

OPERATION MANUAL

CO_2, HUMIDITY, TEMP. DESKTOP MONITOR

Model:7727

INTRODUCTION

This is an accurate, smart and easy-to-use indoor air quality monitor. In addition to measuring the CO_2 concentration, it also measures the ambient temperature and relative humidity. It is also a clock and provide CO_2 trend of past 24 hours. This monitor is developed to be the best helper to checking the indoor air quality.

Features:

- Large LCD displays CO_2 value, humidity, temperature, current CO_2 level good/ normal/ poor indicator, CO_2 trend of past 24 hours and hour-minute clock.
- Touch panel to program the setting
- NDIR (non-dispersive infrared) waveguide CO_2 technology
- 3-color backlight (green / yellow / red) gradually changes color with CO_2 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.

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MATERIAL SUPPLIED

The standard package contains below:

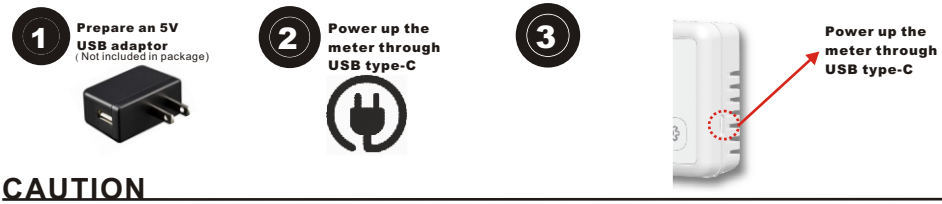
- CO_2 monitor x 1pc
- USB-C cable x 1pc

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

- Operation manual x 1pc

POWER UP

This CO_2 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 CO_2 is powered, the LCD will auto turn on.

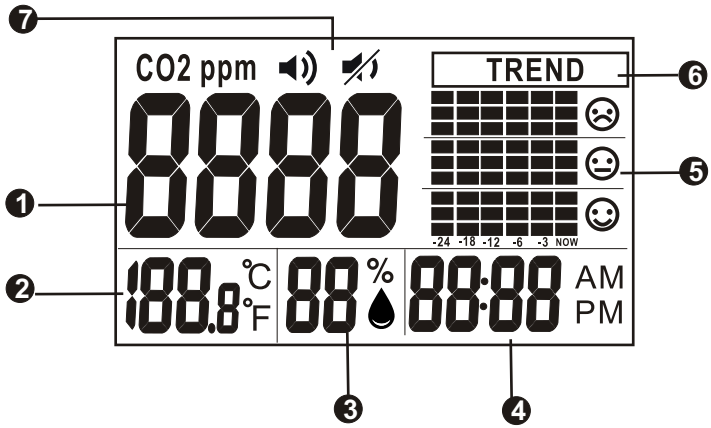


CAUTION

Please take off the AC power adapter and store it well when this CO_2 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 CO_2 monitor is for home use, not suitable for certifying the test results. If use this CO_2 monitor for testing, it does not guarantee the test results. The vents allow the air circulation liquid for measurement of the CO_2 concentration and the ventilation should not be blocked.

DISPLAY , KEYPAD, SPECIFICATION



1. CO_2 concentration, parts per million (ppm). NDIR CO_2 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 CO_2 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

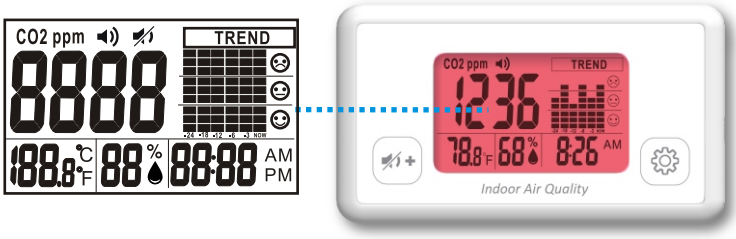
+

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



SPECIFICATION			
Measuring range		Response time	
CO2	200~5000 ppm,	CO2	<2 mins (63% step change)
Temperature	0.0~50.0°C (32.0~122.0°F)	Tair	<2 mins (90% step change)
Humidity	5~95% RH	Humidity	<20 minutes (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)
CO2	±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 10cm distance
		Meter size	108 x 67 x 30 mm
		Weight	90g
		Standard package	Meter, manual ,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 CO2. <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 CO_2 is over alarm threshold, buzzer sounds once a second till pressing " (mute)" to stop.

