



Victory Portable Power Station 4kWh User Manual

Product Model: COMVOLT-Z4000UR



Manufacturing Company: Chengdu Comvolt Energy Co., Ltd

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(Please read this manual carefully before using this product and keep it properly)

I.Function introduction



Figure 1. The main operation buttons/ports list

1.LED Light: Led light with 5-watt power consumption and 30 degrees of focus.

2. DC 12V Input/Output Max 10A: This outlet is bidirectional design support charging and discharging. It can supply power to the on-board electrical appliances within 12V10A or 120W.

3. USB-A/C output: There is an on/off switch on the port. USB port outputs 5V-3A, 9V-2A, and 12V-1.5A. It can charge mobile phones, tablets, cameras, and other digital products, and supports fast charging.



4. Anderson adapter: This adapter supports charging and discharging DC 14.4V 120A by using the Anderson connector as shown below. The high-power equipment can be used as long as in

12V 1500W. You also can power the whole RV or trailer by plugging in this power station to the control panel of the trailer or RV.



Figure: Anderson cable

5. AC output outlets: This outlet supplies a maximum of 120V 15A AC or 1800W AC so the AC appliance under the range can be plugged into.

6. Test port: This port is a 5-pin adapter to test or maintain the battery cell voltage balance by plugging in the optional Active Equalizer. There are four battery cells in the power station so there will be four voltage numbers in micro-volt at the bottom of the display of the active equalizer. If the hundreds digit and the thousands digit are the same, the battery cells are well balanced. Normally, you can apply the active equalizer every one or two years.



Figure: Optional Active Equalizer

7. AC output on/off switch: This switch is a self-locking switch to turn on and off the AC output.

8. Reset button: If the power station works abnormally after long-term use, you can long-press the reset button for about 10 seconds to reset software and then release and press it again. Wait about 5 seconds before the system will be rebooted (if the power station is not rebooted, please press the main On/Off switch).

9. RS-485 communication adapter: This port is used to display or communicate battery parameters with the optional touch screen.



Figure. Optional Touch Screen

10. Cooling fan: When the power supply internal temperature rises to a certain high value, the fan will automatically start.

11. Solar charging adapter: The solar charging adapter is the XT60 adapter. This adapter only supports maximal 20-45V 400W solar panels.

12. Main power on/off switch: This switch will turn on and off the whole system with DC power. For AC power, an additional AC on/off switch will need to be turned on.

13. LED light on/off switch: This switch will turn on and off the LED light.

14. LCD display/screen: 2.8-inch color LCD display can display the battery voltage, current, residual capacity, temperature, status, and other real-time information.

15. DC Input/output adapter: It is XT90 adapter. This adapter has a bidirectional design support charging and discharging, maximal DC14.4V 40A current (12V500W). Please use within the current range.

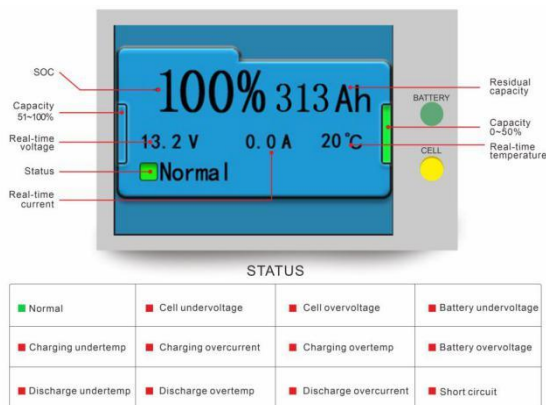
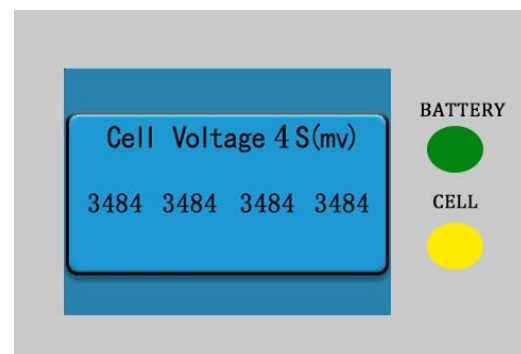


