NEO 2000
Power Station

USER MANUAL

CATALOG

Note: Please read the manual carefully before using!

*Based on providing better products and experience, DaranEner is constantly

 optimizing and updating products, the specifications and descriptions

 of the user manual may be changed and are subject to without notice.

⚠ Disclaimers

- We are not responsible for any damage caused by use under abnormal conditions, including force majeure (typhoon, ground settlement, fire, earthquake, flood, lightning, abnormal voltage, other natural disasters, and other natural disasters), acts of third parties, other accidents, intentional or negligent misuse/failure caused by the customer.
- If accessories and this product are damaged, please do not repair them yourself. We are not responsible for any damage caused by disassembly or repair by yourself.
- The warranty coverage applies to the terms of use, and anything not specified is not covered by our warranty.
- If the instructions in this manual are not followed or used improperly, the product may be damaged or damage the surrounding device or cause personal injury. We are not responsible for any loss or damage caused by the above. In addition, we are not responsible for any modifications made to the product by the customer that are beyond our warranty terms.
- We are not responsible for any collateral damages (including loss of business profits) caused by misuse or modifications to the product, or damages caused by malfunctions of the connected devices which not related to us.
- We cannot confirm or guarantee that this product can be used with medical equipment that related to life safety. We are not responsible for any damage caused by the use of medical equipment.
- For products purchased from non-authorized sellers are not covered under warranty. In addition, we are not responsible for any damages and collateral damages caused by the use of products sold by non-authorized sellers.
- The deterioration of the battery is not covered by the warranty.

I.Important Safety Instructions

Please keep this "User Manual" in a safe place.
This manual contains installation, operation, and use instructions for the
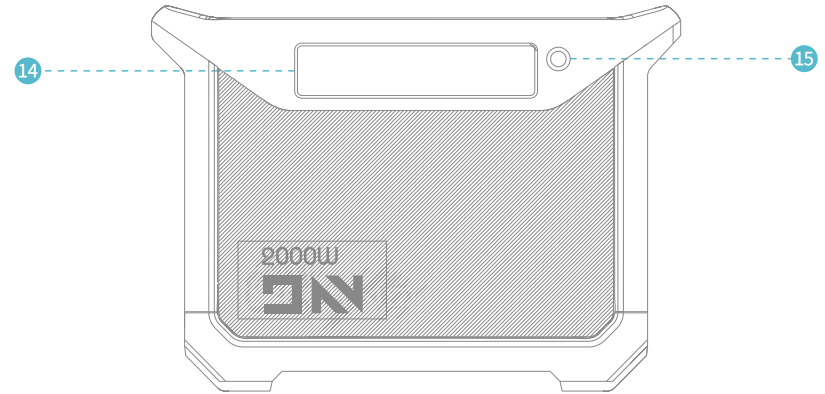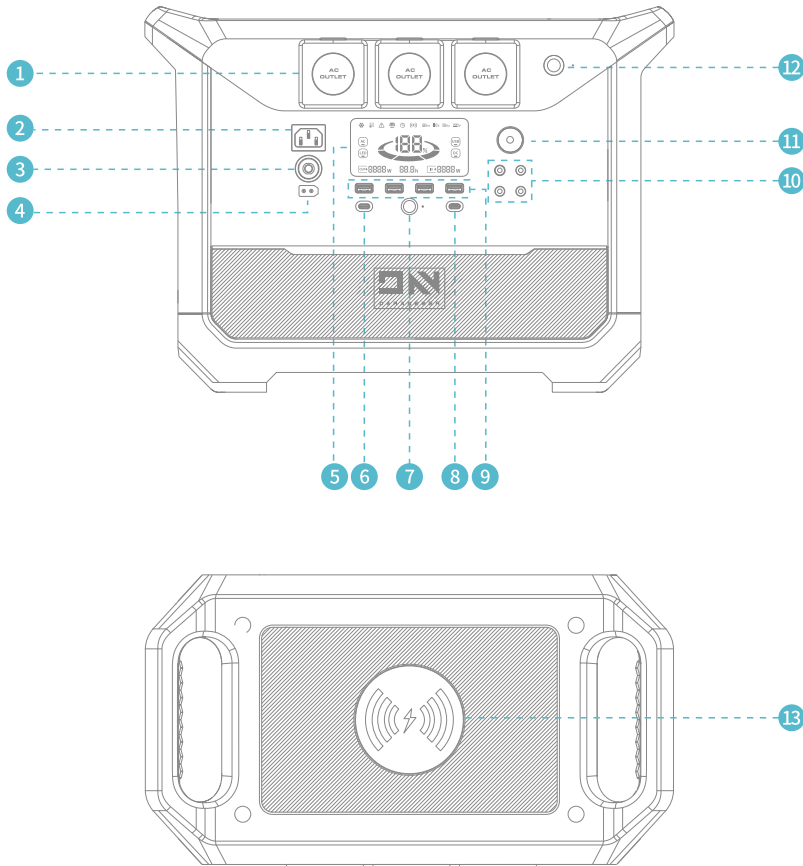**DaranEner Portable Power Station NEO2000.**

