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› Wagan EL3810 Pure Line 3000 Watt Power Inverter User Manual

Wagan 3810

Wagan EL3810 Pure Line 3000 Watt Power Inverter User Manual

Model: EL3810

1. INTRODUCTION

The Wagan EL3810 Pure Line 3000 Watt Power Inverter converts 12V DC battery power into 110V AC household electricity. This device is designed to provide reliable power for a wide range of electronic appliances and tools, making it suitable for vehicles, boats, camping, and off-grid applications. This manual provides essential information for the safe and efficient operation of your inverter.

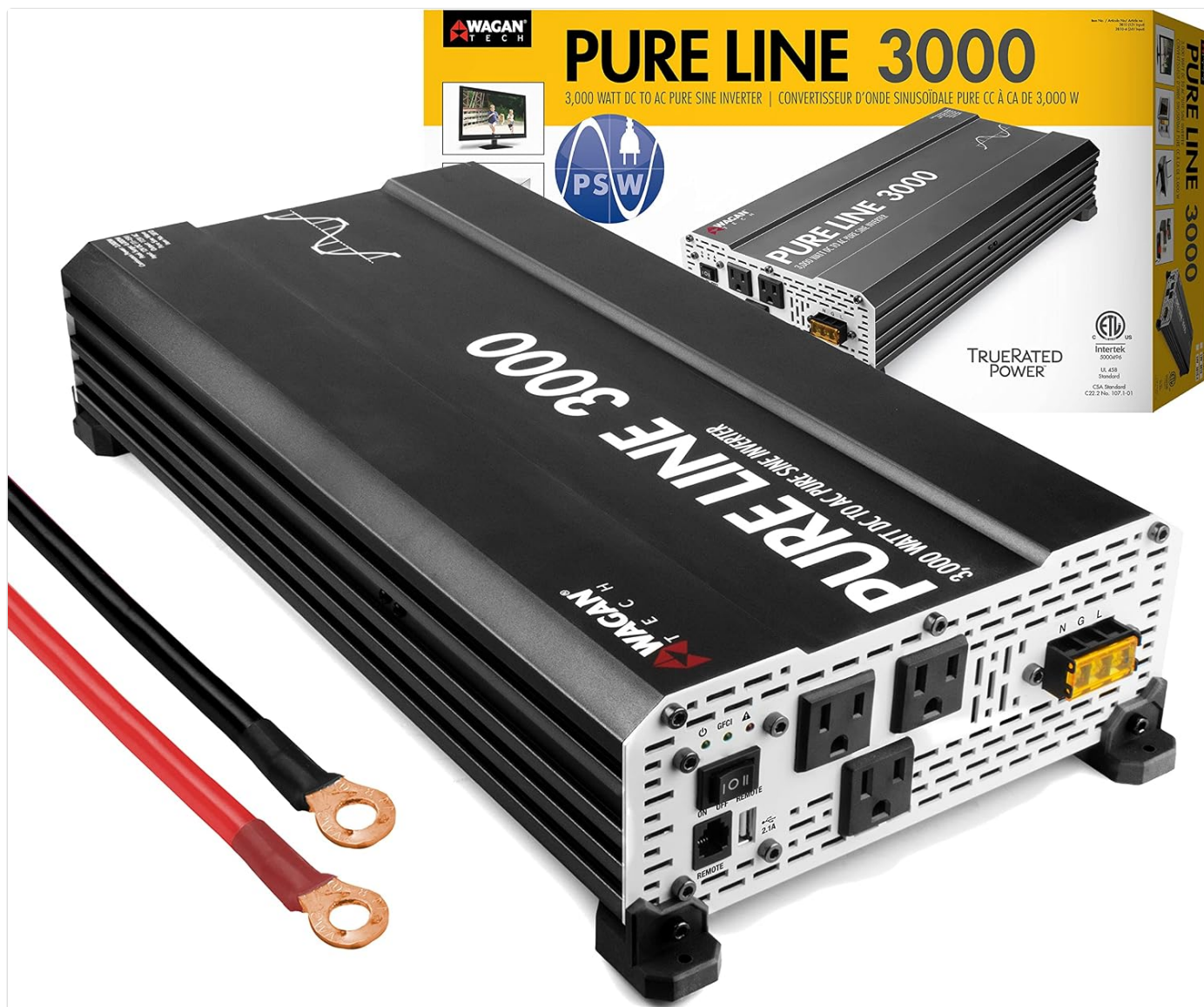


Image 1.1: The Wagan EL3810 Pure Line 3000 Watt Power Inverter, showcasing its robust design and included battery cables.

