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› Treeligo 12V DC Mini Split Air Conditioner User Manual (Model EAC001.22.12)

## Treeligo EAC001.22.12

# Treeligo 12V DC Mini Split Air Conditioner User Manual

Model: EAC001.22.12

## 1. INTRODUCTION

Thank you for choosing the Treeligo 12V DC Mini Split Air Conditioner. This manual provides essential information for the safe and efficient installation, operation, and maintenance of your air conditioning unit. Please read this manual thoroughly before installation and use, and retain it for future reference.

This unit is designed to provide cooling for various vehicles, including semi-trucks, trailers, campers, RVs, crane loaders, and excavators, operating on a 12V DC power supply.

## 2. SAFETY INFORMATION

**WARNING: Failure to follow these safety instructions could result in electric shock, fire, serious injury, or death.**

- Ensure the power supply is disconnected before performing any installation, maintenance, or troubleshooting.
- Installation must be performed by qualified personnel in accordance with all local and national electrical codes.
- Do not operate the unit with wet hands or when standing in water.
- Keep children and pets away from the unit during operation and maintenance.
- Do not block the air intake or outlet of the unit.
- Use only the specified refrigerant (R-134A) and ensure proper handling and disposal.
- The unit is designed for 12V DC power only. Connecting to an incorrect voltage may cause damage or fire.
- Ensure proper ventilation around the outdoor unit to prevent overheating.

## 3. PRODUCT OVERVIEW

The Treeligo 12V DC Mini Split Air Conditioner consists of an indoor unit and an outdoor unit, along with necessary accessories for installation and operation.



Image 3.1: Treeligo 12V DC Mini Split Air Conditioner (Indoor and Outdoor Units)

This image displays the complete Treeligo 12V DC Mini Split Air Conditioner system, featuring both the compact indoor unit and the robust outdoor unit. A semi-truck is visible in the background, illustrating a typical application for this product.

### 3.1. Key Features

- **Powerful Brushless Motor:** Equipped with a 960W brushless motor, providing rapid cooling with up to 3000 RPM and a wind speed of 265 CFM.
- **Low Noise Operation:** Operates at a low noise level of 45dB, ensuring a quiet environment.
- **Variable Frequency Inverter Cooling:** Adjusts operating frequency based on ambient temperature to optimize energy consumption.
- **12V DC Power Supply:** Designed for direct 12V DC vehicle power systems.
- **Low Voltage Protection:** Automatically cuts off power to prevent battery drain, ensuring vehicle start-up. Includes over-voltage and over-current protection.
- **Durable Construction:** Shell made from sturdy ABS material, resistant to deformation and corrosion.



Image 3.2: Brushless Motor and Performance Overview

This graphic highlights the brushless motor technology, demonstrating the unit's low noise output (below 45dB) and efficient wind speed (265 CFM), contributing to a comfortable and quiet interior.

### 3.2. Indoor Unit Features

- **LCD Display:** Provides clear temperature and setting information.
- **360° Air Flow:** Ensures even distribution of cool air.
- **Remote Control:** For convenient adjustment of settings.



Image 3.3: Indoor Unit Controls and Airflow

This image focuses on the indoor unit, detailing its user interface with an LCD display, the 360-degree air flow capability, and the included remote control for ease of use.

### 3.3. Outdoor Unit Features

- **IPX6K Waterproof Rating:** Provides protection against strong jets of water, suitable for outdoor vehicle environments.
- **Thickened Aluminum Condenser:** Enhances heat dissipation and durability.
- **20CC Inverter Scroll Compressor:** Efficient and reliable compressor for consistent cooling performance.



Image 3.4: Outdoor Unit Durability and Components

This image showcases the robust features of the outdoor unit, including its IPX6K waterproof design, the thickened aluminum condenser for efficient heat exchange, and the 20CC inverter scroll compressor.

### 3.4. What's in the Box

The package includes the following components:

- Indoor Unit
- Outdoor Unit
- Remote Control
- Instruction Manual
- Screw Accessories (various screws, washers, gaskets)
- Low Pressure Pipe
- High Pressure Pipe

- Drain Pipe
- Signal Cable
- Battery Cable
- Adhesive Tape
- Expansion Valve
- Mounting Board



Image 3.5: Package Contents

This image provides a visual representation of all items included in the product package, ensuring users can verify they have received all necessary parts for installation.

## 4. TECHNICAL SPECIFICATIONS

Feature	Specification
Brand	Treeligo
Model Number	EAC001.22.12
Item Weight	66 pounds
Product Dimensions (Indoor Unit)	7 x 13 x 23 inches
Product Dimensions (Outdoor Unit)	20 x 9 x 26 inches (Can be mounted horizontally, or on top of the roof)
Efficiency	Efficient
Capacity	66 Pounds
Annual Energy Consumption	100 Kilowatt Hours Per Year
Noise Level	55 Decibels (Operating below 45dB)
Installation Type	Split System
Form Factor	Mini-Split
Special Features	Fast Cooling, Remote Control, Panel Control LCD Display
Color	White
Voltage	12 Volts (DC)
Wattage	800 watts (Rated Power: 960W)
Cooling Power	10000 British Thermal Units (BTU)
Floor Area Coverage	50 Square Feet
Seasonal Energy Efficiency Ratio (SEER)	10
Refrigerant	R-134A

## 5. INSTALLATION INSTRUCTIONS

**Professional installation is recommended for optimal performance and safety.**

### 5.1. Pre-Installation Checklist

- Verify all components listed in Section 3.4 are present and undamaged.
- Ensure the vehicle's electrical system can support a 12V DC, 800W (960W peak) load.
- Select appropriate mounting locations for both indoor and outdoor units, ensuring proper air circulation and drainage.
- Gather necessary tools: drill, wrenches, screwdrivers, vacuum pump, refrigerant gauges, safety

glasses, gloves.