· Please ONLY use AC 100V~120V 60Hz AC power source. Please do not use other voltages to charge, otherwise, it may cause the product and battery to overheat, fire, and explode.

· Please fully charge the power station before using it for the first time.

· When the equipment is connected to the power station, please confirm whether the equipment specifications are consistent with the power station nameplate.

· Please ensure that no short circuit is caused when connecting the external device to the power station.

· Children can not aware of the dangers of electrical equipment, please keep the power station out of the reach of children.

· Do not attempt to disassemble or modify any part of this product that is not described in this manual. Disassembly or modification of this product may cause serious accidents. Internal inspection or repairs should be handled by the dealer of the product or the manufacturer.

· Do not use this product with equipment related to life safety such as medical or essential social or public equipment such as emergency equipment.

· Do not use equipment that requires stable and accurate waveform, frequency, and voltage output. We are not responsible for any damage caused by the use of these products.

· Do not put any objects (especially metal objects) into the power station through the heat vent or interface.

· Do not replace or modify the battery pack.

· Do not touch the metal part of the DC and AC interface without protection.

· Do not immerse the product in water or splash water on it. Also, do not use this product when its surface is wet, as this may cause fire, electric shock, or malfunction.

· Please place the power station in a dry place, do not place the power station in a corrosive, acid-base, flammable & explosive gas, dusty, rainy, or humid environment.

· Please ensure adequate ventilation during use, always maintain at least 5cm (2 inches) of ventilation space around the power station. Ensure that flammable and explosive objects are kept away from the charger adapter.

· In extreme situations, liquid may be leaked from the battery, please avoid contact with battery liquid, if accidentally contacted, please wash with clean water. If the liquid splashes into the eyes, please go to the hospital for treatment asap.

· Do not drop or place heavy objects on the product. Please avoid impact on the product.

· This product cannot be carried on an aircraft or shipped by air.

· When the device is not used for a long time. Please make sure to charge the power station at least every 30 days, to ensure the cycle life of the battery pack.

· Keep the workplace where the machine is placed clean, a messy workplace may lead to accidents. If foreign objects enter the machine by accident, it may cause short out, smoke or fire.

· Do not store the product where the temperature may rise above 50°C (50°F) (e.g. in a metal case or in a car in summer). This may cause deterioration of the product or the battery and may cause smoke or fire.

II. Use Instructions

① Parts Name & Function

1.1 - Panel Function

① **AC Output Socket:** For matching AC output voltage devices.

② **AC Input Socket:** AC charging cable connection socket.

③ **Overload Protection Button:** When the output power is overloaded, the overload protection button will pop up. Please disconnecting the external device, manually press the overload protection button to reset.

④ **XT60 Input Socket:** XT60 solar panel input interface.

⑤ **LED Display:** Showing working status.

