



All-in-One Solar generator model : AU.P7K2B16

EN: User Manual (1-8)



EN: User Manual

1.1 Precautions for use

warning

- Before operating the equipment, always ensure that the power is off to avoid electric shock!
- During operation, all safety precautions in this manual must be strictly followed!
- Do not disassemble, modify, or repair the battery without official authorization. Doing so may result in electric shock or equipment damage, and the company will not be responsible for any losses caused thereby!
- Caution! Please read the user manual carefully before installing or using the solar generator. The safety precautions mentioned in this manual are not exhaustive and are for reference only.

1.2 General Precautions

1. Comply with local safety laws and regulations during equipment installation, operation, and maintenance.
2. Do not wear any conductive items, such as watches, bracelets, necklaces, or rings, while installing, operating, and maintaining the equipment.
3. If the solar generator is stored for an extended period, it needs to be charged and discharged every three months, and the battery capacity should not be lower than 50%.
4. After the battery is fully discharged, it needs to be recharged within 12 hours.
5. Before maintenance, the battery and power supply of the equipment should be turned off.
6. Do not use cleaning solvents to clean the solar generator.
7. Do not expose the solar generator to flammable or irritating chemicals or vapors.
8. The company is not responsible for any losses caused by violations of general safety operating requirements or equipment design, manufacturing, and usage safety standards.
9. The solar generator contains high-voltage electricity; do not touch the sockets on the solar generator directly.

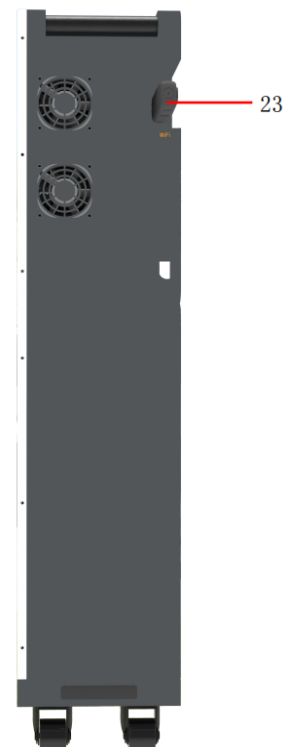
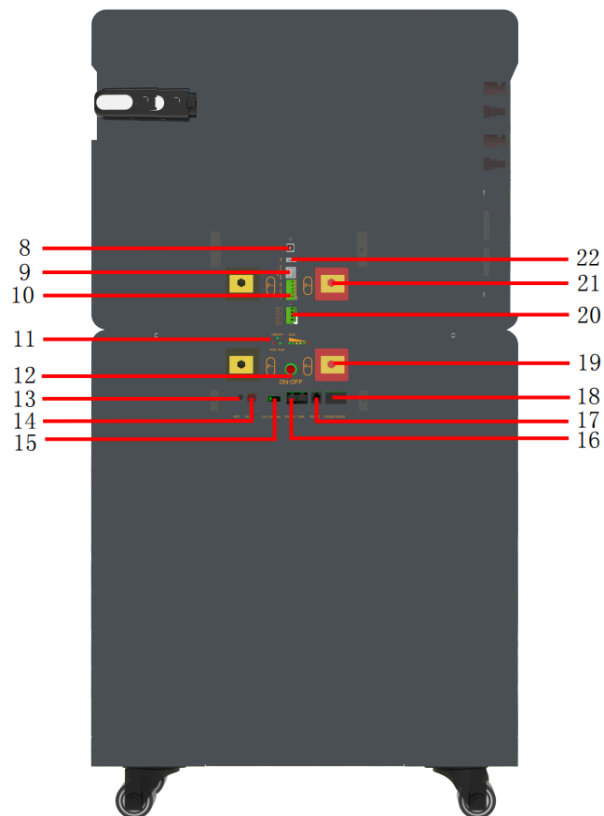
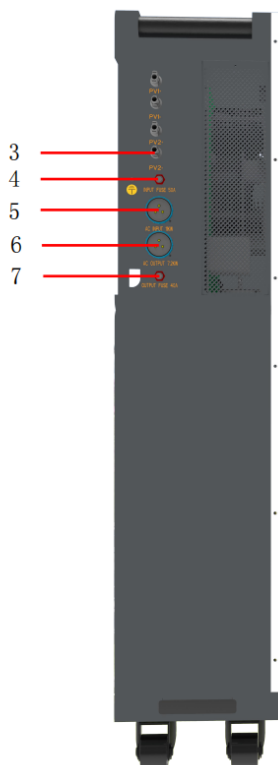
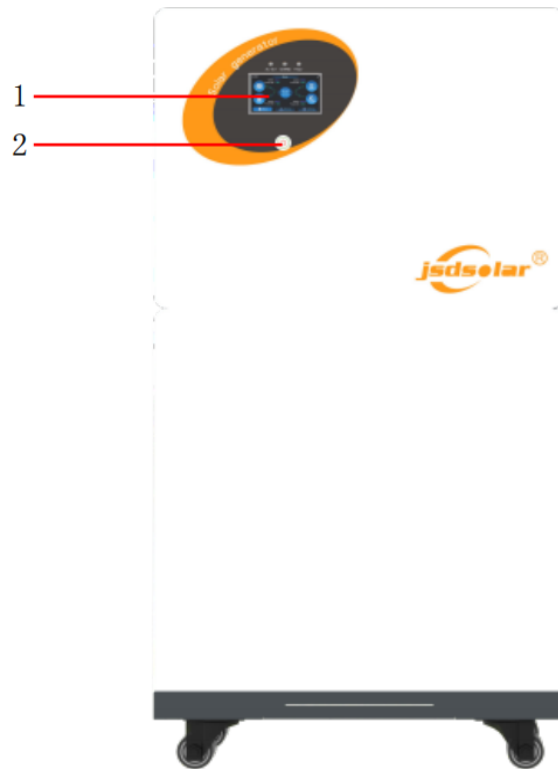
1.3 Before Installation

