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## INKBIRDPLUS PTH-10C

# INKBIRDPLUS PTH-10C Portable CO2 Detector User Manual

Model: PTH-10C

Brand: INKBIRDPLUS

## 1. INTRODUCTION AND OVERVIEW

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The INKBIRDPLUS PTH-10C Portable CO2 Detector is designed to monitor carbon dioxide levels in various indoor environments. It features an advanced Non-Dispersive Infrared (NDIR) sensor for high-precision detection, a large color LCD screen for clear readings, and an audible alarm system. Its compact and portable design, coupled with a long-lasting rechargeable battery, makes it suitable for use in homes, offices, grow tents, greenhouses, and other spaces where air quality monitoring is essential.



Image: The INKBIRDPLUS PTH-10C Portable CO2 Detector on a desk, displaying CO2 levels.

## 2. PRODUCT FEATURES

- **High-Precision NDIR Sensor:** Utilizes advanced infrared technology for accurate CO2 detection.
- **Dual Alarm Function:** Features visual (tri-color indicator) and audible alarms with customizable thresholds.
- **Portable and Durable Design:** Compact size with an included lanyard for easy carrying.
- **Large Color LCD Screen:** Provides clear and easy-to-read CO2 concentration values.
- **ECO Power-Saving Mode:** Automatically turns off the screen after 5 minutes of inactivity to conserve battery.
- **Long-Lasting Battery:** Built-in 1000mAh lithium battery offers up to 72 hours of operation.
- **USB-C Rechargeable:** Convenient charging via a standard USB-C port.
- **Automatic and Manual Calibration:** Ensures measurement accuracy over time.

# Small But Powerful



Image: Overview of the detector's main features, including NDIR sensor, LCD, alarm, ECO mode, calibration, and USB charging.

## 3. PACKAGE CONTENTS

Please check the package for the following items:

- 1 x INKBIRDPLUS PTH-10C Portable CO<sub>2</sub> Detector
- 1 x USB-C Charging Cable
- 1 x Lanyard
- 1 x User Manual

## 4. DEVICE LAYOUT

The device features a simple and intuitive design. The main display shows CO<sub>2</sub> concentration, battery status, and alarm indicators. A single multi-function button controls various settings and calibration.

Image: Front view of the INKBIRDPLUS CO<sub>2</sub> detector highlighting its main features.

## 5. SETUP

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1. **Initial Charging:** Before first use, fully charge the device using the provided USB-C cable and a compatible 5V USB power adapter. The battery indicator on the screen will show charging status. A full charge typically takes about 3 hours.
2. **First Use Calibration:** For optimal accuracy, it is highly recommended to perform a manual calibration in an open, unpopulated environment with fresh air (e.g., outdoors) during the first use. Refer to Section 7 for calibration instructions.

## 6. OPERATION

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### 6.1 Power On/Off

Press and hold the multi-function button for approximately 3 seconds to power the device on or off.

### 6.2 Reading the Display

The large color LCD screen displays the current CO<sub>2</sub> concentration in parts per million (ppm). The device also features a tri-color indication light system around the display to quickly assess air quality:

- **Green Light:** 400-699 ppm (Good concentration)
- **Yellow Light:** 700-1499 ppm (Medium concentration)
- **Red Light:** 1499-5000 ppm (Dangerous concentration)



Image: Explanation of the tri-color CO<sub>2</sub> indication light system.

### 6.3 ECO Power-Saving Mode

To conserve battery, the device automatically enters ECO power-saving mode after 5 minutes of inactivity, turning off the screen. The device continues to monitor CO<sub>2</sub> levels in the background. Press any button to reactivate the display.

## 7. CALIBRATION

Calibration ensures the accuracy of your CO<sub>2</sub> detector. The device supports both automatic and manual calibration.

### 7.1 Automatic Calibration

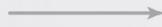
Automatic calibration is enabled by default. The device will periodically self-calibrate in environments with stable CO<sub>2</sub> levels. You can manually toggle automatic calibration on or off.

## Calibrage Automatique

Le calibrage automatique est désactivé par défaut. Le calibrage automatique peut être activé/désactivé manuellement.



Activer le calibrage automatique



Désactiver le calibrage automatique

Image: Instructions for toggling automatic calibration (C-ON/C-OFF).

## 7.2 Manual Calibration

To perform a manual calibration:

1. Place the device in an open, unpopulated environment with fresh air (e.g., outdoors) for at least 10-15 minutes to allow CO<sub>2</sub> levels to stabilize.
2. Long press the multi-function button. The screen will display "CAL" and initiate a 200-second countdown.
3. Keep the device in the fresh air environment until the countdown completes. The device will then be calibrated.

## Calibrage Manuel

Appuyez longuement, l'écran affiche « CAL » et entre dans le mode d'étalonnage manuel du 200s.

