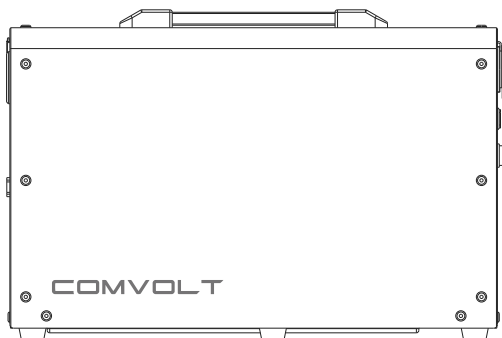


COMVOLT®

Comvolt Portable Power Station 3kWh User Manual



YNT-12230-1800AIUAER

Disclaimer

Read this manual thoroughly before use to ensure safe operation. Misuse may result in injury to yourself and others, damage to the product and connected devices, or property loss.

By using this product, you agree to all terms herein. Comvolt is not liable for issues caused by failure to follow these instructions.

Per U.S. regulations, Comvolt reserves the right to update this document without notice . Visit www.comvoltenergy.com for the latest vs.

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Specifications

Model	YNT-12230-1800AIUAER
Battery Type	LifePO4
Nominal Voltage	12.8V
Voltage range	11.5-14.2V
Capacity	2944Wh (3kWh)
DC Charging	
XT90*2	Single 14.6V,40A Max
120A Anderson	14.6V,120A Max
Solar Charging	
XT60	20-45V,400W Max
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
AC Discharging	
AC Nominal Output Voltage	120V
AC Output Type	Pure sine wave
AC Nominal output Power	1800W 60Hz
AC sustained output Power	1500W
AC peak output power	3600W
LED Lighting power	5W
Low temperature charging self-heating	Yes
Charging Temperature range	-13~131°F
Operation Temperature range	-13~149°F
Storage Temperature range	14~95°F
Dimensions	15.3" × 7.4" × 11.1"
Weight	51lb

Comvolt App

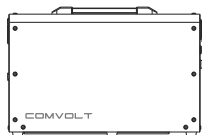
Download the Comvolt smartphone app to monitor and remotely control your power station. Android system Search Comvolt in Google Play



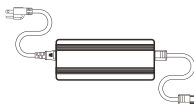
IOS

Inside the Box

■ YNT-12230-1800AIUAER



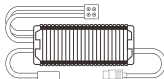
■ 500W Wall Charger



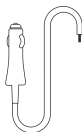
■ Jump-Start Cable



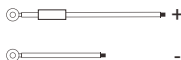
■ 30A DC-DC Charger



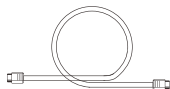
■ ACC Control Switch



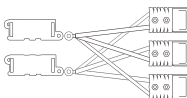
■ 8FT Alternator Charging Input Cable



■ Alternator Charging Output Cable



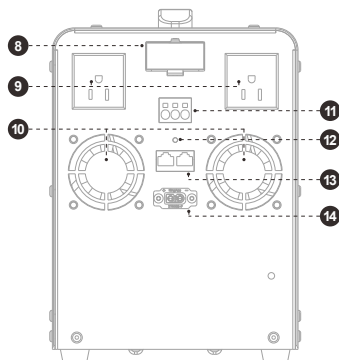
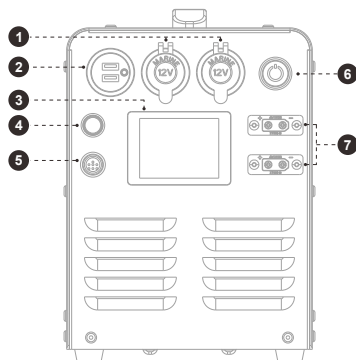
■ Anderson Splitter



