

## Protmex PTH-10E

# Protmex PTH-10E 4-in-1 Portable Carbon Monoxide and Carbon Dioxide Detector User Manual

Model: PTH-10E | Brand: Protmex

## 1. INTRODUCTION

The Protmex PTH-10E is a versatile 4-in-1 portable detector designed to monitor air quality by detecting Carbon Monoxide (CO), Carbon Dioxide (CO<sub>2</sub>), temperature, and humidity in real-time. This device is equipped with a high-precision sensor to provide accurate readings and features an audible alarm system for safety. Its compact design, magnetic suction, and included lanyard make it suitable for various indoor and outdoor environments, including homes, RVs, and camping.



Figure 1: Protmex PTH-10E 4-in-1 Portable Carbon Monoxide and Carbon Dioxide Detector.

## 2. IMPORTANT SAFETY INFORMATION

- **Read all instructions:** Before operating the device, thoroughly read and understand this manual.
- **Placement:** Position the detector in areas where CO and CO<sub>2</sub> are likely to accumulate, but avoid direct exposure to extreme temperatures, humidity, or strong air currents.
- **Alarm Response:** If the alarm sounds, immediately move to fresh air and investigate the source of the gas. Do not ignore alarms.
- **Maintenance:** Regularly check the device for proper function and ensure it is charged. Do not attempt to repair the device yourself.
- **Battery Safety:** Use only the specified charging method (Type-C). Do not expose the device to fire or extreme heat.
- **Environmental Conditions:** The device operates within a temperature range of 14~122°F (-10~50°C) and humidity range of 0~95%RH. Operating outside these ranges may affect accuracy.

## 3. PRODUCT FEATURES

The Protmex PTH-10E offers comprehensive air quality monitoring with the following key features:

- **4-in-1 Detection:** Monitors Carbon Monoxide (CO), Carbon Dioxide (CO<sub>2</sub>), Temperature, and Humidity.
- **High-Precision Sensor:** Equipped with a 10-year life sensor for accurate and real-time data.
- **Wide Detection Ranges:** CO: 0~1000PPM; CO<sub>2</sub>: 400~5000PPM; Temperature: 14~122°F / -10~50°C; Humidity: 0~95%RH.
- **Long-Lasting Battery:** Integrated 1000mAh lithium battery provides up to 140 hours of operation on a single charge.
- **Type-C Fast Charging:** Convenient and quick recharging.
- **Intuitive LCD Display:** Clear display of all monitored parameters.
- **Audible and Visual Alarm:** Three-segment system (Green: Safe, Yellow: Low-frequency alarm, Red: High-frequency alarm) with adjustable warning range.
- **Portable Design:** Compact and lightweight (3.52 ounces) with magnetic suction and a lanyard for easy carrying and placement.