Figure: Display of Battery Information



Viewing Cell Voltage

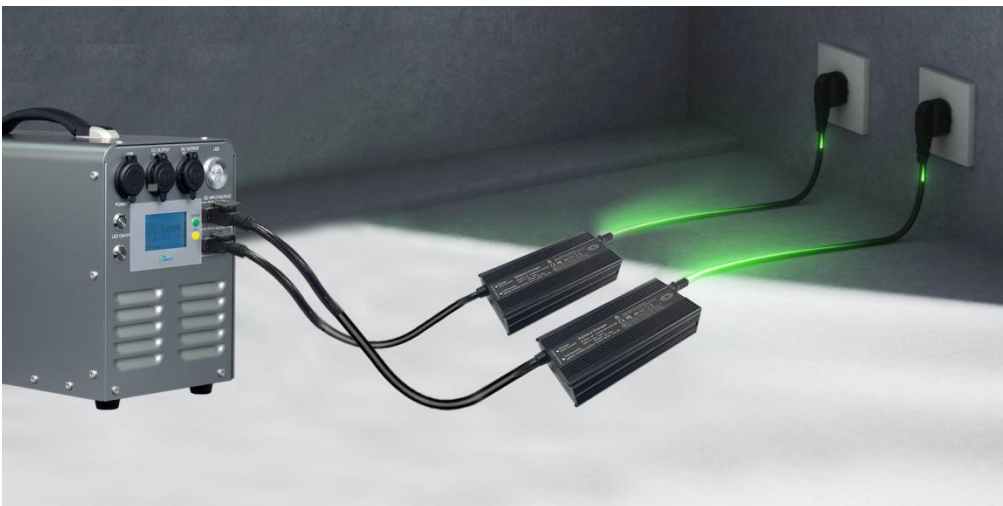
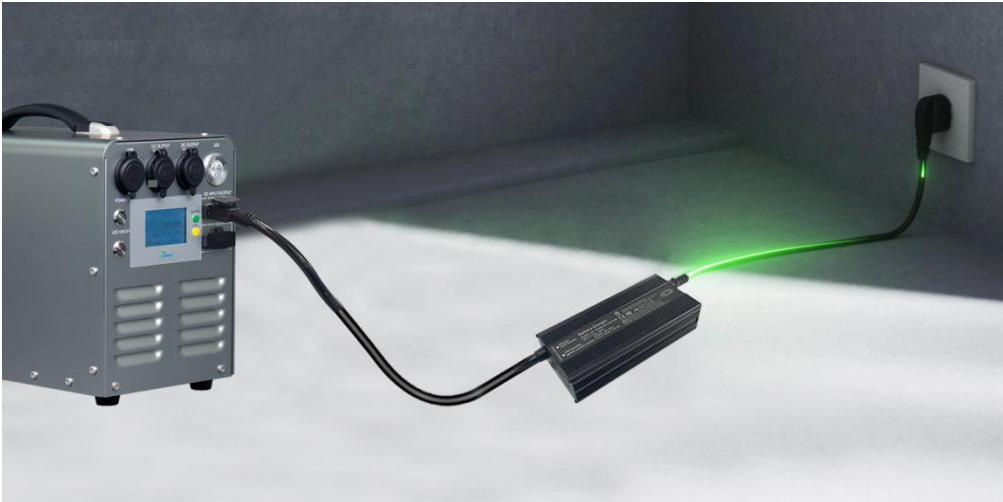
II. Performance and appearance parameter