⑥ **USB-C Port 2:** PD100W output, support various PD protocol devices

⑦ **DC Switch Button:**

· Long press 1S to open the USB output, wireless charging pad, DC5521 and cigarette lighter output, short press again to close all DC output.

· When the USB output is on, press and hold for 10 seconds to reset and restart the DC board.

⑧ **USB-C Port 1:** PD100W output, support various PD protocol devices. This USB-C port supports DC board firmware upgrade.

⑨**USB A Port:**

　·For USB-A ports, each port support QC 3.0 fast charging when less than two ports

　　are used simultaneously.

　·When using 3 or more USB-A ports at the same time, the maximum output for each

　　port is 5V⎓2.4A.

⑩**DC5521 Output Socket:** 4 DC5521 ports with 12V⎓10A output.

⑪**Cigarette Lighter Port:** 12V⎓10A cigarette lighter output for cigarette lighter devices.
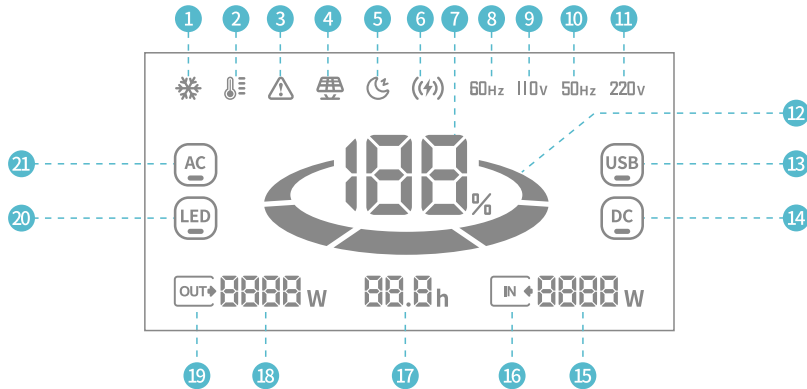
⑫**AC Switch Button:** Long press the AC button for 1 second to activate the AC output,

　short press the button to turn off the AC output.

⑬**Wireless Charger:** 10W wireless charger for devices with wireless charging function.

⑭ **LED Light:** 3W white LED Light.

⑮**LED Light Switch Button:** Long press 1 second to open the LED light with 100% default

　brightness, short press the button to switch between 100% brightness, 50% brightness,

　strobe mode and SOS mode.

1.2 - LED Screen Display

① **Snowflake Indicator:** This icon will light up when working at low temperature.

② **Thermometer Indicator:** When the temperature inside the machine reaches the

　temperature protection threshold, the device will turn off the output and this icon

　will light up.

③ **Alarm Indicator:** This icon will light up when the device is malfunctioning. (This icon

　won't light up when the battery pack has no malfunctioning)

④ **Solar Charging Indicator:** This icon will light up when the solar panel is connected.

⑤ **Hibernation Indicator:** This icon will light up when the device enters hibernation

　mode when there is no working state.

⑥ **Wireless Charging Indicator:** This icon will lit when wireless charging is activated.

⑦ **Power Percentage Indicator:** The battery power percentage icon.

⑧-⑪ **AC Output Voltage and Frequency Display Icon:** The icon lights up when the

　corresponding voltage and frequency are output. For example, when the output is

　110v/60hz, the icons for 110V and 60Hz will light up on the screen.

⑫ **Power Indicator:** Each block represents 20% of the battery power.

⑬ **USB Indicator:** This icon will light up when the USB output is activated.

⑭ **DC Indicator:** This icon will light up when the DC output is activated.

⑮ **Input Power:** Displays the current input power.

⑯ **IN Indicator:** The input icon will light up when charging.

⑰ **Charge/Discharge Time:** The remaining charging time is displayed when charging,

　and the remaining dischargeable time is displayed when discharging.

⑱ **Output Power:** Displays the current output power.

⑲ **OUT:** The output icon will light up when AC/DC output is activated.

⑳ **LED Light Indicator:** When the LED light is activated this icon will light up at

　the same time.

