

CEA®

Portable energy storage power supply

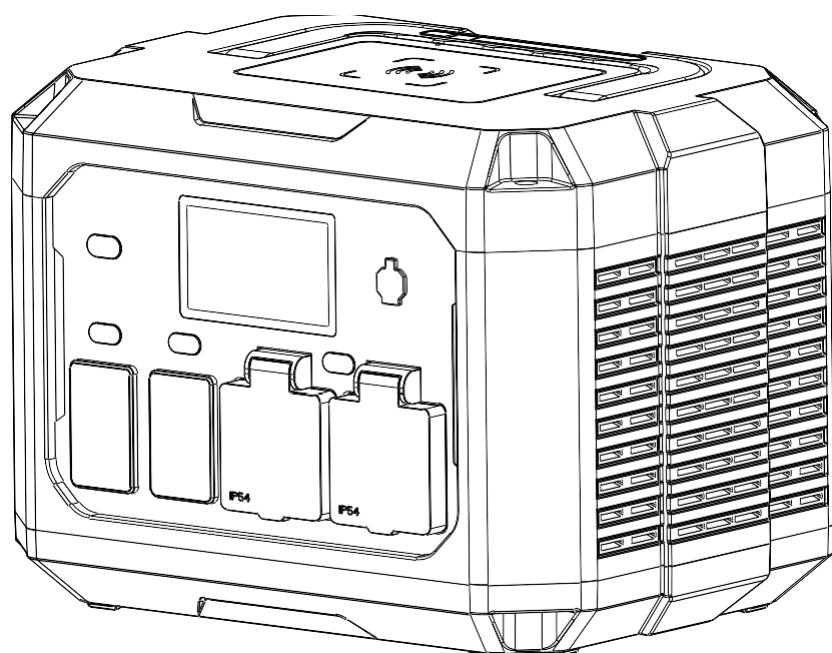
EA500-518WH-1XX

(XX, indicates different colors, such as BK, GN, YE)

Version A0

Product use and technical specification

Please read the manual carefully and follow the instructions before using



CEA ELECTRIC CO.,LTD

Applicability

This manual is applicable to the following products:

- Portable energy storage power supply EA500-518WH-1XX(XX, indicates different colors, such as BK, GN, YE)

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Date and modification

April 2022, revised version A0

I. Product Application and Scope of Use

- Product name: portable energy storage power supply
- Model/Specification: EA500-518WH-1XX
(XX, indicates different colors, such as BK, GN, YE)
- Product features:
 1. This product has long endurance;
 2. Using lithium iron phosphate battery core, safe and reliable, with lots of cycle times and long service life;
 3. Flexible charging, small and light, portable;
 4. MPPT technology, built-in SEC intelligent control technology, BMS intelligent battery management system and HH-STREAM fast charging technology, to ensure the safety of products and electrical equipment;
 5. Intelligent electricity management, electricity consumption is clear;
 6. Pure sine wave output, intelligent bidirectional inverter, intelligent output;
 7. This product has charging over-voltage protection, discharge under-voltage protection, short circuit protection, discharge over-current protection, charging over-current protection, over-temperature protection.
- Purpose and scope of application:

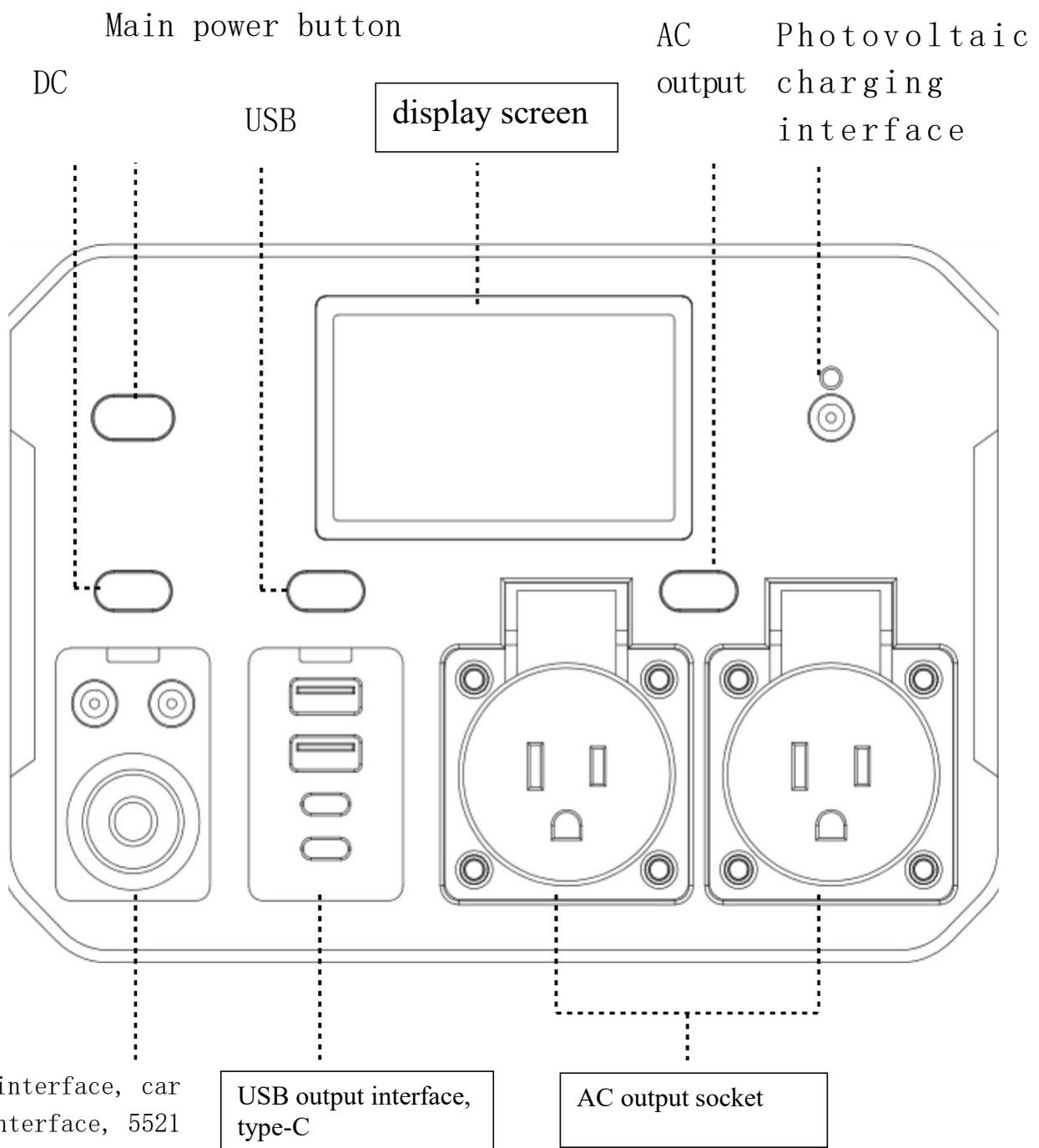
This product can be used in family emergency, emergency rescue, outdoor live broadcast, open-air camping, street stall, night market and other scenes; Suitable for TV, projectors, outdoor refrigerators, juicers, rice cookers, ovens, printers, copiers, ventilators, beauty lights, outdoor audio, unmanned aerial vehicles, industrial fans, cutting machines, electric drills, SLR, washing machines, motors, high-pressure water guns, barbecue, etc.

II. Product introduction

1. Composition

Portable energy storage power supply is mainly composed of housing, inverter, display screen, main control panel and lithium iron phosphate battery

