

Renogy RIV2420P2-12S

Renogy 2000W 24V Pure Sine Wave Inverter

Model: RIV2420P2-12S

User Manual

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your Renogy 2000W 24V Pure Sine Wave Inverter. This inverter is designed to convert 24V DC battery power into stable 120V AC power, suitable for a wide range of applications including RVs, trucks, marine vessels, camping, and home backup systems. Its pure sine wave output ensures compatibility with sensitive electronics, providing clean and reliable power.



Image: The Renogy 2000W 24V Pure Sine Wave Inverter, showing the main unit, remote control, and included battery cables.

2. SAFETY INFORMATION

Please read all safety instructions carefully before installing or operating the inverter. Failure to follow these instructions may result in electrical shock, fire, serious injury, or death.

- **Electrical Hazard:** Do not open the inverter casing. There are no user-serviceable parts inside. Refer all servicing to qualified service personnel.
- **Proper Ventilation:** Ensure adequate ventilation around the inverter to prevent overheating. Do not block ventilation openings.
- **Grounding:** The inverter chassis must be properly grounded to prevent electrical shock.
- **Battery Connection:** Connect the inverter only to a 24V DC battery system. Incorrect voltage can damage the inverter and connected devices.
- **Flammable Materials:** Do not install the inverter near flammable materials or in areas where flammable fumes or gases may accumulate.
- **GFCI Protection:** The built-in GFCI (Ground Fault Circuit Interrupter) provides protection against electrical faults. Do not bypass or disable this feature.

Essential Safety Protection

Built-in GFCI protects against electrical faults for complete peace of mind

GFCI



FCC



ETL

Note: Please ensure the inverter chassis is well grounded.

Image: The inverter highlighting its essential safety protection features, including GFCI, FCC, and ETL certifications, with a boat in the background suggesting marine use.

3. PRODUCT FEATURES

- **2000W Continuous Output, 4000W Peak Power:** Provides stable power for various appliances and handles high surge loads.
- **92% Energy Efficiency:** High conversion efficiency minimizes energy waste and provides clean power output.
- **Pure Sine Wave Output:** Delivers high-quality power, reducing interference and ensuring compatibility with sensitive electronics.
- **24V System Compatibility:** Designed for 24V battery systems, offering advantages in portability, space-saving, and flexible installation compared to 12V systems.
- **Remote Control Switch:** Allows convenient operation and monitoring of the inverter from a distance.
- **Multiple AC Outputs:** Equipped with two AC outputs and a terminal block for diversified connectivity options.

- **Comprehensive Protection Features:** Includes five powerful protection features to ensure reliable power conversion and safeguard connected equipment against accidental failure and damage.
- **Low Noise Operation:** Designed for quiet performance, ensuring a serene environment even during sleep.

Maximize Efficiency up to 92%



2000W
continuous output



4000W
peak power

92%+
conversion
efficiency

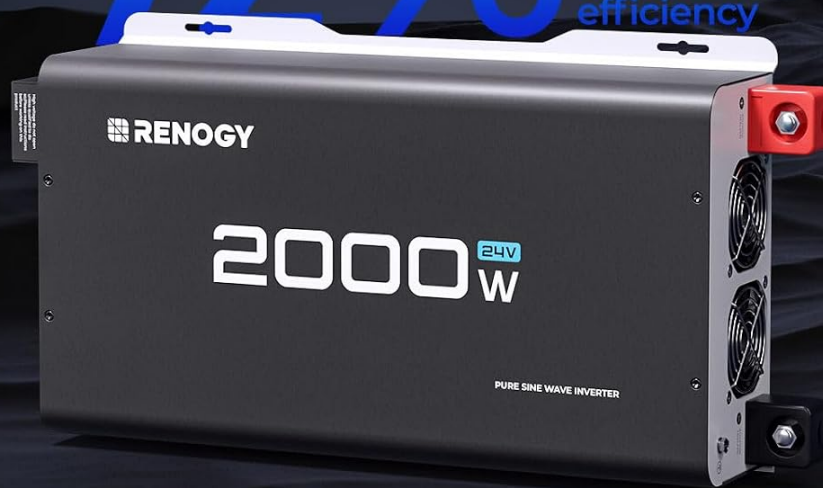


Image: Visual representation of the inverter's 92% energy efficiency, highlighting 2000W continuous output and 4000W peak power.

