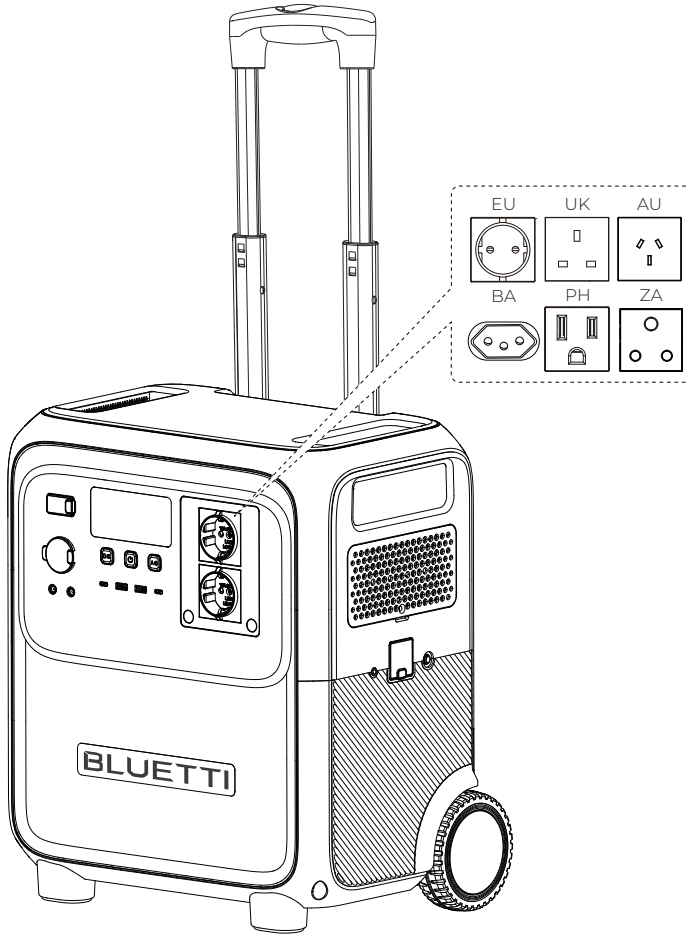
Elite 320
Portable Power Station

User Manual V2.0

Important Instructions

- For optimal performance, **update your unit to the latest firmware before first use.**
- See the appendix "Update Firmware via BLUETTI App" for guidance.
- Read and understand this manual before use and keep it handy for future reference.

BLUETTI



⚠ Tips

1. Fully charge the unit before first use.
2. Do not use solar panels with an open circuit voltage higher than 60 V. The solar input voltage range for the unit is 12 V-60 V.
3. If the unit's SoC falls below 5%, please recharge the unit in time. If the SoC drops to 0, power off the unit and charge it for at least 30 minutes before restarting.
4. This unit is for off-grid use only. Do not connect the unit's 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.
6. For optimum battery life, discharge and charge the unit every 3 months.

Legal Information

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Notice

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The contents of this manual are subject to change without notice. Please obtain the latest version from BLUETTI official website.

If you have any questions or concerns about this manual, please contact BLUETTI support for further assistance.

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Website: https://www.bluettipower.com/

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1. Safety Information

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

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

- Read all the instructions before using the product.
- Handle the product with care, avoiding drops, violent impacts, or tilting.
- To reduce the risk of injury, close supervision is necessary when the product is used near children.
- Do not put fingers or foreign objects into the product's ports.
- Use of an attachment not recommended or sold by the manufacturer may result in a risk of fire, electric shock, or injury to persons.
- Do not move the product during operation to avoid poor connections.
- Do not expose the battery to high temperatures, as this may cause an explosion or leakage of flammable liquids or gases.
- Do not use the product in the rain or high humidity environments.
- Do not use a battery pack or appliance that is damaged or modified. Damaged or modified batteries may exhibit unpredictable behavior resulting in fire, explosion, or risk of injury.
- Handle the product with caution in low air pressure environments to prevent explosions or leaks.
- Charge the product in a well-ventilated area.
- Under abusive conditions, liquid may be ejected from the product's battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help. Battery liquid may cause irritation or burns.
- In case of fire, use a dry powder fire extinguisher appropriate for the product.
- Never dispose of the product's battery in fire, hot ovens, or by cutting it.
- Do not operate the product with a damaged cord, plug, or output cable.
- 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 disassemble the product; take it to a qualified service person if service or repair is required. Incorrect reassembly may result in a risk of fire or electric shock.
- Unplug the product before any servicing to prevent electric shock.
- WARNING - RISK OF EXPLOSIVE GASES. Follow these instructions and those published by manufacturer of any equipment you intend to use in vicinity of the product to reduce risk of battery explosion.

- WARNING - RISK OF ELECTRIC SHOCK. Never use the product to power tools to cut or access live parts, wirings or materials containing them, such as building walls.
- Have servicing performed by a qualified repair person using only identical replacement parts. This will ensure that the safety of the product is maintained.
- ⚠ 🕮 The symbols on the unit and its accessories are intended to remind you to read the instructions in the literature accompanying the product before operation and maintenance.
- The socket-outlet should be installed near the product and easily accessible for safety purposes.
- **ATTENTION:** The output from the USB-C, DC5521, and cigarette lighter ports is classified as PS3 under the IEC 62368-1 standard. To reduce the risk of fire, it is recommended to use protective measures, such as a fire enclosure, for any connected equipment or accessories.
- Use the telescopic handle for transport only. Retract it fully after use.

