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› ERICKHILL ECO-06 CO2 Meter User Manual

ERICKHILL ECO-06

ERICKHILL ECO-06 CO2 Meter User Manual

Model: ECO-06

1. INTRODUCTION

The ERICKHILL ECO-06 CO2 Meter is an advanced air quality monitor designed to accurately measure carbon dioxide (CO2) concentration, temperature, and relative humidity in real-time. Utilizing a dual-channel NDIR infrared sensor, this device provides precise and rapid readings, helping to ensure a healthy indoor environment. It also calculates dew point and wet bulb temperature, offering a comprehensive overview of your air quality.

This manual provides detailed instructions for the proper setup, operation, maintenance, and troubleshooting of your ERICKHILL ECO-06 CO2 Meter.

2. SAFETY INFORMATION

- Read all instructions carefully before using the device.
- Do not expose the device to extreme temperatures, direct sunlight, or high humidity.
- Avoid dropping or subjecting the device to strong impacts.
- Do not attempt to disassemble or modify the device. This will void the warranty and may cause damage.
- Use only the provided USB cable and charging plug for charging.
- Keep the device away from water and other liquids.
- Ensure proper ventilation around the device for accurate readings.

3. PACKAGE CONTENTS

Verify that all items are present in the package:

- ERICKHILL ECO-06 CO2 Meter
- USB Cable
- Charging Plug

- User Guide (this document)



Image: The ERICKHILL ECO-06 CO2 Meter and its accessories as found in the product packaging.

4. PRODUCT OVERVIEW

The ERICKHILL ECO-06 features a clear FPC color screen for displaying data and a three-color LED indicator for quick air quality assessment. It includes three control buttons for menu navigation and operation.

NDIR Infrared Sensor

More Sensitive and Accurate Test in Real-Time



Image: Top view of the ERICKHILL ECO-06 CO2 Meter, highlighting the NDIR infrared sensor and control buttons.

4.1 Device Components

- **NDIR Infrared Sensor:** Located at the top, for accurate CO2 detection.
- **FPC Color Screen:** Displays CO2 concentration, temperature, humidity, and other data.
- **LED Indicator:** Provides a visual cue for air quality (Green, Orange, Red).
- **MENU Button:** Accesses device settings and options.
- **ON/OFF ENTER Button:** Powers the device on/off and confirms selections.
- **RETURN LIGHT Button:** Navigates back in menus and controls backlight.
- **USB Charging Port:** For charging the internal battery and connecting to a computer.

5. SETUP

5.1 Charging the Device

Before first use, fully charge the device. Connect the provided USB cable to the device's charging port and the other end to the charging plug, then plug it into a power outlet. The device can also be charged via a

computer's USB port. A full charge typically takes several hours. The battery icon on the display will indicate charging status, though it may show full bars until the battery is critically low.

5.2 Powering On/Off

Press and hold the **ON/OFF ENTER** button for a few seconds to power the device on or off.

5.3 Initial Placement

Place the CO2 meter in the area where you wish to monitor air quality. Ensure it is on a stable surface, away from direct airflow (e.g., vents, open windows) and heat sources, which could affect temperature and humidity readings. For optimal CO2 readings, place it at a typical breathing height.

6. OPERATING INSTRUCTIONS

6.1 Real-Time Monitoring

Once powered on, the device will immediately begin displaying real-time data on its FPC color screen. The main screen shows:

- **CO2 Concentration:** Measured in parts per million (ppm).
- **Temperature:** Displayed in °F or °C.
- **Relative Humidity (RH):** Displayed as a percentage.
- **Dew Point (DP) and Wet Bulb (WB) Temperature:** Calculated values.

Real-Time Monitoring



Image: The ERICKHILL ECO-06 CO₂ Meter displaying current CO₂, temperature, humidity, dew point, and wet bulb measurements.

6.2 Air Quality Indicator

The device features a three-color LED indicator at the top, providing a quick visual assessment of CO₂ levels:

- **Green Light:** CO₂ concentration is between 0-700 ppm (Good air quality).
- **Orange Light:** CO₂ concentration is between 701-5000 ppm (Moderate to poor air quality).
- **Red Light:** CO₂ concentration is above 5001 ppm (Very poor air quality, requires immediate ventilation).