NO	Product		COMVOLT-Z4000UR
1	Battery type		LifePO4
2	Nominal Voltage		12.8V
3	<u>Voltage range</u>		<u>11.5-14.2V</u>
4	Nominal Capacity		4006Wh
5	DC Charging	XT90*2	Single 14.6V/40A Max
		120A Anderson	14.6V/120A Max
6	Solar charging	XT60	20-45V/400W Max
7	DC Discharging	CIG Outlet*2	Single 11.5-14.2V/10A Max
		120A Anderson	11.5-14.2V/120A Max
		USB-A	5V/3A 9V/2A 12V/1.5A 18W Max
		USB-C	5V/3A 9V/2A 12V/1.5A 18W Max
8	AC Discharging	AC Nominal Output Voltage	120V
		AC Output Wave	Pure sine wave
		AC Output Frequency	60Hz
		AC Nominal output Power	1800W
		AC sustained output Power	1500W
		AC peak output power	3600W
9	LED Lighting power		5W
10	Low temperature charging self-heating		Yes
11	Charging Temperature range		-13~131°F
12	Operation Temperature range		-13~149°F
13	Storage Temperature range		14~95°F
14	Dimensions		L17.6in*7.4in*11.1 in
15	Weight		64lb

III. Use Case 1: Charging from Shore Power/Wall Power

1. Wall/Shore Power Charging

a. The power station has two XT90 female adapter for the wall/shore power charging by connecting the accessory DC Charger as shown in the picture below. Please connect one side of the input power cord of the charger into the 110V on the wall or shore and the other end to the XT90 adapter of the power state. The charging light will turn red to start charging. The LCD screen will automatically light up to indicate the status and percentage of the charging. The screen will turn off automatically when it is done and the charging light will turn green. No switches need to be turned on for charging only. You can connect the charger to one XT90 adapter of the power station to do a normal power charge. If you are in a hurry, you can separately connect two XT90 adapters of the power station to reduce the charging time in half. Please do NOT charge the power station with two XT90 adapters all the time which will reduce the life of the power station.



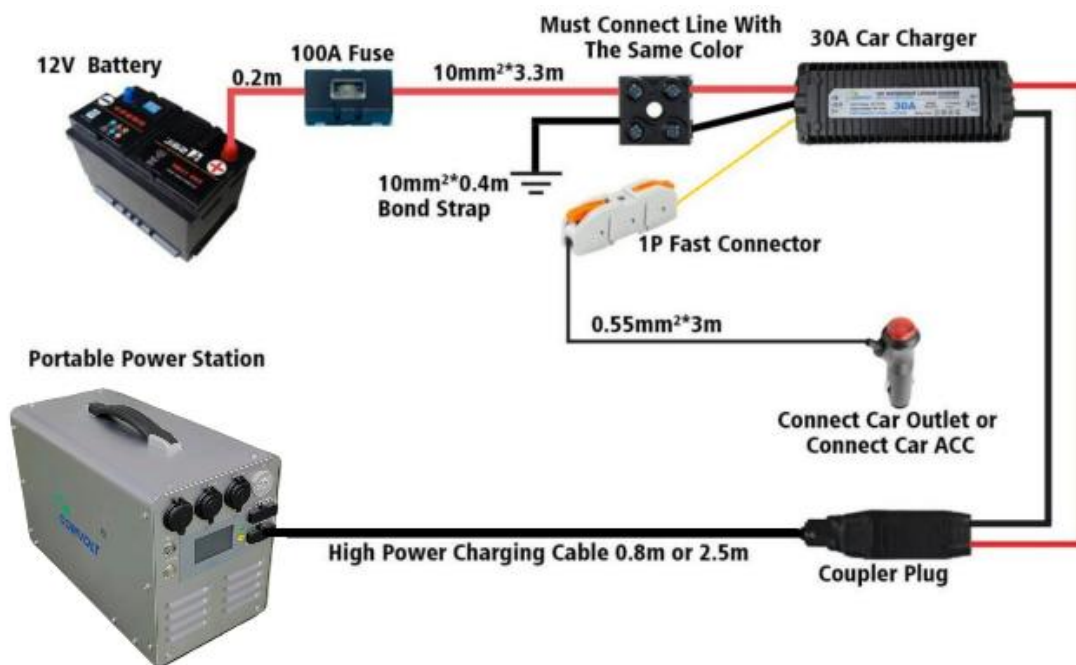
b .The portable power station has built-in intelligent software Batter Management System (BMS), which has complete and reliable protection functions. When the battery is fully charged, the BMS will automatically cut off the charging circuit to protect the battery from being damaged or overcharged.

c .To charge the power station, you must use the factory charger or authorized brands by the original factory. It is prohibited to non-authorized charger which could damage the power station.

