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› EAPRO Solar PCU 1500 1050VA/12V Inverter Instruction Manual

EAPRO EAPRO 1500 PWM

EAPRO Solar PCU 1500 1050VA/12V Inverter Instruction Manual

Model: EAPRO 1500 PWM

1. INTRODUCTION

The EAPRO Solar PCU 1500 is a versatile Power Conditioning Unit (PCU) designed to provide reliable power for homes and offices. This inverter converts 12V DC power from a battery into 220V AC power, suitable for various appliances. It integrates a powerful 50 AMP solar charge controller, enabling efficient utilization of solar energy.

Key features include a high-frequency design, an LCD display for real-time performance monitoring, and automatic protection mechanisms against overload, short circuit, and low battery voltage. A cooling fan ensures optimal operating temperature, and its durable, compact casing allows for easy installation.



Figure 1: Front view of the EAPRO Solar PCU 1500 Inverter, showing the control panel and LCD display.

2. SAFETY INSTRUCTIONS

Please read and understand all safety instructions before installing or operating the EAPRO Solar PCU 1500. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- Ensure proper ventilation around the inverter to prevent overheating.
- Do not expose the inverter to rain, moisture, or direct sunlight.
- Keep children and unauthorized personnel away from the unit.
- Always disconnect power before performing any maintenance or wiring.
- Use appropriate wiring and fuses as specified in the installation section.
- Do not open the inverter casing; there are no user-serviceable parts inside. Refer servicing to qualified personnel.

3. PACKAGE CONTENTS

Verify that all items are present in the package:

- EAPRO Solar PCU 1500 Inverter Unit
- Battery Connecting Wires
- Fuse
- Instruction Manual (this document)

4. PRODUCT OVERVIEW

Familiarize yourself with the various components and connection points of your EAPRO Solar PCU 1500.

4.1 Front Panel

The front panel features the LCD display and control buttons for operating the inverter.

- **LCD Display:** Shows real-time status, battery voltage, load, and other operational parameters.
- **MODE (UPS) Button:** Selects the operating mode (e.g., UPS mode).
- **HIGH/LOW Button:** Adjusts settings or navigates menus.
- **ON/OFF Button:** Powers the inverter on or off.
- **POWER SAVING Button:** Activates or deactivates power-saving mode.

4.2 Rear Panel Connections

The rear panel provides all necessary input and output terminals.

The infographic features the EAPRO Solar logo with the tagline 'POWER WITH BRAIN'. It includes a '10 YEARS OF TRUST' badge and a '10M Satisfied Users Globally' badge. A central globe icon is surrounded by eight callout boxes: 'Inception in 2012', '20+ Countries Global Presence', 'ODM For most of the reputed brands', '5 Manufacturing Facilities', 'Domestic & Export Dealer/Distributor Network - 3000', 'In-house R&D with 50+ Technocrats', 'Trusted technology Over 10 million satisfied users globally.', and 'Team Strength 650+'. At the bottom, it displays a 'A Complete Range of Power Backup Solutions' with images of various inverter models. Contact information includes the website www.eapro.in, phone number +91-9068563156, and address Plot No. 106-107, Salempur Industrial Area, Roorkee - 247677 (U.K.) India. Social media icons for YouTube, Facebook, and LinkedIn are also present.

Figure 2: Rear view of the EAPRO Solar PCU 1500 Inverter, showing AC output, Mains input, Solar input, and Battery terminals.

- **AC Output Socket:** Connect your appliances here.
- **MAINS Input:** Connect to the utility grid for battery charging and bypass operation.
- **SOLAR Input (+/-):** Connect solar panels to these terminals.
- **BATT. (+/-) Terminals:** Connect the 12V battery to these terminals using the provided battery connecting wires.
- **FUSE Holder:** Contains the main protection fuse.

5. SETUP AND INSTALLATION

Follow these steps for proper installation of your EAPRO Solar PCU 1500.

- 1. Mounting:** Choose a dry, well-ventilated area away from direct sunlight, heat sources, and flammable materials. Ensure sufficient clearance around the unit for airflow.
- 2. Battery Connection:**
 - Ensure the inverter is OFF.
 - Connect the positive (+) terminal of the 12V battery to the BATT. (+) terminal on the inverter using the red battery connecting wire.
 - Connect the negative (-) terminal of the 12V battery to the BATT. (-) terminal on the inverter using the black battery connecting wire.
 - Ensure connections are tight and secure.
- 3. Solar Panel Connection:**
 - Connect your solar panels (up to 1000W total) to the SOLAR input terminals (+/-).
 - Ensure the total Voc (Open Circuit Voltage) of your solar array does not exceed 22V and Vmp (Maximum Power Voltage) is around 17V for optimal charging.
 - Observe correct polarity: positive to positive, negative to negative.
- 4. AC Mains Input Connection:** Connect the MAINS input socket on the inverter to a reliable utility grid power outlet using an appropriate power cord (not included).
- 5. AC Output Connection:** Plug your desired appliances into the AC Output Socket on the rear panel. Ensure the total load does not exceed 850 Watts.