■ User Manual



Product Details



1 12V Cigarette Lighter Outlet

3 LCD Display

5 Balance Port

7 12V DC Input

9 110V 15AAC Outlet

11 AC Output

13 RS-485

2 USB-A/C Output

4 Inverter Switch

6 Power Switch

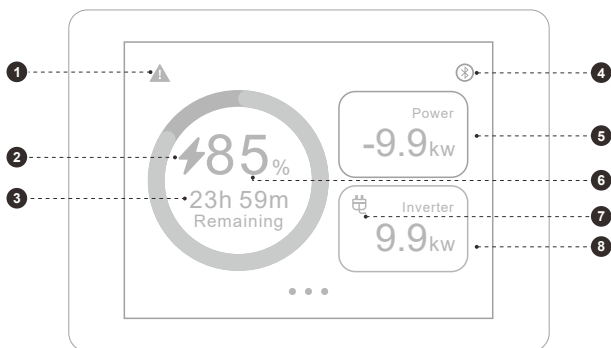
8 12V 120A Anderson Connector

10 Cooling fan

12 Reset Button

14 Solar Panel Input

LCD Screen

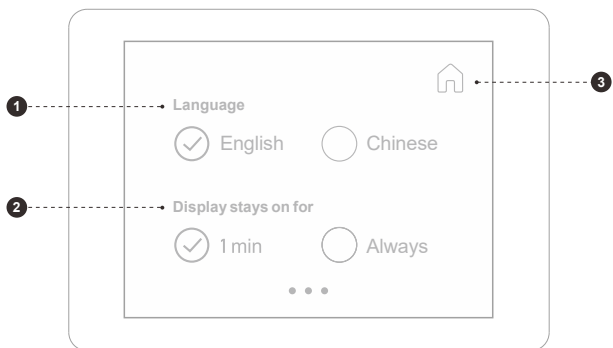


- | | |
|--|-------------------------|
| 1 Error Code | 2 Charging Indicator |
| 3 Estimated Charging/ Discharging Time | 4 Bluetooth Indicator |
| 5 Battery Input/Output Power | 6 State of Charge |
| 7 Inverter Status | 8 Inverter Output Power |

Icon	Name	State
	Malfunction	This icon will light up when an issue occurs. Tap it to see the specific problem. The indicator will turn off automatically once the issue is resolved.
	Charge	This indicator lights up when the battery is charging and turns off when the battery is fully charged.
	Bluetooth	This indicator lights up when a bluetooth device is connected.
	Inverter Status	The indicator light turns on when the inverter is on, and turns off when the inverter is off.

The State of Charge (SOC) displayed upon receiving the new power station is an estimated value. To calibrate the SOC for greater accuracy, please perform a complete charge-discharge cycle as follows:

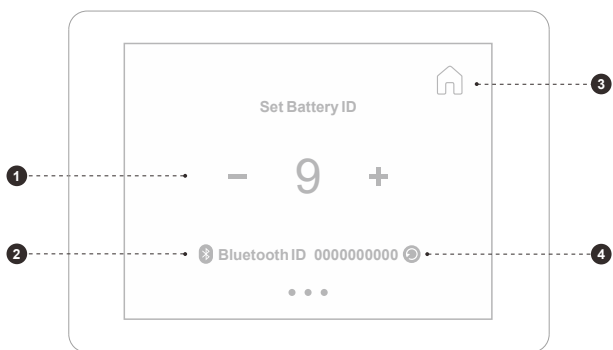
- 1.Full Charge:Charge the power station to 100% SOC in a single session until the charging current drops to 0A.
- 2.Full Discharge:Then, discharge it in a single session to 0% SOC until the output current drops to 0A. This complete cycle allows the system to relearn the battery capacity, resulting in a more precise SOC reading.



1 Language selection

2 Select how long the display stays on

3 Home



1 Set battery ID

2 Bluetooth ID

3 Home

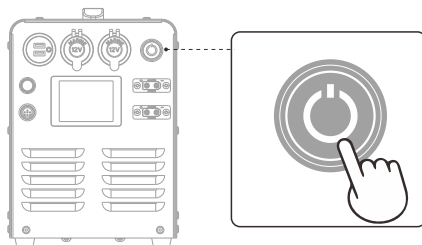
4 Reset Bluetooth

! Tip: Only change battery ID settings when multiple batteries are connected via RJ45 cable. Make sure that each battery has a unique ID

Main Power Switch

Press to turn on all DC outputs. Press again to turn off .

Notice: Inverter will also turn off when the main power switch is off, regardless of the inverter switch Position.

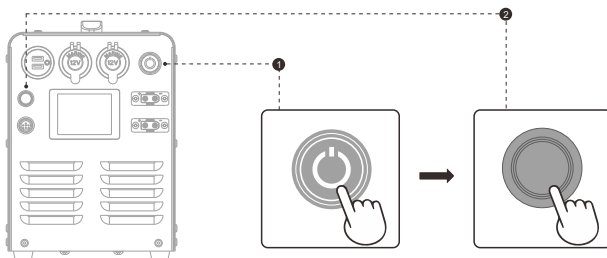


Tip: Turn the main switch off when not in use to prevent battery drain.

