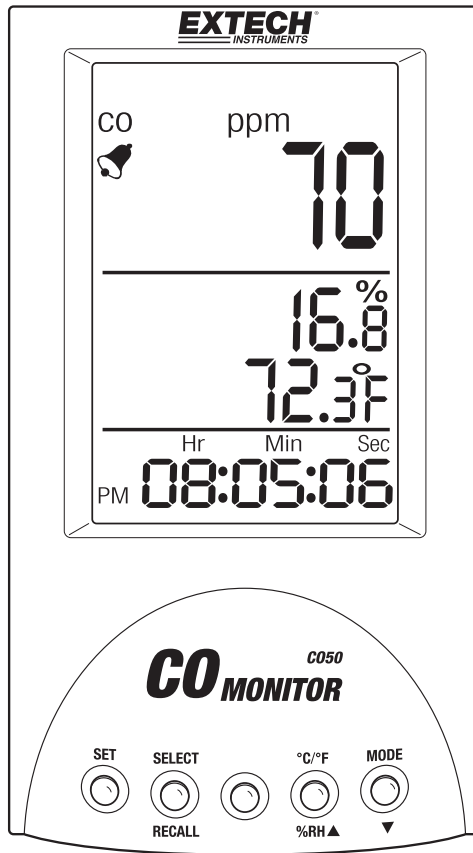# Desktop Carbon Monoxide Monitor
Model CO50

Introduction

Thank you for selecting the Extech Instruments Model CO50, this meter measures carbon monoxide (CO), air temperature, and humidity. The CO50 can be used to check indoor air quality and carbon monoxide problem areas. This device is shipped fully tested and calibrated and, with proper use, will provide years of reliable service. Please visit our website (www.extech.com) to check for the latest version of this User Guide, Product Updates, and Customer Support.

Features

- Large four-tiered LCD Simultaneously displays CO concentration, Air Temperature, and Relative Humidity with Date and Time

- Desktop style with audible alarm

- Latest smart measurement technology

- Easy to use, intended for indoor air quality monitoring

- Bright multicolor LED representing Recording (Green), Alarm (Red), Startup (Orange)

- 99 data point memory

- User adjustable CO Alarm limit (default 30 ppm)

- Max. reading utility

- Electrochemical CO sensor, measures up to 999 ppm

- Includes Universal AC adaptor (100-240V) for US, EU, UK, and AUS plug types

IMPORTANT SAFETY NOTES

The CO50 Carbon Monoxide Monitor is intended for general purpose Air Quality monitoring only, and has not been certified for use pursuant to any state or city safety Carbon Monoxide Alarm or Monitoring requirements.

The CO50 Carbon Monoxide Monitor has not been tested by an independent lab to comply with UL 2034 or IAS 6-96 standard.

It is the responsibility of the customer to obtain and apply current local, state, and national regulations with regard to CO alarms, monitoring and testing.

Meter Description

Button Description

SET Button:
Set date and time
Audible Alarm ON/OFF (SET+MODE)
Alarm Limit Adjustment
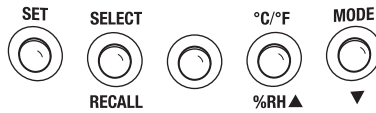Toggle the time format (12/24 clock)

SEL/RECALL Button:
Move to next digit
Short press to save current reading
Long press to recall stored reading

C/F/%RH Button with up arrow:
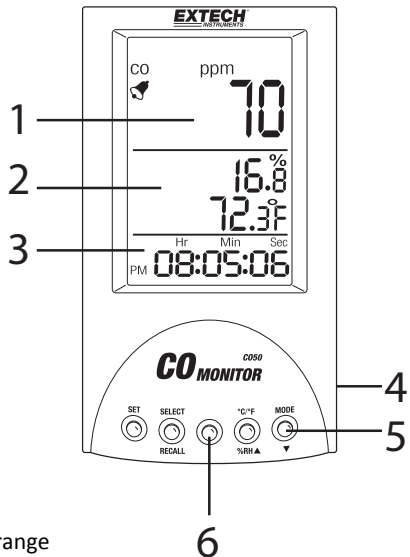Increase a value
Press and hold to switch temperature units