#### 4. DEVICE COMPONENTS

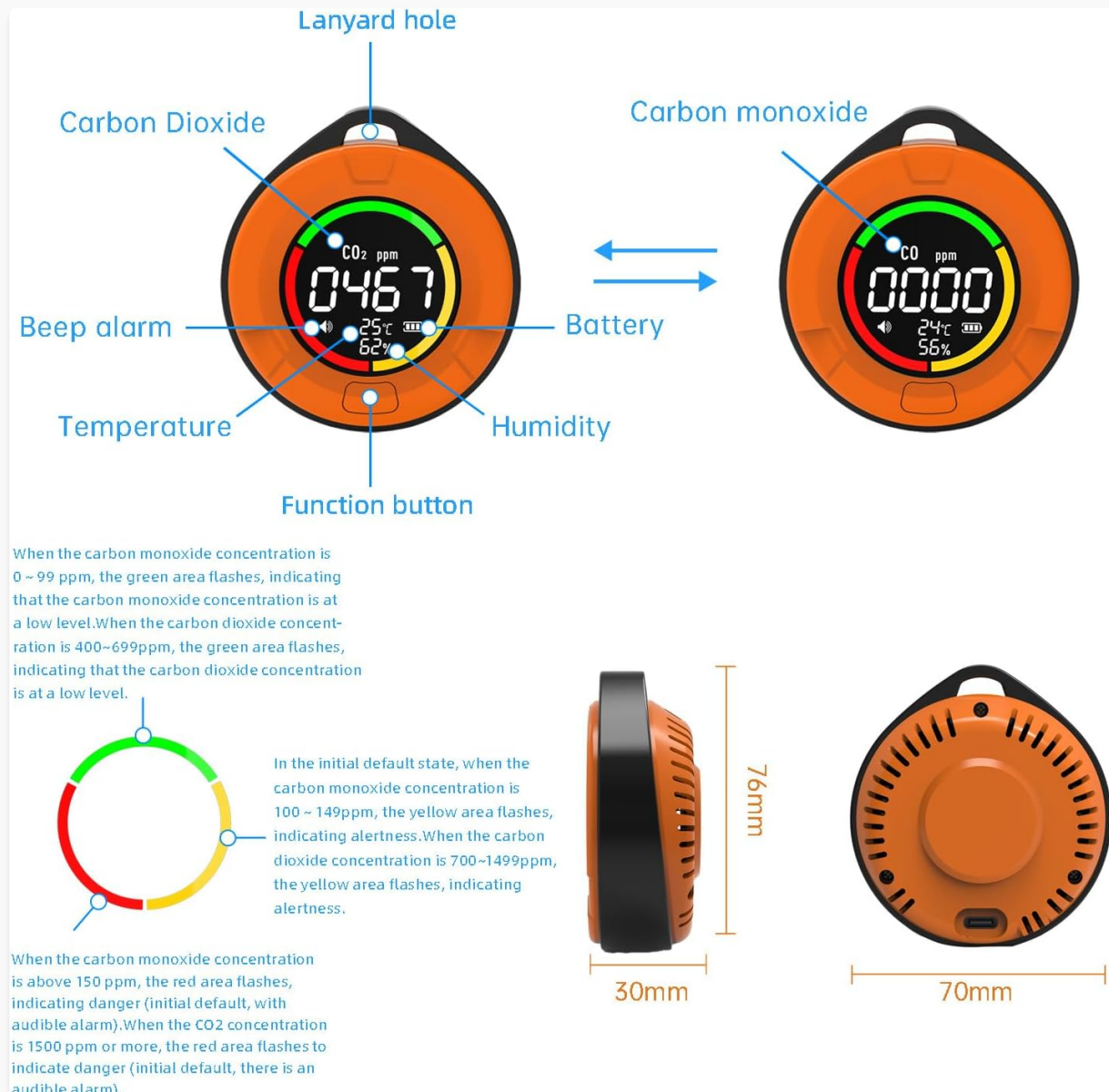


Figure 2: Diagram illustrating the key components of the Protmex PTH-10E detector.

- **Lanyard Hole:** For attaching the included lanyard or carabiner.
- **Display Screen:** Shows CO/CO<sub>2</sub> concentration, temperature, humidity, battery level, and alarm status.

- **Function Button:** Used to switch between CO and CO2 display modes.
- **Magnetic Back:** Allows the device to be attached to metal surfaces.
- **USB-C Charging Port:** For recharging the internal battery.

## 5. SETUP

1. **Initial Charge:** Before first use, fully charge the device using the provided Type-C cable. Connect the cable to the charging port on the device and a compatible USB power adapter. The battery indicator on the display will show charging status.
2. **Power On:** The device typically powers on automatically when charged or when the function button is pressed.
3. **Placement:** Choose a suitable location for the detector. It can be placed on a flat surface, hung using the lanyard, or attached to a metal surface via its magnetic back. Ensure it is not obstructed and has good air circulation.

## 6. OPERATING INSTRUCTIONS

### 6.1 Power On/Off

The device is designed for continuous monitoring. It powers on automatically when connected to power or when the function button is pressed. To turn off, press and hold the function button for several seconds until the display shuts down. To power on, press the function button briefly.