1. After unpacking, please check the product and packing list. If the product is damaged or missing parts, please contact your local retailer;
2. Before installation, please disconnect the power and ensure the battery is in the off position;
3. Wiring must be correct. Do not connect the reverse polarity cable, and ensure there is no short circuit with external equipment;
4. Ensure the electrical parameters of the solar generator system are compatible with the relevant equipment;
5. Please place the solar generator away from water and fire sources;
6. Do not connect the solar generator to faulty or incompatible equipment;
7. Before starting use, please check that all connections are secure to avoid loose connections causing overheating and damage to the equipment.

2. List

Solar generator packing list/accessories				
Number	Product Name	Model	Quantity	Describe
1	Solar generator	AU.P7K2B16	1	
2	User Manual	Includes English and French	1	Bilingual instruction manual
3	Factory inspection report		1	
4	High power input/output socket	with built-in cables	1/1	Connect the AC input and output of the solar generator
5	MC4	MC4 Male and Female Connectors	2	Connect the solar panel to the inverter PV input
6	copper busbar	with heat shrink tubing in the middle.	2	Connect the P+ and P- terminals of the battery and inverter respectively.
7	Ordinary Ethernet cable	0.2-meter RJ45 crystal heads at both ends	1	Connect battery and inverter communication

3. Appearance description



Number	Definition	Explain
1	Screen	Color touch screen
2	Inverting switch	Turn on/off output
3	Solar input	Standard MC4 interface
4	AC input fuse	50A
5	AC input	11KW
6	AC output	7.2KW
7	AC output fuse	40A
8	USB communication port	Inverter connect computer
9	BMS communication port	Connect BMS
10	Inverter dry contact point	Control generator switch
11	Battery indicator light	Prompt respective statuses
12	Battery switch	Turn on/off battery
13	Battery reset button	Reset button
14	DIP switch	Number each battery
15	Battery dry contact point	Control generator switch
16	External RS485/CAN interface	Communicate with inverter
17	Communicate with inverter	Battery connect computer
18	Internal RS485 port	Communication between batteries
19	Battery power interface	DC + and - poles of battery
20	CT dry contact port	Connect CT
21	Inverter power interface	DC + and - poles of inverter
22	WiFi port (optional)	Backup WiFi interface
23	WiFi port (standard)	WiFi interface