MODE Button with down arrow:
Decrease a value
Review Maximum (MAX) reading

Meter Description

1. Top LCD display for CO concentration
2. Middle LCD display for RH and temperature
3. Bottom LCD display Time and Date
4. Power Adaptor jack
5. Push-button controls
6. Multicolor LED indicator light

LED Indicator Description

When meter is powered on the LED is illuminated orange
In normal mode with meter ON, LED is not illuminated
Each time a reading is stored in memory the LED flashes green and the audible beeper sounds
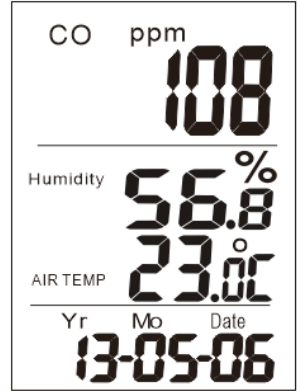When the alarm is tripped the LED flashes red and the audible beeper sounds

Operation

POWER THE METER

Plug the AC adaptor into meter and receptacle to turn on the meter. Reset the date and time each time the meter power is cycled. Remove the adaptor or switch off the AC power source to shut down the meter.

GETTING STARTED

All LCD display lines will switch ON when power is applied to meter. The LED indicator will also be ON steady with an orange color. The display will now auto zero. Auto zero takes approximately 60 seconds and then the meter counts down from 9 to 0. The meter is now in the normal operating mode.

When attempting to manually store the current CO reading, the LED light turns green for one second and a short beeper tone will sound.
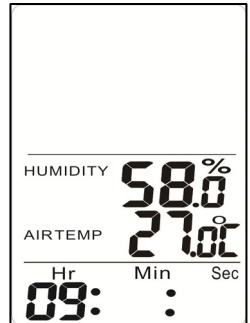
The LCDs show the current CO value in ppm (top), ambient temperature/relative humidity (middle), and the date and time (bottom).

Toggle the temperature units by pressing and holding the **C/F/%RH▲** button.

SETTING DATE/TIME

In normal operation, the meter alternates the date and time displays.

Press the **SET** button to switch between the 12-hour system (am/pm) and the 24-hour system. Note that the default time display is a 24-hour clock format.

1. Press and hold **SET** for 3 seconds to see image at right.
2. Press ▼ to decrease a number or press ▲ to increase a number
3. Press **SEL/RECALLECALL** to scroll through the YEAR-MONTH-DAY
4. When finished changing the Date, press **SET** to change the Time
5. Press ▼ to decrease number or press ▲ to increase number
6. Press **SEL/RECALLECALL** to scroll through HR-MIN-SEC
7. Press **SET** to access the alarm setting (see Alarm section).
8. To exit, press and hold **SET** for 3 seconds.

MAXIMUM READING

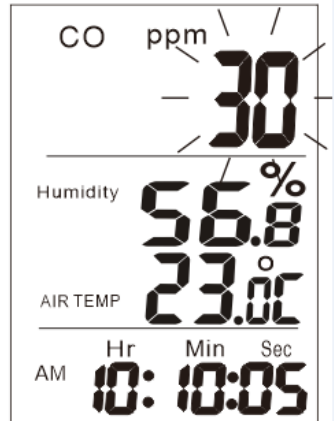Press the **MODE▼** button, the LCD will show the maximum reading since the meter was first powered. Press again to return to the normal measurement mode.

To clear the maximum reading: Enter the Maximum mode and, when MAX Icon appears, press and hold the **SET** button, "Clr" appears for confirmation of clear command.

CO ALARM SETTING

1. Press and hold the **SET** button for 3 seconds to enter the setup mode
2. Press **SET** again to skip the Date setting (set the Date if desired per earlier instructions)
3. Press **SET** again to skip the Time setting (Set the Time if desired per earlier instructions)
4. A flashing digit will appear. Use the up ▲and down ▼ arrows to increase/decrease the alarm threshold. Press **SEL/RECALL** to move to the next digit. There are 3 digit places with a maximum setting of 999pm (30ppm is the default).
5. Press and hold **SET** for 3 seconds to save and return to the normal measurement mode.