2.DC or Car Charging

a. Low power charging: you use the company's low power 100W car charger (optional) as shown in the below figure. To charge, you can insert the output adapter of the charger into the XT90 adapter of the portable power station, and then insert the input adapter of the charger into the car/vehicle cigarette lighter socket.

b .High-power charging: You can use the high-power car charging set, as shown in the below picture, including a set of high power car charging cable and a high-power car charger, when the DC adapter is connected to the car alternator, please correctly connect to the positive and negative electrodes! Charging power is 450W. The charger has protection functions to protect reliable constant current, constant voltage, and short circuits. The charging current is controlled within the rated current range. The charging process can be turned on and off by a car 12V ACC or the car cigarette lighter on/off switch. The car cigarette lighter on/off switch must be plugged in the car cigarette to operate.



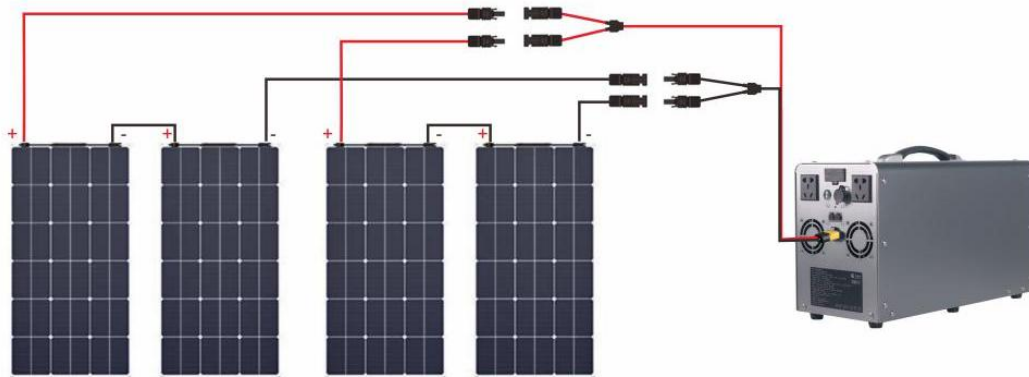
c. Suggestion: The separate charging line must use the standard copper flexible wire, which can carry 5-8A current per square millimeter (mm²) and total 50A current. The charging line is equipped with a 100A fuse (quick fuse) near the positive pole of the car alternator or the

positive pole of the starting battery. The wire needs to be set away from the heating body and the length of the wire should be 2 inches spare length to avoid wire damage caused by vibration or shaking. The modification or installation of the charging line must be completed by a qualified professional automotive electrician or technician and comply with local laws and regulations. This user manual is for reference only.

3.Solar Panel Charging

a .The portable power station has an efficient MPPT solar panel charging controller, which automatically tracks the maximum power point of the solar panels. We recommend using our foldable solar panels. The charging voltages is ranging from 20 to 45V and power LESS than 400W.

b .When using our solar panel for charging, you will unfold the solar panel in full sunlight and plug one end of the solar charging cable into the solar panel output adapter, and plug the other end into our solar charging adapter XT60. When it is charging, the real-time charging current can be viewed through the LCD screen. Please adjust the orientation of the solar panel to obtain the maximum charging current. If you do not use our solar panel, you might need to use a MC4 to XT60 adapter as shown in the below picture:



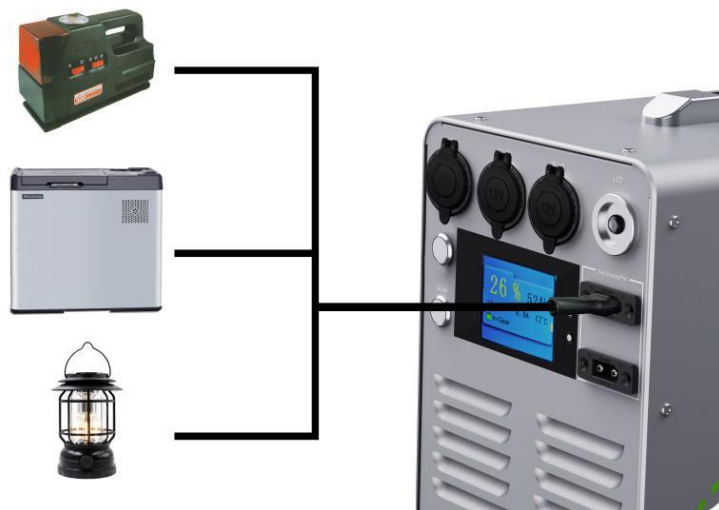
c .The solar panels must generate charging voltages ranging from 20 to 45V and power LESS than 400W. Note: Mismatched solar panels and faulty wiring could damage the solar panels and/or the power station.

IV. DC power output

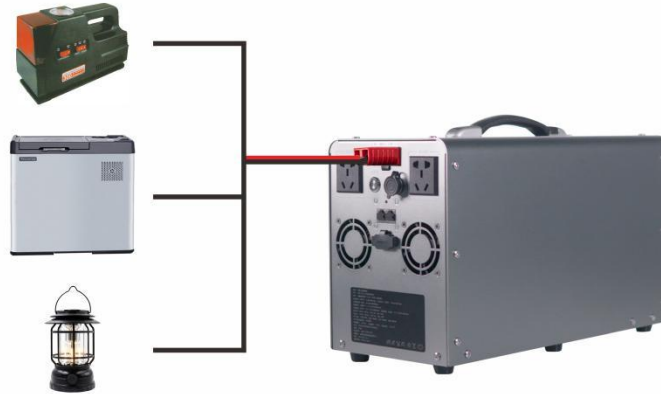
1. 12V Cigarette Lighter Outlet: This outlet can output 12V DC, the maximum continuous output current is 10A (120W). Short time (less than 5 minutes) output current is 5A(180W). The portable power station is equipped with 4 series lithium iron phosphate 1 battery packs, and the output voltage range of the cigarette lighter socket is 11.5-14.2V, which meets the voltage requirements of all 12V electrical appliances, and can supply power to air pumps, car refrigerators, external lighting and other equipment.



2. XT90 Adapter: Two XT90 adapters can be found in the front. Each adapter can output 12V direct current and maximum 40A current (500W). Two adapters can parallelly supply DC power when the current exceeds the capacity of a single interface. Please make sure the current consumption is within the maximum output range.



3. Anderson Adapter: One Anderson adapter can be found in the back of the power station. It outputs 12V DC power and maximum 120A current (1500W). Please make sure the current consumption is within the maximum output range.



4. USB-A/C port: This port has a USB-A and a USB-C adapters which support fast charging, mobile phones, tablets, cameras, and other digital products to charge. Please open the rubber cover of the interface and push the on and off switch on the side. A blue light will be on when you charge the external devices. When you do not use the USB ports, you can turn off the switch to cut off unnecessary standby consumption.



V. 110V Pure Sine Wave AC output

1. The Power station can provide 120v maximum rated current 15A (1800W) AC which is normal for most house AC appliances, instruments, power tools and other equipment. The peak current is 30A . the peak power is 3600W. The power station has a built-in high-power pure sine wave inverter, which uses an amorphous transformer and imported high-current power tube, which greatly improves the conversion efficiency and reliability, and reduces the heat output.
2. To use AC output, you will need to turn on the AC switch on the back. When the green light of the switch is turned on, the pure sine wave AC power will be inverted.