4. Installation and Usage Instructions

1. Place the solar generator on a flat surface, solid surface or platform. Stay away from high temperature and high humidity environments. Flip down the brake switch on the bottom casters to prevent the solar generator from moving.
2. Align the inverter and battery parts with the holes and stack them together, then lock the fixing screws. Connect the positive and negative terminals of the inverter to the positive and negative terminals of the battery, and connect the BMS interface of the inverter to the RS485 interface of the battery for communication. Note that the positive and negative poles cannot be reversed to avoid damage (refer to Figure A for connection)
3. Connect the AC input, AC output, and PV input lines (refer to Figure A for connection). Before connecting, turn off all power switches to ensure safe wiring. After all the wiring connections are completed, check the wiring again to ensure that it is correct.
4. Turn on the battery switch on the back of the solar generator, and then press the inverter switch button at the bottom of the screen. Wait for the device to start until the screen displays a stable "ON" font, indicating that the solar generator is functioning properly. At this point, you can turn on the switches of the PV and AC input lines to charge the solar generator
5. When installing and using for the first time, it is necessary to calibrate the battery capacity: maintain the default settings. After the AC and PV lines are successfully connected, start charging and wait for the charging power displayed on the screen to change to "0W".
6. After the PV input and AC input are connected normally, the solar generator will emit a prompt sound, and the PV, GRID, LOAD, and battery icons in the upper left corner of the screen will display operating data such as voltage, power, and current.
7. Once the all-in-one machine is running normally and there is no buzzing sound, you can turn on the AC output line switch and use the solar generator for power supply.
8. For large-scale relocation or temporary shutdown, please unplug the AC power cord and photovoltaic input cord, and turn off all switches to ensure the solar generator is powered off.

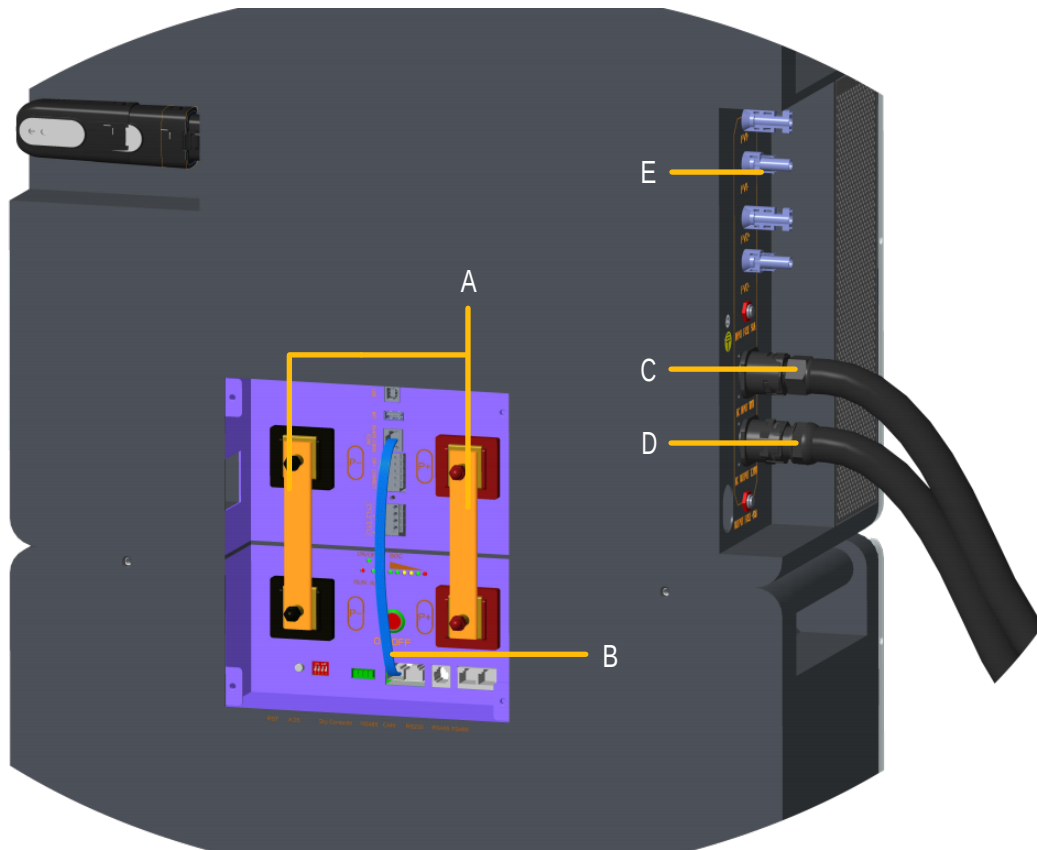


Figure A

A : Connect the positive and negative copper busbars between the inverter and the battery, ensuring that the positive terminal is connected to the positive terminal and the negative terminal to the negative terminal. Tighten the screws to prevent damage caused by overheating or poor contact.

