



NIEUWKOOP

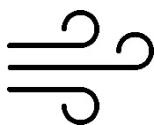
METEN.NL

USER MANUAL



GT2501

CO₂, HUMIDITY, TEMPERATURE
DESKTOP MONITOR



TO MEASURE  TO KNOW



INTRODUCTION

This is an accurate, smart and easy-to-use indoor air quality monitor. In addition to measuring the CO₂ concentration, it also measures the ambient temperature and relative humidity. It is also a clock and provide CO₂ trend of past 24 hours. This monitor is developed to be the best helper to checking the indoor air quality.

Features:

- Large LCD displays CO₂ value, humidity, temperature, current CO₂ level good/ normal/ poor indicator, CO₂ trend of past 24 hours and hour-minute clock.
- Touch panel to program the setting
- NDIR (non-dispersive infrared) waveguide CO₂ technology
- 3-color backlight (green / yellow / red) gradually changes color with CO₂ concentration. (AUTO mode)
- 7-color backlight to fit into home/office decoration and to be used as nightlight. (ON mode)
- Programmable audible alarm threshold
- Eco mode to turn backlight dim during night time
- Areas of application: Widely used in the office building, residential house, school, exhibition hall, shopping mall, meeting room, fitness center, restaurant and other public places where personal comfort and healthy are important.

MATERIAL SUPPLIED

The standard package contains below:

-CO₂-monitor -USB-C cable -Operation manual

***NOTE:** provided USB-C cable is for power charging only, can't be used for data transfer.*

POWER UP

This CO₂ meter is designed as desktop or wall mount use. It is mainly powered up by 5VDC through USB-C cable. For mobility, you may also use power bank for temporary use. Once CO₂ is powered, the LCD will auto turn on.

1

Prepare an 5V
USB adaptor



2

Power up the meter
through USB type-C



3



Power up the
meter through
USB type-C

CAUTION

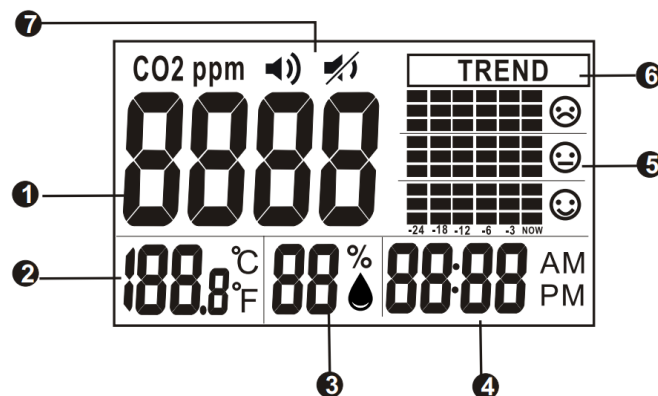
Please take off the AC power adapter and store it well when this CO₂ monitor left idle for long. Please use a standard USB power supply (such as PC's USB port, universal AC adapter with USB port).

Improper power supply can cause serious damage to the device, or result in injury or death to the user.

This CO₂ monitor is for home use, not suitable for certifying the test results. If use this CO₂ monitor for testing, it does not guarantee the test results. The vents allow the air circulation liquid for measurement of the CO₂ concentration and the ventilation should not be blocked.



DISPLAY, KEYPAD, SPECIFICATION



1. CO₂ concentration, parts per million (ppm). NDIR CO₂ sensor, display up to 5000ppm
2. Ambient temperature. °C/°F switchable. Range: 0.0~50.0°C (32.0~122.0°F)
3. Relative humidity. Range 5~95%RH
4. Real-time clock display. Real-time 24-hour clock (hour/minute)
5. Three emojis. The status of current CO₂ level 😊 <800ppm 😐 800ppm~1000ppm ☹️ >1000ppm
6. Trend: 24-hour Historical Chart. Bar graph displays indicate the status of CO₂ records up to 24 hours
7. CO₂ concentration alarm buzzer. Buzzer is default as OFF and can be activated through keypad.



