Xijia ECO3.6

Xijia 3600W Hybrid Inverter User Manual

Model: ECO3.6

1. Important Safety Instructions

Please read all instructions and cautionary markings on the unit and in this manual before installation and operation. Failure to follow these instructions may result in electric shock, fire, or severe injury.

- Installation must be performed by qualified personnel.
- Ensure all wiring is correctly polarized and securely connected.
- Do not disassemble the inverter. There are no user-serviceable parts inside.
- Avoid exposing the inverter to rain, snow, spray, or any liquids.
- Ensure adequate ventilation around the inverter to prevent overheating.
- Disconnect all power sources (solar, battery, AC) before performing any maintenance or wiring.

2. Product Overview

The Xijia ECO3.6 is a 3600W hybrid inverter designed for solar power systems, integrating a 120A MPPT solar charge controller, a pure sine wave inverter, and a battery charger. It converts 24V DC to 110V/120V AC at 60Hz.

Key Features:

- Integrated 120A MPPT solar charge controller with up to 98% efficiency.
- Compatible with 24V Lead-Acid (Seal, AGM, Gel, Flooded) and Lithium batteries.
- Max PV Input Power: 4200W; Voltage Range: 60-450Vdc; Max PV Input VOC: 450V DC.
- Nominal Output Frequency: 50/60Hz (configurable).
- Multiple charging and output modes for flexible application.
- LCD and LED display for system data and operating status.
- WIFI remote monitoring support for iOS and Android.

Product Components:

The inverter features a robust enclosure with various connection ports and an intuitive display panel.

Figure 2.1: Front view of the Xijia 3600W Hybrid Inverter, showing the LCD display and status indicators.

Figure 2.2: Rear view of the inverter, illustrating the various input and output terminals for AC, PV, and battery connections.

3. Installation and Setup

Proper installation is crucial for the safe and efficient operation of your hybrid inverter. Ensure the mounting surface is sturdy and can support the inverter's weight.

Mounting the Inverter:

- Choose a dry, well-ventilated area, away from direct sunlight and heat sources.
- Maintain adequate clearance around the inverter for airflow (minimum 20 cm on all sides).
- Mount the inverter vertically on a wall using appropriate fasteners.

Wiring Connections:

Refer to the wiring diagram below for correct connection procedures. Always ensure power is disconnected before making any connections.

