

REED

Model CO-180 Carbon Monoxide Meter



Instruction Manual

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Safety

WARNINGS!

Do not use the Meter as a personal safety monitor

For safety reasons, we recommend that this unit be certified every year

Learn and recognize the effects of CO poisoning:

0-1PPM	Normal background levels
9 PPM	ASHRAE Standard 62-1989 for living areas
50 PPM	OSHA enclosed space 8-hour average level*
100 PPM	OSHA exposure limit*
200 PPM	Mild headache, fatigue, nausea and dizziness
800 PPM	Dizziness, nausea and convulsions Death within 2 to 3 hours

* U.S. Department of Labor, Occupational Safety & Health Administration (OSHA) Regulation 1917.24 states: The CO content in any enclosed space shall be maintained at not more than 50 PPM (0.005%). Remove employees from enclosed space if the CO concentration exceeds 100 PPM (0.01%).

Common Sources of CO

Common sources of potentially dangerous levels of CO are:

- Poorly maintained furnaces, gas heaters, or fireplaces
- Dirty or plugged chimneys, or flue exhausts
- Poorly maintained gas, oil, or kerosene appliances
- Internal combustion engines (e.g., automobiles, lawnmowers, blowers)

Features

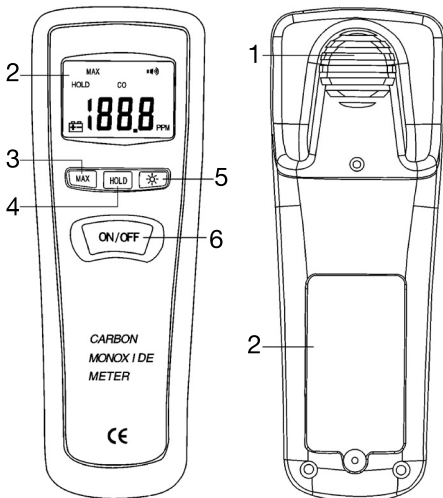
- Highly accurate with fast response time
- Measuring range from 1 to 1000 ppm with a 1 ppm resolution
- $\pm 5\%$ or ± 10 ppm basic accuracy (whichever is greater)
- Max, Data hold and Auto shut off
- Utilizes a stabilized electrochemical gas specific fast response sensor
- Audible alarm starts at 35ppm
- Backlight LCD display
- Dimensions/Weight: 160 x 56 x 40mm / 180g
- Complete with 9V battery and carrying case

Specifications

Operating Temperature:	0 to +50°C
Operating Humidity:	0-99% relative humidity (non-condensing)
Measurement Range:	0 to 1000 PPM
Resolution:	1 PPM
Accuracy:	$\pm 5\%$ or ± 10 PPM
Warm-up Period:	<2 seconds
Power Supply:	9V, NEDA 1604A or IEC 6LR61, or equivalent (included)
Auto Power Off:	Meter automatically shuts down after 15 minutes of inactivity
Sensor Type:	Stabilized electrochemical Gas-specific (CO)
Typical Sensor Life:	3 years

Instrument Description

1. CO sensor
2. LCD display
3. MAX Hold button
4. DATA Hold button
5. Backlight button
6. Power button
7. Battery door



Operating Instructions

This meter indicates the presence of CO by a reading on the LCD and a beeper tone. The beeper functions much like the clicking of a Geiger counter:

- Above 200 PPM, the beeper sounds continuously with the concentration of CO
- From 35 PPM to 200 PPM, the beeper sounds discontinuously with the concentration of CO

Data Hold

The Data Hold function allows the meter to hold a measurement for later reference.

1. Press the DATA HOLD button to hold the reading on the indicator. The “HOLD” indicator will appear in the display.
2. Press the DATA HOLD button to return to normal operation.

Max Hold

To hold the highest reading on the LCD, press the MAX Hold button. The MAX Hold button is located on the left side of the meter (bottom button). The meter reading will not change as readings change, rather it will only display the highest reading encountered since the MAX Hold button was pressed. Press the MAX Hold button again to return to normal operation.

Backlight Button

Press the Backlight button to light up the display. Press it again to turn the light off.

Power Button

Press the power button to power on the meter. Press it again to turn the meter off.

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CO and Appliance Malfunctions

The following table identifies typical problems that can produce high levels of CO.

Appliance	Fuel	Typical Problems
Gas furnaces Room heaters	Oil, natural gas, or LPG (liquefied petroleum gas)	<ol style="list-style-type: none">1. Cracked heat exchanger2. Not enough air to burn fuel properly3. Defective/blocked flue4. Maladjusted burner5. Building not properly pressurized
Central heating furnaces	Coal or kerosene	<ol style="list-style-type: none">1. Cracked heat exchanger2. Not enough air to burn fuel properly3. Defective grate.
Room heaters Central heaters	Kerosene	<ol style="list-style-type: none">1. Improper adjustment2. Wrong fuel (not K-1)3. Wrong wick or wick height4. Not enough air to burn fuel5. System not properly vented
Water heaters	Natural gas or LPG	<ol style="list-style-type: none">1. Not enough air to burn fuel properly2. Defective/blocked flue3. Maladjusted burner4. Building not properly pressurized
Ranges Ovens	Natural gas or LPG	<ol style="list-style-type: none">1. Not enough air to burn fuel2. Maladjusted burner3. Misuse as a room heater4. System not properly vented
Stoves Fireplaces	Gas, wood, coal	<ol style="list-style-type: none">1. Not enough air to burn fuel properly2. Defective/blocked flue3. Green or treated wood4. Cracked heat exchanger5. Cracked firebox