㉑ **AC Indicator:** This icon will light up when the AC output activated.

1.3 - Operating Instructions

1.3.1 Power on Operation

Please press and hold the AC/DC/LED button for 1 second to turn on the corresponding function according to your needs.

① **DC Button**

・Press and hold the DC output button for 1 second to activate the USB-A, USB-C ports, the cigarette socket, DC5521 output, and the wireless charging output.

・Short press to turn off all DC output. When the DC output is activated, press and hold the button for 10**s** to reset the DC output.

② **AC Button**

Press and hold the AC button for 1 second to activate AC output, the AC icon and the corresponding working voltage frequency icon on the screen will light up.

③ **LED Light Button**

・Press and hold for 1 second to turn on the light (default brightness is 100%).

・Short press to switch between 100% brightness, 50% brightness, strobe mode and SOS mode.

1.3.2 DC button and LED switch combination control

① **Hibernation Mode**

The hibernation mode icon on the LED screen indicates the hibernation mode on and off status. In hibernation mode, the DC output automatically turns off after 3 minutes of no-load (output current is 200 mA or less), and the AC output automatically turns off after about 8 hours of no-load.

Press and hold the DC switch button while pressing the LED switch button to switch the hibernation mode on or off.

⚠ **Tips:** Please turn off the hibernation mode when using the power station to power devices for a long period of time or charging the low power rating device, such as charging Bluetooth earphones alone, or charging cameras for time-lapse photography, etc.

② AC Frequency Switching

Not recommended unless necessary! The default frequency is 110V 60Hz. To switch the frequency, press and hold the DC button and press the LED switch for 3 seconds to switch the frequency.

1.3.3 Power off operation

There is the no-load power consumption of the power station is about 7W. When the power station is not in use, please press the corresponding button to turn off the power output to prevent battery power loss.

1.3.4 Device Connection

Before connecting the external device, please make sure that the working voltage of your device is consistent with the output voltage of the power station.
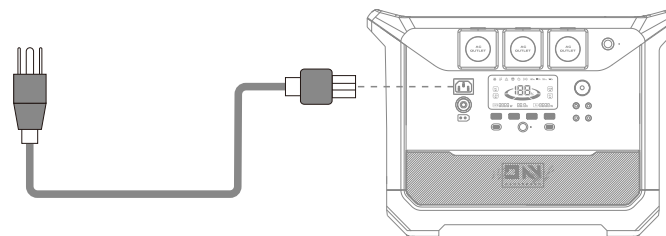
❷ Charging Your Power Station

Please strictly follow the instructions below to charge the power station. Charge the product only when the environment temperature is 0°C~40°C. Please use the original charging cable.
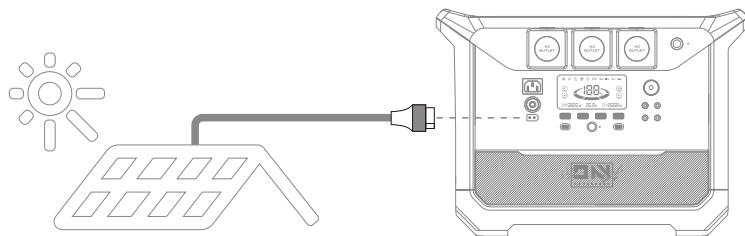
⚠ To extend battery life, when charging is complete and the battery level shows 100%, continue charging for 30 minutes before disconnecting the charging power source.

2.1 - Charging with an Original AC Cable

Charge the power station using the AC cable provided by DaranEner. The charging voltage is 110V 60Hz. Super-fast charge from 0% to 100% takes about 1.8 hours.

2.2 - Charging with Solar Panel

A. Place the solar panel in a place where it can get enough direct sunlight and adjust the appropriate angle.

B. Connect the solar panel to the power station XT60 input port.

Warm tip: The actual charging efficiency of the solar panels depends on various factors such as weather, temperature, sunlight, the angle of the solar panel, etc. The actual solar charging efficiency may different.