4. Setting mode:

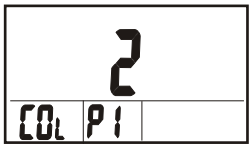
Long press " ⚙ " key till entering the setting mode. Then, press " ⚙ " key to select setting modes in sequence: COL (Backlight COLOR), AL (Alarm setting), Buzzer, ECO (energy-saving mode),Real-Time Clock and Unit (temperature unit).

Press " + " key to adjust the parameters.

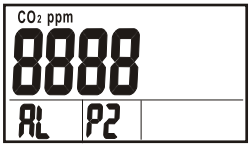
***Note: During the setting process, the device will return to the main screen after 60 sec of idle time.**

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

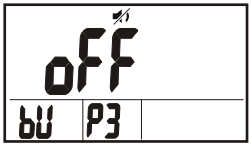




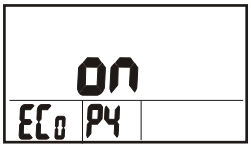
4.2 AL: The default alarm setting is 1,000ppm. It is adjustable from 800ppm to 3,000ppm, the interval is 100ppm. This thresold is also related to buzzer alarm trigger and red backlight trigger in Auto mode and AL mode.



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

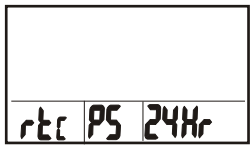


4.4 ECO: The default ECO setting is "ON'. Press **"+"** key to select "OFF". After ECO mode is turned on, the backlight is dimmer during the period from 22:00 pm to 6:00am for saving power and easy reading.

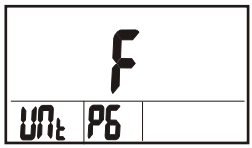


4.5 Real-time:
Set "12 Hour(AM/PM) or 24 Hour " by pressing **"+"** key. The default setting is 00:00(24 Hour Clock). The setting sequence is hour then minute. After setting "hour", press **"SET"** key to set "minute" (the interval is 1 hour / 1 minute). Press **"+"** key to adjust the value. Press and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

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

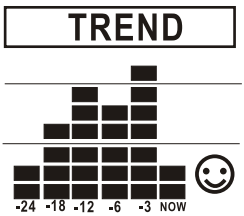


4.6 Temperature unit: Press **"+"** to switch between °C and °F



5.0 Trend

Bar graph display indicates the status of CO_2 records up to 24 hours
"Now" bar graph displays the current CO_2 and it is updated with new records every 4 seconds.
"-3~-24" bar graphs display the average CO_2 and it is updated with new records every 10 minutes.
"-3" is the average CO_2 concentration of the latest 3 hours.
"-6" In past 6 hours, the average CO_2 concentration of the first 3-hour.
"-12" In past 12 hours, the average CO_2 concentration of the first 6-hour.
"-18" In past 18 hours, the average CO_2 concentration of the first 6-hour.
"-24" In past 24 hours, the average CO_2 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)



6.0 CO_2 Calibration

The meter is calibrated at standard 400ppm CO_2 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 CO_2 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 CO_2 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 CO_2 level is around 400ppm. Do not calibrate in rainy day because high humidity will affect the CO_2 level in air. Do not calibrate in places crowded with people or close to where exist high CO_2 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 mins. For other E03: 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 Co2 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.

FAMILY PRODUCTS

Other related CO_2 products:

Portable:

Model 7752, 77532, 7755, 77535, 77596 and 77597 portable CO2/RH/Temp. meter



Wall mount

Model 7721,77231,7722 ,77232,7729,7530 Wall mount CO2/RH/Temp. meter

Desktop:

Model 7787, 7788and 7798 desktop CO2/RH/Temp. meter



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