



CO-Quick CO Detector

User Manual

Updated 3/30/2026

1. Overview

Thank you for purchasing CO-Quick from Radiant Technology.

CO-Quick is a compact, USB-C-powered carbon monoxide detector with a translucent 360° visible enclosure and a distinctive analog-style visual response. In normal operation, CO-Quick shows a steady green indication. As carbon monoxide rises, the unit transitions into a red percolating indication that intensifies toward a full visual boil.

CO-Quick is designed to be:

- small and easy to mount
 - easy to power
 - easy to see from any angle
 - quick to respond to changing air conditions
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2. In the Box

- CO-Quick detector
 - USB-C to USB-C power cable
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3. Installation

Mount CO-Quick so that:

- the flat side rests against the mounting surface
- the sensor openings face outward into real ambient air
- the sensor openings are not blocked

- the USB-C cable is routed so it does not strain the connector

Connect CO-Quick to a 5 VDC USB power source.

After power is applied, allow approximately 45 seconds for startup stabilization before relying on the unit.

4. Normal Operation

Normal condition

CO-Quick displays a steady green illumination.

Rising CO condition

As CO exposure rises, CO-Quick begins showing a light red percolation. As exposure increases further, that indication builds toward a full red boil.

Clear air recovery

When returned to fresh air, the indication should drop back rapidly toward normal.

Startup condition

CO-Quick includes an approximately 45-second startup inhibit / stabilization period after power-up.

5. Recommended Test Interval

Radiant recommends a functional test once per year.

This test confirms that the detector responds. It is a functional response check only. It is not a calibration procedure.

6. Annual Functional Test

Inverted glass dish / one-match method

This is the recommended annual test method for CO-Quick.

What you need

- CO-Quick, powered and operating normally

- one clear glass dish or bowl, about 1 liter in volume
- a single wooden match
- a safe, non-flammable work area

Procedure

1. Power CO-Quick and allow it to complete its startup period.
2. Use a clear glass dish or bowl of about 1 liter internal volume. An inverted glass dish with about 2-inch sides works well.
3. Place the powered CO-Quick inside the chamber area near the upper inside volume of the inverted dish so the sensor openings are exposed to the chamber air.
4. Light one wooden match.
5. Introduce the lit match into the chamber area, keeping the flame and smoke away from a direct blast into the sensor openings.
6. Watch CO-Quick closely. Within about 10 seconds, the unit should begin a nervous red percolating response.
7. As soon as a clear positive response is seen, remove CO-Quick from the chamber and return it to fresh air.
8. The unit should clear back toward normal within a few seconds.

Important test notes

- Use one match only.
- Do not direct dense smoke straight into the sensor openings.
- Do not use repeated prolonged smoke exposure as a test method.
- Do not leave the unit in the chamber after a positive response has already been observed.
- Perform this test only in a safe area, away from fuel vapors, solvents, and combustible materials.

If the unit does not behave normally

If CO-Quick does not respond during the test, or if it does not clear normally in fresh air afterward, discontinue testing and inspect the installation, power source, and sensor openings. If abnormal behavior persists, contact Radiant Technology.

7. Care and Maintenance

- Keep the sensor openings clean and unobstructed.
- Do not paint, tape, seal, or cover the sensing end.
- Do not expose the unit to unnecessary dense smoke.
- Inspect the cable and connector periodically.
- If the enclosure is dirty, wipe the outside gently with a soft dry cloth.

Do not disassemble CO-Quick.

8. Important Notes and Cautions

CO-Quick uses an electrochemical CO sensor. To protect sensor performance:

- avoid long-term exposure to organic solvents
- avoid acidic or strongly alkaline environments
- avoid silicone vapors and silicone-based sealants near the sensor openings
- avoid strong shock or vibration
- avoid corrosive sulfur-containing gases or environments

The underlying sensor element also has known cross-sensitivity to some gases, especially ethylene and hydrogen, so unusual atmospheres may influence indication. Sensor operating range and caution data are based on the SY-CO-28BPE sensor specification.

9. Technical Specifications

Product name: CO-Quick

Product type: Visual carbon monoxide detector

Power input: 5.0 VDC \pm 0.5 V

Current draw: 10 mA

Connector: USB-C receptacle

USB-C function: Power only

Included cable: USB-C to USB-C

Normal indication: Steady green

CO indication; Progressive red percolation building to full visual boil

LED count: 8 green LEDs, 8 red LEDs

Startup stabilization period: Approximately 45 seconds

CO response mapping:

0 ppm CO: no CO indication

100 ppm CO: full visual indication

Sensor type: Electrochemical fuel-cell CO sensor

Sensor model: SY-CO-28BPE

Sensor detection range: 0 to 1000 ppm CO

Sensor overload limit: 2000 ppm CO

Typical sensor response time (t90): Less than 60 seconds

Expected sensor life: 3 years

Operating temperature: -20 °C to 50 °C

Operating humidity; 15% to 90% RH

Dimensions: 1.25 in diameter, 0.85 in height

Weight: 11 g

Compliance: None -- Non-TSO, Non-PMA

Warranty: 3 years

10. Disclaimer

Products from Radiant Technology are not designed for use in applications where their failure would endanger safe flight or human life in any way. They are intended solely for use in VFR conditions. They are not certified to meet any Technical Standard Order and are not produced under a Parts Manufacturing Authority (TSO / PMA).

As a result, if permanently installed in the aircraft, they are suitable only for use in experimental and ultralight aircraft and in Light Sport Aircraft, provided they meet the requirements of the respective manufacturer. Specifically not for use as a primary display instrument in certified aircraft.

13. Warranty

Your new Radiant Technology instrument carries a three-year warranty from the invoice date. Please contact us at support@radiantinstruments.com should your product need warranty service. There is an additional charge for international warranty service.

14. Return / Refund Information

Must be returned in new, uninstalled, resalable condition within 14 days after receipt. Ship to Radiant Technology, PO Box 20690, Wichita KS 67208.
