

VOLTDEER

AMBEROCK

Power Supply
Portable Power Station
AR2000



User Manual

Information Version: 1.0
5PMPA08-00314

Legal Information

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Disclaimer

The Manual contains instructions for the use of the product. All the pictures and charts
in this manual are for description and explanation only. Shanghai Voltdeer Technology
Co., Ltd. reserves the right to change the information in the manual which is subject to
change without further notice.

Please read this manual carefully before using the product and keep this manual for
further reference. Failure to use the product in accordance with the manual may result
in serious injuries, property damages and may void the warranty, for which Shanghai
Voltdeer Technology Co., Ltd. shall not be liable.

Shanghai Voltdeer Technology Co., Ltd. makes no representations or warranties express
or implied, with respect to all the information in this manual.

In the event of any conflicts between this manual and the applicable law, the latter
prevails.

The final interpretation of this manual belongs to Shanghai Voltdeer Technology Co., Ltd.

Safety Instructions



Warning

- The device should be used in strict compliance with local laws, electrical safety regulations, and fire prevention regulations of the nation or the region.
- Do not place the device near open fire, heat sources and flammable materials.
- Do not leave the device in an extremely hot environment.
- disposal of a battery into fire or a hot oven, or mechanically crushing or cutting of a battery, that can result in an explosion
- Avoid contact with any liquid. Do not immerse the product in water or get it wet. Do not use the product in rain or humid environments.
- Do not operate the device with wet hands.
- Do not place the device in dusty locations.
- Do not expose the device to high electromagnetic radiation.
- Do not mechanically crush, cut or strike the device.
- Do not shake the device.
- Do not insert any foreign objects into the device.
- Keep the device out of reach of children and pets.
- Do not use the device if device exterior is seriously damaged.
- Do not disassemble the device.
- leaving a battery in an extremely high temperature surrounding environment that can result in an explosion or the leakage of flammable liquid or gas.
- A battery subjected to extremely low air pressure that may can result in an explosion or the leakage of flammable liquid or gas.
- Do not open under load.
- Do not open or mutilate batteries. Released electrolyte is harmful to the skin and eyes. It may be toxic.
- A battery can present a risk of electric shock and burns by high short-circuit current.
- Failed batteries can reach temperatures that exceed the burn thresholds for touchable surfaces.
- Battery maintenance prevention from terminals short-circuit when put on a conductive surface.
- Where a hazard is present after the removal of a cover, a warning label shall be placed on the equipment. The label shall be visible before the cover is removed.
- The UPS cord shall be connected to an earthed mains socket outlet for safety reasons.
- Do not overcharge the internal battery. See Instruction Manual.
- CAUTION: This device is not intended for use in a commercial repair facility.

Safety Instructions

- The following precautions should be observed when working on batteries:
 - a) disconnect the charging source prior to connecting or disconnecting battery terminals.
 - b) do not wear any metal objects including watches and rings;
 - c) do not lay tools or metal parts on top of batteries;
 - d) use tools with insulated handles;
 - e) wear rubber gloves and boots;
 - f) determine if battery is either intentionally or inadvertently grounded. Contact with any part of a grounded battery can result in electric shock and burns by high short-circuit current. The risk of such hazards can be reduced if grounds are removed during installation and maintenance by a skilled person;
- The appliance is not to be used by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction.
- This appliance contains batteries that are non-replaceable.



Caution

Operation

- The device is not recommended for powering medical equipment related to personal safety.
- Please ensure good ventilation while the device is in use.
- Do not move the device or turn the device upside-down when using it. Please place the device correctly.
- Do not stack heavy objects on the device.
- For safety purposes, please use only the accessory (cable, charger, and etc) supplied or recommended by explorelectric. explorelectric shall not be liable for damage caused by third-party devices.
- servicing of batteries should be performed or supervised by personnel knowledgeable about batteries and required precautions.
- UPS may be connected to TN and TT electrical supply system
- TN and TT electrical supply system supplied to the load and the stored energy device;
- IP20 rating for enclosure;
- Pollution degree 2
- Overvoltage category II
- Indoor use only and vibration class 3M1 (Vibration: 1 m/s²)

Transportation

- Do not bring the device on a plane.