Noise-Free, Serene Sleep

Enjoy a quiet environment with a low-noise inverter, even during sleep



Idle < 0.8A(19.2W)

Image: The inverter demonstrating its noise-free operation, suitable for use in quiet environments like bedrooms.

4. PACKAGE CONTENTS

Verify that all items are included in your package:

- Renogy 2000W 24V Pure Sine Wave Inverter
- Remote Control Unit
- Remote Control Cable (RJ45)
- Battery Cables (1x Red 3AWG 3ft, 1x Black 3AWG 3ft)



Image: The complete package contents, including the inverter, remote control, and battery cables.

5. SETUP AND INSTALLATION

Proper installation is crucial for the safe and efficient operation of your inverter. Follow these steps carefully:

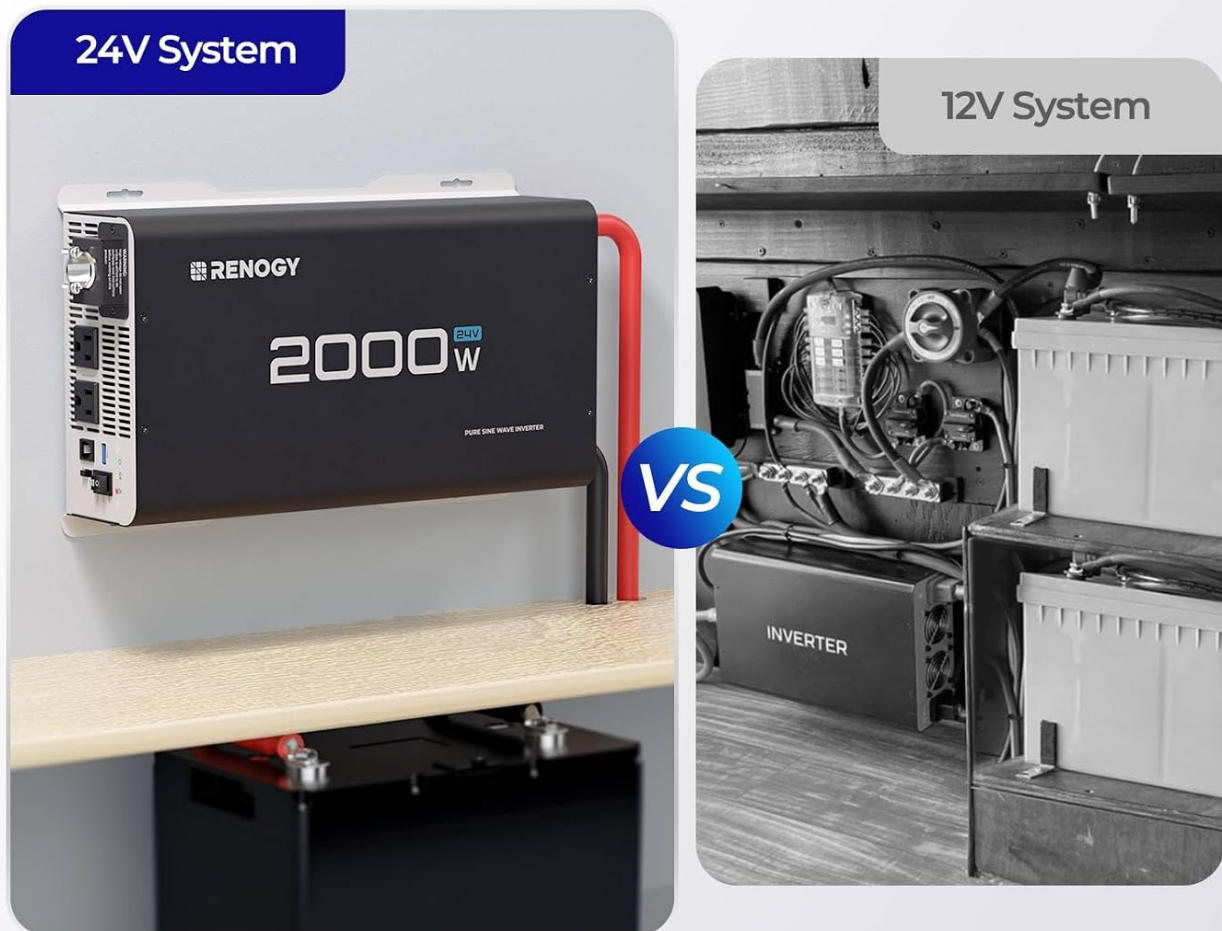
1. **Choose a Location:** Select a dry, well-ventilated area away from direct sunlight, heat sources, and flammable materials. The inverter should be mounted securely.
2. **Mounting:** Secure the inverter using appropriate fasteners. Ensure there is sufficient space around the unit for airflow.
3. **Grounding:** Connect the inverter's chassis ground terminal to a reliable earth ground using a suitable gauge wire.
4. **DC Input Connection:**
 - Connect the positive (+) battery cable (red) to the positive (+) terminal on the inverter.
 - Connect the negative (-) battery cable (black) to the negative (-) terminal on the inverter.
 - Ensure connections are tight and secure to prevent voltage drop and overheating.
5. **AC Output Connection:** Plug your AC appliances into the inverter's AC outlets or connect to the terminal block as needed. Ensure the total wattage of connected appliances does not exceed the inverter's continuous output rating.

