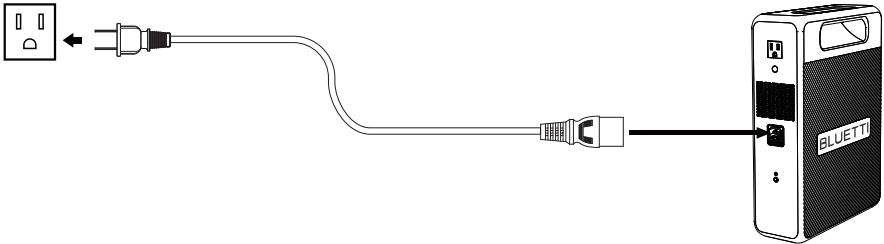
A: Handsfree 2 has a built-in intelligent BMS that automatically adjusts the charging power in response to the battery temperature and SoC, thus protecting the battery and extending its service life.

Q5: What should I do if the machine's power level appears to show an abnormality?

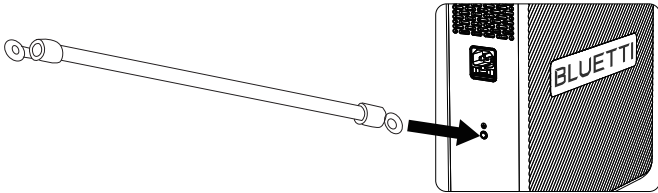
A: Please discharge the machine completely, followed by a complete charging process, and make sure that no devices are connected or loaded during the entire charging period. After completing this charging and discharging cycle, the SOC of the battery will be recalibrated.

Appx. 3 Grounding Guidelines

Only use the grounding terminal when the Handsfree 2 is connected to the home grid using a 2-pin cable, or if the wall outlet's grounding is ineffective, and the connected device features a metal case.

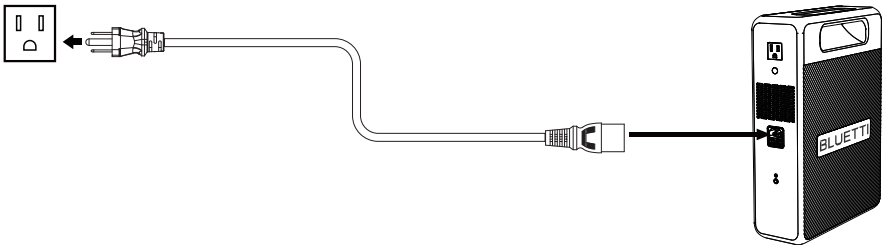


Use a cable with OT terminals for grounding. Connect one end to the grounding terminal with a grounding screw and the other end to the wall outlet or home distribution box ground.



The grounding terminal is unnecessary in the following scenarios.

- When connecting the Handsfree 2 to the wall outlet with a 3-pin cable, it's already grounded effectively.



- When the Handsfree 2 is not connected to the grid, touching its case won't cause an electrical shock.

Appx. 4 FCC Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

To maintain compliance with FCC's RF Exposure guidelines, this equipment should be installed and operated with minimum distance between 20cm the radiator your body. Use only the supplied antenna.

Appx. 5 IC Warning statement

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

RF exposure statement(BT): The equipment complies with IC Radiation exposure limits set forth for uncontrolled environments. This equipment should be installed and operated with a minimum distance of 20cm between the radiator and your body.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- (1) L'appareil ne doit pas produire de brouillage;
- (2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Déclaration d'exposition aux radiofréquences IC:

Cet équipement est conforme aux limites d'exposition IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec une distance minimale de 20 cm entre le radiateur et le corps.

Appx. 6 Consignes de sécurité

Lisez ce manuel pour obtenir des instructions sur l'utilisation appropriée et les informations de sécurité du produit. Les instructions de sécurité fournies ici sont à des fins d'illustration et incluent, sans s'y limiter, celles répertoriées dans ce manuel. Le fonctionnement réel doit être conforme à toutes les normes de sécurité applicables. Si vous avez des questions, n'hésitez pas à contacter l'assistance BLUETTI ou vos revendeurs BLUETTI locaux.

1) Déclaration

Pour garantir un fonctionnement sûr, il est essentiel d'observer et de respecter les conditions suivantes:

- Utilisez ou stockez toujours le produit dans les conditions spécifiées dans ce manuel.
- L'installation et les conditions ambiantes doivent être conformes aux exigences des normes internationales, nationales ou régionales pertinentes.
- Évitez le démontage, le remplacement de composants ou la modification non autorisés des codes logiciels.