Attention



Not permitted on aircraft.

Disposal and Recycling

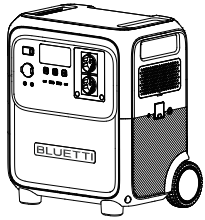
1. Take old electronic components and batteries to designated recycling centers. This prevents improper disposal and supports material recovery.
2. If possible, fully discharge the batteries and then place them in designated battery recycling boxes. The batteries in this product contain hazardous chemicals. Do not dispose of them with regular household waste. Please follow local laws and regulations for proper battery disposal.
3. If a battery cannot fully discharge due to product malfunction, do not place it in the battery recycling box. Instead, contact a professional battery recycling organization for safe handling.

Grounding Instructions (For AC charging only)

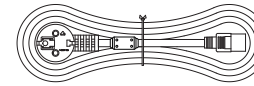
- This product must be grounded when connected to the grid. If it should malfunction or break down, grounding provides a path of least resistance for electric current to reduce the risk of electric shock.
- The product is equipped with an AC charging cable that has a grounding conductor and plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.
- WARNING - Improper connection of the grounding conductor can result in a risk of electric shock. Check with a qualified electrician if you're in doubt as to whether the product is properly grounded. Don't modify the plug provided with the product – if it'll not fit the outlet, have a proper outlet installed by a qualified electrician.

SAVE THESE INSTRUCTIONS

2. Packing List



Elite 320
Portable Power Station



AC Charging Cable

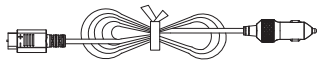


Grounding Screw
(M5 × 10 mm)



Documents

The following accessories* are not included.
You can purchase optional accessories at https://www.bluettipower.com
*Images are for reference only.



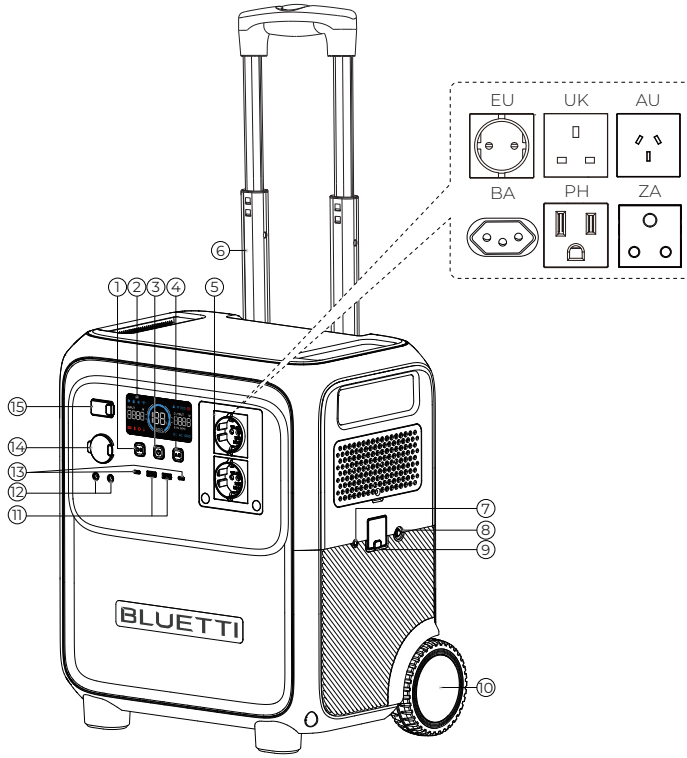
Car Charging Cable



Solar Charging Cable
(MC4 to XT60)

3. Get to Know Your Elite 320

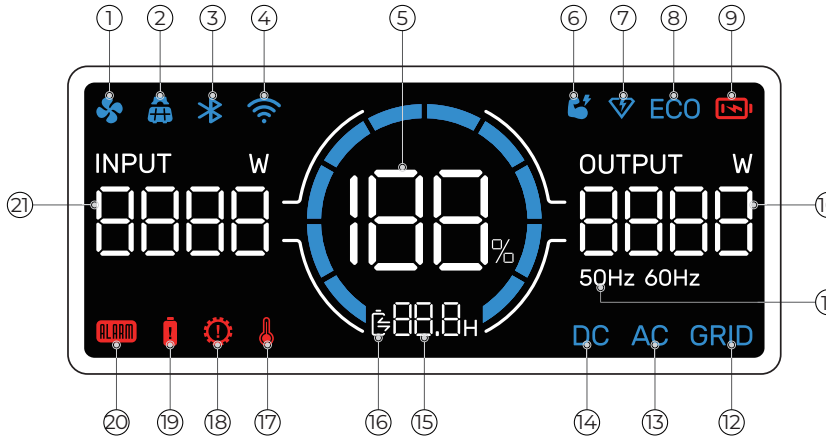
3.1 Overview



① DC Power Button
② LCD Display
③ Power Button
④ AC Power Button
⑤ AC Outlet
⑥ Telescopic Handle
⑦ Grounding Terminal*
⑧ Circuit Breaker
⑨ AC Input
⑩ Wheel
⑪ USB-A Ports
⑫ DC5521 Ports
⑬ USB-C Ports
⑭ Cigarette Lighter Port
⑮ DC Input

* Used for grounding when powering certain equipment. For assistance, contact us or seek guidance from the appendix "Grounding Guidelines".