Safety Instructions

Maintenance

- Charge the device every 3 months. If you need to store the device for a long time, please charge it to 40% ~ 70% every time before storing it.
- Recharge the device within 12 hours after it has been fully discharged. Leaving the battery empty for a long time without charging it will cause irreversible damage to the battery.
- If the device does not work properly, please contact your supplier or the nearest service center within 24 hours. DO NOT disassemble the battery for repair or maintenance by yourself. Exploretric shall not assume any responsibility for problems caused by unauthorized repair or maintenance. by unauthorized repair or maintenance.

Cleaning

- Please use a soft and dry cloth to clean the exterior surfaces.

Disposal

- Dispose of used batteries according to the laws or the regulations of the nation or the region.

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1 Packing List



AR2000



User Manual



PV Charging Cable

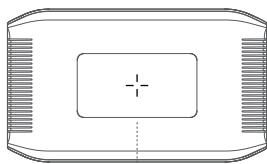


Car Cigar Lighter
Charging Cable



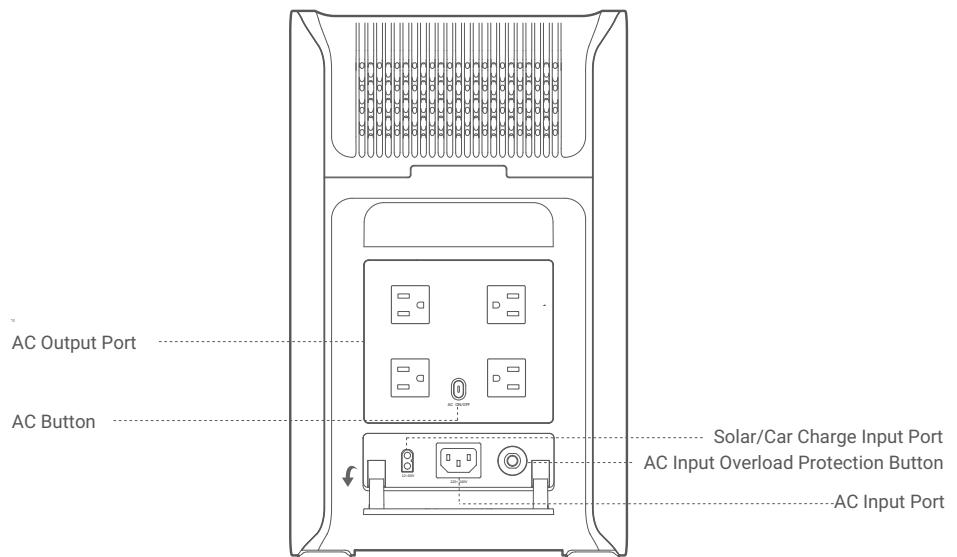
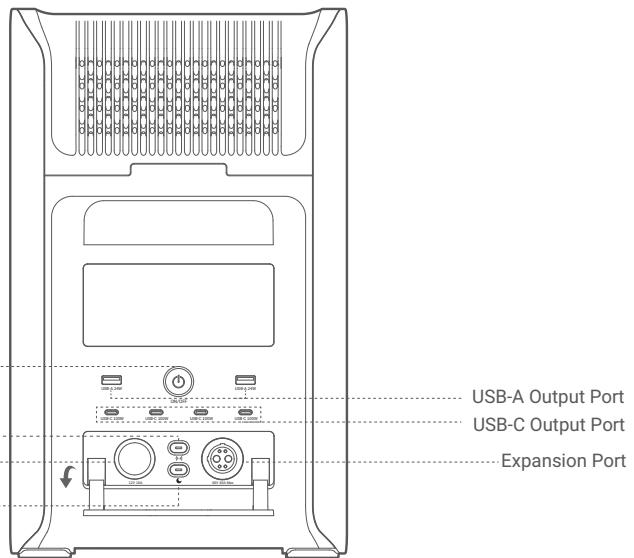
*AC Charging Cable