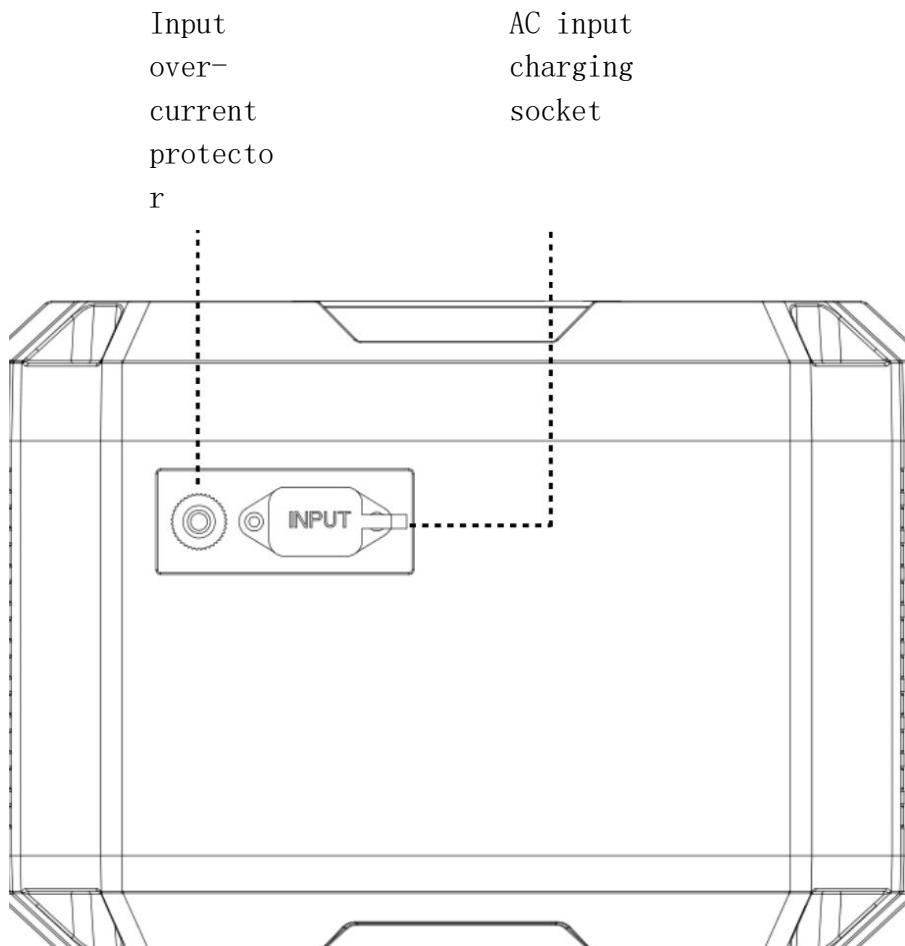
2. Function key description



II. Product introduction

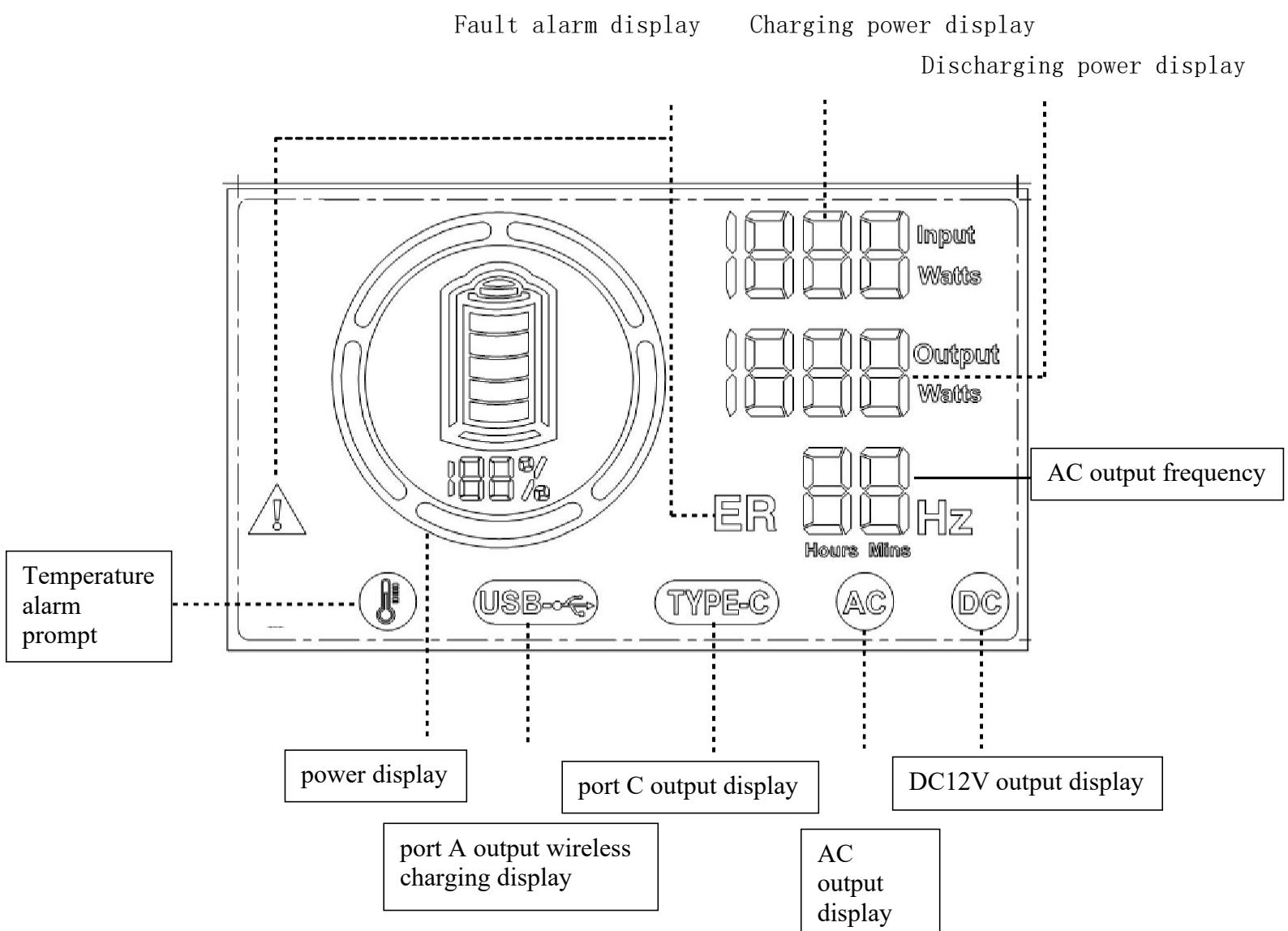
Remarks:

1. Press and hold LED light button + main power button for 3 seconds, display screen will reset and restart;
2. When the AC output is off, press and hold the main power button + AC button for 3 seconds to switch the frequency between 50 and 60HZ;
3. Long press the AC button to turn on or off the buzzer;
4. After the main power button is turned on, if other functions are not operated for three minutes, it will enter the sleep mode;
5. Press and hold the LED button for 10 seconds, and the display screen will not go out automatically;
6. Press and hold the AC button + LED button for 3 seconds to view the system version;



II. Product introduction

3. Display screen function description:



III. Technical parameter

Project	Parameter	
Battery capacity	Lithium iron phosphate soft package 518WH	
Product size	298*220*213mm	
Product weight	7.5 kg	
Use ambient temperature range	-10 ~ 40 °C	
Storage temperature	-10 ~ 40 °C	
Input	Type-c2 Input Charging	100W 5V3A 9V3A 12V3A 15V3A 20V5A
	Solar charging	100W (11-23V 5A)
	Mains electricity charging	140W (100-240V 1A)
Output	Type-c1 output	Single discharge 30W 5V3A 9V3A 12V2.5A 15V2A 20V1.5A Support PD/QC3.0/QC2.0/AFC/BC1. 2/APPLE and some other fast charging protocols

Type-c2 Input/Output	Bidirectional charge and discharge PD100W 5V3A 9V3A 12V3A 15V3A 20V5A Support PD/QC3.0/QC2.0/AFC/BC1. 2/APPLE and some other fast charging protocols	
USB A1 Output	18W fast charging: supports QC3.0/QC2.0/AFC/BC1.2/A APPLE and some other fast charging protocols 5V3A 9V2A 12V1.5 A	
USB A2 Output	18W fast charging: supports QC3.0/QC2.0/AFC/BC1.2/A APPLE and some other fast charging protocols 5V3A 9V2A 12V1.5A	
Car charging output	5521*2 1*Cigarette lighter, 12V10A	
AC Output	2X, 110V, 60Hz 500W	
Charging time	Type-c2 Input Charging	Approximately 5. 2H
	Solar charging	About 4H
	Mains electricity charging	About 5.5H
Illumination	Lamp power	2W
	Flashlight power	2W supports SOS flash
Wireless charging	10W	