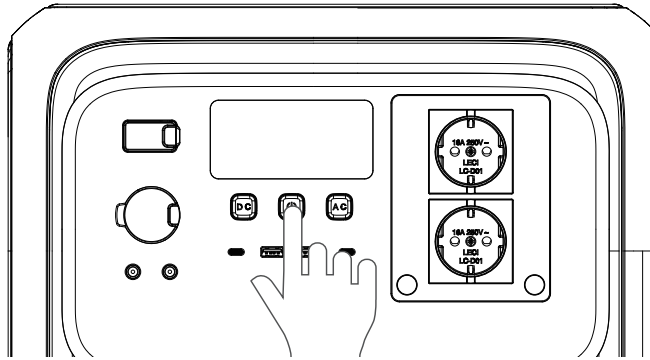
3.2 LCD Display



① Fan
② DC Input
③ Bluetooth Connection
④ Wi-Fi Connection
⑤ State of Charge (SoC)
⑥ Power Lifting Mode
⑦ Turbo Charging
⑧ ECO Mode
⑨ Low Battery
⑩ Output Power
⑪ AC Output Frequency
⑫ AC Input
⑬ AC Output
⑭ DC Output
⑮ Remaining Discharging Time
⑯ Battery Status
⑰ Temp Alert
⑱ Overload
⑲ Short Circuit
⑳ System Fault
㉑ Input Power

4. Use Your Elite 320

4.1 Power On/Off



Power On

Press the power button; the lit button indicates that the Elite 320 is on standby.

Power Off

Long press the power button for about 2 seconds to turn off the unit.

AC On/Off

Press AC power button when Elite 320 is on.

DC On/Off

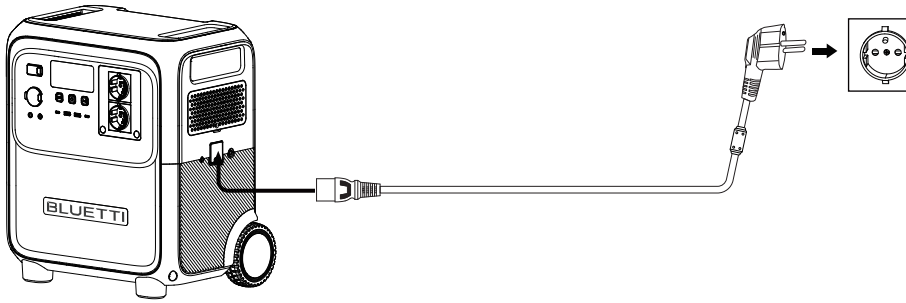
Press DC power button when Elite 320 is on.

> ***Note:*** When Elite 320 is on, press any button to activate the display.

4.2 Charging Options

4.2.1 Wall Outlet

Plug the Elite 320 into a standard wall outlet. It stops charging when fully charged.

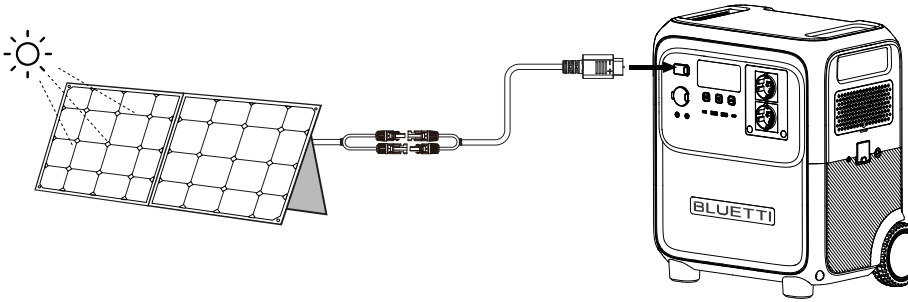


Note: Do not plug the unit's AC charging cable into its own AC outlets. Doing so could damage the connected device.

4.2.2 Solar Panel

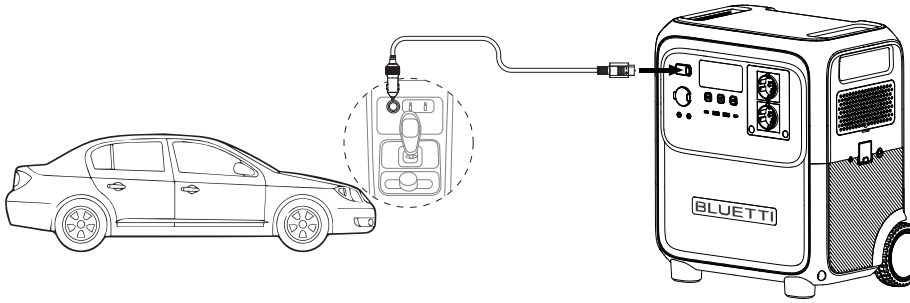
Connect the solar panel(s) either in series or parallel, then use the solar charging cable to link them to the Elite 320.