While alarm is tripped, the LED will flash red even if "beeper audio off" is selected. To silence the beeper when in an alarm condition, press **SET** and **MODE** at the same time. The red LED will continue to flash, however, until the environmental CO level no longer exceeds the default or user selected Alarm level. Remember to reactivate the beeper for future use.
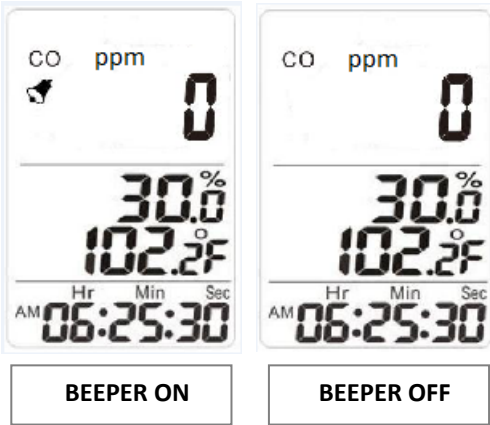
AUDIBLE ALARM BEEPER (ON / OFF)

By default, the beeper is set ON, and the LCD shows the bell icon on the left side of the LCD screen.

To switch OFF the audible alarm temporarily: From the normal measurement mode, press the **SET + MODE▼** button at the same time (the bell icon disappears). After 4 minutes the alarm will turn on again automatically. To comply with UL regulations (2013), the beeper volume is 85 dB at a distance of 3 meters (9.8 feet).

The Alarm beeper will sound when the environmental CO level exceeds the Default (30ppm) or user selected level.

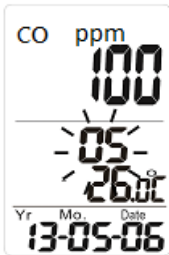| BEEPER ON	BEEPER OFF

MANUALLY STORE/RECALL 99 CO READINGS

The CO50 can manually store a CO reading with a press of the **SEL/RECALL** button. The LCD shows the current record number (01-99) in the humidity reading area each time a reading is manually stored (a short beep will sound each time a reading is stored also).

To recall stored readings, press and hold the **SEL/RECALL** Button, the LCD shows the number of the record with its CO reading, to scroll other stored readings use the ▲ and ▼ buttons.

To clear stored data:

Access the Recall mode and press and hold the **SET** button until "Clr "appears on LCD. The LCD automatically returns to normal mode.

The illustration below on the left shows a manually recorded reading (reading number '05' in this case); the middle illustration shows the recalled reading; the illustration on the right shows readings cleared.

| Reading stored | Reading Recalled | Reading Cleared |

CO CALIBRATION

It is recommended that the meter be calibrated monthly in a clean air environment.

From the normal measurement mode, press and hold the **MODE▼** button for at least 6 seconds to enter calibration mode.

The LCD shows **CAL** and **a number** representing the time remaining in the calibration (15 seconds). The meter returns to the normal measurement mode automatically when calibration is complete.

Warning: Ensure that no CO concentration is present while calibrating.

Specifications

Measurements	CO (ppm), Temperature $^oF/\,^oC$, and RH%
CO measurement range	000 to 999ppm
CO resolution	1ppm
CO accuracy	± 5% of reading or ±10ppm
CO Sensor	Electrochemical type
Alarm alert	Red LED and audible beeper > 85dB (3m distance)
Temperature range	-10 to 60°C (14 to 140°F)
Temperature resolution	0.1^{o}C/^{o}F
Temperature Accuracy	±0.6^{o}C (1.2^{o}F)
RH range	10 to 90% RH
RH Resolution	0.1% RH
RH Accuracy	±5% RH (at 25°C) otherwise ±7%
Memory capacity	99 data points
Power	AC adaptor
Dimensions	155 x 87 x 81 mm (6.1 x 3.4 x 3.2")
Weight	165g (5.8oz.)