Inverter Switch

Press to turn on AC outputs. Press again to turn off .

Notice: The inverter will not turn on if the main power switch is off.

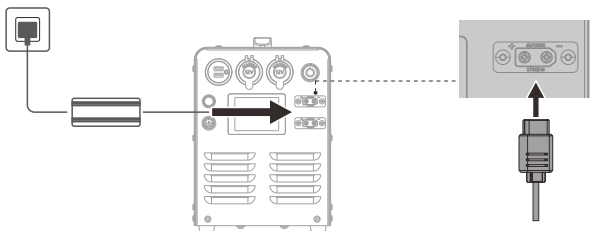


Charging

Wall Plug

Connect the wall charger to the XT90 port at the front of the unit.

Multiple chargers can be used at the same time to double the charging speed.

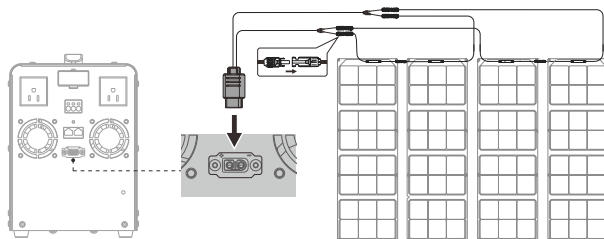


⚠ Slower charging speed helps extend the battery life.

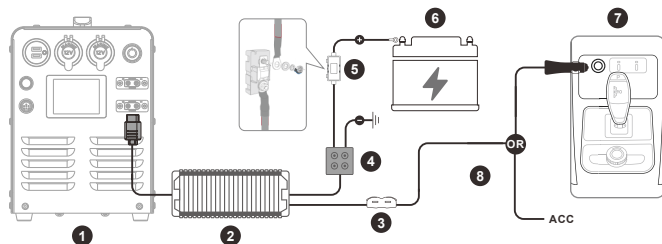
Solar Panel

Insert the solar charging cable into the XT60 port located at the back side of the unit. For third-party solar panels, use the included MC4-to-XT60 adapter.

Check the real-time charging current on the screen and adjust the solar panel angle to maximize charging efficiency.



DC-DC charger



- | | |
|----------------------------|---------------------|
| 1 Portable Power Station | 2 30A DC-DC Charger |
| 3 Quick Connector(1pin) | 4 Terminal Block |
| 5 In-line Fuse Holder | 6 Vehicle Battery |
| 7 Cigarette Lighter Outlet | 8 Control Wire |

DC-DC Charger Installation Instructions Step-by-Step Wiring Instructions:

Route the Input Wiring Harness

Guide the input wiring harness from the vehicle's engine bay into the cabin where the DC-DC charger is installed.

Connect to the DC-DC Charger

Attach the input wiring harness to the **input terminals** on the DC-DC charger.

Connect the Positive Lead to the Vehicle Battery

Use the pre-installed **ring terminal** to securely connect the **positive (red) wire** to the **positive terminal** of the vehicle battery.

Connect the Negative Lead to Ground

Attach the **negative (black) wire** to a solid **chassis ground** or to the **negative terminal** of the vehicle battery.

Mount the In-Line Fuse Holder

Secure the in-line fuse holder firmly inside the engine bay, close to the battery for easy access and safety.

Connect the Control Wire

- For **manual charging control**, connect the control wire to a **12V cigarette lighter port**.
- For **automatic charging**, connect it to a **accessory (ACC) power port**.

Notice:

- When using the **cigarette lighter**, charging must be manually turned on or off using the switch.
- When using the **ACC port**, charging will begin automatically when the vehicle key is in the **ON** position.

Connect Output to Power Station

Plug the **XT90 output cable** from the DC-DC charger into one of the **XT90 input ports** located on the front of the Comvolt unit.

Important Safety Warning:

Ensure all wiring connections are **securely tightened**:

- **Recommended torque:** 3.0–4.0 N·m
- **Do not exceed:** 6.0 N·m (may damage fuse terminals)
- Always install the **ring terminals, washers, and nuts** in the correct order.

Loose connections can cause excessive heat and lead to cable blowing. Over-tightening can break the fuse holder or damage terminals.