(2000W).

6. **Remote Control Connection:** Plug the remote control cable into the RJ45 port on the inverter and the remote control unit.

Space-Efficient Compact Design

Maximize space with a compact design that doesn't compromise on power



Note: Superior to 12V Systems, the 24V system requires fewer batteries and wires, ensuring a neat, user-friendly setup and cost savings.

Image: Illustrates the space-efficient compact design of the 24V system compared to a 12V system, emphasizing easier installation.

6. OPERATING INSTRUCTIONS

Once installed, operating your Renogy inverter is straightforward:

1. **Power On:** Ensure all connections are secure. Turn on the inverter using the power switch on the unit or the remote control. The indicator lights will illuminate.
2. **Connect Appliances:** Plug your AC devices into the inverter's outlets. Start with smaller loads first, then gradually add larger ones.
3. **Monitor Load:** Pay attention to the inverter's indicators or remote display to monitor the power consumption. Avoid overloading the inverter.

4. **Power Off:** When finished, turn off the inverter before disconnecting any appliances or the battery.

Effortless RV Appliance Power-Ups

Power up your RV appliances with ease

4000W MAX



Note: The surge capacity of inductive appliances can exceed their continuous rating by up to 5 to 7 times.

Image: Depicts the inverter's capability to power various RV appliances, including a smartphone, laptop, air conditioner, and microwave, with a maximum peak power of 4000W.