2. SAFETY PRECAUTIONS

Read and understand all safety instructions before operating the inverter. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- **Ventilation:** Ensure adequate ventilation around the inverter. Do not block cooling vents.
- **Moisture:** Do not expose the inverter to rain, moisture, or spray.
- **Flammable Materials:** Do not operate the inverter near flammable liquids or gases.
- **Electrical Connections:** Always connect the inverter to a 12V DC power source. Ensure all connections are tight and correct polarity is observed (positive to positive, negative to negative).
- **Grounding:** The inverter must be properly grounded. Refer to the 'Installation and Setup' section for grounding instructions.
- **Overload:** Do not exceed the inverter's rated power output. Overloading can damage the inverter and connected devices.
- **Children:** Keep the inverter out of reach of children.

GREAT PROTECTION



**SHORT CIRCUIT
PROTECTION**



**OVER VOLTAGE
PROTECTION**



**OVER HEATING
PROTECTION**



**LOW BATTERY
AUTOMATIC
SHUT DOWN**

Image 2.1: The inverter includes multiple protection features such as short circuit, over voltage, overheating, and low battery automatic shut down to ensure safe operation.

3. PACKAGE CONTENTS

Verify that all items are present in the package:

- Wagan EL3810 Pure Line 3000 Watt Power Inverter
- DC Cable (3 feet, 4AWG)
- User Manual (this document)

4. PRODUCT OVERVIEW

The Wagan EL3810 is a Pure Sine Wave inverter, providing clean and stable power suitable for sensitive electronics. It features a robust design with multiple outlets and safety mechanisms.