**Remarque:** l'appareil calibré dans un environnement ouvert.



Appuyez longuement



Image: Steps for initiating manual calibration.

## 8. ALARM SETTINGS

The device is equipped with an audible alarm that activates when the CO<sub>2</sub> concentration exceeds a set threshold. The default alarm threshold is 1500 ppm.

### 8.1 Customizing the Alarm Value

To adjust the alarm threshold:

1. Long press the multi-function button for approximately 5 seconds until the alarm value starts flashing.
2. Press the button once to increment the flashing digit.
3. Press the button twice quickly to move to the next digit.

4. Once the desired alarm value is set, wait a few seconds for the device to save the setting automatically.

## 8.2 Deactivating the Alarm

The audible alarm function can be deactivated if desired. Follow the steps for customizing the alarm value and set it to 'OFF' or a similar indicator if available, or set the threshold to its maximum value (5000 ppm) to effectively disable it for typical indoor use.

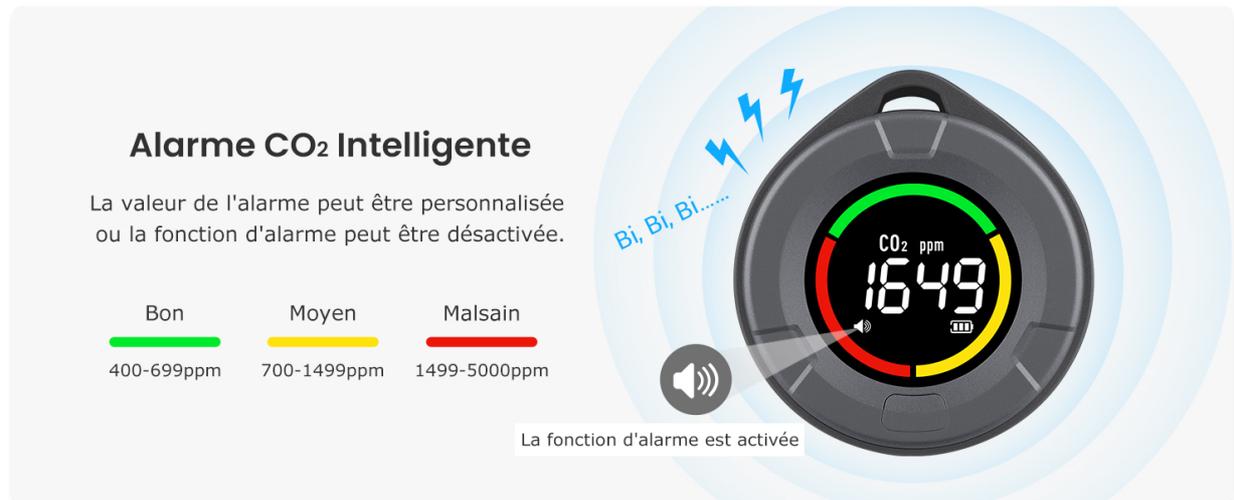


Image: Illustration of the smart CO2 alarm in action.

## 9. POWER MANAGEMENT

The PTH-10C is powered by a built-in 1000mAh lithium-polymer battery.

### 9.1 Battery Life

A fully charged battery provides up to 72 hours of continuous operation. Actual battery life may vary depending on usage patterns and environmental conditions.