7. MAINTENANCE

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

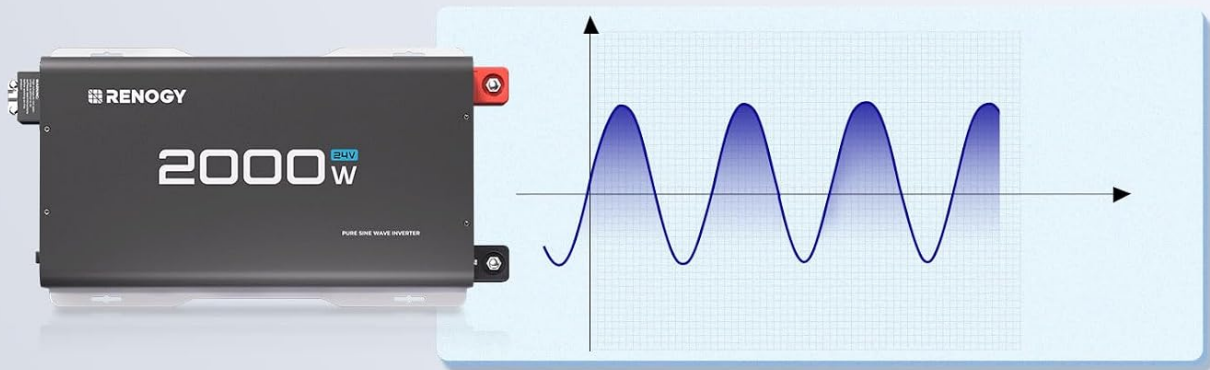
- **Cleanliness:** Keep the inverter clean and free from dust and debris. Use a dry cloth for cleaning. Do not use liquid cleaners.
- **Ventilation:** Periodically check that the ventilation openings are not obstructed.
- **Connections:** Inspect all electrical connections regularly to ensure they are tight and free from corrosion.
- **Storage:** If storing the inverter for an extended period, ensure it is in a cool, dry place and disconnected from the battery.

8. TROUBLESHOOTING

If you encounter issues with your inverter, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Inverter not turning on	Loose battery connections, low battery voltage, blown fuse/breaker	Check and tighten battery connections. Recharge or replace battery. Check and reset circuit breaker or replace fuse.
No AC output	Overload, short circuit, high/low input voltage, GFCI tripped	Reduce load. Check for short circuits in wiring/appliances. Verify battery voltage. Reset GFCI.
Inverter shuts down frequently	Overheating, overload, low battery voltage	Ensure proper ventilation. Reduce load. Recharge battery.
Fan constantly running or loud	High internal temperature, heavy load	Ensure adequate ventilation. Reduce load if possible.

Surpassing Inverters in Excellence



Type	Renogy Pure Sine Wave Inverter	Other Pure Sine Wave Inverter	Modified Sine Wave Inverter
THD (Total Harmonic Distortion)	less than 3% (The THD of the grid is less than 5%, more stable than the grid)	5%-8%	20%-40%
Remote Control	✓	✗	✗
GFCI	✓	✗	✗
Inverter Efficiency	> 92%	80%-85%	

Image: A comparison table illustrating the superior performance of the Renogy Pure Sine Wave Inverter in terms of Total Harmonic Distortion (THD), remote control, GFCI, and efficiency compared to other inverter types.

9. SPECIFICATIONS

Attribute	Value
Model Name	2000W 24V
Item Model Number	RIV2420P2-12S
Wattage	2000 watts (Continuous) / 4000 watts (Peak)
Input Voltage	24V DC
Output Voltage	110V/120V AC (Pure Sine Wave)

Attribute	Value
Energy Efficiency	92%
Product Dimensions	16.94 x 8.99 x 3.75 inches
Item Weight	10.14 pounds (4.6 kg)
Manufacturer	Renogy
Recommended Uses	Marine, RV, Truck, Camping, Home

2000W 24V Pure Sine Wave Inverter

A reliable inverter for a secure, stable power supply

Weight 16.94 x 8.99 x 3.75in

Dimension 10.14 lbs/4.6 kg



Image: The Renogy 2000W 24V Pure Sine Wave Inverter with its key dimensions and weight clearly labeled.

10. WARRANTY AND SUPPORT

Renogy products are designed for reliability and performance. For warranty information, technical support, or service inquiries, please visit the official Renogy website or contact their customer service department. Keep your purchase receipt for warranty claims.

For additional resources and product information, you may visit the [Renogy Store on Amazon](#).

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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.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

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

Answered questions about this manual

How do I configure the Renogy RIV2420P2-12S 2000W 24V Inverter for use with two 12V 190Ah (360Ah total) lead-acid batteries?

To set up your Renogy RIV2420P2-12S 2000W 24V Inverter with two 12V 190Ah lead-acid batteries, follow these steps for a 24V configuration:Battery Wiring (Series Connection): Since this is a 24V inverter, you must connect...

[Read full answer](#)