PORTABLE USER POWER STATION C700 & C1400 MANUAL



About this manual

Thank you for purchasing SANTAK's high-quality portable power station.

This manual contains important instructions that you should follow during usage and maintenance of the portable power station. Please read all instructions before operating the equipment and save this manual for future reference.

Change history

Release date	Description
2024-03-15	First release.

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Safety precautions



A Before using this product, read the "Safety Precautions" carefully to ensure correct and safe use, and keep the manual properly.

Product use

- Keep the product in a ventilated and dry place, and avoid using it in rain or humid environment.
- Use additional devices and accessories specified by our company. If you need to replace any part, check the information on SANTAK's official website www.santak.com.
- Use the product within the allowed operating temperature range of -20°C to +60°C. High ambient temperature will easily trigger the overtemperature protection function of the portable power station, limiting the load capacity or load time. If the temperature is too low (below -20°C), the product's self-protection function will be triggered, and the product will malfunction.
- The portable power station has the low-temperature battery health management function. When the ambient temperature is between -20°C and +10°C, this function will be triggered to automatically identify the temperature and the maximum load according to the characteristics of the lithium-ion battery. The temperature alarm A and overload alarm 🔀 icons will flash simultaneously on the LCD of the portable power station. In this case, reduce the load or move the portable power station to a place with higher temperature and wait until the temperature of the lithium-ion battery rises before using it.
- The portable power station is resistant to electromagnetic interference. However, do not use the portable power station in an environment with strong static electricity or magnetic field to avoid malfunction or even failure of the portable power station.

- Do not disassemble or pierce the portable power station with sharp objects in any way, so as to avoid product failure, fire or even explosion.
- If the portable power station suffers a serious fall or external impact, do not use it again.
- If the product accidentally falls into the water during use, place
 it in a safe open area and stay away from the product until it
 is completely dry. Dried products shall not be used again and
 shall be handled properly in accordance with the discarded
 methods in this Manual. If the product is on fire, the following
 fire extinguishing equipment can be used: water or fog, sand, fire
 blanket, dry powder, or carbon dioxide fire extinguisher.
- It is prohibited to short-circuit the product with wires or other metal objects.
- Do not put miscellaneous objects on the portable power station.
- Please keep interfaces of the portable power station clean to ensure normal operation.
- Do not block the air inlet and outlet of the portable power station to avoid overheating during operation.

Product charging

- The portable power station must be charged with an officially designated charging cable. SANTAK is not responsible for any consequences caused by the use of unauthorized charging cables.
- When charging, put the portable power station on the floor away from flammable or combustible materials. Please keep an eye on the portable power station during charging to prevent accidents.
- After continuous full-load discharge, if the product battery is at a high temperature, it is recommended to charge after the portable power station comes down to the ambient temperature, otherwise charging may be prohibited. The charging ambient

temperature of the battery is 0°C to 50°C, and charging within the optimal charging ambient temperature (22°C to 28°C) can greatly prolong the service life of the battery.

Product storage and transportation

- Keep the portable power station out of reach of children.
- If the portable power station reports extremely low power after
 use, charge it before storing. Otherwise, the battery inside the
 product may be damaged if stored for a long time. If the battery
 capacity of the portable power station is low and it is left unused
 for a long time, the battery will enter the deep sleep mode. To
 wake the battery from deep sleep mode, the portable power
 supply must be charged.
- Do not put the portable power station near a heat source, such as a car exposed to direct sunlight for a long time, fire source, or heating furnace.
- Keep the environment where the portable power station is stored dry. Do not put the portable power station in the water or where it may leak.
- Do not store or transport the portable power station with glasses, watches, metal necklaces, hairpins, or other metal objects.
- The storage temperature is -20°C to +60°C.

Disposal of product battery

Batteries are hazardous chemicals and it is strictly forbidden to dispose of them in ordinary garbage cans, be sure to completely discharge the portable power station before diposing of it in the designated battery recycling bin. For more details, please comply with the local laws and regulations on battery recycling and disposal.

Product repair and maintenance

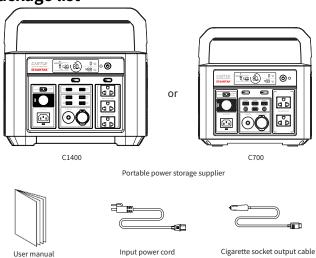
 If the portable power station is idle for a long time, it is recommended to read the battery capacity on the LCD every 2 to 3 months. If the power capacity is less than 30%, it is recommended to recharge the portable power station to 30% to 80%, and then turn off the portable power station and store it at room temperature.