Note: Make sure the solar panel(s) meet the following requirements:
Voc: 12 V-60 V Current: 20 A Max. Power: 1,000 W Max.



4.2.3 Car (12 V/24 V)

Connect the Elite 320 to your car's 12 V or 24 V cigarette lighter port or socket using the car charging cable.



Notes:

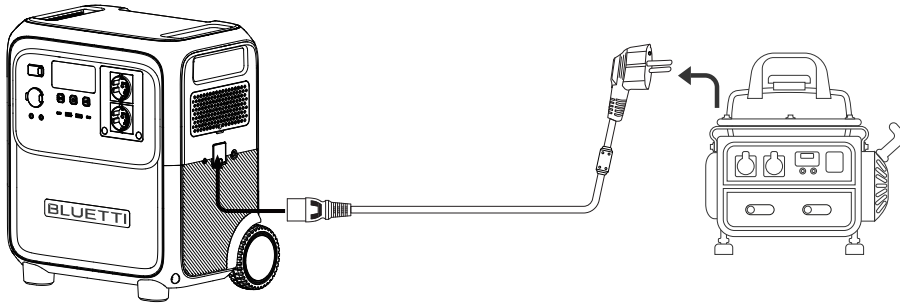
- Make sure your car has power and the engine is running while charging.
- Avoid over-discharging the car's battery.

4.2.4 Generator

Connect the Elite 320 to a generator using the AC charging cable. The charging stops automatically when fully charged.

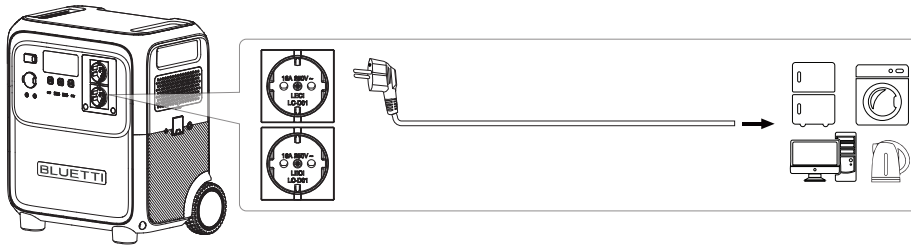
Notes:

- Use a generator with a pure sine wave output that matches the required voltage and frequency, and meets or exceeds the Elite 320's input power needs.
- It's recommended to enable **Grid Self-Adaption** mode when charging with a generator.



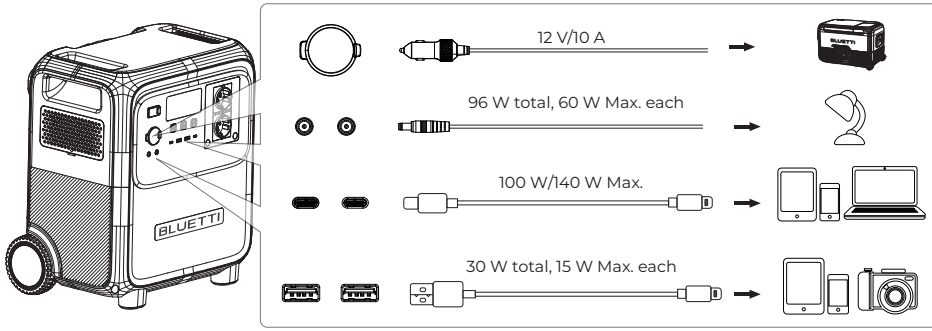
4.3 Power Your Devices

AC Outlets



Note: When servicing devices connected to the unit, make sure to unplug them from the outlets. Even if the AC output is turned off, physically unplugging the devices is necessary for complete disconnection.

DC Outlets

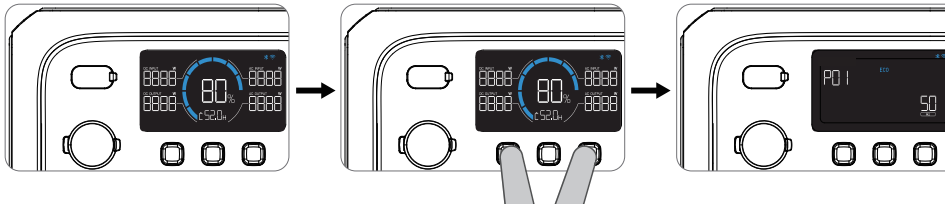


5. Configure Your Elite 320

The Elite 320 can be configured using either the device's buttons or the BLUETTI app. For advanced settings, such as enabling Grid Self-Adaption mode or configuring ECO mode, use the BLUETTI app. Refer to the app manual for more details.