B : Connect the inverter's BMS interface and the battery's RS485 interface using a 0.2-meter standard network cable to enable successful communication between the battery and the inverter.

C-D : Configure the solar generator with AC IN and AC OUT cables and terminals. Secure the bare wire end of the cable to the household power switch, ensuring the L-N and GND wires are connected correctly. Then, plug the other end of the cable into the AC INPUT port of the solar generator. The AC OUTPUT connection is similar: connect one end of the bare wire to the household load and the other end to the AC OUTPUT port of the solar generator (be sure to turn off all switches and disconnect all power sources during wiring to ensure safety).

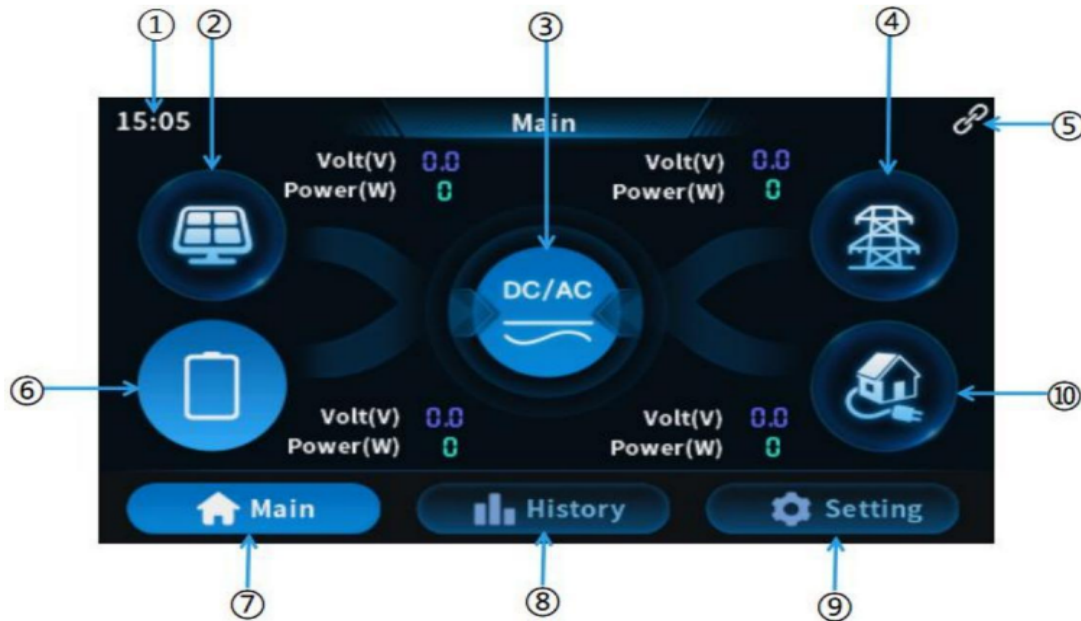
E : PV1 and PV2 interfaces for solar generators; Connect two strings of solar panels, the first string connected to the positive and negative terminals of PV1, and the second string connected to the positive and negative terminals of PV2; Please note that the maximum valueThe voltage of each string of solar panels must not exceed 500V, and the solar panels mustConfigure according to the specifications on the label or manual

4. 1 Screen Operation Introduction

On the main screen, click the "PV-Main Power-Battery-Load" icon to view detailed real-time operating voltage, current, power, and historical data.

4.2、 Operation and Display Panel

The operation and display panel, shown in below chart, is on the front panel of the inverter. It includes three indicators and a LCD display, indicating the operating status and input/output power information.