IV. Operation and use methods

1. Charging steps and methods:

1.1 AC charging only needs one end of a power cord to be inserted into the charging socket on the back of the equipment, and the other end connected to mains electricity. The input voltage range: AC is 100-240V 50/60 Hz, and the power is 140W;

1.2 DC charging products support input voltage range DC: 11-23V 5521 interface. Check the input voltage range before charging and insert the DC input interface into the 5521 interface in the upper right corner of the front of the equipment to complete DC charging;

2. How to use the output with load:

2.1 AC load: check that the power range and voltage range of on-load electrical equipment should match with this equipment before use, insert the power plug of on-load products into the output socket of the equipment, turn on the main power button and AC output button in turn, and the display screen shows the output on-load power;

3. How to use DC/USB output:

Before use, check that the voltage and corresponding parameter range of the on-load electrical equipment should match with this equipment, insert the interface plug of the on-load product into the corresponding interface of the equipment, and turn on the main power button and DC/USB button in turn;

4. How to use lighting:

The lighting switch button is located at the handle, and the lighting is divided into

ordinary lighting and flashlight lighting. The control sequence of the switch button is: lighting 1 bright/lighting 1 flash/lighting 2 bright/off;

5. How to use wireless charging:

Place the mobile phone in a position marked with a wireless charging area on the top of the device, and turn on the main power button and the USB button in turn;

V. Fault code display

project	abbreviation	description
Er 01	DC OCP	DC output module (DC12V & cigarette lighter) and output over-current
Er 02	DC SCP	DC output module (DC12v & cigarette lighter) and output short circuit or wrongly inserted into charger
Er 03	AC Error	AC module fault
Er 04	PD Error	One way type-C1 or type-C2 interface failure
Er 05	PCBA OTP	PCBA temperature too high
Er 06	BAT UTP	Battery temperature too low
Er 07	USBA Error	USBA1 or USBA2 output fault
Er 08	Reserve	Reserve
Er 09	BAT OTP	Battery over-temperature alarm
Er 10	BAT OCP	Battery over-current; System overload
Er 11	BAT UVP	Battery under-voltage warning
Er 12	BAT LOW	Battery low voltage warning
Er 13	WP Error	Wireless power charging failure

VI. Product maintenance

- 6.1 Newly purchased products shall be fully charged before use;
- 6.2 Regularly remove the dust and dirt at the cooling window;
- 6.3 Under the condition of long-term storage for more than 3 months, at least 50% of the electricity power shall be stored;
- 6.4 If stored for more than 6 months, please charge and discharge the product for 1-2 times in order to prolong the service life of the battery;

VII. Warnings and notes

- 7.1 The voltage standards of different electrical appliances are different. Before use, carefully check whether the rated voltage range of the product is consistent with the voltage range of the portable power supply, otherwise it may lead to dangerous situations;
- 7.2 After the battery is discharged to the termination voltage, more discharge is called over discharge. Over discharge is easy to cause serious power loss of the battery, which greatly shortens its service life. Therefore, deep discharge should be avoided when the battery is used;
- 7.3 The product shall be kept away from fire source, high temperature

environment, wet and rainy environment during use and placement, otherwise it may cause dangerous situations;

7.4 This product has a built-in high-voltage power supply, and non professionals are not allowed to disassemble it by themselves;

7.5 Please do not discard this product at will after its service life. Please recycle it according to local laws and regulations;

7.6 The product shall be protected from rain, water immersion and violent vibration during transportation;

7.7 It cannot be used at an altitude of more than 2000m;

7.8 Product AC is AC output, please do not insert your hand or hand-held metal conductor into AC socket;

7.9 Do not drop, squeeze or pierce the product, so as to avoid exposing the product to external pressure, resulting in short circuit in the internal circuit of the product and battery damage;

7.10 Please shut down in time after use (there is no-load power loss when the AC output is turned on, which will continue to consume battery power);

7.11 please select the solar panel according to the electrical parameters specified by the manufacturer. If the voltage is higher than the parameters, the product may be damaged;

