GENERAL®

DCO1001

USER'S MANUAL

CARBON MONOXIDE DETECTOR

INTRODUCTION

Features

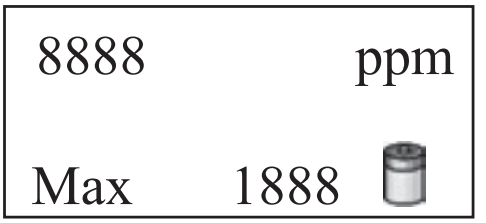
- Adjustable CO warning level
- Dual digital display
- Backlight
- Low battery
- Auto power off function
- Wrist strap.

CO LEVELS & THEIR EFFECT

PPM	Symbols and applicable standard.
0-1	Maximum background levels
9	Maximum indoor air quality level: Maximum allowable concentration per ASHRAE Residential standards 62-1989 for living area.
25	Maximum limit 8 hrs of continuous exposure per California OSHA workplace standards.
35	Maximum 8 hrs average exposure level per US OSHA workplace standards.
50	Maximum concentration for continuous exposure in any 8 hrs average level per OSHA standards.
100	Remove employees from enclosed space if the CO concentration exceeds 100ppm per OSHA exposure limit.
200	Mild headache, fatigue, nausea and dizziness w/i 2-3 hrs.
400	Frontal headache, life threatening after 3 hrs. Maximum concentrations in flue gas the US EPA and AGA standards.
800	Dizziness, nausea, convulsions, death w/I 2-3 hrs.
1600	Nausea w/i 20 min., death w/i 2-3 hrs.

CONTROLS AND INDICATORS

LCD Display



1. Primary display: Current CO value.
2. Secondary display: Max CO value
3. Low battery indicator.

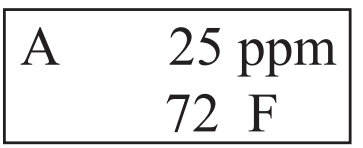
Function Keys

1. Φ Turns the meter on and off. Selects the alarm value.
2. Turns the backlight on and off.
   Switch temperature unit C and F.
   Reset the maximum CO value.
   Select the calibration value.
3. Φ + : Enter calibration mode.

OPERATING INSTRUCTIONS

1. Power on/off

Press Φ to turn the meter on and off. When meter is on, the preset alarm value and current air temperature will blink on the LCD. The meter is now running its Self- Test and will finish in about 15 seconds with a short beep. The meter will then be in the measuring mode.



IMPORTANT:

Turn on the meter in an area free of CO since high CO level may cause failure in passing Self-Test.

2. F/C Switching

User can select °C or °F as the temperature mode by press ing for temperature more than 1 sec. during Self-Test.

3. Alarm Setting

The meter is preset at the alarm value of 25 ppm to give warnings of possible danger. Users can adjust the value for different needs or standard by:

1. Turn off the meter.
2. Press and hold Φ until the value options show. There will be 25, 30, 35, 45, 50, 70, 100, and 200ppm display ing in cycles.
3. Release the button to select the preferred value.
4. The meter will return to Self- Test mode.

4. Measurements

The meter detects the existence of CO in the environment and displays the reading in PPM. It also indicates the maxi mum value (on the bottom LCD display) of all readings since the meter has been on. Users may reset the maximum value by pressing for two seconds in the measuring mode.

5. Backlight

The meter features backlight function for using in dark areas. Press to turn the backlight on and off.

6. Low Battery indicator

Shows on the LCD when battery voltage gets low.

Auto Power off

The meter turns itself off automatically after 15 minutes of non-operation is disabled during calibration.

CALIBRATION

To enter the calibration mode, turn off meter and press Φ + simultaneously for 2 seconds. It will show blinking ppm on the upper display and calibration value “0” at lower side. Now the meter is running 0 ppm calibration as default.

0 ppm calibration.

The meter has a preset calibration value at 0 ppm. Put the meter in the area free of CO and enter calibration mode. The meter will calibrate automatically. The LCD is now displaying a blinking ppm value at upper side which will slowly runs down to 0 or a minus value, completed. This takes about 10 minutes.

Note:

Don’t be alarmed if high PPM or minus value shows up when entering calibration mode. It will go down and approach to 0 seconds. The erratic readings are caused by electromagnetic interfere (EMI) in the environment, such as computers or cell phones. It is suggested to remove the meter from the interference otherwise the calibration may take much longer time or never complete.

100ppm/500ppm calibration

For other standard calibrations press and hold to select the calibration value. (0, 100, 500 ppm).

1. Place the meter into the sealed box filled with standard gas
2. (e.g. 100ppm/500ppm) for 15 minutes. Then the calibra tion will be done automatically.
3. Check if the reading meets calibration value. If it does, the calibration is well completed. If not repeat the procedure.

OPERATING NOTICE

1. Keep the meter off from electromagnetic interference (EMI) which may cause erratic readings.
2. Recovering time is required when meter exposed to high level CO. The longer the exposure, the longer recovering time is needed.
3. Self- Test after power is on to the test sensor and circuit condition.

TROUBLESHOOTING

- **Power on but no display**
  a) The power must be on for at least 300ms.
  b) Make sure the batteries are in good contact and correct polarity.
  c) Replace a new battery and try again.
- **Displays disappears**
  Check whether the low battery indicator shows before display disappears. If so, replace with new battery.
- **Calibration failure**
  a) Check if the low battery indicator shows before calibration. If so, replace with new battery and try again.
  b) Make sure the standard gas is correct.
  E 2. : The value is underflow.
  E 3. : The value is overflow.
  E 4. : The value is erroneous.
  E 31.: A/D failure, return the meter to your distributor for repair.
  E 33.: Measurement circuit failure, return the meter to your distributor for repair.
  E 35.: Self-Test failure. Turn on the meter again in the other area free of CO. Sensor failure. Return the meter to your distributor for repair.

SPECIFICATIONS

1. CO range: 0~999PPM
2. Resolution: 1 ppm.
3. Accuracy: +/- 20% at 0~100 ppm
   +/- 15% at 100~500 ppm
   (at 20 +/- 5°C, 50 +/- 20%RH)
4. Battery: 3AAA alkaline. Battery life is 250 hours when the backlight is off and 35 hrs when the backlight is on.

ACCESSORIES INCLUDED

(3) AAA alkaline batteries, Operation manual, Wrist Strap & Carrying pouch

WARRANTY

The meter is warranted to be free from defects in material and workmanship for a period of one year from the date of purchase. This warranty covers normal operation and does not cover battery, misuse, abuse, alteration, neglect, improper maintenance, or damage resulting from leaking batteries. Proof of purchase is required for warranty repairs. Warranty is void if the meter has been opened.

RETURN AUTHORIZATION

Authorization must be obtained from the supplier before returning items for any reason. When requiring a RGA, RMA (return authorization), please include data regarding the defective reason, the meters are to be returned along with good packing and insured against possible damage or loss.

GENERAL®

Specialty Tools & Instruments™

GENERAL TOOLS & INSTRUMENTS™
80 White Street
New York, NY 10013-3567
PHONE (212) 431-6100
FAX (212) 431-6499
TOLL FREE (800) 697-8665

e-mail: sales@generaltools.com
www.generaltools.com

DCO1001 User's Manual

Specifications subject to change
without notice
©2009 GENERAL TOOLS & INSTRUMENTS™
NOTICE - WE ARE NOT RESPONSIBLE FOR TYPOGRAPHICAL ERRORS.
MAN#DCO1001 05/09