Air Quality Indicator

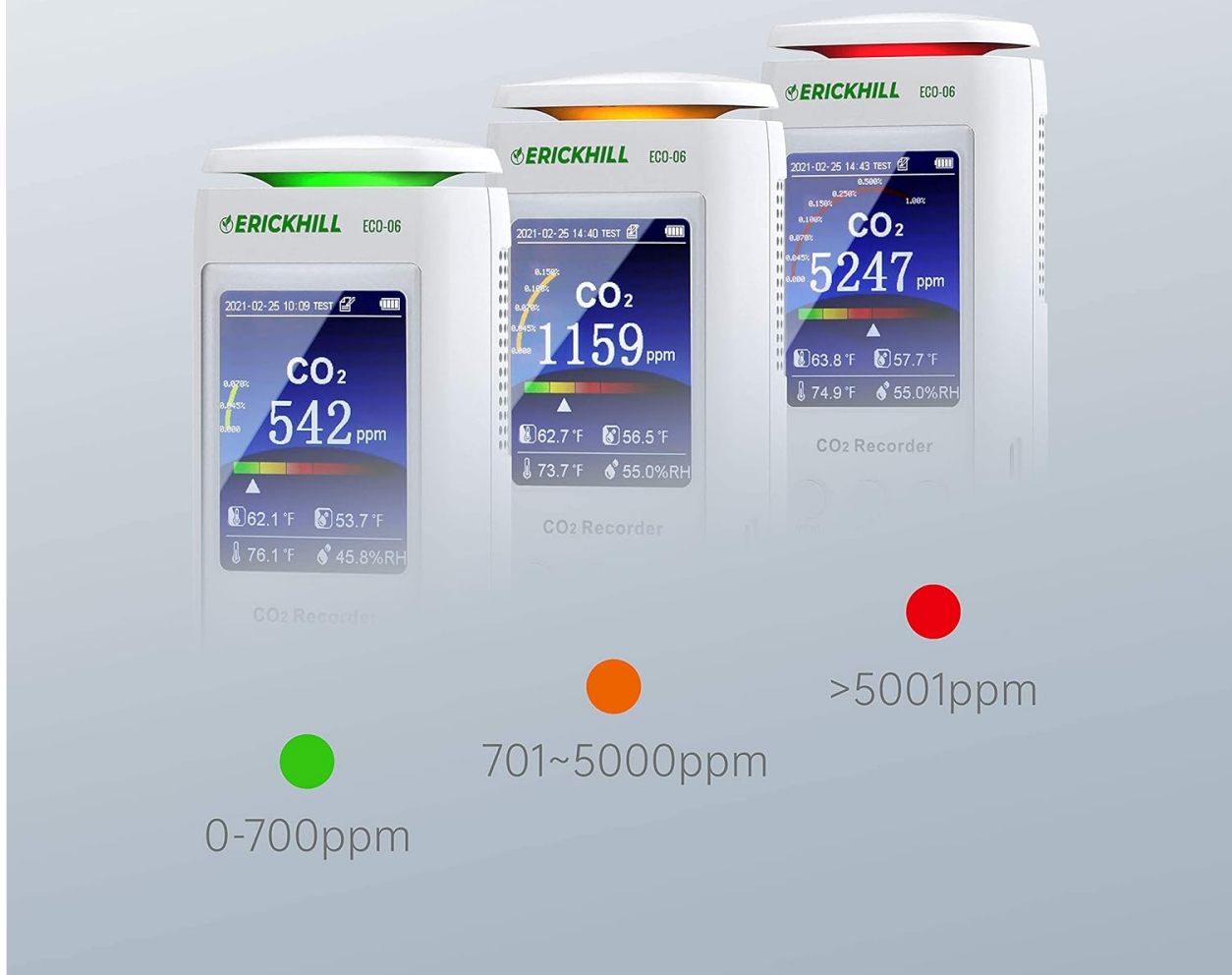


Image: Visual representation of the ERICKHILL ECO-06's LED air quality indicator, showing green for low CO₂, orange for moderate, and red for high CO₂ levels.