2 Interface

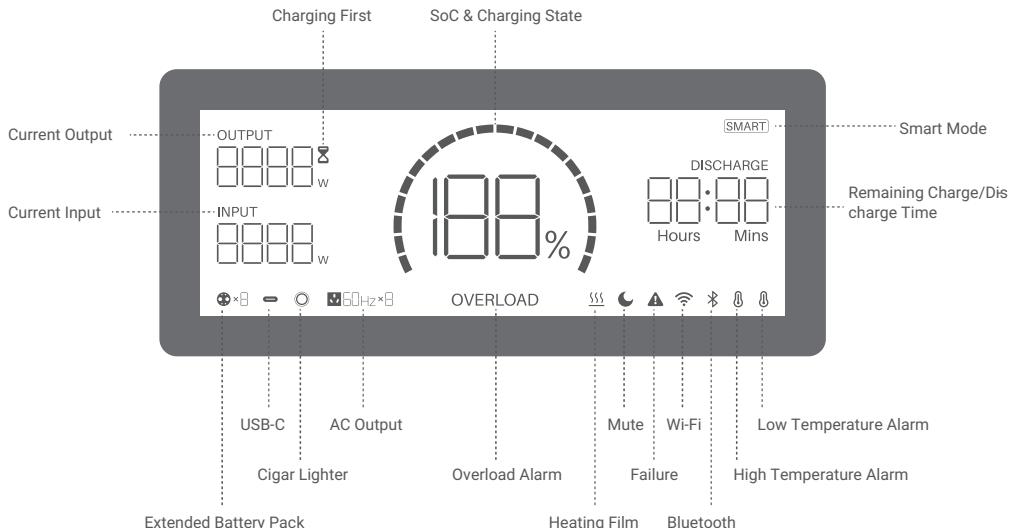


Wireless Charging Area

2 Interface



3 Screen Display & Meaning



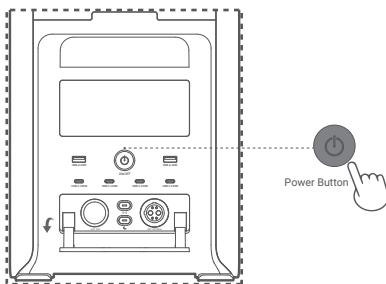
Screen Display	Meaning
	Number: Current battery level. The ring lights up clockwise: The battery is charging. *The capacity of the battery may be reduced at low temperatures. The actual situation prevails.
	Charging First: The battery is running out of power. It has stopped discharging and is charging at full speed. *When the battery level reaches 20%, the battery will start discharging again.
	Smart Mode: The device is charging/discharging intelligently. Please set charging/discharging time via App.
	Heating film is on. *In this mode, when cell temperature is below the rated value, the heating film starts to work to ensure that the device can be charged properly. The heating film is on by default, if you want to disable the function, please set it through the APP.
	Silent charging mode is on. *In this mode, the charging noise will be reduced and the charging time may be extended.
	Flash Green: Wi-Fi connection is in progress. Solid Green: Wi-Fi connection is successful.
	Flash Green: Bluetooth connection is in progress. Solid Green: Bluetooth connection is successful.

*For more information, please see Troubleshooting.

4 Device Use

4.1 Turn On/Off Device

- Turn On Device: Short press the power button, all icons on the display screen light up, and the power button lights green and keeps on.
- Turn Off Device: Long press the power button for 2 s and the display goes out.



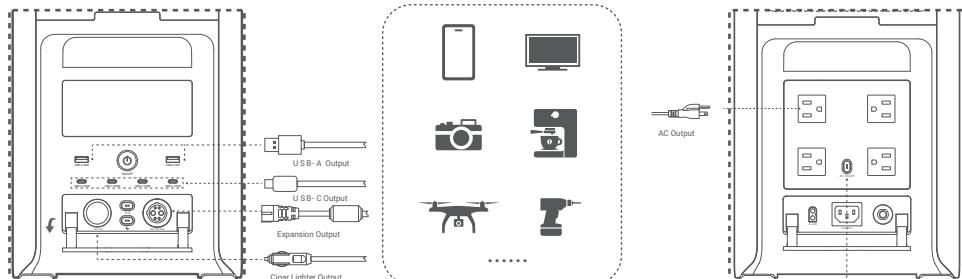
Note

- The device has a charging-protection function. It will wake up and cannot be turned off when it is charging.
- The device will standby for 40 minutes by default. If the total output power of all ports remains below 2 W for more than 40 minutes, and the device is not being charged during this period, the device will automatically shut down. To disable the function or adjust standby time, please set it via App.
- If the device cannot be switched off due to malfunction, you can press and hold the button for 15 seconds to perform a forced shutdown.