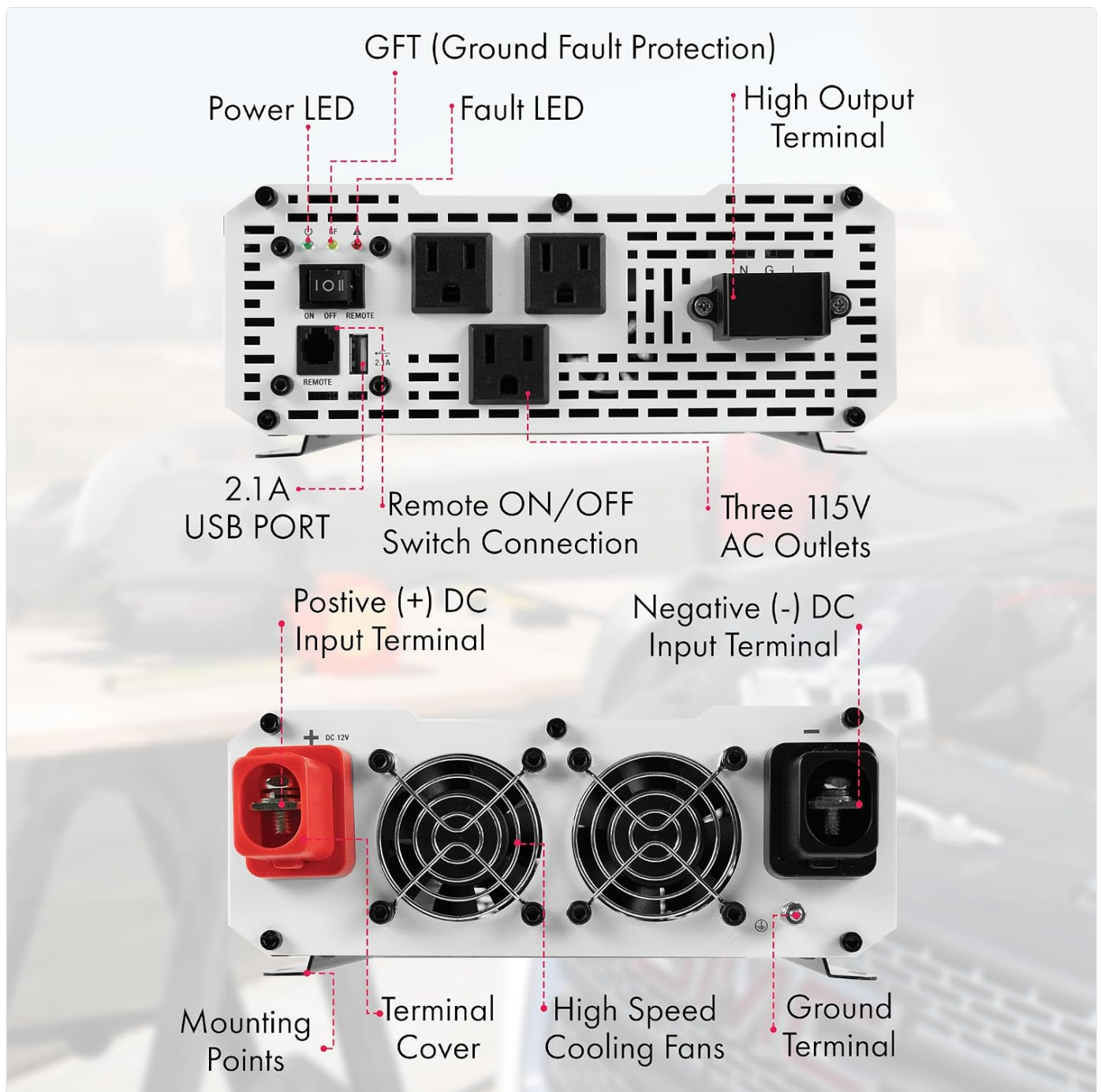


Image 4.1: Detailed view of the inverter's front and rear panels, indicating the location and function of all ports, switches, and terminals.

4.1. Front Panel Features

- **Power LED:** Indicates the inverter is powered on.
- **Fault LED:** Illuminates to indicate a fault condition (e.g., overload, low battery).
- **ON/OFF Switch:** Controls the main power to the inverter.
- **Remote ON/OFF Switch Connection:** Port for an optional remote control switch.
- **Three 115V AC Outlets:** Standard household outlets for connecting AC devices.
- **2.1A USB Port:** For charging USB-powered devices.
- **High Output Terminal:** For connecting high-power AC loads directly.