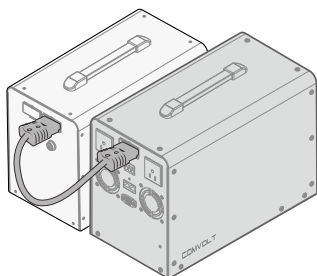
DC DC Charger Placement Guidelines

To ensure safe and effective operation of the DC-DC charger, the installation area must meet the following conditions:

1. Keep sufficient around the power station for heat dissipation and maintenance access.
2. Ensure the charger ports have enough room for easy cable connection and disconnection.
3. Install at a Clearance and dry location. Avoid damp, dusty, or excessively hot locations.
4. Do not install near engine components, exhaust systems, or other high-temperature areas.
5. Ensure Proper Ventilation. Do not block the charger with blankets, tools, or other items that may restrict airflow.
6. Keep Away from Flammable Materials. As the charger generates heat during operation, do not install it near fuel, oil, or any other flammable substances.
7. Place the charger out of reach of children and pets for safety.

Battery Expansion

To increase the system's capacity, you may connect additional 12V batteries in parallel, or use a Comvolt Expansion Pack. For optimal performance, when using a Comvolt Expansion Pack, also connect the Ethernet(RJ45) cable to enable battery status synchronization and centralized health monitoring.

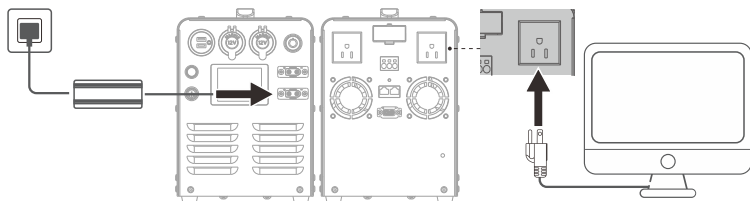


⚠ When connecting batteries in parallel, ensure the voltage difference is less than 1V. Only connect using the Anderson port on the back side of the unit.

Uninterruptible Power Supply (UPS)

This product supports UPS functionality with zero transfer time. When charging via AC input, it can simultaneously supply power to external devices without interruption.

The zero-switching output ensures compatibility with devices that require uninterrupted power delivery, such as surgical equipment (electrosurgical units, ultrasonic scalpels), ventilators, and other sensitive medical devices.



Troubleshooting

Battery Not Charging

- Check whether charging fails via both wall charger and DC - DC charger.
- If only one charging method fails, replace the corresponding charger.
- If neither method works, please contact customer support.

No Output with Alarm

- Possible causes: low battery, overload, short circuit, or overheating.
- Please check and resolve each potential issue accordingly.

No Output, No Alarm

- The battery may be in protection mode. Press the Reset button or start charging to exit this mode.

Vehicle Jump Start Not Working

- Check whether the battery voltage of the power unit is above 12.8V.
- Inspect the vehicle's starter battery for potential failure.

Low Solar Charging Current

Clean dust and debris from the solar panel; avoid shading. Adjust the panel's angle and orientation. Check if the charging cable is too long or has insufficient wire gauge.

No output via cigarette lighter

Check if the fuse inside the cigarette lighter plug is blown or if the plug is not fully inserted.

Other Issues

Please contact customer support for further assistance at support@comvolt.com

Storage and Transportation

- Handle with care during transportation and unloading. Avoid dropping or stacking multiple units more than small units. Always keep the unit upright.
- Store and transport the unit with a **State of Charge (SOC) below 50%**. Recharge upon receipt.
- For long-term storage, place the unit in a dry, clean, ventilated, and shaded indoor environment.

Warnings and Safety Precautions

Before using the energy storage system, please read this manual carefully. Improper use may result in damage. The manufacturer assumes no responsibility for accidents caused by misuse or non-compliance with the instructions.

WARNING: The following actions will void the warranty:

- Do not short-circuit the output ports with metal objects.
- Ensure correct polarity at all input and output interfaces.
- Avoid water or any liquid (especially corrosive substances) entering the unit.
- Keep the unit away from heat sources, fire, high-voltage areas, and prolonged direct sunlight.
- Do not strike, drop, or step on the product.
- Do not disassemble or modify the internal circuits or housing without manufacturer authorization.
- If battery electrolyte contacts skin or eyes, rinse immediately with clean water and seek medical attention.
- Discontinue use immediately if you notice abnormal smells, sounds, leakage, or deformation.
- Keep the product out of reach of children.
- Do not dispose of the battery in water, fire, or general household waste. Use certified recycling services.
- Upon end of service life, dispose of the unit through a certified battery recycling facility.

COMVOLT®