5.1 Settings Mode

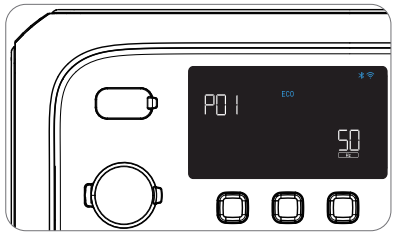
Enter the Mode: Press and hold the AC and DC power buttons simultaneously for about 2 seconds. The frequency icon flashes.



Exit the Mode: Press and hold both the AC and DC power buttons again.
If left idle for 1 minute, the Elite 320 automatically exits without saving any changes.

Adjust settings in Settings Mode.

- Turn off the AC power first.
- Press the DC power button to navigate through the items, and press the AC power button to adjust.



Page Code	Setting
P01	Frequency
P03	AC Charging Mode
P04	Power Lifting Mode
P05	ECO Mode
P06	Bluetooth
P07	Wi-Fi

5.2 AC Charging Mode

The Elite 320 offers three AC charging modes: Standard (default), Turbo, and Silent. You can set Standard or Turbo mode directly on the display, while the Silent mode can be activated via the app. By default, the device charges in Standard mode.

Mode		AC Input (Max.)	Solar Input (Max.)	AC + Solar Input (Max.)	Note
Standard		1,000 W	1,000 W	1,600W	Battery-friendly
Turbo	US	1,440 W	1,000 W	2,000 W	Quick recharge
	JP	1,440 W	1,000 W	2,000 W	
	EU/AU/UK	1,440 W	1,000 W	2,000 W	
Silent		800 W	600 W	1,400 W	Quiet operation

5.3 Power Lifting Mode

Power Lifting mode is disabled by default. It allows Elite 320 to power up to 2,700 W pure resistive loads like electric kettles, blankets, hair dryers, and similar heating devices.

Note: This mode is only for pure resistive loads rated 1,800 W-2,700 W. While the Elite 320 can handle such loads, its actual output power is still 1,800 W.

5.4 ECO Mode

AC-ECO and DC-ECO modes are disabled by default. When ECO modes are turned on, please be cautious that the Elite 320 will shut off the AC or DC output after a period of low or no load.

Set the auto shutdown power threshold and auto-off time via the app.

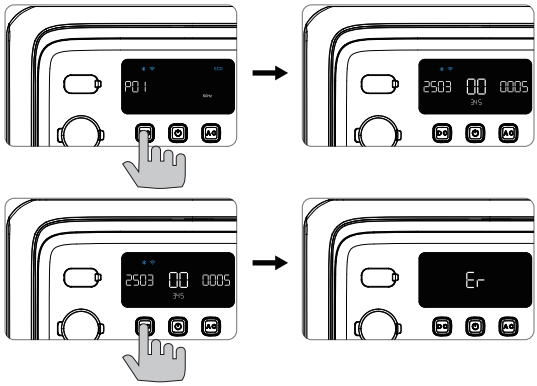
Notes:

- Both AC-ECO and DC-ECO modes are unavailable when charging with AC power.
- Press the AC power button to turn on/off AC-ECO and DC-ECO modes together, and use the BLUETTI app to control them separately.
- Disable the ECO mode when connecting small devices or critical appliances such as lights and refrigerators.

6. View Device Information

View device information in Settings Mode, too.

- Go to the P01 frequency page and long press the DC power button to view the unit's SN. Press the DC power button again to navigate through other information.
- When on Fault History page, long press the AC power button for about 2 seconds, then release to clear the history.



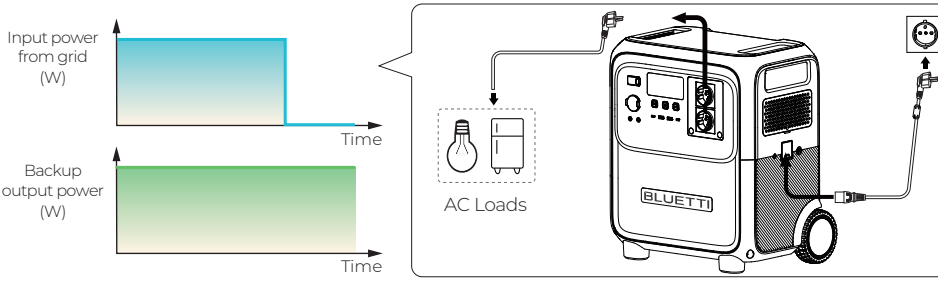
Page Code	Information
	Serial Number (SN)
	Error Code
	Fault History
	Version

7. UPS Feature

Connect Elite 320 to the wall, and it directly draws power from the outlet to operate connected devices. It swiftly switches to battery power during an outage. Set UPS modes in the app.

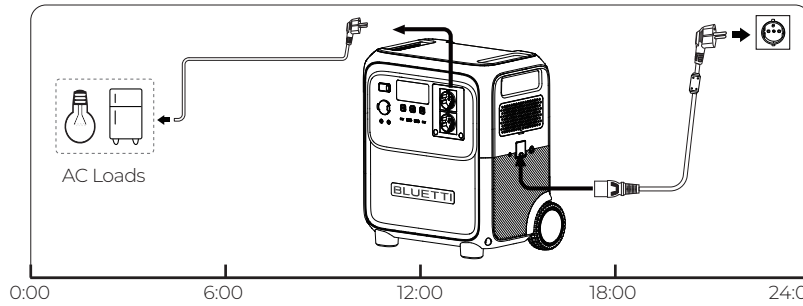
- **Standard**

The Elite 320 charges fully using a combination of solar and grid power, prioritizing solar when available. When the grid is active, it directly powers your devices. If the grid goes out, the Elite 320 seamlessly takes over.