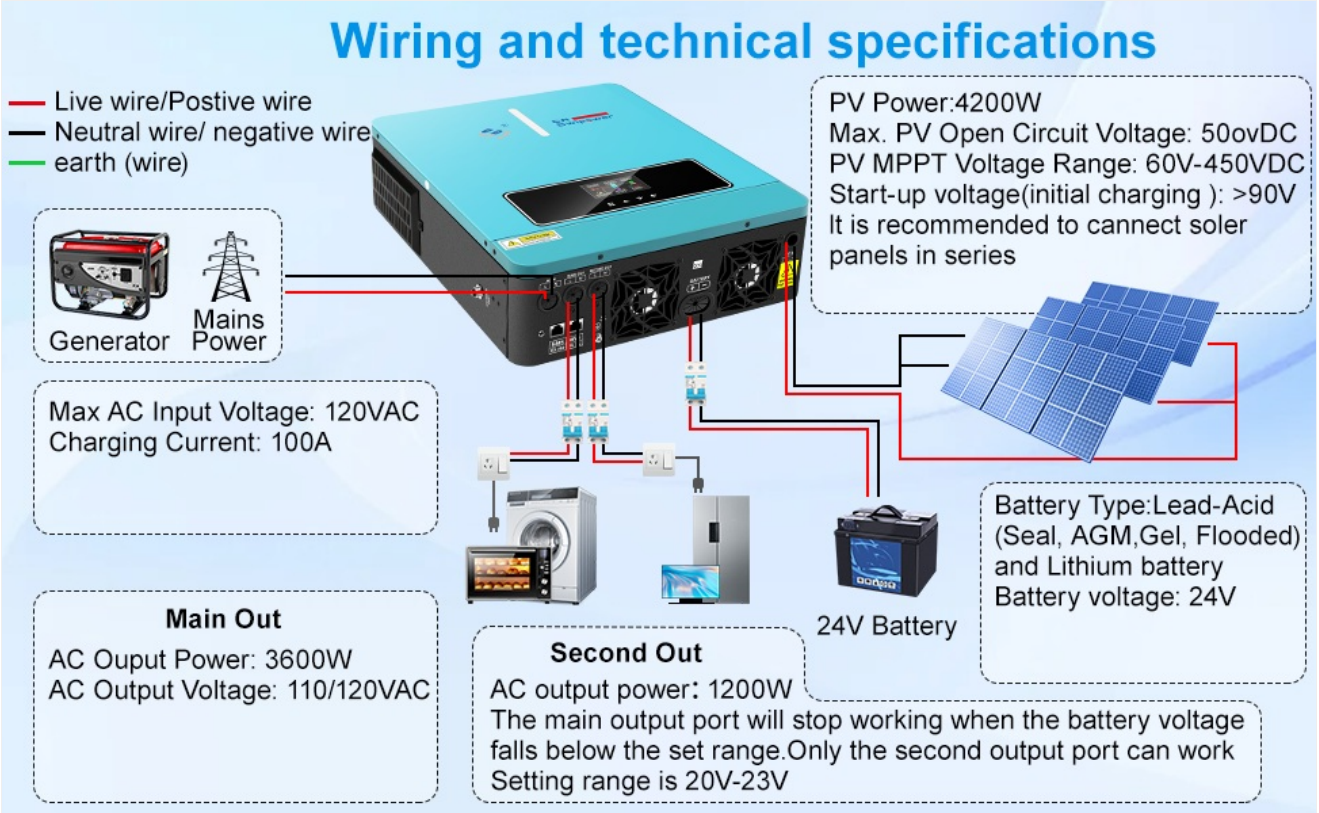

Figure 3.1: Detailed wiring diagram showing connections for solar panels, battery, AC input (mains/generator), and AC outputs (Main Out, Second Out).

1. **Battery Connection:** Connect the 24V battery bank to the designated battery terminals. Ensure correct polarity (positive to positive, negative to negative).
2. **PV Input Connection:** Connect your solar panel array to the PV input terminals. Ensure the PV voltage and current are within the inverter's specifications (60-450Vdc, Max 4200W). It is recommended to connect solar panels in series.
3. **AC Input Connection:** Connect the AC mains or generator power to the AC input terminals.
4. **AC Output Connection:** Connect your loads to the Main Out and Second Out terminals. The Main Out provides 3600W, while the Second Out provides 1200W and operates only when the battery voltage is above a set threshold (20-23V).
5. **Grounding:** Ensure the inverter is properly grounded according to local electrical codes.

4. Operating Instructions

Once installed, the inverter can be configured and operated via its LCD display and buttons, or remotely via WIFI.

Initial Power-Up:

1. Ensure all wiring connections are secure.
2. Turn on the battery breaker.
3. Turn on the PV array breaker.
4. Turn on the AC input breaker (if connected).
5. Switch on the inverter's power button. The LCD display will illuminate.

LCD Display and Settings:

The LCD display provides real-time system data and allows configuration of various parameters. Use the navigation buttons to scroll through menus and adjust settings.

- **Configurable Parameters:** Battery charging current, AC/Solar Charger priority, Load Supply Priority.
- **Monitoring:** View input voltage, output voltage, battery status, load percentage, and more.

Charging Modes:

The inverter supports four charging modes to optimize battery charging based on available power sources.