BLUETTI ne sera pas responsable des circonstances suivantes:

- Les dommages résultant d'événements de force majeure tels que tremblements de terre, incendies, tempêtes, inondations ou coulées de boue.
- Dommages causés par le propre transport du client.
- Dommages résultant de conditions de stockage inadéquates telles que spécifiées dans le manuel.
- Dommages causés par la négligence du client, une mauvaise utilisation ou des actions intentionnelles.
- Dommages au système causés par des tiers ou des clients, y compris, mais sans s'y limiter, une mauvaise manipulation et une installation non conforme aux instructions de ce manuel.
- Ce produit n'est pas destiné à être utilisé avec des appareils nécessitant une alimentation sans interruption (UPS) hautes performances, y compris, mais sans s'y limiter, les serveurs de données, les postes de travail, les équipements médicaux et autres appareils similaires. BLUETTI ne sera pas responsable de toute perte de données, dommage matériel ou blessure corporelle résultant de la violation de cette exigence.

2) Exigences générales

INSTRUCTIONS RELATIVES AUX RISQUES D'INCENDIE, DE CHOC ÉLECTRIQUE OU DE BLESSURES CORPORELLES

CONSIGNES DE SÉCURITÉ IMPORTANTES

 **AVERTISSEMENT** - Lors de l'utilisation de ce produit, des précautions de base doivent toujours être prises, notamment les suivantes:

- Lisez toutes les instructions avant d'utiliser le produit.
- Pour réduire le risque de blessure, une surveillance étroite est nécessaire lorsque le produit est utilisé à proximité d'enfants.
- Ne mettez pas les doigts ou les mains dans le produit. Et n'insérez pas d'objets étrangers dans les ports du produit.
- L'utilisation d'un accessoire non recommandé ou vendu par le fabricant peut entraîner un risque d'incendie, de choc électrique ou de blessures corporelles.
- Pour réduire le risque d'endommagement de la fiche et du cordon électriques, tirez sur la fiche plutôt que sur le cordon lorsque vous débranchez le produit.
- N'utilisez pas de batterie ou d'appareil endommagé ou modifié, car ils pourraient présenter un comportement imprévisible entraînant un incendie, une explosion ou des blessures.
- N'utilisez pas le produit avec un cordon ou une fiche endommagés, ou un câble de sortie endommagé.

- N'essayez pas de remplacer la batterie interne ou tout autre composant du produit par une personne autre que le personnel autorisé. Il n'existe aucun composant réparable par l'utilisateur final. Ne démontez pas le produit, apportez-le à un technicien qualifié lorsqu'un entretien ou une réparation est nécessaire. Un remontage incorrect peut entraîner un risque d'incendie ou de choc électrique.
- Pour réduire le risque de choc électrique, débranchez le produit de la prise avant de tenter toute réparation indiquée.
- Le port USB-C, classé PS3 selon la norme IEC 62368-1, doit prendre en compte les mesures de sécurité incendie des appareils ou accessoires connectés (tels que les boîtiers résistant au feu) .
- Ce produit peut être utilisé seul. Lorsqu'il est utilisé avec un sac à dos, seul le sac à dos BLUETTI BP2 est autorisé.
- Lors du chargement de la batterie interne, travaillez dans un endroit bien ventilé et ne limitez en aucun cas la ventilation.
- Dans des conditions abusives, du liquide peut être éjecté de la batterie ; éviter les contacts. En cas de contact accidentel, rincer à l'eau. Si le liquide entre en contact avec les yeux, consultez également un médecin. Le liquide éjecté de la batterie peut provoquer des irritations ou des brûlures.
- N'exposez pas le produit au feu ou à des températures excessives. L'exposition au feu ou à une température supérieure à 130°C (266°F) peut provoquer une explosion.
- Faites effectuer l'entretien par un réparateur qualifié en utilisant uniquement des pièces de rechange identiques. Cela garantira que la sécurité est maintenue.
- N'empilez rien sur le produit pendant son stockage ou son utilisation. Ne déplacez pas le produit pendant son fonctionnement, car les vibrations et les impacts soudains peuvent entraîner de mauvaises connexions avec le matériel interne.
- **AVERTISSEMENT** : évitez tout contact avec l'eau de mer, qui pourrait provoquer une corrosion des pièces métalliques.
- En cas d'incendie, utiliser uniquement un extincteur à poudre sèche adapté au produit.
- **AVERTISSEMENT - RISQUE DE CHOC ÉLECTRIQUE**. N'utilisez jamais le produit pour alimenter des outils électriques permettant de couper ou d'accéder à des pièces ou des câbles sous tension, ou à des matériaux pouvant contenir des pièces ou des câbles sous tension à l'intérieur, comme les murs d'un bâtiment, etc.