• Time Control

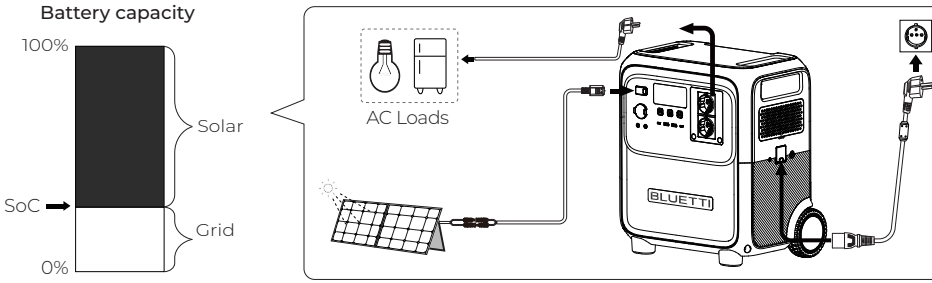
Save costs by scheduling Elite 320 to charge during off-peak hours and power devices during peak hours.



Period	Charge	Discharge	Discharge	Discharge
Load Power	Grid	Elite 320	Elite 320	Elite 320

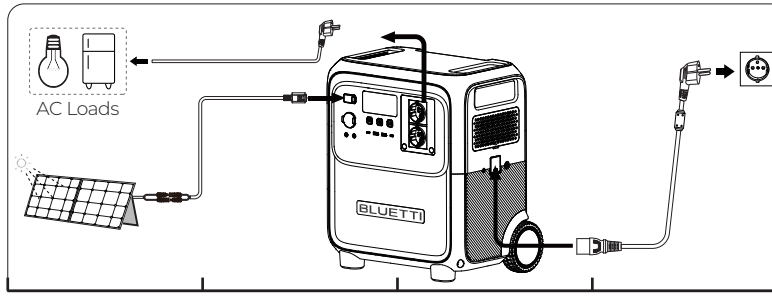
• PV Priority

Efficiently uses solar energy. Elite 320 initially charges from the grid to a set SoC and seamlessly switches to solar replenishment.



• **Customized**

Personalize charging/discharging schedule, set battery SoC limits, and control the schedule and grid input switches.

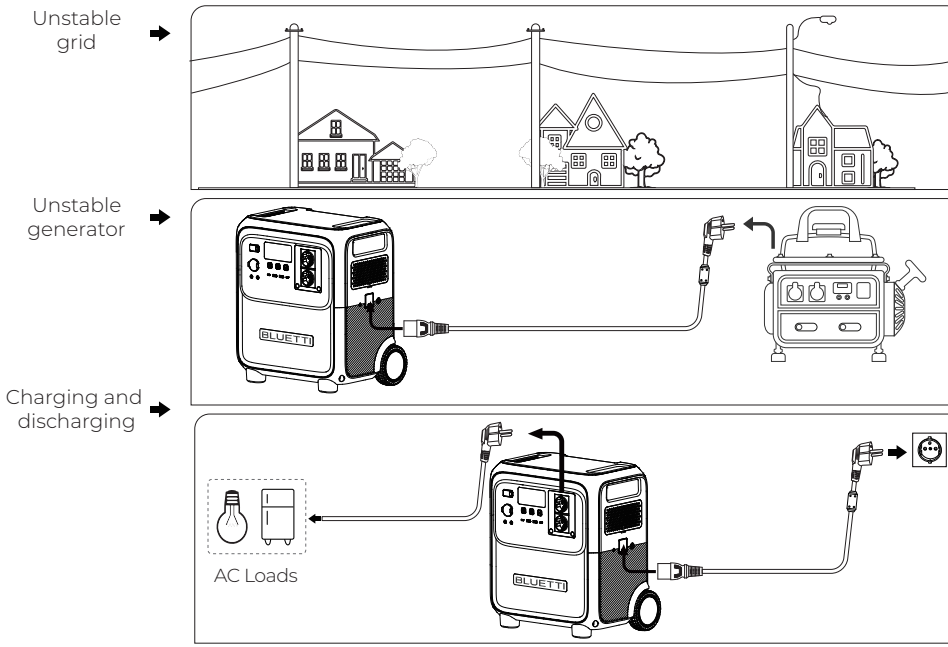


Period	Charge	Discharge	Discharge	Discharge
Load Power	Grid	Elite 320	Elite 320	Elite 320

Note: Not for devices like data servers or workstations that require high-performance UPS. BLUETTI assumes no liability for issues arising from violating this restriction.