6.3 Menu Navigation

Use the following buttons to navigate the device's menu:

- Press **MENU** to enter the main menu.
- Use the **ON/OFF ENTER** button to select an option or confirm a setting.
- Use the **RETURN LIGHT** button to go back to the previous screen or exit the menu.
- The **ON/OFF ENTER** and **RETURN LIGHT** buttons may also function as Up/Down arrows within menu options for adjusting values.

6.4 Setting Alarms

The device allows you to customize the CO₂ warning alarm range. Navigate to the alarm settings in the menu to set your desired high CO₂ threshold. When the CO₂ concentration exceeds this threshold, the device will emit an audible alarm and the LED indicator will turn red (or orange, depending on your setting).

Manual Alarm Mode

Protect the Health of Your Family

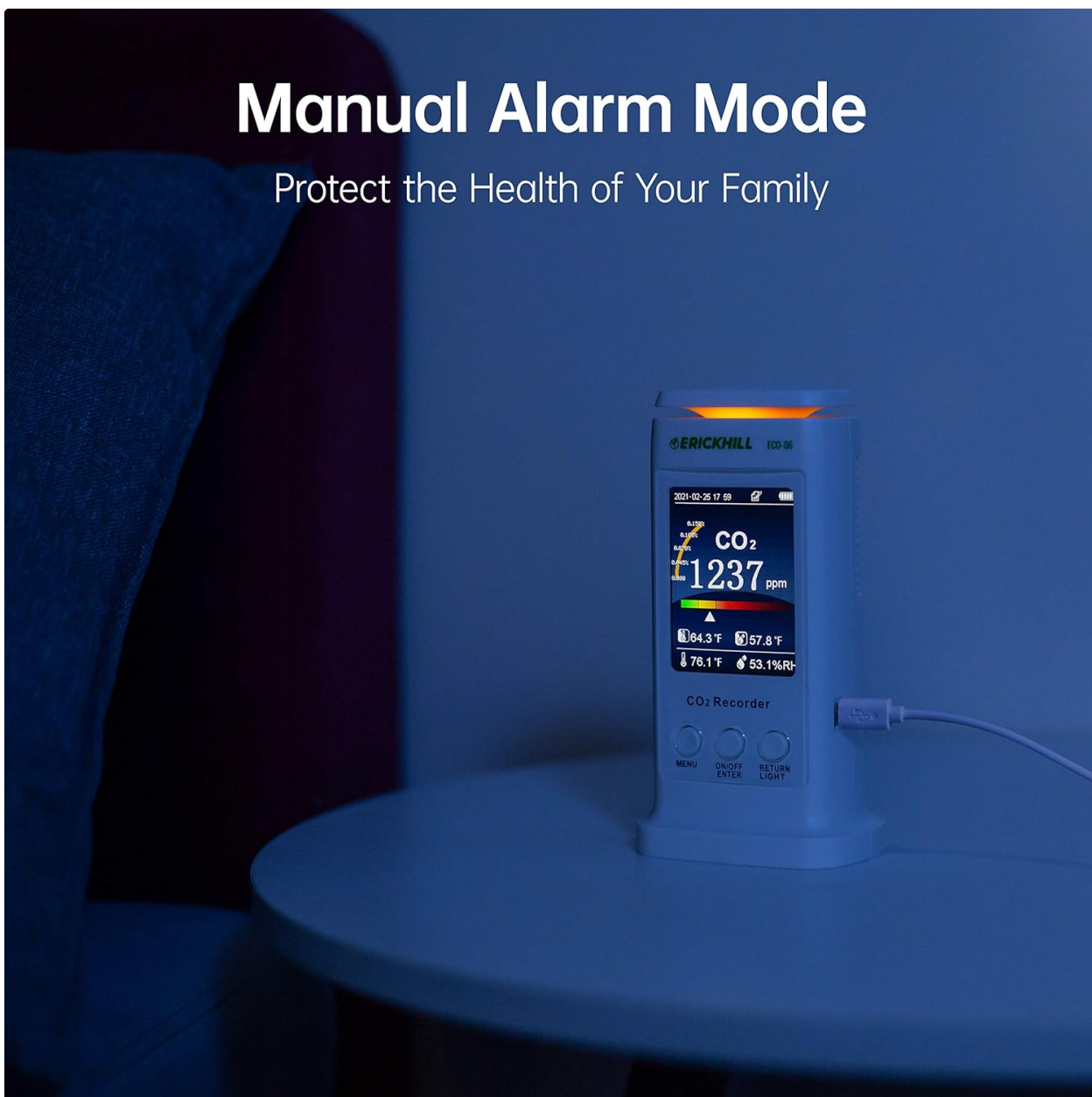


Image: The ERICKHILL ECO-06 CO2 Meter with its orange LED alarm activated, signaling high CO2 levels.