### 6.2 Switching Display Modes (CO/CO2)

Briefly press the function button to toggle between displaying Carbon Monoxide (CO) concentration and Carbon Dioxide (CO2) concentration. The display will clearly indicate which gas is being shown (e.g., "CO ppm" or "CO2 ppm").

### 6.3 Understanding the Display

The LCD screen provides real-time readings:

- **CO/CO2 Concentration:** Large digits show the current parts per million (ppm) for the selected gas.
- **Temperature:** Displays the ambient temperature in Celsius or Fahrenheit.
- **Humidity:** Shows the relative humidity percentage (RH%).
- **Battery Indicator:** Shows the current battery charge level.
- **Alarm Status:** Visual indicators (green, yellow, red segments) around the display ring, along with an audible alarm icon, indicate the current safety level.

### CONVENIENT TO CARRY

Portable for going out  
And that product is small  
in size



### CAMPING

Carry CO & CO2 detector to  
prevent CO or CO2 poisoning  
in closed environment

### DELIVERY GUASHENG

It can be carried with you



Figure 3: Detector display showing Carbon Monoxide (CO) levels, temperature, and humidity.



# TEMPERATURE AND HUMIDITY MONITORING



Figure 4: Detector display showing Carbon Dioxide (CO<sub>2</sub>) levels, temperature, and humidity.

Video 1: Demonstration of the Protmex 4-in-1 detector's real-time monitoring capabilities for carbon monoxide and carbon dioxide, along with temperature and humidity readings.

## 7. ALARM SYSTEM

The PTH-10E features an intuitive alarm system with visual and audible alerts:

- **Green Zone:** Indicates safe levels of CO/CO<sub>2</sub>.
- **Yellow Zone:** Indicates low-frequency alarm levels, suggesting caution.
- **Red Zone:** Indicates high-frequency alarm levels, signifying immediate danger and requiring evacuation.

The warning range for CO is adjustable within 25-125 ppm (default 50 ppm). When CO or CO<sub>2</sub> concentrations exceed the set threshold, the device will emit a loud audible alarm and flash the corresponding color on the display ring.

# CARBON DIOXIDE MONITORING



Figure 5: Visual representation of the audible alarm activation on the detector.

## 8. BATTERY AND CHARGING

The device is powered by a 1000mAh rechargeable lithium battery. A full charge provides approximately 140 hours of continuous operation.

- **Charging:** Connect the device to a USB power source using the Type-C charging cable. The battery icon on the display will animate to indicate charging.
- **Battery Level:** The battery indicator on the display shows the remaining charge. Recharge the device when the battery level is low to ensure continuous protection.





Figure 6: Illustration of the detector's extended battery life, indicating up to 144 hours of use.

## 9. PLACEMENT AND PORTABILITY

The Protmex PTH-10E is designed for maximum portability and flexible placement:

- **Magnetic Suction:** The device features a magnetic back, allowing it to be securely attached to metal surfaces such as refrigerators, car interiors, or other appliances.
- **Lanyard:** An included lanyard and carabiner allow for easy carrying during outdoor activities like camping, hiking, or travel, and for hanging inside tents or vehicles.
- **Tabletop Placement:** Its stable base allows for convenient placement on any flat surface in living rooms, kitchens, bedrooms, or offices.





Figure 7: The detector's compact size and various carrying options for travel and outdoor use.

Video 2: Overview of the Protmex CO detector, highlighting its portability, magnetic attachment, and suitability for various environments like camping and car travel.

## 10. MAINTENANCE

- **Cleaning:** Wipe the device regularly with a soft, dry cloth. Do not use abrasive cleaners, solvents, or immerse the device in water.
- **Storage:** When not in use for extended periods, store the device in a cool, dry place away from direct sunlight and extreme temperatures. Ensure it is fully charged before storage.
- **Sensor Care:** Avoid blocking the sensor vents. Do not expose the sensor directly to strong chemicals or contaminants, as this may affect its accuracy and lifespan.