8. Grid Self-Adaption Mode

When charging with an unstable generator or grid power, or if consumption power exceeds charging power, enable this mode in the app. The Elite 320 automatically adjusts to handle power fluctuations, protecting the unit and connected devices from potential issues due to variations in power quality.



9. Maintenance and Care

- When the SoC drops to 5%, charge the unit in time.
- Before storing, charge to 40%-60% SoC, then power off and disconnect all cables.
- Store it in a cool, dry place, away from flammable materials.
- Safe storage temperature: -4°F to 113°F (-20°C to 45°C). For storage over a month, keep it at 50°F to 86°F (10°C to 30°C).
- Fully cycle every 3 months to maintain battery health.
- Avoid extended storage; it may impact performance and lifespan.

If SoC drops to 0 during storage or startup:

- Shut down immediately.
- Charge within 48 hours.
- Keep it at 41°F to 95°F (5°C to 35°C) for 6 hours before charging.
- Recommended to charge via an AC source; if using solar energy, ensure an input of over 100 W.

10. System Switch Recovery

When the battery runs out and the unit shuts down, it saves the ON/OFF status of the AC and DC power buttons.

- If connected to grid power, the saved settings will automatically restore when the battery reaches 5%.
- If not connected to grid power, the settings will only restore if the battery reaches 5% and at least 30 minutes have passed since the unit turned off.

For example, in standard UPS mode, if a refrigerator is plugged into the AC outlet of the Elite 320 and the grid power goes out, the unit will provide immediate backup power. If the battery depletes, the unit will shut off but retain the AC output status as ON. When grid power returns and the battery is above 5%, the unit will automatically turn the AC output back ON to continue powering the refrigerator.

Note :

- During recovery, the AC and DC output settings can be adjusted via the app.
- To restore power immediately, turn off this feature.

11. Specifications

Model	Elite 320
Battery Capacity	3,200 Wh (100 Ah)
Battery Type	$LiFePO_4$
Weight	About 74.96 lbs/34 kg
Dimensions (L × W × H)	15.87 × 11.18 × 18.11 in/403 × 284 × 460 mm (with wheels)
Charging Temperature	32°F to 104°F/0°C to 40°C
Discharging Temperature	-4°F to 104°F/-20°C to 40°C
Operating Humidity	10% to 90%
AC Output (Discharging/Bypass)	US: 1,800 W Max., 120 V, 50/60 Hz
	JP: 1,800 W Max., 100 V, 50/60 Hz
	EU/UK/AU: 1,800 W Max., 230 V, 50/60 Hz
	DC Output
2 × USB-A	5 V⎓ 3 A, 15 W Max. each, 30 W total
1 × USB-C PD 3.0/QC 3.0	100 W Max., 5/9/12/15 V⎓3 A, 20 V⎓5 A
1 × USB-C PD 3.1/QC 3.1	140 W Max., 5/9/15 V⎓3 A, 20/28 V⎓5 A
1 × Cigarette Lighter Port	120 W Max., 12 V⎓10 A
2 × DC5521 Port	12 V⎓5 A, 60 W Max. each, 96 W total (12 V⎓8 A)
	AC Input
AC Charging	US: 1,440 W Max., 120 V, 50/60 Hz
	JP: 1,440 W Max., 100 V, 50/60 Hz
	EU/UK/AU: 1,440 W Max., 230 V, 50 / 60 Hz
AC Input (Bypass)	US: 1,800 W Max., 120 V, 50/60 Hz
	JP: 1,500 W Max., 100 V, 50/60 Hz
	EU/UK/AU: 2,300 W Max., 230 V, 50/60 Hz
DC Input (XT60-F)	1,000 W Max., 12 V to 60 V, 20 A Max.
AC + DC Input	2,000 W Max.
Communication	Wi-Fi (2.4GHz)/Bluetooth (BLE5.0)
Operating Altitude	≤ 6,561.68 ft /2,000 m
Protection Rating	IP20
	Uninterruptible Power Supply (UPS)
Switchover Time	10 ms

Note : The cigarette lighter port and DC5521 ports are wired in parallel with a total maximum output of 10A.

Radio Frequency			
	Operating Frequency	Maximum Transmit power	Modulation mode
WIFI	2412MHz～2472MHz	≤20dBm	DBPSK/DQPSK/CCK/ BPSK/QPSK/16QAM/64QAM
BLE5.0	2402MHz～2480MHz	≤10dBm	GFSK

12. Troubleshooting & FAQs

On the Error Code page, the Er and error code appear simultaneously on the screen. Check the app for error details and recommended solutions. If the issue persists, stop using the product immediately and contact BLUETTI support for assistance.

FAQs (Frequently Asked Questions)

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

A: Keep the total power below 1,800 W. Some devices with motors or compressors may start at 2-4 times their rated power, which could easily overload the Elite 320.

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

A: Yes, you can use third-party solar panels with an open circuit voltage of 12 V-60 V and MC4 connectors. Avoid mixing different types of solar panels.

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

A: Yes, the Elite 320 supports pass-through charging.

Q4: Why is the charging power often too low?

A: The built-in BMS adjusts the charging power based on battery temperature and SoC to protect the battery and extend its life.

Q5: How to calculate the operation time?