4.2 Power Other Devices

① Wired Powering

Connect the device to be charged/power to the corresponding ports with the right cables.



Note

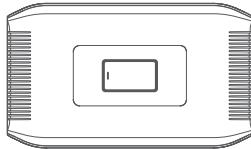
- If you want to power your device via AC output port, please press the AC button to turn on AC switch first.
- The appearance of AC sockets may vary. The actual product prevails.



4 Device Use

② Wireless Charging

Place a device with a wireless charging receiver on the top of the device to charge the device.

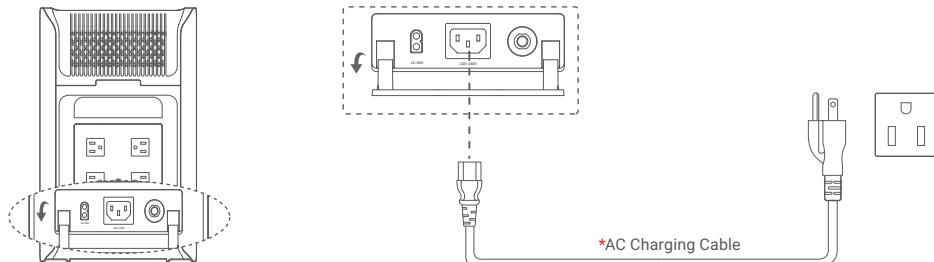


Note

Please align the device to the center of the wireless charging area. Otherwise, the charging efficiency will be affected.

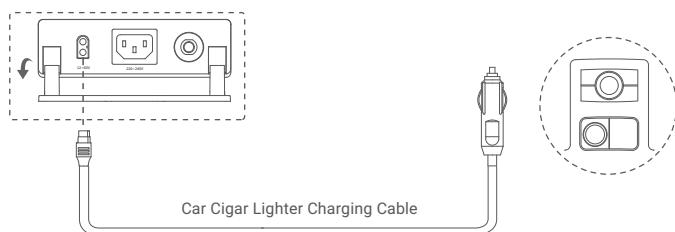
4.3 Charge the Battery

① AC Charging



*The appearance of the AC charging cables may vary. The actual product prevails.

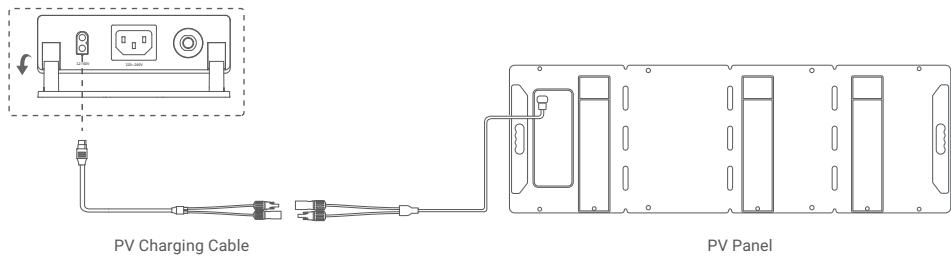
② Car Charging



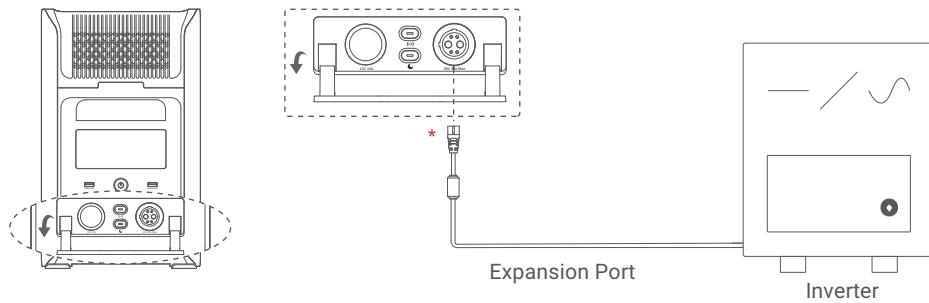
Car Cigar Lighter Charging Cable

4 Device Use

③ PV Charging



④ Expansion Port Charging



*Expansion port shall be purchased separately.