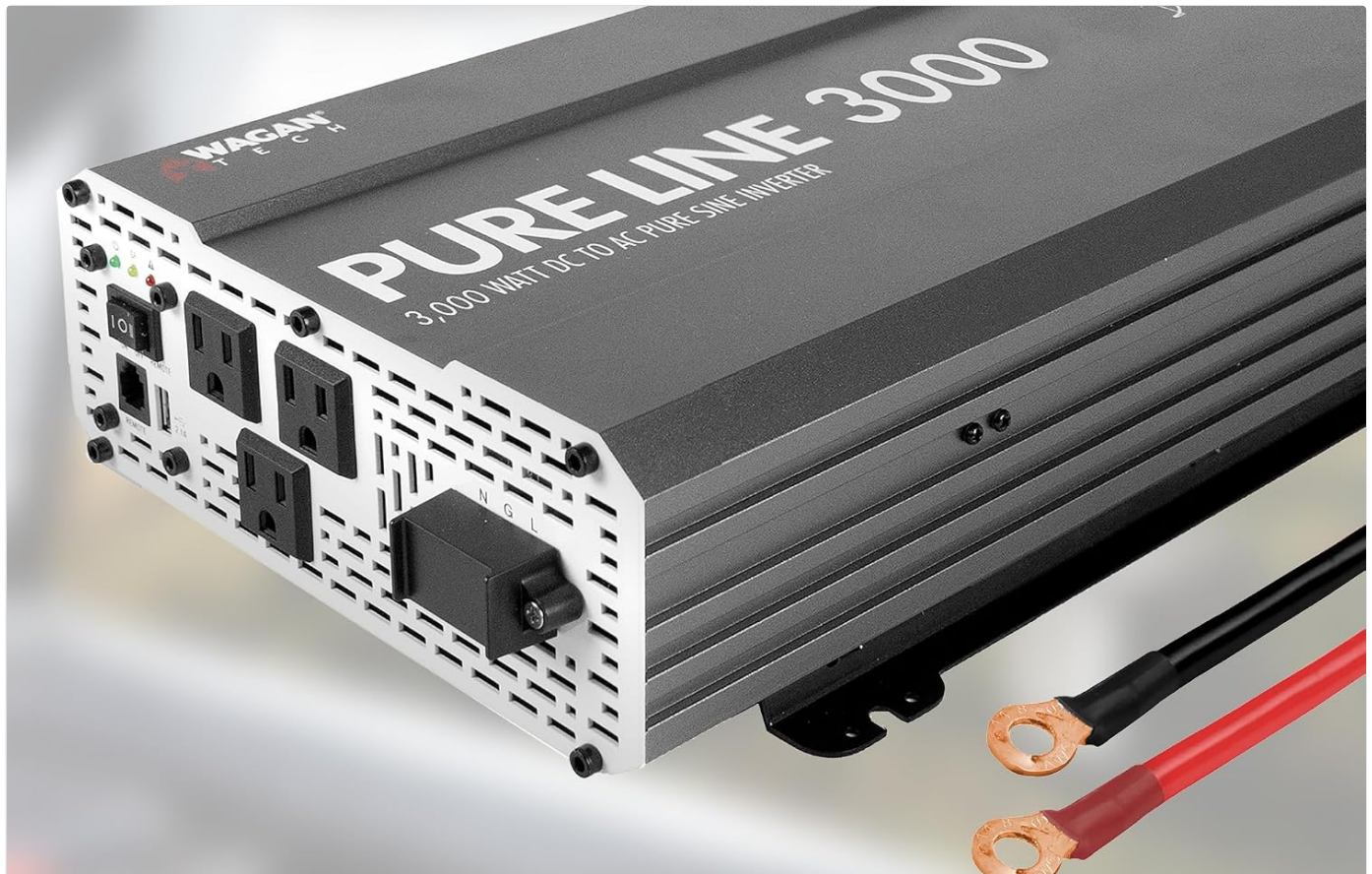
4.2. Rear Panel Features

- **Positive (+) DC Input Terminal:** Connects to the positive terminal of the 12V battery.
- **Negative (-) DC Input Terminal:** Connects to the negative terminal of the 12V battery.

- **Ground Terminal:** For connecting the inverter to a proper earth ground.
- **High Speed Cooling Fans:** Automatically activate to dissipate heat during operation.
- **Mounting Points:** For securing the inverter in a stable location.

4.3. Key Technologies

- **Pure Sine Wave (PSW):** Provides clean, stable AC power, virtually identical to utility power, making it safe for sensitive electronics.
- **TrueRated Power:** Wagan Tech's commitment that the inverter will sustain its rated load continuously for 24 hours, ensuring reliable performance.
- **Ground Fault Protection (GFT):** Enhances safety by protecting against electrical shock and fire hazards.



TRUERATED POWER™

Our inverters are tested at full load and will sustain that load continuously for 24 hours.

GROUND FAULT PROTECTION™

Ground fault protection for added safety.
Shock and fire protection.

Image 4.2: Explanation of TrueRated Power, indicating continuous load capability, and Ground Fault Protection for enhanced safety.

5. INSTALLATION AND SETUP

Proper installation is crucial for the safe and efficient operation of your inverter.

5.1. Choosing a Location

- Mount the inverter in a dry, cool, and well-ventilated area.
- Avoid direct sunlight, heat sources, and moisture.
- Ensure sufficient clearance around the cooling fans for proper airflow.
- Mount the inverter securely using the provided mounting points to prevent movement.

5.2. Battery Connection (DC Input)

WARNING: Incorrect polarity will damage the inverter and void the warranty. Always connect positive to positive and negative to negative.