①	Time	⑥	Battery parameters
②	Photovoltaic (PV) parameters	⑦	Main
③	System information	⑧	Historical data
④	AC input parameters	⑨	Menu bar
⑤	Screen communication	⑩	AC output parameters

LCD screen set menu :



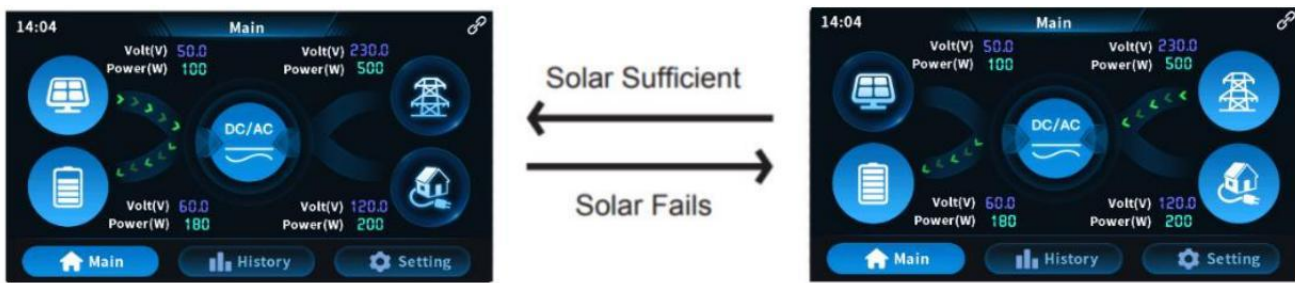
Real-time data viewing method

On the LCD main screen, press the screen to scroll through the real-time data of the machine.

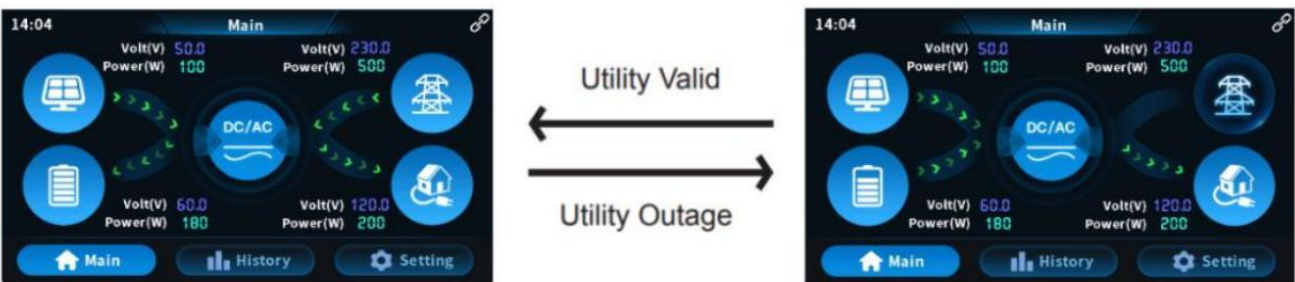
5. Operating Mode Description

5.1、Charging mode

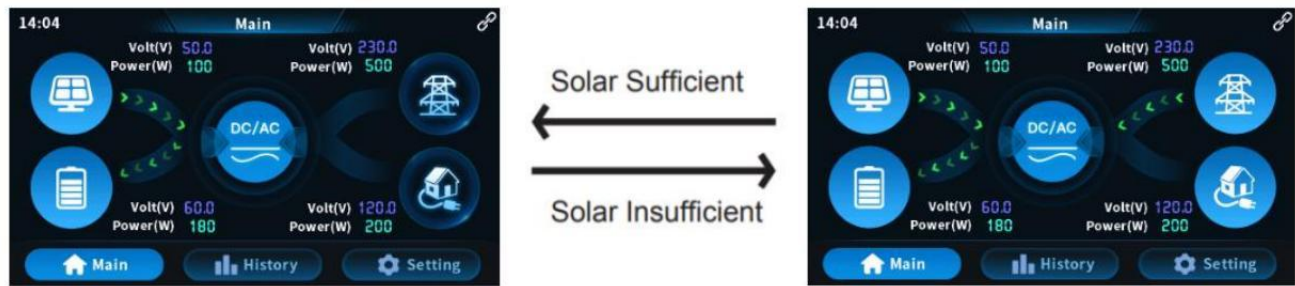
1) **PV priority:** PV module will charge the battery preferentially, and the battery is charged by the Mains only when the PV system fails. During the day, solar energy is fully used to charge, while at night, it converts to the Mains. This can maintain battery level, and is ideal for areas where the grid is relatively stable and electricity price is relatively high.