5 Specifications

Battery

Capacity	2400Wh
Type	LiFePO ₄

General

Dimensions(L×W×H)	15.35 × 9.06 × 14.76 in (390 × 230 × 375 mm)
Weight	558.42 lbs (26.5 kg)
IP Rating	IP20
Cooling	Forced Air Cooling
Communication	RS485, CAN, WiFi, BLE
Cycle Life(25°C, 80%EOL)	>3000
Capacity Expansion	Support
App	Android, iOS
Certifications	RCM, CE, UN38.3, UL

Output

AC Output (× 4)	100V~220V/120V~18A 2200W Max 60Hz
Cigar Lighter Output (× 1)	12 V 10 A
USB-A Output (× 2)	12V=2A/9V=2.5A/5V=3A, 24W Max
USB-C Output (× 4)	20V=5A/20V=3A/15V=3A/12V=3A/9V=3A/5V=3A, 105W Max
Expansion Port Output (× 1)	48 V=40 A, 2000 W Max
Wireless Charging Output (× 1)	15W Max, 43.67 dBuAm@10m(filed strength)

Input

PV Input	800 W, 12V~60 V=25 A Max
Cigar Lighter Input	11~14V (12V Platform)=8 A; 21~28V (24V Platform)=8 A
Expansion Port Input	54 V =30 A
AC Input	100V~15A Max 50/60Hz 120V~18A 2200W Max 60Hz

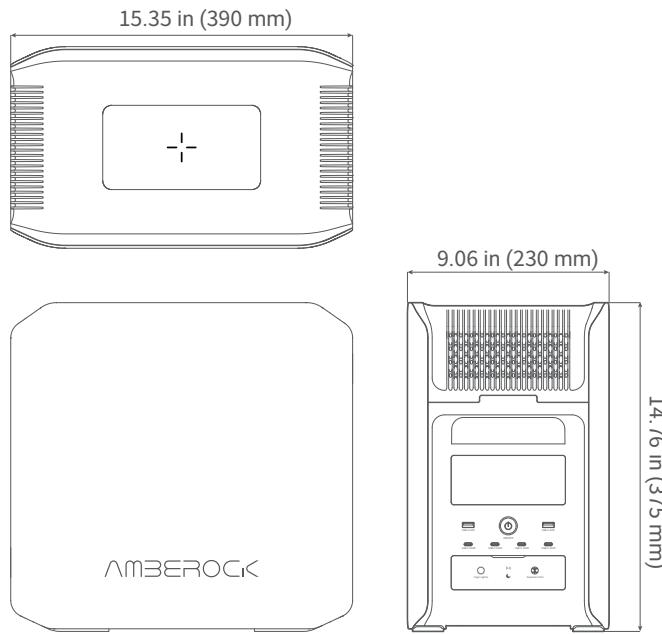
5 Specifications

Environment Specification

Discharging Temperature	-4~104°F (-20 °C ~ 40 °C)
Charging Temperature	-4~104°F (-20 °C ~ 40 °C) *When the temperature is below 42 °F (5 °C), the heating film will be turned on automatically to ensure normal charging/discharging.
Storage and Transportation Temperature	Short-term: -4~104°F (-20 °C ~ 40 °C) Long-term: 68~86 °F (20 °C ~ 30 °C)
Relative Humidity	0% ~ 85% (non-condensing)
Max. Altitude	6562 ft (2000 m)

*Product performance is based on testing in a controlled environment. Your results may vary due to several external and environmental factors.