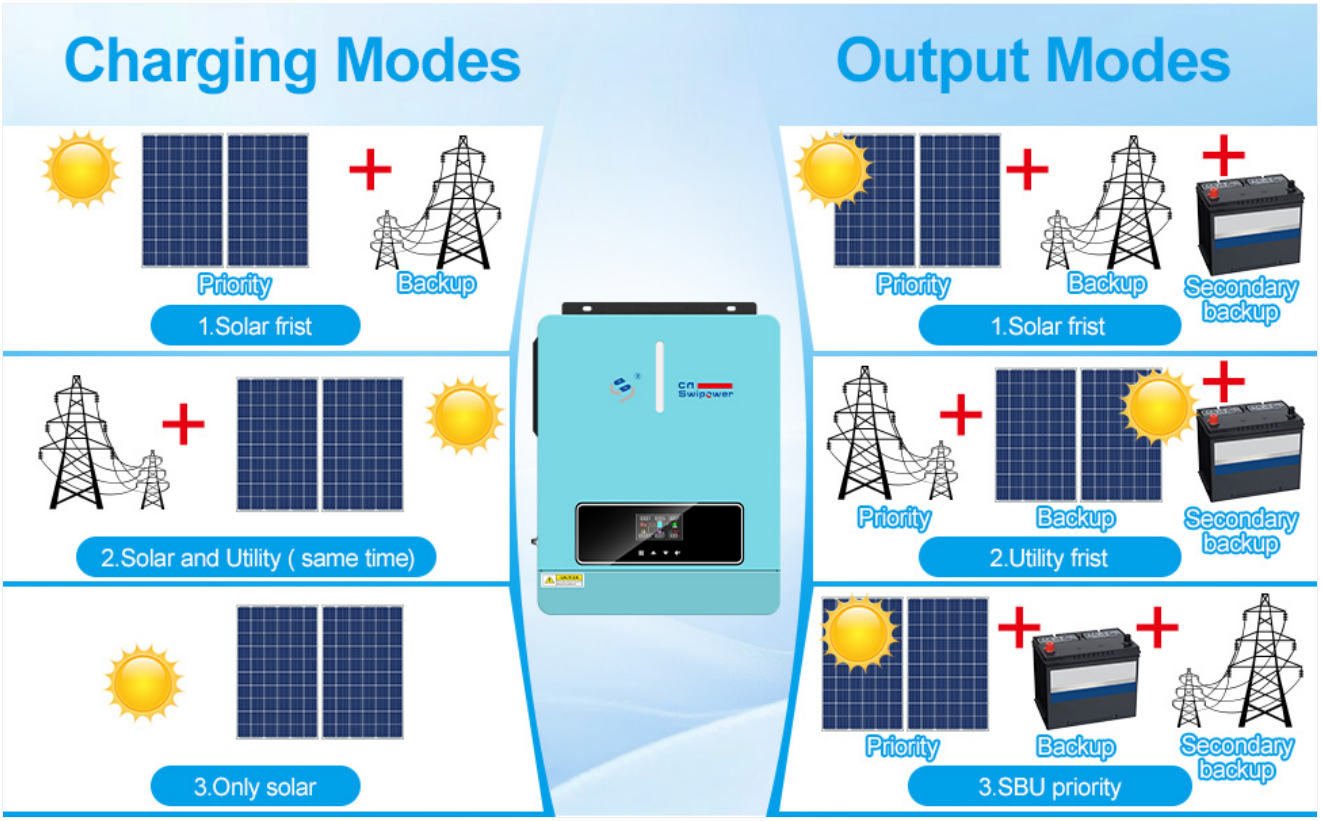

Figure 4.1: Visual representation of the available charging and output modes for the inverter.

- **Only Solar:** Charges the battery exclusively from solar power.
- **Mains First:** Prioritizes charging from the AC mains/generator, supplementing with solar if needed.
- **Solar First:** Prioritizes charging from solar power, supplementing with AC mains/generator if solar is insufficient.
- **Mains & Solar Hybrid:** Charges from both AC mains/generator and solar simultaneously.

Output Modes:

Three output modes determine the power source for connected loads.

- **Solar First:** Prioritizes solar power for loads, then battery, then AC mains/generator.
- **Mains First:** Prioritizes AC mains/generator for loads, then solar, then battery.
- **SBU Priority (Solar-Battery-Utility):** Prioritizes solar, then battery, then AC mains/generator.

WIFI Remote Monitoring:

The inverter supports WIFI connectivity for remote monitoring via a mobile application (iOS/Android) or web interface. Follow the instructions provided with the WIFI module for setup and connection.

5. Maintenance

Regular maintenance ensures the longevity and optimal performance of your inverter.

- **Cleaning:** Periodically clean the exterior of the inverter with a dry cloth. Ensure ventilation openings are free from dust and debris. Do not use liquid cleaners.

- **Connections:** Annually inspect all electrical connections for tightness and signs of corrosion. Tighten any loose connections.
- **Environment:** Ensure the operating environment remains within specified temperature and humidity ranges.

6. Troubleshooting

This section provides solutions to common issues you might encounter. For problems not listed here, contact technical support.

Problem	Possible Cause	Solution
Inverter not turning on	No battery connection; Battery voltage too low; Power switch off	Check battery connections; Charge battery; Turn on power switch
No AC output	Overload; Output breaker tripped; Battery low; Inverter fault	Reduce load; Reset breaker; Charge battery; Contact support
Battery not charging from solar	PV input voltage too low/high; PV connections incorrect; Solar panel issues	Check PV voltage range; Verify PV wiring; Inspect solar panels
Overload warning	Connected load exceeds inverter capacity	Reduce the total load connected to the inverter.

7. Specifications

Detailed technical specifications for the Xijia 3600W Hybrid Inverter (Model ECO3.6).

Parameter	Value
Model Number	ECO3.6
Rated Power	3600W
Max PV Input Power	4200W
PV Voltage Range	60-450Vdc
Max PV Input VOC	450V DC
MPPT Charge Current	120A
Battery Voltage	24V DC
AC Output Voltage	110V/120V AC
Nominal Output Frequency	50/60Hz
Waveform	Pure Sine Wave
Product Dimensions	16.65 x 13.13 x 4.33 inches
Item Weight	22 pounds
Manufacturer	XIJIA

8. Warranty and Support

For warranty information and technical support, please refer to the documentation included with your purchase or contact Xijia customer service. Ensure you have your model number (ECO3.6) and purchase details available when seeking support.