## 11. TROUBLESHOOTING

Problem	Possible Cause	Solution
Device does not power on	Low battery or no charge.	Connect to a power source using the Type-C cable and charge fully.
Inaccurate readings	Sensor vents blocked; device exposed to extreme conditions; sensor malfunction.	Ensure vents are clear. Move device to a stable environment. If problem persists, contact customer support.
Alarm sounds frequently without apparent danger	High background levels of CO/CO <sub>2</sub> ; alarm threshold set too low.	Ventilate the area. Check and adjust alarm threshold settings if applicable (refer to advanced settings if available).

Problem	Possible Cause	Solution
Display is dim or flickering	Low battery.	Recharge the device.

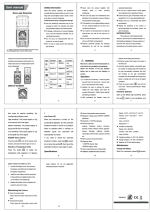

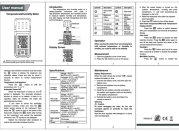



12. TECHNICAL SPECIFICATIONS

Parameter	Value
Model Number	PTH-10E
CO Detection Range	0 – 1000 PPM
CO2 Detection Range	400 – 5000 PPM
Temperature Range	14 – 122°F (-10 – 50°C)
Humidity Range	0 – 95% RH
Power Source	Rechargeable Lithium Battery (1000mAh)
Battery Life (Full Charge)	Up to 140 hours
Charging Port	Type-C
Dimensions	1.18"D x 2.76"W x 2.76"H (7.6 x 6 x 3 cm)
Item Weight	3.52 ounces
Material	ABS
Alarm Type	Audible and Visual (LED ring)

13. WARRANTY AND CUSTOMER SUPPORT

Protmex provides **3 years of service** and **lifetime technical support** for the PTH-10E portable detector. If you encounter any problems or have questions regarding the device, please contact customer service through the platform where you purchased the product (e.g., Amazon Customer Service). We aim to respond to inquiries within 12 hours.

Your satisfaction is our priority, and we are committed to providing reliable support for your product.

	<p><a href="#">Protmex HT609 Gas Leak Detector User Manual</a></p> <p>User manual for the Protmex HT609 Gas Leak Detector, covering safety information, operation, specifications, and maintenance.</p>
	<p><a href="#">Protmex PT6508 Digital Temperature Humidity Meter User Manual</a></p> <p>Comprehensive user manual for the Protmex PT6508 Digital Temperature Humidity Meter, covering operation, display screen, maintenance, and technical specifications for measuring ambient temperature, dew point, and wet bulb.</p>
	<p><a href="#">Protmex HT607 Temperature &amp; Humidity Meter User Manual</a></p> <p>Comprehensive user manual for the Protmex HT607 Temperature &amp; Humidity Meter, detailing its features, operation, specifications, and maintenance. Learn how to measure ambient temperature, humidity, dew point, and wet bulb temperature with this high-precision digital hygrometer.</p>
<p>PT20C Weather Station Clock WWVB RCC/NO RCC Version User Manual</p> 	<p><a href="#">PT20C Weather Station Clock User Manual</a></p> <p>User manual for the Protmex PT20C Weather Station Clock, detailing its features, setup, operation, and functions including temperature, humidity, air pressure, weather forecast, and alarm settings. Covers RCC and WWVB versions.</p>
<p>PT20C Weather Station Clock WWVB RCC / NO RCC Version User Manual</p> 	<p><a href="#">PT20C Weather Station Clock User Manual</a></p> <p>User manual for the Protmex PT20C Weather Station Clock, covering features, operation, settings, specifications, and troubleshooting for both WWVB RCC and NO RCC versions.</p>
<p>PT6708 Calibration manual</p> <p>1. In the absolute mode, first press and hold the "F" and "SET" keys at the same time, and then press the power button without interruption until the LCD screen shows the calibration code to enter the Absolute mode.</p> 	<p><a href="#">Protmex PT6708 Digital Sound Level Meter Calibration Guide</a></p> <p>Step-by-step instructions for calibrating the Protmex PT6708 Digital Sound Level Meter, including entering debugging mode and performing A/C weighted measurements.</p>