## 5.2. Step-by-Step Installation



Image 5.1: Installation Steps Overview

This diagram illustrates the eight primary steps involved in installing the Treeligo 12V DC Mini Split Air Conditioner, from mounting units to connecting power and refrigerant.

1. **Install External Machine:** Securely mount the outdoor unit in the chosen location on the vehicle. Ensure it is level and has adequate clearance for airflow.
2. **Install Expansion Valve:** Connect the expansion valve to the appropriate lines as per the diagram.
3. **Install Indoor Unit:** Mount the indoor unit inside the vehicle cabin. Ensure it is securely fastened and positioned for optimal air distribution.
4. **Install High & Low Pressure Pipelines:** Connect the high and low pressure refrigerant lines between the indoor and outdoor units. Ensure all connections are tight and leak-free.
5. **Install Connecting Line, Drain Pipe, and Power Line:** Connect the signal cable, drain pipe, and main power cable. The drain pipe should be routed to allow condensate to exit the vehicle without causing damage.
6. **Vacuum and Add Refrigerant:** Evacuate the system using a vacuum pump to remove air and moisture. Then, charge the system with the specified amount of R-134A refrigerant. This step requires specialized tools and expertise.
7. **Connect the Power Cord to the Battery:** Connect the main power cable directly to the vehicle's 12V DC battery, ensuring correct polarity and a secure connection. Install an inline fuse if not already present.
8. **Turn on the Air Conditioner:** Once all connections are secure and the system is charged, power on the unit and test its operation.

## 6. OPERATING INSTRUCTIONS

The Treeligo 12V DC Mini Split Air Conditioner can be operated using the control panel on the indoor unit or

the provided remote control.

## 6.1. Control Panel

The indoor unit features an LCD display and control buttons for direct operation. Refer to Image 3.3 for a visual guide.

- **Power Button:** Turns the unit ON/OFF.
- **Mode Button:** Cycles through operating modes (e.g., Cool, Fan).
- **Temperature Adjustment:** Buttons to increase or decrease the desired temperature.
- **Fan Speed:** Adjusts the fan speed (Low, Medium, High, Auto).

## 6.2. Remote Control

The remote control provides convenient access to all functions from a distance. Point the remote control directly at the indoor unit's receiver when operating.

- **Power Button:** Turns the unit ON/OFF.
- **Mode Selection:** Selects operating modes.
- **Temperature Setting:** Adjusts the target temperature.
- **Fan Speed Control:** Changes fan speed.
- **Timer Function:** Sets a timer for automatic ON/OFF.
- **Sleep Mode:** Adjusts temperature and fan speed for comfortable sleep.

## 6.3. Low Voltage Protection

The unit is equipped with a low voltage protection feature. If the vehicle battery voltage drops below a safe threshold, the AC unit will automatically shut off to prevent complete battery discharge, ensuring the vehicle can still start. This threshold is factory set and not user-adjustable.

## 7. MAINTENANCE

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Regular maintenance ensures the longevity and efficient operation of your Treeligo air conditioner.

- **Clean Air Filters:** The indoor unit's air filters should be cleaned every 2-4 weeks, or more frequently depending on usage and environment. Remove filters, wash with mild soap and water, rinse thoroughly, and allow to dry completely before reinstallation.
- **Clean Outdoor Unit:** Periodically inspect and clean the outdoor unit's condenser coils to remove dirt, dust, and debris. Use a soft brush or vacuum cleaner. Ensure power is disconnected before cleaning.
- **Check Drain Pipe:** Ensure the drain pipe is clear of obstructions and allows for proper condensate drainage.
- **Inspect Electrical Connections:** Annually, check all electrical connections for tightness and signs of corrosion.
- **Refrigerant Level Check:** If cooling performance decreases, have a qualified technician check the refrigerant level. Refrigerant charging should only be performed by certified professionals.

## 8. TROUBLESHOOTING

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Before contacting customer support, please refer to the following table for common issues and their solutions.

Problem	Possible Cause	Solution
Unit does not turn on	No power supply; Blown fuse; Low battery voltage; Power cord disconnected.	Check battery connections; Check vehicle fuse box; Recharge vehicle battery; Ensure power cord is securely connected.
Insufficient cooling	Dirty air filters; Blocked outdoor unit; Low refrigerant; Incorrect temperature setting; Doors/windows open.	Clean air filters; Clear obstructions from outdoor unit; Set desired temperature lower; Close all doors and windows; Contact technician for refrigerant check.
Unit is noisy	Loose mounting; Fan obstruction; Abnormal compressor operation.	Check mounting screws; Remove any obstructions from fan; If noise persists, contact customer support.
Water leakage from indoor unit	Blocked drain pipe; Improper installation angle.	Clear drain pipe; Ensure indoor unit is installed with a slight downward slope towards the drain.
Remote control not working	Dead batteries; Obstruction between remote and unit; Remote out of range.	Replace batteries; Remove obstructions; Operate remote within effective range.

## 9. WARRANTY AND CUSTOMER SUPPORT

Treeligo products are manufactured to high-quality standards and are backed by a manufacturer's warranty. For specific warranty terms and conditions, please refer to the warranty card included with your product or visit the official Treeligo website.

If you encounter any issues that cannot be resolved using the troubleshooting guide, or if you require technical assistance, please contact Treeligo customer support. When contacting support, please have your product model number (EAC001.22.12) and purchase information ready.

For more information, visit the [Treeligo Store on Amazon](#).