- Avoid using alcohol and other organic solvents to clean the surface of the portable power station. Wipe the surface with a dry cotton cloth.
- Keep the portable power station in a dry place to avoid direct contact with water.

Boarding Instructions

According to the requirements of air traffic control, it is prohibited to carry equipment with lithium-ion batteries higher than 160 Wh on board. Therefore, this product cannot be carried on board.

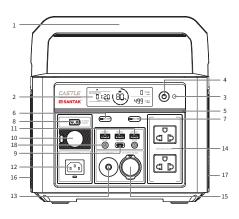
Package list



Function description

Panel introduction





C700

Τ	Folding nandle	10	Lighting and control switch
2	LCD	11	USB-A port
3	Ambient light sensor (ALS)	12	Charging input port
4	Power switch and function settings	13	Circuit breaker
5	Ambient Light	14	AC output socket
6	DC output switch	15	Car charging output
7	AC output switch	16	Air inlet
8	Solar/Car charging input port	17	Air outlet
9	USB-C port	18	5525 port

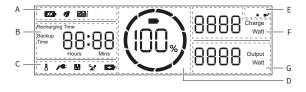
No.	Item	Description
1	Folding handle	Used to move the portable power station.
2	LCD	Displays the product's battery and usage status. *The LCD backlight will be turned off according to the working status of the portable power station.
3	ALS	The brightness of LCD backlight is automatically adjusted according to the ambient light intensity.

No.	Item	Description
4	LCD button (power switch and function settings)	Press for 0.1s to 1s to: Turn on the portable power station Wake up the LCD backlight and ambient light Mute when the buzzer beeps Press the button twice within 1.5s to turn off the ambient light. Press the button for 4s to 10s to enter function setup mode: Short press the button to switch between the super-fast charge mode, ECO energy saving mode, and uninterruptible power supply (UPS) mode (see "Introduction to the display interface" on page 9). To select a specific mode, press the button for 1s to 4s, short-press to select ON or OFF, and then press the button for 1s to 4s again. If you do not operate for 10s or press the button again for 4s to 10s, you will exit the setting interface.
5	Ambient light	Three colors: White, blue, orange Brightness of white light changes gradually: battery discharge mode Brightness of blue light changes gradually: battery charging mode Blue light solid on: battery fully charged Brightness of orange light changes gradually: failure mode All off: standby mode or system turned off *To turn off the ambient light, press the power switch twice within 1.5 seconds. To turn on the ambient light, short press the power switch once.

No.	Item	Description
6	DC output switch and LED indicator	Short press the power switch to turn on or turn off the output of USB-C port (9 in the preceding figure), USB-A port (11 in the preceding figure), and car charging outlet (15 in the preceding figure). When DC output of the portable power station is enabled, the DC indicator lights up.
7	AC output switch and LED indicator	Short press the power switch to control AC output of the product. When AC output of the portable power station is enabled, the AC LED indicator lights up.
8	Solar/Car charging input port	Used to charge the portable power station through a car's cigarette ligher socket or solar panel. For details, see "Charge" on page 11.
9	USB-C port	Used to power devices with USB-C ports, such as laptops and smartphones.
10	Lighting and control switch	Short press to turn on or off the light. Press the switch for 4s to enter the SOS mode and short press the switch again to exit this mode.
11	USB-A port	Used to power devices with USB-A ports, such as laptops, smartphones, action cameras, and speakers.
12	Charging input port	Connect the standard AC input power cord of the portable power station to the AC power supply (wall socket or power strip). After enabling the UPS mode, you can use the portable power station as a UPS with the portable power station connected to both the AC power supply and your device. At this time, the AC power is supplied by the grid but not the battery. If the AC power is suddenly interrupted, the portable power station will quickly and automatically provide power to your device from its battery.

No.	Item	Description	
13	Circuit breaker	Used for AC mains input overcurrent protection (shown as button pop-up).	
14	AC output socket	Used to power devices with 2-pin or 3-pin AC plugs, such as laptops, TVs, mini refrigerators, and vacuum cleaners. Derating is required for devices greater than 700 W (C700) or 1400 W (C1400) (test before use, some may not be supported).	
15	Car charging output	The car charger supports the maximum current output of 13.6V/10A, which can not only power the automotive appliances, but also recharge the car's 12V lead-acid battery (check that the positive and negative poles of the battery are connected correctly).	
16	Air inlet	Hand for worth time	
17	Air outlet	Used for ventilation.	
18	5525 port (for C700 only)	Used to power devices with 5525 or 5515 ports, such as laptops, electric toy cars, surveillance cameras, LED lights, and digital home appliances.	