**1000mAh**

## Large-capacity Lithium Battery

Lasts 72 hours at a time

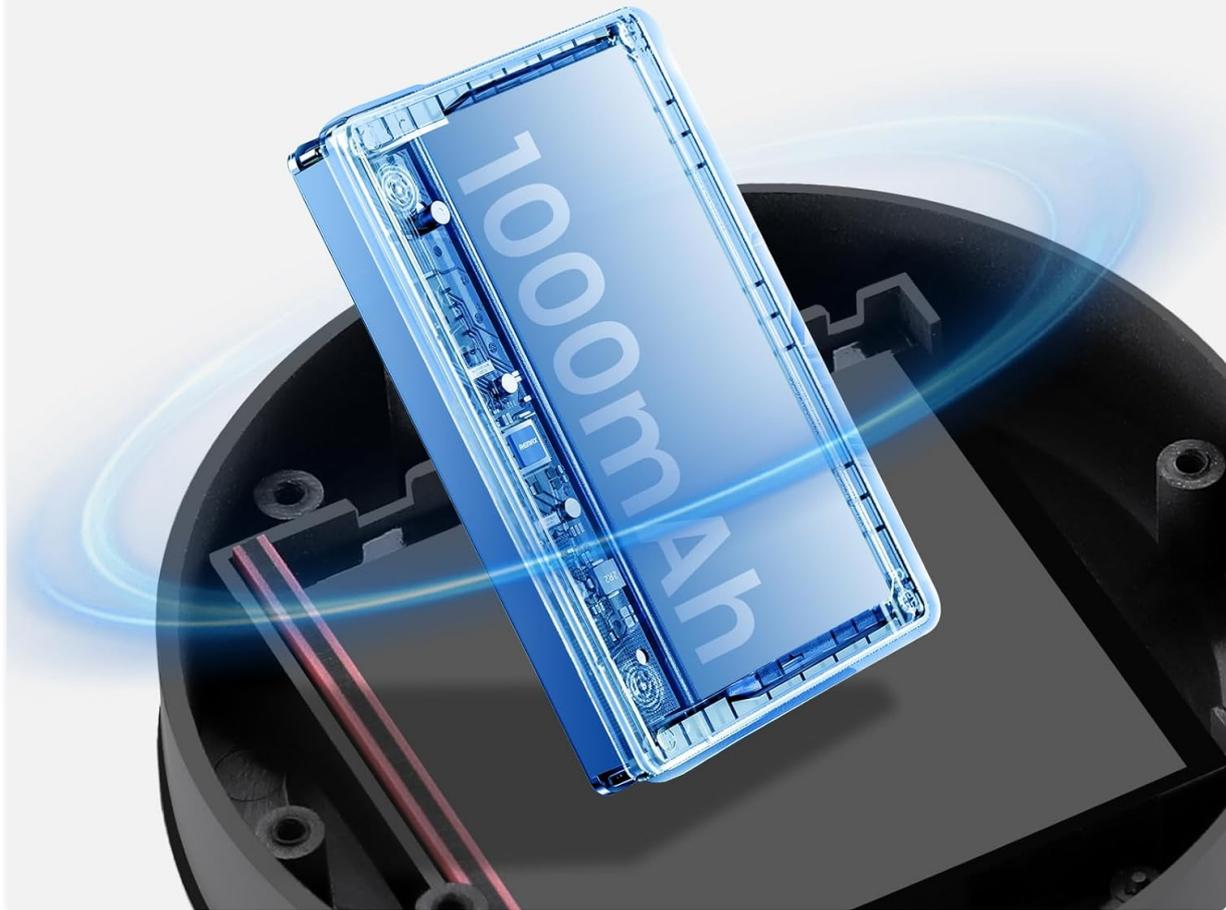


Image: Illustration of the 1000mAh lithium battery and its 72-hour endurance.

### 9.2 Charging

Connect the device to a 5V USB power source using the provided USB-C cable. The battery icon on the display will indicate charging status. The device can be used while charging.

## 10. MAINTENANCE

- **Cleaning:** Wipe the device with a soft, dry cloth. Do not use liquid cleaners, abrasive materials, or solvents, as these can damage the sensor or casing.
- **Storage:** Store the device in a cool, dry place away from direct sunlight, extreme temperatures, and high humidity when not in use for extended periods.
- **Calibration:** Regular calibration (as described in Section 7) is recommended to maintain measurement accuracy.

## 11. TROUBLESHOOTING

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
Inaccurate CO2 readings	Sensor drift; device not calibrated; sensor obstructed.	Perform a manual calibration in a fresh air environment. Ensure the sensor opening is clear.
Device does not power on	Battery is depleted.	Charge the device using the USB-C cable.
Alarm not sounding	Alarm function deactivated; alarm threshold set too high.	Check alarm settings (Section 8) and ensure it is enabled and the threshold is appropriate.
Short battery life	Battery not fully charged; frequent screen activation.	Ensure the device is fully charged. Utilize ECO power-saving mode.

## 12. SPECIFICATIONS

Parameter	Value
Model Number	PTH-10C
Manufacturer	INKBIRDPLUS
Dimensions (L x W x H)	7 x 7 x 2.5 cm (2.75 x 2.75 x 0.98 inches)
Weight	20 grams (0.7 oz)
Battery Type	1000mAh Lithium-polymer (included)
Power Source	Battery powered, USB-C rechargeable
Voltage	5 Volts
Material	Plastic
Sensor Type	Non-dispersive infrared (NDIR)
Alarm Type	Audible
CO2 Detection Range	400-5000 ppm
Charging Time	Approximately 3 hours
Operating Time	Up to 72 hours

## 13. SAFETY INFORMATION

- Do not expose the device to water or excessive moisture.
- Do not disassemble or attempt to repair the device. Unauthorized repairs will void the warranty.
- Keep out of reach of children.
- Use only the provided or a certified USB-C cable for charging.
- This device is intended for general air quality monitoring and should not be used as a substitute for professional medical advice or certified safety equipment in critical environments.
- Avoid placing the device in direct sunlight or near heat sources, as this may affect sensor accuracy.

## **14. WARRANTY AND SUPPORT**

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For detailed warranty information, technical support, or customer service inquiries, please visit the official INKBIRDPLUS website or contact their customer support team directly. Please have your model number (PTH-10C) and purchase information ready when contacting support.