- Short press to switch between backlight mode
- Setting modes. Long press to enter setting mode



- While buzzer sounds, short press to mute
- While in setting mode, press to adjust value



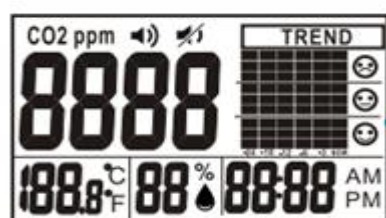
SPECIFICATION

Measuring range		Response time	
CO ₂	200~5000 ppm	CO ₂	<2 mins (63% step change)
Temperature	0.0~50.0°C (32.0~122.0°F)	Temperature	<2 mins (90% step change)
Humidity	5~95% RH	Humidity	<20 min (90% step change)
Resolution	1ppm, 0.1°C/°F, 1%RH	Operating	0~50°C, 0~95% RH (avoid condensation)
Accuracy		Storage	-20~60 C, 0~95%RH (avoid condensation)
CO ₂	±50ppm ±5% of reading (0~3000ppm). Other range is 10% of reading	Power supply	5VDC USB type C port
Temperature	±0,6°C/±0,9°F	Power consumption	<500mA
Humidity	±5%RH (at 25°C, 10~90%RH) ; ±7%RH (at 25°C, other range)	Buzzer	~70dB at 10 cm distance
		Meter size	108 x 67 x 30 mm
		Weight	90 gr
		Standard package	Meter, manual, adaptor,



USB type-C cable

OPERATION



2 functional keys for setup purpose



mute
adjust value

SETUP

1. Power on and measure:

- Connect the USB-C cable to a PC or 5VDC wall adapter or power bank to power on the device.
- After power on and 10 seconds warm-up, the device will start to measure CO₂ concentration, ambient temperature and relative humidity.

2. Backlight & Buzzer Mode:

Besides value display, this meter is also equipped with programmable backlight and buzzer features.

There are 4 different backlight modes: Auto, AL, ON and OFF. Default as Auto.

There are 2 buzzer modes: OFF and ON. Default as OFF.

- Short press "⚙️ (SET)" key to display the existing backlight mode. To change it, press "⚙️" key to switch between Auto → AL → ON → OFF. After selecting the mode, you do not need to press any key to confirm it, just wait for 3 seconds and it will return to normal display with the setting you choose.

Backlight mode	Backlight action	Buzzer action (while activated)
Auto	The backlight color varies with the CO ₂ . <800ppm is green; 800ppm~1,000ppm is yellow; >1000ppm is red. Red threshold is programmable in P4.2 AL mode of setting function.	While CO ₂ exceeds AL threshold, buzzer beep till it is manually off by short pressing "MUTE" key
AL	No backlight while below threshold. When alarm level is exceeded, the backlight is turned into red. The default is 1,000 ppm and programmable in P4.2 of setting.	While CO ₂ exceeds AL threshold, buzzer beep till it is manually off by short pressing "MUTE" key
ON	The LCD backlight is always on and not related to CO ₂ value. The backlight color depends on the color you select in COL mode of setting. 7 colors to be selected.	While CO ₂ exceeds AL threshold, buzzer beep till it is manually off by short pressing "MUTE" key
OFF	Turn off backlight functions at all time.	While CO ₂ exceeds AL threshold, buzzer beep till it is manually off by short pressing "MUTE" key

3. How to turn off buzzer:

Buzzer function is default OFF in case of using in quiet places. It is required to activate buzzer function in setting mode while audible alarm is needed. While buzzer is activated and measured CO₂ is over





alarm threshold, buzzer sounds once a second till pressing " (mute)" to stop.

4. Setting mode:

Long press "⚙️" key till entering the setting mode. Then, press "⚙️" key to select setting modes in sequence: COL (Backlight COLOR), AL (Alarm setting), Buzzer, ECO (energy-saving mode), Real-Time Clock and Unit (temperature unit).

Press "⏏️" key to adjust the parameter.