Introduction to the display interface



A Function settings	
33	Used to set and display the super-fast charge mode status.

1	Used to set and display the ECO (energy saving) mode status.	
UPS	Used to set and display the UPS mode status.	
B Charge/Disch	arge time	
88:88	Displays the estimated remaining charge/discharge time based on the current power consumption.	
C Faults and ala	arms	
8	Temperature abnormal	
/	AC mains input abnormal	
U	Inverter output abnormal	
*	Overload	
	Charger abnormal	
D Battery information		
	Displays the remaining battery (%).	
	Displays the remaining battery by incrementing or decrementing the bars.	
E Charging source		
•	AC charging mode	
•	DC charging mode	
F Charging power		
8888	Displays the current charging power (unit: W).	

G Output power	
8888	Displays the current output active power or apparent
UUUU	power.

^{*}By default, the ECO (energy saving) mode is disabled. The portable power station will continue to output energy until the battery runs out.

To enable the ECO (energy saving) mode, see the description in "Panel introduction" on page 5. After the ECO (energy saving) mode is enabled, the portable power station works in battery discharge mode. If the AC load is lower than 60 W for more than 1 hour, the AC output will be turned off automatically. If the DC load is less than 10 W for more than 5 hours, the DC output will be turned off automatically.

Turn-on instruction

- 1. Short press the power switch (LCD button ④) to turn on the portable power station.
- 2. Within 10 seconds, short press the DC output switch (⑤) to turn on DC output, or short press the AC output switch (⑦) to turn on the AC output.

NOTE: If you do not press the DC output switch or AC output switch within 10 seconds, the portable power station will be automtically turned off.

Turn-off instruction

Press the DC output switch (s) or AC output switch (T) to turn off the output. Check that the LED indicators of the two switch are off. The portable power station will be automatically turned off within 10 seconds to 45 seconds.

Charge

The portable power station can be charged through:

- AC charging port: connected to the AC power or on-board 12V power supply
- XT60 charging port: conncted to a solar panel using a XT60 cable (see "Solar charging instruction" on page 12 for details)

Charging source	Description	Remarks
AC power	About 1 hour to 80%, 1.5 hours fully charged (super-fast charge mode)	The charging time is for reference only. It depends on the charging voltage and
Car charging	10A Max	current.

^{*}The product can also deliver power while charging.

Car charging instruction

To charge the portable power station through a car's cigarette lighter socket, use the standard car charging cable to connect the solar/car charging input port (®) to the car's cigarette lighter socket.

Solar charging instruction

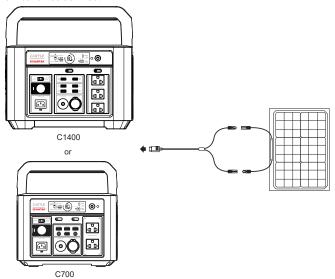
To charge the portable power station with a olar panel, use a dedicated connection cable to connect the solar/car charging input port (®) to the solar panel.

This product can be charged with 10-60 VDC (C1400)/10-30 VDC (C700) input. If the input exceeds 60 V (C1400)/30 V (C700), overvoltage protection will be triggered. Overvoltage may cause damage to the product. For damage caused by exceeding the specified number of connections or not connecting according to specifications, SANTAK will not provide free repair service.

Please use solar panels recommended by SANTAK.

Universal solar panels (10-60 V for C1400/10-30 V for C700, 10A Max.) with MC4 ports can be used to charge the portable power station using a MC4-to-XT60 cable. Before charging the portable power station, check that the positive and negative poles are connected correctly to avoid equipment damage. During the warranty period,

if the product is damaged due to quality problems of third-party solar panels or improper operation, SANTAK will not provide free maintenance service.



UPS mode

The UPS mode is disabled by default. See <u>"Panel introduction" on page 5</u> for details.

Important note

The UPS mode allows the portable power station to work with both the AC power supply and AC outlet connected (at this time the AC power comes from the grid, not the battery). If the AC power supply is suddenly interrupted, the portable power station automatically switches to the battery mode within 10 ms. 0ms switching is not supported. Therefore, do not connect the portable power station to the equipment with high uninterruptible power supply requirements,

or test several times to confirm compatibility before use. SANTAK is not responsible for malfunction or data loss caused by operations not following the instructions in this manual.

Instructions

- Connect the AC charging cable attached to the product to the power grid.
- 2. Connect your equipment to the AC output port of the product.
- 3. Set the product to UPS mode by referring to <u>"Panel introduction"</u> on page 5.