Important: Always double-check all connections for correct polarity and tightness before powering on the unit.

6. OPERATING INSTRUCTIONS

This section details how to operate your EAPRO Solar PCU 1500.

6.1 Powering On/Off

- **To Power On:** Press and hold the **ON/OFF** button for a few seconds until the LCD display illuminates.
- **To Power Off:** Press and hold the **ON/OFF** button for a few seconds until the display turns off.

6.2 LCD Display

The LCD display provides critical information about the inverter's status:

- **Battery Voltage:** Current battery charge level.
- **Load Level:** Indicates the percentage of connected load.
- **Input Source:** Shows whether the inverter is running on Mains, Battery, or Solar power.
- **Error Codes:** Displays specific codes in case of a fault.
- **Operating Mode:** Indicates the currently selected mode (e.g., UPS, Power Saving).

6.3 Operating Modes

- **UPS Mode:** Provides uninterrupted power supply. When mains power is available, it charges the battery and powers the load. Upon mains failure, it seamlessly switches to battery power.
- **Power Saving Mode:** Optimizes energy consumption by reducing standby power. The inverter may enter a low-

power state when no load or very light load is detected.

- **Real Time Clock Based Operation:** The inverter can be configured for specific charging and discharging cycles based on a real-time clock, optimizing solar energy usage and battery life. Refer to the advanced settings menu on the LCD for configuration.

Use the **MODE (UPS)** and **HIGH/LOW** buttons to navigate through menus and select desired operating modes or settings.

7. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your EAPRO Solar PCU 1500.

- **Cleaning:** Periodically clean the exterior of the inverter with a soft, dry cloth. Ensure ventilation openings are free from dust and debris. Do not use liquid cleaners.
- **Connections:** Annually check all electrical connections (battery, solar, mains, output) for tightness and corrosion. Loose connections can cause overheating and poor performance.
- **Battery Health:** Monitor battery health regularly, especially if using lead-acid batteries. Ensure battery terminals are clean and free of corrosion.
- **Environment:** Ensure the installation environment remains dry, cool, and well-ventilated.

8. TROUBLESHOOTING

This section provides solutions to common issues you might encounter.

Problem	Possible Cause	Solution
Inverter does not turn on.	<ul style="list-style-type: none">• Battery not connected or low voltage.• Main fuse blown.• Power button not pressed correctly.	<ul style="list-style-type: none">• Check battery connections and charge level.• Inspect and replace fuse if necessary.• Press and hold the ON/OFF button for a few seconds.
No AC output.	<ul style="list-style-type: none">• Overload condition.• Short circuit at output.• Low battery voltage.• Inverter in fault mode.	<ul style="list-style-type: none">• Reduce connected load.• Check output wiring for short circuits.• Charge battery or check battery health.• Power cycle the inverter.
Battery not charging from solar.	<ul style="list-style-type: none">• Solar panels not connected or incorrect polarity.• Insufficient sunlight.• Solar panel voltage/current too low.	<ul style="list-style-type: none">• Check solar panel connections and polarity.• Ensure panels are clean and facing the sun.• Verify solar panel specifications match inverter requirements.

If the problem persists after attempting these solutions, please contact EAPRO customer support.

9. SPECIFICATIONS

Feature	Specification
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Feature	Specification
Brand	EAPRO
Model Name	EGIP1500PWM12V
Model Number	EAPRO 1500 PWM
Recommended Uses	Home, Office
Power Source	Solar Powered
Rated Load Capacity	850 Watts
Max Output Power	1050 VA
Electrical Output Waveform	Pure Sine Wave
Frequency	50 Hz
Battery Voltage	12V (Single Battery Operated)
Solar Charge Controller	50 AMP
Max Solar Panel Support	Up to 1000W (Voc up to 22V, Vmp 17V)
Dimensions (L x W x H)	330 x 325 x 185 mm
Item Weight	11.1 kg

10. WARRANTY INFORMATION

The EAPRO Solar PCU 1500 comes with a **30 Months Warranty** from the date of purchase. This warranty covers manufacturing defects under normal use and service conditions. Please retain your purchase receipt as proof of purchase for warranty claims.

The warranty does not cover damage caused by improper installation, misuse, unauthorized modifications, natural disasters, or normal wear and tear.

11. CUSTOMER SUPPORT

For technical assistance, troubleshooting, or warranty inquiries, please contact EAPRO customer support:

- **Phone:** 8650115000
- **Website:** www.eapro.in