**Note: During the setting process, the device will return to the main screen after 60 sec of idle time.*

4.1 COL: The default LCD backlight color is white. A total of 7 colors are selectable. The color order is white, turquoise, blue, purple, red, yellow and green



4.2 AL: The default alarm setting is 1,000ppm. It is adjustable from 800ppm to 3,000ppm, the interval is 100ppm. This threshold is also related to buzzer alarm trigger and red backlight trigger in Auto mode and AL mode.

4.3 Buzzer activation: Buzzer is default OFF for using in quiet places. Press "+" to turn to ON.

4.4 ECO: The default ECO setting is "ON". Press "+" key to select "OFF". After ECO mode is turned on, the backlight is dimmer during the period from 22:00 pm to 6:00am for saving power and easy reading.

4.5 Real-time:

Set "12 Hour(AM/PM) or 24 Hour" by pressing "+" key. The default setting is 00:00(24 Hour Clock). The setting sequence is hour then minute. After setting "hour", press "SET" key to set "minute" (the interval is 1 hour /1 minute). Press "+" key to adjust the value. Press and hold "+" key for 5 seconds to adjust faster.

**Note: Complete the settings (hour-minute) to save the real-time values.*

4.6 Temperature unit: Press "+" to switch between °C and °F.



5. Trend

Bar graph display indicates the status of CO₂ records up to 24 hours "Now" bar graph displays the current CO₂ and it is updated with new records every 4 seconds.

"-3~-24" bar graphs display the average CO₂ and it is updated with new records every 10 minutes.

"-3" is the average CO₂ concentration of the latest 3 hours.

"-6" In past 6 hours, the average CO₂ concentration of the first 3-hour.

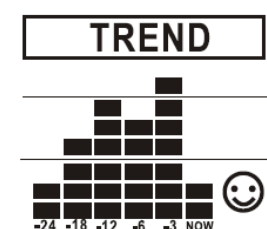
"-12" In past 12 hours, the average CO₂ concentration of the first 6-hour.

"-18" In past 18 hours, the average CO₂ concentration of the first 6-hour.

"-24" In past 24 hours, the average CO₂ concentration of the first 6-hour.

E.g. It is now 12:00 noon on 12/19. "-3" = 09:00~12:00 (12/19);

"-6" = 06:00~09:00 (12/19); "-12" = 00:00~06:00








(12 /19) ; “-18” = 18:00 ~24:00 (12/18) ; “-24” = 12:00~18:00 (12/18)

6. CO₂ Calibration

The meter is calibrated at standard 400ppm CO₂ concentration in factory. It's suggested to do manual calibration regularly to maintain good accuracy.

First of all, leave the meter in a known 400ppm CO₂ condition for some minutes. press “ + “” keys at the same time till “CAL” appears. Pressing “” key to start the calibration. After a period of 250 seconds count down, the display show “Pass” on display to indicate the calibration is done.

Press “” key return to normal measuring mode.

CAUTION: Do not calibrate the meter in the air with unknown CO₂ level. Otherwise, it will be taken as 400 ppm and leads to inaccurate measurement. The manual calibration is suggested to be done outdoor

with good ventilation, fresh air and sunny day where CO₂ level is around 400ppm. Do not calibrate in rainy day because high humidity will affect the CO₂ level in air. Do not calibrate in places crowded with people or close to where exist high CO₂ such as ventilating outlets or fireplaces.

ERROR CODE AND SOLUTIONS

CODE	PROBLEM	SOLUTION
E1	CO ₂ sensor is damaged	Send back to repair.
E2	Measured reading is under the lower limit	For CO ₂ E2: re-calibrate. For other E2: leave the meter in room condition for 30 mins. If it not works, send back to repair.
E3	Measured reading is above the upper limit	For CO ₂ E3: put the meter in fresh air for 5 minutes. For other E3: leave the meter in room condition for 30 mins. If it not works, send back to repair.
Fail	To indicate the calibration is fail	Put meter in fresh and stable CO ₂ condition for calibration.

? Can't power on

Check whether the adaptor is well plugged.

WARRANTY & RETURN AUTHORIZATION

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 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.

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



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Nieuwkoop BV

Aalsmeerderweg 249 -S

1432 CM AALSMEER

0297 325836

info@nieuwkoopbv.nl

www.meten.nl



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