1. Ensure the inverter's ON/OFF switch is in the 'OFF' position.
2. Connect the **red** DC cable to the **positive (+)** terminal of the 12V battery.
3. Connect the other end of the **red** DC cable to the **positive (+)** DC input terminal on the inverter.
4. Connect the **black** DC cable to the **negative (-)** terminal of the 12V battery.
5. Connect the other end of the **black** DC cable to the **negative (-)** DC input terminal on the inverter.
6. Tighten all connections securely. Loose connections can cause overheating and poor performance.

5.3. Grounding

The inverter must be properly grounded to prevent electrical shock. Connect a heavy-gauge wire (not included) from the inverter's ground terminal to a suitable earth ground, such as the chassis of a vehicle or a ground rod in an off-grid setup.

6. OPERATION

6.1. Turning On/Off

1. After all connections are made, switch the inverter's ON/OFF switch to the 'ON' position.
2. The Power LED should illuminate, indicating the inverter is operational.
3. To turn off the inverter, switch the ON/OFF switch to the 'OFF' position.

6.2. Connecting AC Devices

1. Ensure the total wattage of all connected AC devices does not exceed the inverter's continuous power rating (3000W).
2. Plug your AC devices into the 115V AC outlets on the front panel.
3. For devices requiring higher power, use the High Output Terminal if applicable and ensure proper wiring.

6.3. Using the USB Port

The 2.1A USB port can be used to charge most USB-powered devices, such as smartphones and tablets. Simply connect your device's USB charging cable to the inverter's USB port.

6.4. Load Considerations

The inverter has a continuous power rating of 3000W and a peak surge power of 6000W. Some appliances, especially those with motors (e.g., refrigerators, power tools), have a high starting (surge) current. Ensure the surge rating of your appliance does not exceed the inverter's peak surge capability.

Variety of Uses

Power a wide range of electronic items!



Image 6.1: The inverter can power a variety of electronic items, from power tools to household appliances, due to its pure sine wave output and high wattage capacity.

7. 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 cooling vents are free from dust and debris. Do not use liquid cleaners.
- **Connections:** Regularly check all DC and AC connections to ensure they are tight and free from corrosion.
- **Storage:** If storing the inverter for an extended period, disconnect it from the battery and store it in a cool, dry place.

8. TROUBLESHOOTING

This section addresses common issues you might encounter with your inverter.

Problem	Possible Cause	Solution
No power output / Inverter not turning on	Loose battery connections Low battery voltage Blown fuse Inverter switch OFF	Check and tighten battery cables Recharge or replace battery Check and replace internal/external fuses (consult professional) Turn inverter switch to ON
Fault LED illuminated / Inverter shuts down	Overload Overheating Low battery voltage Short circuit	Reduce connected load Ensure proper ventilation, allow to cool Recharge or replace battery Check for short circuits in connected devices or wiring
Connected device not working correctly	Device requires more power than inverter provides Device incompatible with inverter output	Check device wattage and inverter capacity Ensure device is compatible with pure sine wave power
Cooling fans constantly running	High ambient temperature Heavy load on inverter	Ensure adequate ventilation This is normal under heavy load; ensure fans are not blocked

9. SPECIFICATIONS

Feature	Specification
Model	EL3810
Continuous Power	3000 Watts
Peak Surge Power	6000 Watts
Input Voltage	12V DC
Output Voltage	110V AC
Output Waveform	Pure Sine Wave
USB Output	5V, 2.1A
AC Outlets	3 (3-prong ground fault protected)
Dimensions (L x W x H)	19 x 8.7 x 3.8 inches

Feature	Specification
Item Weight	12.5 pounds
Certifications	RoHS compliant, CE approved, ETL certified (UL458 Standards & CSA C22.2#107.1)
Included Cables	DC Cable (3 feet, 4AWG)

10. WARRANTY AND SUPPORT

Wagan Tech products are designed for reliability and performance. For warranty information, technical support, or service inquiries, please refer to the official Wagan Tech website or contact their customer service directly. Keep your purchase receipt as proof of purchase for any warranty claims.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

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