2) **Mains priority:** The Mains supply is preferentially used to charge the battery. Only when the Mains fails, the PV charging can be activated.



3) **Hybrid charging:** PV and mains hybrid charging. PV MPPT charging is a priority, and when PV energy is insufficient, the mains supply supplements. When the PV energy is sufficient again, the mains stops charging. This is the fastest charging mode, suitable for the areas where power grid is unstable, providing sufficient backup power supply at any time.



4) **Only Solar:** Only PV charging, without Mains charging. This is the most energy-efficient way in which battery is charged only by solar panels, and is usually used in areas with good lighting conditions.

5. Parameters and Specifications

Model		AU.7P2B16
Battery rated voltage		51.2VDC
Max charging and discharging current of battery		200A/200A
Cell capacity		314AH
Battery capacity		16KWH
Inverter	Max AC input power	11KW
	AC input voltage	85-140VAC
	AC max charging current	120A
	Rated output power	7.2KW
	Rated output voltage	120VAC
	Output frequency	50/60HZ $\pm$ 0.1%
PV input	MPPT range @ operating voltage	90-450VDC
	PV input voltage range	90-485VDC
	Maximum PV input power/current	Single PV input : 16A/4500W
		Dual PV Input : 16+16A/9000W
	Max PV charging current	150A
	Max PV+AC charging current	150A
Temperature Control System		Intelligent Fan
Operating Ambient Temperature		-10~+60°C
Storage Ambient Temperature		-15~+60°C
Operating/Storage Ambient Humidity		5-95% Non-condensing
Inverter chassis dimensions		560*390*235 mm
Inverter chassis packaging dimensions		630*400*318 mm
Battery chassis dimensions		560*665*235 mm
Battery chassis packaging dimensions		630*705*318 mm
Overall size solar generator		560*1055*235 mm

Note: The connected electrical equipment (including loads, AC charging, photovoltaic voltage and current) must not exceed the maximum parameter values of the solar generator. Exceeding these values will trigger the solar generator's automatic protection mechanism and may even cause serious damage.

6. troubleshooting

question	Solution
No display on screen	1. The screen may be in sleep mode. Tap the screen to wake it up. 2. The solar generator battery may not be connected or may be low on power. Please ensure the side switch is on, the AC power cord is plugged in, and the PV voltage and AC input voltage values displayed on the screen meet the parameter requirements. 3. There may be an internal fault. Please contact our after-sales service.
The AC power outlet has no output	1. Please check if the battery switch is switched to the "ON" position, if the photovoltaic input cable and AC input cable are correctly connected, and if the voltage displayed on the screen meets the parameter requirements. 2. Check if a red error message appears at the top of the screen. If so, please note the message and locate and troubleshoot the fault based on the fault information. If the fault cannot be resolved, please contact our after-sales service.
The buzzer continues to beep	1. The solar generator battery may be low on power. Please ensure the side circuit breaker is on, the AC power cord is plugged in, and the PV and AC input voltage values displayed on the screen meet the requirements. 2. Check if a red error message appears at the top of the screen. If so, note it down and locate and troubleshoot the problem based on the fault information. If the problem persists, please contact our after-sales service.
Solar generator surface overheating or triggering high-temperature protection:	1. The ventilation openings may be blocked. Please check for foreign objects and blockages near the ventilation openings. 2. The fan may be blocked or malfunctioning. Please check if the fan is working properly and if air is blowing out when the solar generator is running. 3. High temperatures and prolonged full-load operation may trigger the high-temperature protection. You can turn off the load and the solar generator. Let it sit for half an hour before restarting. 4. If the problem persists after following the above steps, it may be an internal fault. Please contact our after-sales service.
Battery cannot be charged	1. Observe whether the screen displays a normal AC power input voltage or a solar photovoltaic input voltage. If the displayed input voltage is close to 0V, the external power supply and wiring need to be checked; 2. Check if a red error message appears at the top of the screen. If so, please note the error message and locate and troubleshoot the problem based on it. If the problem persists, please contact our after-sales service.