3 Cold Climate Use Method

· Due to the chemical characteristics of LiFePO4 batteries, low temperature (-10~-40°C) will affect the battery capacity of the product. If you are in an environment below 0°C (32°F), it is recommended to place the power station in an insulated container and connect it to a charging power source (12V car cigarette lighter/AC input/solar panel, etc.). The natural heat generated by the power station in the insulated container will keep the battery pack efficiency at the highest level.

· In an environment below 0°C (32°F), the power station cannot be charged, but can output power to other equipment.

4 Discharge protection

To extend battery life, the BMS (Battery Management System) will automatically shuts down AC output when the remaining battery level is below 10%, only DC output is allowed.

5 Troubleshooting

Failure Type	Screen Display	Possible Reason	Solution
AC Output Overload	Alarm icon lights up Error code: E12	Output load exceeds rated load	Reduce the power of external devices
AC Output Short Circuit	Alarm icon lights up Error code: E12	Short circuit at the output devices	Release short circuit device
AC No Output	Alarm icon does not lights up	Insufficient Battery power	Charge the power station
		Temperature protection,	Shut down and wait for a while to cool down
		Internal failure	Contact after-sales service
AC Input Overvoltage	Alarm icon lights up Error code: E15	Input voltage is over the rated voltage range	Please charge the power station with rated voltage
AC Input Undervoltage	Alarm icon lights up Error code: E16	Input voltage is lower than the rated voltage range	Please charge the power station with rated voltage

DC No Output	DC icon does not light up	External connection short circuit	Release short circuit device
		Internal failure	Contact after-sales service
Temperature Protection	Thermometer icon lights up	The air vent is blocked	Keep the air vent clear
	Error code: E13	The working temperature exceeds the rated temperature	Shut down and wait for a while to cool down
		Internal failure	Contact after-sales service
Fan Failure	Alarm icon lights up	Fan jammed	Clear the stuck object
	Error code: E19	Fan broken	Contact after-sales service

III. Product Specifications

❶ Cell specifications

Cell Type	LiFePO4
Warranty	24 Months
Battery Capacity	2073.6Wh(648000mAh)
Cycle Life	3500 Cycles to 80% Capacity

Storage Advice	It is recommended to charge the product once a month

❷ Input and Output

USB-A*4	5V⎓3.6A/9V⎓2.5A/12V⎓2A (Max.24W)，5V⎓2.4A when used simultaneously
USB-C*2	5V⎓3A/9V⎓3A/15V⎓3A/20V⎓3A/20V⎓5A (Max.100W)
Cigarette Lighter Output	12V⎓8A (Max.120W)
AC Port Output	230V50Hz/60Hz 2000W (Max.3000W)
Input	AC Input:230V/10.4A (Max.2400W) Solar Charging XT6033~60V/20A (Max.600W)
LED Light	3W
Wireless Charging	5W/7.5W/10W

❸ Basic Specifications

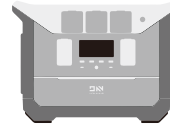| Net Weight	56.4lb（25.6kg）
Product Size	18.7x13.6x10.2 in (476x345x260mm)
Discharging Temperature	-10~45℃
Charging Temperature	0~45℃

IV.Product Warranty

❶ Warranty Policy

1. Claiming warranty may need your receipt and order number. We may also need to verify your identity.
2. We provide 2 years warranty for all DaranEner products, you can extend the warranty to 5 years by registering as a user on DaranEner official website.
3. During the warranty period, we will provide free repair or replacement service.
4. Even if the product warranty has expired, we can still provide paid support. However, we may not be able to handle peripherals (such as cables), discontinued products or parts.
5. We have a DOA (Defective on Arrival) period of 7 days. This means that if the product becomes defective within seven days of receipt, we will replace the item free of charge.
6. Even within the warranty period, if the product is damaged due to negligence such as customer disassembly, water immersion, drop, etc., or damage caused by natural disasters, this is not within the scope of free maintenance, the maintenance fees and freight will be charged.
7. Products purchased from non-genuine channels, such as resale second-hand products or products purchased from unknown sources, are not covered by the warranty and will not be repaired. In this case, please contact your seller for warranty support.