Dimensions



Unit: inch (mm)

6 Troubleshooting

Screen Display		Possible Reason/Meaning	Troubleshooting
	Icons Flash Together	The extended battery pack connection failed.	Please check the connection of the extended battery pack.
OVERLOAD	Icons Flash Together	Discharging Overcurrent	Disconnect the abnormal device to be charged. Restart the device after ensuring that the discharging current of each interface is less than its maximum current.
OVERLOAD	Icons Flash Together	Charging Overcurrent	Disconnect the charger. Restart the device after ensuring that the charging current is less than the maximum charging current of the device.
OVERLOAD	Icons Flash Together	Expansion Port Overcurrent /Short Circuit/Overtimevoltage /Overload	Disconnect the device connected to the expansion port.
OVERLOAD	Icons Flash Together	USB Port Overload	Disconnect the device connected to USB ports.
OVERLOAD	Icons Flash Together	Cigar Lighter Port Overload	Disconnect the device connected to the cigar lighter port.
OVERLOAD	Icons Flash Together	AC Port Overload /Short Circuit	Disconnect the device connected to AC ports. After the fault is removed, turn on AC switch again to restore the AC interface outputs.
OVERLOAD	Icons Flash Together	Cigar Lighter Port Overttemperature	Wait for the device temperature to return to operating temperature. For specific temperatures, see the specification.
	Icons Flash Together	AC Output Overttemperature	Please confirm whether the fan inlet and outlet are blocked. If not, wait for the device temperature to return to operating temperature, and turn on AC switch again to restore the AC interface outputs.
	Icons Flash Together	AC Failure	Turn off the device and contact after-sales personnel.
	Icons Flash Together	Heating Film Failure	Turn off the device and contact after-sales personnel.

7 FAQ

1. What do I need to pay attention to when storing the device?

Before storage, please turn off the device and place it in a dry and ventilated place where the temperature is between -5 and 35, and the humidity is between 0% and 60%. Keep the device away from fire, heat source, water source and corrosive substances.

Before long-term storage, please ensure the power level is between 40% and 70%.

2. Why the device cannot be used when the voltage and current of power-using devices are within the rated range?

Please check if the power of the power-using devices is less than the rated power of the corresponding interfaces, and if the sum of the power of all power-using devices is less than the rated power of the device.

3. How to upgrade the device?

You can upgrade the device through App. Before upgrade, please make sure that the device is fully charged, and please do not use the device during upgrade.

4. Can the device be charged with a third-party PV panel?

Yes. If you choose a third-party PV panel, please make sure that the interface of the PV panel is MC4 interface and its voltage is between 11 V and 60 V.

For safety purposes, please use only the PV panel supplied by Voltdeer.
for damage caused by third-party devices.

5. Why the device still can't be charged after enabling the heating film at low temperatures?

The device does not support charging when the battery cell temperature is lower than the rated value. When the heating film is enabled, the battery will be heated up automatically, and will resume charging when the cell is heated up to the rated temperature. After enabling the heating wait patiently for the charging function to resume.

8 Regulatory Information

FCC Compliance 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.

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.

ISED Compliance 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.

l'appareil contient des émetteurs/récepteurs exempts de licence qui sont conformes aux CNR exempts de licence d'Innovation, Sciences et Développement économique Canada. L' exploitation est soumise aux deux conditions suivantes :

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

RF Exposure Statement

This equipment complies with FCC/IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

ce matériel est conforme aux limites de dose d'exposition aux rayonnements, FCC / CNR-102 énoncée dans un autre environnement. cette eqipment devrait être installé et exploité avec distance minimale de 20 entre le radiateur et votre corps.

Caution!

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

EU Declaration of Conformity

Hereby, Voltdeer Technology, Co. Ltd. declares that the radio equipment type wireless charger(AR2000) is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address:

<https://www.voltdeer.com/>

WARRANTY

User

Name: _____

Tel.: _____

E-Mail: _____

Post Code: _____

Address: _____

Product

Model : _____

Serial No.: _____

Seller

Name: _____

Tel.: _____

Purchase Date: _____

Thank you for your purchase from Voltdeer. Please read the user manual carefully and make sure you are familiar with the instructions before use.

When a fault occurs, please contact the local distributor or send an email to service@voltdeer.com

For more information, please scan the following QR code to visit Voltdeer website.



Shanghai Voltdeer Technology Co., Ltd.
Room 407, Building 25, No.111, Kangqiao East
Road, China (Shanghai) Pilot Free Trade Zone.

✉ service@voltdeer.com
🌐 <https://www.voltdeer.com/>
📞 021-50880510