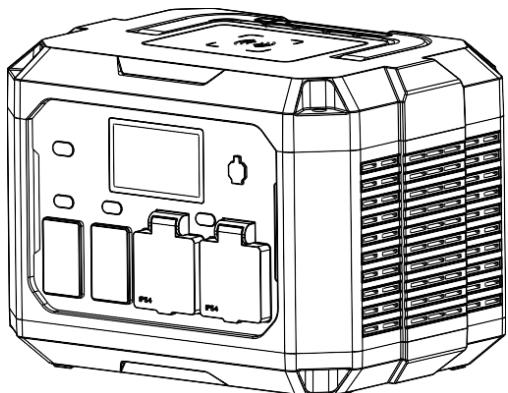
7.12 it is forbidden to short circuit the output port of the product;

7.13 This product and its accessories may contain some small parts. Please place the product and its accessories out of the reach of children. Children may inadvertently damage this product and its accessories, or swallow small parts to cause suffocation or other hazards. Children or people with limited intelligence should use this product with the accompaniment of their guardian;

7.14 Do not use this product in thunderstorm weather, which may cause product failure or electric shock;

7.15 If the product falls into water accidentally during use, it shall be placed in a safe open area and shall not be used again;

VIII. Product packing list

Portable energy storage power supply X 1	manual X 1
	 <p>CEA® Portable energy storage power supply EA500-518WH-1XX</p> <p>Product use and technical specification Please read the instructions carefully and follow the instructions before using</p>  <p>CEA ELECTRIC CO.,LTD</p>
AC Power charging line X 1	DC car charging line X 1
	

CAUTION

A photovoltaic panel as an input for charging the internal battery shall be provided with an inverter and/or a charge controller in accordance with UL 1741 or UL 62109-1;

The external power supply shall be a power source in accordance with the Standard UL 60950-1 and CAN/CSA C22.2 No. 60950-1, or UL 1310 and No. 1, CAN/CSA C22.2 No. 223, or No.1, CAN/CSA C22.2 No. 223;

A vehicle adapter that complies with the enclosure and input contacts requirements in the Standard for Vehicle Battery Adapters, UL 2089, and Power Supplies, CAN/CSA C22.2 No. 107.1. The connector plug shall incorporate a fuse or other protective device having a current rating not greater than 15 A.

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

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

- a) Read all the instructions before using the product.
- b) To reduce the risk of injury, close supervision is necessary when the product is used near children.
- c) Do not put fingers or hands into the product.
- d) Use of an attachment not recommended or sold by power pack manufacturer may result in a risk of fire, electric shock, or injury to persons.
- e) To reduce risk of damage to the electric plug and cord, pull the plug rather than the cord when disconnecting the power pack.
- f) 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.
- g) Do not operate the power pack with a damaged cord or plug, or a damaged output cable.
- h) Do not disassemble the power pack, take it to a qualified service person when service or repair is required. Incorrect reassembly may result in a risk of fire or electric shock.
- i) To reduce the risk of electric shock, unplug the power pack from the outlet before attempting any instructed servicing.
- j) **WARNING – RISK OF EXPLOSIVE GASES.**
 - 1) To reduce risk of battery explosion, follow these instructions and those published by battery manufacturer and manufacturer of any equipment you intend to use in vicinity of the battery. Review cautionary marking on these products and on engine.
- k) **PERSONAL PRECAUTIONS**
 - 1) Have plenty of fresh water and soap nearby in case battery acid contacts skin, clothing, or eyes.
 - 2) Wear complete eye protection and clothing protection. Avoid touching eyes while working near battery.
 - 3) If battery acid contacts skin or clothing, wash immediately with soap and water. If acid enters eye, immediately flood eye with running cold water for at least 10 minutes and get medical attention immediately.
 - 4) NEVER smoke or allow a spark or flame in vicinity of battery or engine.
 - 5) Be extra cautious to reduce risk of dropping a metal tool onto battery. It might spark or short-circuit battery or other electrical part that may cause explosion.

- I) When charging the internal battery, work in a well ventilated area and do not restrict ventilation in any way.
- m) Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help. Liquid ejected from the battery may cause irritation or burns.
- n) Do not expose a power pack to fire or excessive temperature. Exposure to fire or temperature above 130°C may cause explosion. The temperature of 130°C can be replaced by the temperature of 265°F.
- o) Have servicing performed by a qualified repair person using only identical replacement parts. This will ensure that the safety of the product is maintained.

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.

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Production date: see package

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