❷ Disposal and Recycling

1. This product has a built-in LiFePO4 battery and cannot be disposed of with general household waste.
2. These are hazardous materials and are subject to certain transportation and disposal regulations.
3. Do not open or disassemble this product and recycle its battery alone.
4. When disposing of this product, please follow the instructions of your local government and dispose of it in accordance with the prescribed method.
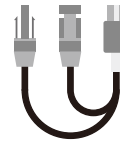
V. Packaging List

NEO 2000 Power Station
(1)

AC Charging Cable
(1)

USB-C to USB-C Cable
(1)

MC4 to XT60
Solar Charging Cable
(1)

User Manual
and Warranty Card
(1)

FAQ

Q: **What type of battery does DaranEner NEO 2000 use?**

A: NEO 2000 adopts a new generation of LiFePO4 battery, which is high safety, long life, and good heat resistance.

Q: **What should I do if there is a malfunction?**

A: Please contact customer service for troubleshooting. Do not disassemble the machine by yourself.

Q: Does NEO 2000 use the MPPT method to charge?

A: NEO 2000 uses MPPT solar charging.

Q: Can I charge other devices at the same time when the power station is charging?

A: Yes, NEO 2000 supports the UPS function. If the power consumption required by the connected external device exceeds the power supply of the internal battery, the AC charging input will power the connected external device first, suspending the charging of the power station. In the event of a sudden power failure, the UPS function can switch the mains to the internal battery power within 20ms.

Q: When the AC output is on, the AC outlet is not connected to the external devices, will it drain battery power in this situation?

A: When the AC output is turned on, the inverter will be started, and there is a no-load power consumption less than 10W. When the power station is not in use, please close each output interface to prevent battery power drained out.

Q: After fully charge the power station and storing it for a long time without use, how long will the battery drop to 0%?

A: When NEO 2000 is not in use, there is almost no natural discharge (turning off all switches). If it is stored for a long time after being fully charged, it can still remain more than 80% of the power after 3 months. For emergency use, please check the remaining power at least every 3 months.

Q: When using the AC output, there is obvious noise, is it a malfunction?

A: It is not a malfunction. This is the sound of the cooling fan running. The fan dissipates the internal heat and keeps the battery working in a good temperature environment.

Q: Can this power station be brought on the plane?

A: NEO 2000 cannot be carried on aircraft or shipped by air.

Q: After using it for the first time or using a period of time, the remaining battery power displayed on the LED screen is different from the actual remaining battery power. Or the battery is draining too fast.

A: The remaining power displayed on the LED screen may differ from the actual remaining power after the first use or after a period of long-term use. If this happens, don't worry. This is because the BMS goes into learning mode. After the first use or use for a long period of time, the battery pack needs to be fully charged and discharged twice, so that the BMS can re-learn and correct the battery power level. DaranEner is working hard to improve the accuracy of the displayed data.

Specific operation steps

　Use (fully discharge) the power station to 0%.

　Then charging the battery to 100% and leaving it for 3 hours or more, and fully discharging again.

　(Repeat the above discharge and charge operations twice)

　If the problem persists, please contact customer service.

Q: Why does NEO2000 not support car cigarette lighter charging?

A: NEO 2000 uses an MPPT charge and discharge controller. The rated input voltage of the XT60 port for solar charging is 33-60V. The car cigarette lighter can only provide 12V/24V charging voltage. Therefore, the XT60 interface of NEO2000 does not support charging from the car cigarette lighter socket. If you want to charge the NEO 2000 through your car's cigarette lighter socket in an emergency, you can charge the NEO 2000 from the car battery by connecting the included AC charging cable to a car cigarette lighter inverter/converter (Note: the car inverter/converter is not included in the package, please buy it separately).