3) Instructions de mise à la terre

Ce produit doit être mis à la terre lorsqu'il est connecté au réseau. En cas de dysfonctionnement ou de panne, la mise à la terre fournit un chemin de moindre résistance au courant électrique afin de réduire le risque de choc électrique. Ce produit est équipé d'un cordon doté d'un conducteur de mise à la terre et d'une fiche de mise à la terre. La fiche doit être branchée dans une prise correctement installée et mise à la terre conformément à tous les codes et ordonnances locaux.

⚠ Avertissement - Une mauvaise connexion du conducteur de mise à la terre de l'équipement peut entraîner un risque de choc électrique. Vérifiez auprès d'un électricien qualifié si vous avez des doutes quant à savoir si le produit est correctement mis à la terre. Ne modifiez pas la fiche fournie avec le produit - si elle ne s'adapte pas à la prise, faites installer une prise appropriée par un électricien qualifié.

4) Exigences de manipulation

Pendant le transport ou le stockage, veillez à éviter de faire tomber, de heurter violemment ou d'incliner le produit car cela pourrait entraîner des dommages internes. Si nécessaire, utilisez une assistance mécanique telle que des chariots ou des établis à hauteur réglable pour assurer une manipulation sécuritaire.

Nombre de personnes recommandé en fonction du poids du produit

Le poids	Nombre de personnes
<18kg (39.7lbs)	1
18kg-32kg (39.7lbs-70.5lbs)	2
32kg-55kg (70.5lbs-121.3lbs)	3
>55kg (121.3lbs)	4 ou un chariot

5) Instructions d'entretien et de stockage de l'utilisateur

- Lorsque le SoC tombe à 5 %, veuillez charger le produit immédiatement.
- Avant de stocker le produit, chargez-le à 40% à 60% de SoC pour le maintenir dans un état optimal. De plus, éteignez le produit et débranchez toutes les connexions électriques.
- Conservez le produit dans un endroit frais et sec, en le gardant à l'écart des matériaux et gaz inflammables ou combustibles.
- Le produit peut être stocké en toute sécurité dans une plage de température de -20°C à 40°C (-4°F à 104°F). Cependant, si la durée de stockage dépasse un mois, il est recommandé de maintenir une température idéale de stockage autour de 30°C (86°F).
- Faites un cycle complet du produit tous les 3 mois pour maintenir la santé de la batterie. Il n'est PAS recommandé de stocker le produit pendant de longues périodes, car cela pourrait affecter ses performances et sa durée de vie globale.

 Si le SoC tombe à 0 (pendant le stockage ou au démarrage), effectuez les actions suivantes pour redémarrer le produit en toute sécurité:

- Arrêtez immédiatement.
- Chargez dans les 48 heures.
- Conservez-le à une température ambiante de 5°C à 35°C (41°F à 95°F) pendant 6 heures avant de le charger. Il est recommandé de charger le produit via une source CA. Si vous chargez via l'énergie solaire, assurez-vous que votre système solaire fournit une puissance supérieure à 100 W.

  Le symbole affiché est destiné à vous rappeler de lire les instructions de la documentation accompagnant le produit avant l'utilisation et l'entretien.

- Connectez le produit à une prise de courant dotée d'une connexion à la terre à l'aide du cordon d'alimentation fourni.
- La prise de courant doit être installée à proximité du produit et facilement accessible pour des raisons de sécurité.
- Ne jetez jamais une batterie en la jetant au feu ou dans un four chaud, ni en l'écrasant ou en la coupant mécaniquement, car cela pourrait la faire exploser.
- évitez de laisser les batteries dans des environnements à température extrêmement élevée, car cela peut entraîner une explosion ou une fuite de liquide ou de gaz inflammable.
- La batterie soumise à une pression d'air extrêmement basse peut entraîner une explosion ou une fuite de liquide ou de gaz inflammable.
- Il convient d'attirer l'attention sur les aspects environnementaux de l'élimination des batteries.

CONSERVER CES INSTRUCTIONS

 BLUETTI n'est pas responsable des dommages causés à l'équipement par la violation des instructions ci-dessus.

For more information, please visit:

Web: <https://www.bluettipower.com>



@ BLUETTI Support

@ BLUETTI Official



@ bluetti_inc



@bluetti.inc



@bluetti_official



service@
bluettipower.com

Customer Service

Tel: **800-200-2980** (Monday to Sunday 9:00-17:00)

Email: sale@bluettipower.com (Pre-sales),

service@bluettipower.com (After-sales)

USA Company

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NEVADA 89118 United States

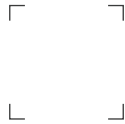
FRN: 0033559824

SHENZHEN POWEROAK NEWENER CO., LTD.

Add: F19, BLD No.1, Kaidaer, Tongsha Rd No.168,

Xili Street, Nanshan, Shenzhen, China





Certificate

Inspector: _____

QC: _____

Just Power On

P/N:17.0303.0753-00A0