After the power grid is disconnected, the product will continue to to power your equipment with its battery, thereby protecting your equipment.

* The UPS mode is available only for equipment below 1400 W (C1400)/700 W (C700). Do not use other equipment at the same time during use to avoid triggering the overload protection function of the mobile power storage power supplier. SANTAK is not responsible for malfunction or data loss caused by improper use.

Maintenance

Clean

Use a dry cotton cloth to clean this product.

Storage

Store the product in a dry place and avoid direct contact with water. To ensure the battery life, if you need to store the portable power station for a long time, charge it to 30%-80%, keep it in the OFF state, and store it at room temperature.

Usage

- Use the portable power station within the operating temperature range.
- The product is not waterproof, therefore do not immerse it in water.

 Continuous operation under high ambient temperature and heavy load may trigger the overtemperature protection function of this product. In this case, wait for the temperature inside the product to recover before continuing to use it.

Alarms

Item	Alarm	Buzzer	Ambient light (orange)	Indication
Battery	Overvoltage or overcurrent		√	
	Overtemperature	√		8
	Low temperature		√	8
AC mains	Overvoltage or undervoltage			/
AC output	Overvoltage or undervoltage			
	Short circuit	√	√	
	Overload	√	√	*
DC charging	Overvoltage		√	53
AC charging	Overvoltage		V	5
	Overcurrent		√	53
	No output		√	5
Bus voltage	Overvoltage		V	or

Item	Alarm	Buzzer	Ambient light (orange)	Indication
Temperature	Overtemperature	√	V	8
	Low temperature		√	8
Fan	Fan stuck or disconnected	√		

Troubleshooting

Symptom	Alarm indication	Cause	Possible solution
The AC mains is normal, but the portable power station cannot be powered by the AC mains.		The circuit breaker of the portable power station is disconnected.	Manually connect the circuit breaker.
After connecting to loads, the portable power station repeatedly shuts down and restarts several times and finally shuts down.	*	The low- temperature battery health management function of lithium-ion battery is triggered.	Reduce the loads or move the portable power station to a position with higher temperature. Wait until the temperature of the lithium-ion battery rises.
The charger cannot be charged.	23	The charging component of the portable power station is faulty.	Contact your supplier.

If the problem persists, contact your local distributor or SANTAK Customer Service at santakexport@santak.com. Please be sure to record and provide the following information:

- Model and serial number
- · Date of failure
- Complete problem description (including indicator status, buzzer beep status, power status, and load capacity)

Technical specifications

Item	C1400	C700		
Basic specifications				
Net weight (kg)	12.1	7.5		
Dimensions (L x W x H, mm)	345 x 235 x 228	269 x 190 x 190		
Capacity (Wh)	1010	524		
Certification standards	UN38.3			
Output	Output			
AC output (x2) pure sine wave	*Total power: 1400 W, 220 V/50 Hz	*Total power: 700 W, 220 V/50 Hz		
*USB-A fast charging (x4) (C1400) *USB-A fast charging (x3) (C700)	Max. 28 W per port, 5 V/9 V/12 V 2.4A	Max. 28 W per port, 5V/9V/12V 2.4A max		
*USB-C output (x2) *USB-C output (x1)	Max. 100 W per port 5V/9V/12V/15V 3A max, 20V 5A max	Max. 65 W per port 5V/9V/12V/15V/20V 3.25A max		
Car charger output (x1) Max. 136W, 13.6V 10A				
5525 output (x2)	1	Max. 36W, 12V 3A max		
Input				
AC charge input voltage	90-285V			
AC charge input power	Max. 1010W	Max. 524W		

Item	C1400	C700	
Solar charge input	Max. 450W, 10-60V DC 10A max	Max. 200W, 10-30V DC 10A max	
Car charge input	Max. 136W, 13.6V DC 10A max		
Battery			
Battery type	Lithium-ion		
Discharge temperature	-20°C to +60°C		
Charge temperature	0 to 50°C		
Battery SoH	>80% SoH after 500cycles		

^{*}The maximum AC+DC output power is 1400 W (C1400)/700 W (C700).

^{*}USB-A protocol:QC2.0, QC3.0, FCP, AFC

^{*}USB-C protocol:QC2.0, QC3.0, FCP, AFC, PD3.0, PPS(3A)

Appendix Acronyms and abbreviations

Acronym/Abbreviation	Full form	
AC	Alternating current	
ALS	Ambient light sensor	
LCD	Liquid-crystal display	
UPS	Uninterruptible power supply	

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