3. When the AC power reaches more than 900W and the inverter power temperature reaches 50°C / 122°F , the fan starts to work to cool the built-in inverter. The greater the power consumption is, the higher speed the fan runs. When the power is less than 800W and the inverter temperature is lower than 50°C / 122°F , the fan stops running. When the AC is not used, please turn off the AC switch to avoid unnecessary standby consumption.

VI. Jump Start Car/High Current Applications

The power station can jump start a car, a RV and a truck as a starting battery. It supports a short time (3 seconds) large current output maximum 500A and 12V. The steps are as follows:

Step 1: Open the car engine cover. Find the car starting battery and confirm the positive and negative terminals.

Step 2: Connect the red crocodile clip on the positive pole of the starting battery and the black crocodile clip on the negative pole of the starting battery. Then insert the XT90 adapter of the jumping cable into any XT90 adapter of the power station. Double check all the connections (Note DO NOT mismatch the positive and negative poles!!)

Step 3: Start the vehicle. If the vehicle is not started right away, please wait at least 1 minute and try to start the vehicle again. After starting the vehicle, the wiring should be removed immediately. Please first unplug the XT90 from the power station and then remove the red and black crocodile clip from the car battery.



The power station can also be used in high current applications such as power the whole RV/RV trailer control panel or power a truck winch. You will need to connect the Anderson adapter to the power station and the other terminal to the appliances or winch.



VII. Troubleshooting

No.	Troubles	Handling Methods
1	Abnormal output or abnormal screen messages	Long press (10 seconds) "reset" button on the back then release it and press it one more time to restart the system.
2	Can't charge	Make sure all the cables and adapters are correctly plugged in. Alternatively switch to another way to charge to see if the battery can be charged. You might need to replace the corresponding charger.
3	No output with alarm	Low battery power, output overload, output short circuit, or overheated power supply will trigger the alarm and shut down the output. Locate the cause one by one.
4	No output without alarm	Battery protection, press "reset". Or unplug the adapters and pug-in back
5	Cannot jump start car	Check that the voltage of the power station is less than 12.8V or the car starting battery is damaged.
6	Appliances plugged in the cigarette adapter do not work	Check that the fuse inside the inserted cigarette lighter plug has blown or the plug is not inserted in place.
7	Others	Contact the customer service

VIII. Storage and Transportation

1. During transportation or loading and unloading, do NOT drop it. Do not stack up or turn upside down.
2. The portable power station should be stored and transported under the State of charge (SoC) of less than 50% charged, and please charge it in time before use it.
3. Long-term storage of the power station should be 50-60% charged and placed in a dry, clean, dark, well-ventilated indoor environment, storage temperature refers to the table above.
(Storage Temperature range: 14~95°F)
4. For long-term storage, please charge the portable charging station to 50-60% first, turn off all switches, and recharge the power bank to 50-60% every 3 months.

IX. Cautions and Warnings

Please read this manual carefully before using the portable power station. Improper use may cause damage to the supply. The company does not bear any responsibility for any accidents caused by failure to follow the instructions.

Warning! Please customers in the use process in strict accordance with the following matters, otherwise no warranty.

- * Do not use metal battery pack positive-negative short circuit.
- * Do not connect the positive-negative poles of the reverse battery pack.
- * Avoid any liquids including corrosive liquids such as battery water.
- * Keep it away from heat, fire sources, high pressure places, and avoid long time exposure.
- * Do not hit, fall, trample battery pack.
- * It is strictly prohibited to disassemble or change the circuit, structure, and appearance of the battery pack without the permission and guidance of the manufacturer.
- * When electrolyte leakage splashes into the skin and eyes, please rinse with water and immediately seek medical treatment.
- * When the battery pack has an abnormal smell, abnormal sound, leakage, serious deformation and other abnormal conditions, please immediately stop using.
- * Please do not put the scrap battery into water or fire.
- * After the battery string expires, send it to a local qualified battery recycling company for disposal.
- * Keep battery out of children's reach.
- * If you have any questions, please send an email to service@comvoltenergy.