A: Runtime = Battery Capacity × DoD × η ÷ (Load + Elite 320 Self-consumption)

Note: DoD (Depth of Discharge) is 95%. η (inverter efficiency) is over 92%. Elite 320 self-consumption is about 10 W.

Appendix

Update Firmware via BLUETTI App

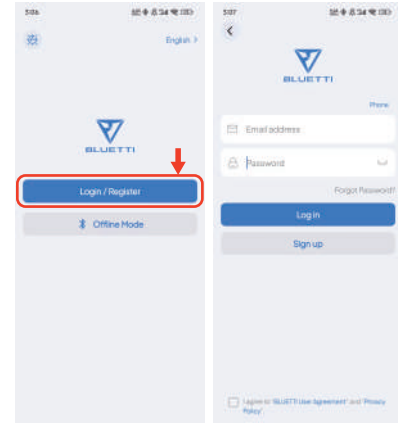
Keeping firmware updated is IMPORTANT for optimal performance. For detailed instructions, refer to the app user manual in the app. This manual uses the Elite 200 V2 upgrade as an example.

1. Download the BLUETTI app

Scan the QR code or search for “BLUETTI” in the App Store or Google Play to download the app.

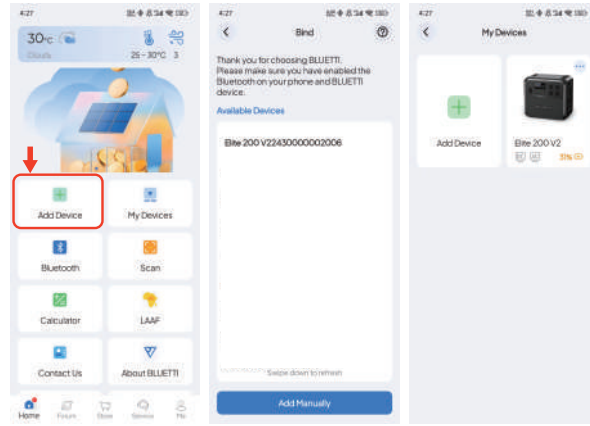
2. Log in or sign up

Log in with a BLUETTI account. If there is no account, create one by following the on-screen instructions.



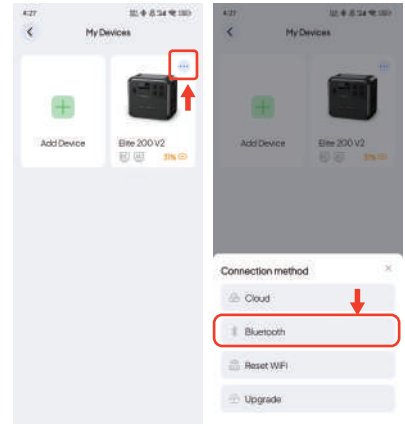
3. Bind the unit

- Tap **Add Device** directly or access **My Devices** > **Add Device** to start the process.
- Select the unit from the available device list, or choose **Add Manually** and enter the unit's serial number (SN).
- Alternatively, tap **Scan** on the **Home** page or in **Add Device** page to bind via QR code.



4. Connect via Bluetooth

On the **My Devices** page, tap the unit and select **Bluetooth** as the connection method.

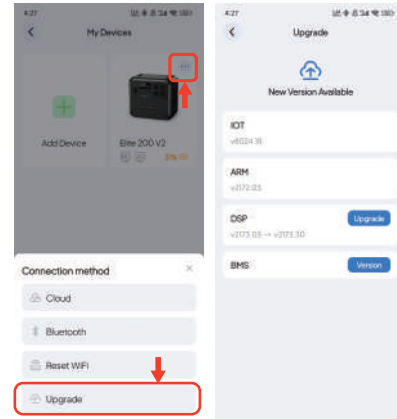


5. Check for Firmware Updates

Tap **Upgrade** to access the **Upgrade** page.
The app will check for the latest firmware version available for the unit.

6. Download and Install the Update

If a new firmware update is available, tap **Upgrade** and follow the on-screen instructions.

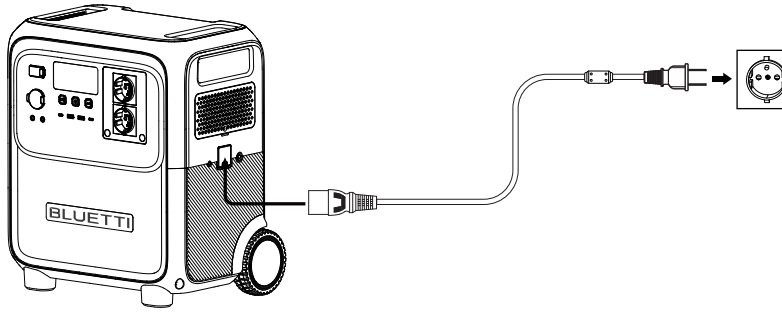


Notes:

- Ensure the unit remains powered on and connected during the update.
- Keep your phone and the unit close together (recommended range: 16.4 ft/5 m).
- Do not exit app until done.

Grounding Guidelines

Only use the grounding terminal when the product 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.