6.5 Data Logging and Analysis

The ECO-06 can store up to 80,000 groups of records. You can configure the recording mode (continuous or timed) and the recording interval (hour/minute/second) through the device's menu. To view and analyze historical data, connect the device to a computer using the provided USB cable. The device supports real-time graphic viewing and analysis, allowing you to identify peak values (MAX/MIN/AVG) over time.

Check the Data by Connecting to Computer



Image: The ERICKHILL ECO-06 CO2 Meter connected to a computer, showing its data logging capabilities and software interface.

6.6 Automatic Baseline Calibration (ABC)

The device features Automatic Baseline Calibration (ABC) to maintain accuracy. For optimal calibration, it is recommended to periodically expose the monitor to fresh outdoor air for a period of time. The manual does not provide specific details on frequency or duration for user-initiated ABC, nor does it offer a manual calibration option.

7. MAINTENANCE

7.1 Cleaning

To clean the device, gently wipe the exterior with a soft, dry cloth. Do not use abrasive cleaners, solvents, or immerse the device in water. Ensure the sensor openings are free from dust and debris.

7.2 Battery Care

The device contains a rechargeable lithium-ion battery. To prolong battery life:

- Avoid fully discharging the battery frequently.
- Charge the device regularly, even if not in constant use.
- Store the device in a cool, dry place if not used for extended periods.

8. TROUBLESHOOTING

If you encounter issues with your ERICKHILL ECO-06 CO2 Meter, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Device does not power on.	Low battery or device malfunction.	Charge the device fully. If it still doesn't turn on, contact customer support.
CO2 reading is stuck at 0 ppm or appears inaccurate.	Sensor malfunction or calibration issue.	Ensure the sensor area is clean. Move the device to an outdoor environment for several minutes to allow for automatic baseline calibration. If the issue persists, the sensor may be faulty; contact support.
Temperature/Humidity readings seem inaccurate.	Environmental factors or sensor deviation.	Ensure the device is not near heat sources, direct sunlight, or strong drafts. Compare readings with another calibrated device. Note that consumer-grade sensors may have slight deviations.
Battery icon always shows full, then device suddenly shuts off.	Firmware or battery indicator issue.	This is a known characteristic for some units. Monitor usage time to anticipate shutdown. Keep the device connected to USB power for continuous monitoring if needed.
Cannot connect to computer for data transfer.	Incorrect cable, driver issue, or software incompatibility.	Ensure you are using the correct USB cable. Check if the necessary drivers or software are installed on your computer. Contact ERICKHILL support for software links and compatibility information.

9. SPECIFICATIONS

Feature	Description
Brand	ERICKHILL
Model Number	ECO-06
Sensor Type	Dual-channel NDIR (Non-Dispersive Infrared)
Measured Parameters	CO2 concentration, Temperature, Relative Humidity, Dew Point, Wet Bulb Temperature
CO2 Measurement Range	Typically 0-9999 ppm (refer to device for exact range)
Temperature Range	Typically -10°C to 50°C (14°F to 122°F)
Humidity Range	0% to 99% RH
Display	FPC Color Screen, Three-color LED Indicator
Data Storage	Up to 80,000 groups of records
Connectivity	USB for charging and data transfer
Power Source	Rechargeable 1500 mAh, DC3.7V Lithium-ion Battery
Color	White

10. WARRANTY AND SUPPORT

ERICKHILL provides a 36-month after-sale service and lifetime technical support for the ECO-06 CO2 Meter. If you have any questions, require assistance, or experience issues not covered in this manual, please do not hesitate to contact our professional after-sales team. They are available to help resolve your problem in a timely manner.

For support, please refer to the contact information provided on the ERICKHILL official website or the product packaging.