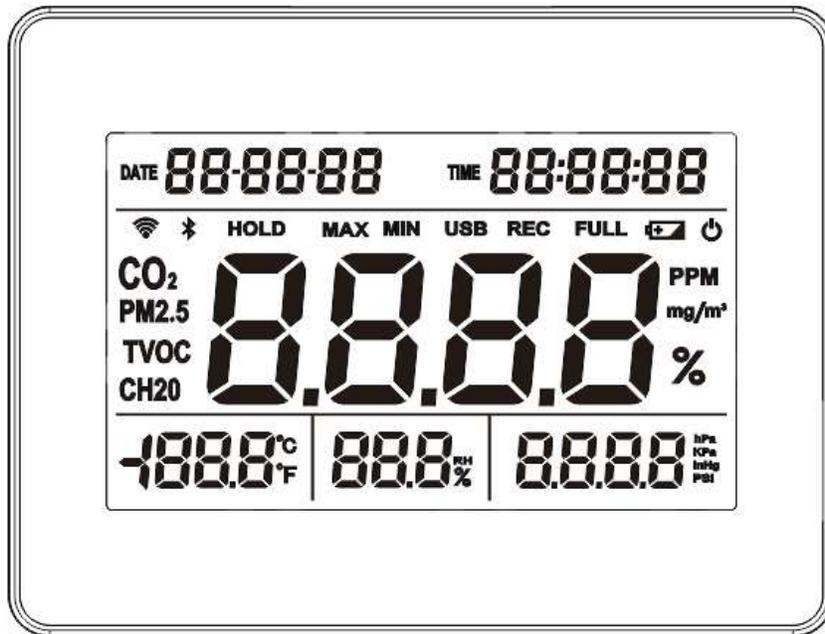


# Data logging

## Carbon Dioxide Detector

### User manual



## **1.Overview**

Thank you for purchasing the Carbon Dioxide Detector, a high quality instrument which measures 8 parameters:

1. CO2 Concentration(PPM)
2. Air Temperature (°C / °F)
3. Humidity (%)
4. Barometric Pressure (hPa, kPa, inHg,PSI)
5. Perpetual Calendar and Time display

The Carbon Dioxide Detector comes with many powerful features including the following:

1. Warning carbon dioxide level
2. Large LCD with White Backlight
3. Maximum, Minimum Reading Display
4. Hold Function
5. High Accuracy
6. Low Battery Indicator
7. Wall-mounted and desktop Design
8. CE Certified & RoHS Compliant
9. Auto Power Off (with override option)
10. Software, USB Lead, Case & Batteries included
11. Reading Internal Memory (Data record function)
12. Comes With Power Adaptor(choose one from the available plug US/UK/AU/EUR)

## **2. Specifications**

Large LCD Display: (12\*7.5cm) LCD display with backlight

Carbon Dioxide Range: 0~9999(out of scale)

Accuracy: ±50ppm ±5%rdg (0~5000)

Response Time: 10sec

Temperature Range: -10.0~70.0°C (14~158°F)

Resolution: 0.1/°F

Accuracy:  $\pm 0.6^{\circ}\text{C}/\pm 0.9^{\circ}\text{F}$  ( $0\sim 50^{\circ}\text{C}/32\sim 122^{\circ}\text{F}$ ), others  $\pm 1.2^{\circ}\text{C}$

Humidity Range:  $0\sim 99.9\%$

Resolution:  $0.1\%$

Accuracy:  $\pm 2\%$  ( $10\sim 90\%$ )

Barometric Pressure Range:  $10$  to  $1100\text{hPa}/1$  to  $110\text{kPa}/0.29$  to  $32.48\text{inHg}/0.15$  to  $16.00\text{PSI}$

Resolution:  $1\text{Pa}/0.1\text{kPa}/0.01\text{inHg}/0.01\text{Psi}$

Data Logging :  $9144$  groups

Operating Condition:  $0\sim 50^{\circ}\text{C}, 0\sim 95\%RH$

Storage Condition:  $-20\sim 60^{\circ}\text{C}, 0\sim 99\%RH$

Sensor Life:  $15$  years in normal conmm

Environments with ABC on

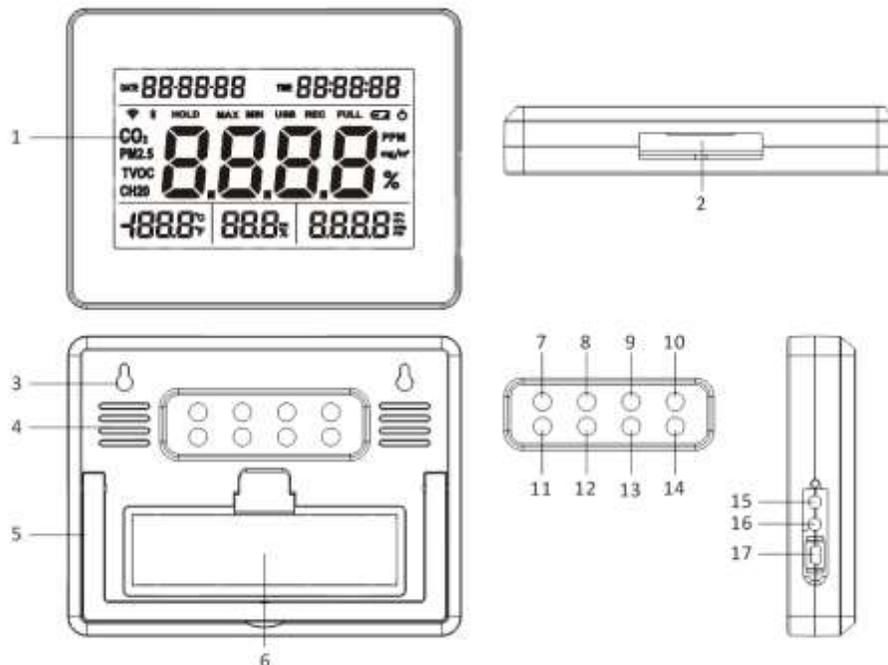
Storage Temp:  $-40\sim 70^{\circ}\text{C}$  ( $-40\sim 158^{\circ}\text{F}$ )

Power Supply:  $4\times 1.5\text{v}$  AA batteries or  $1\text{A}$  Output  $5\text{V}$  AC Adapter(not included)

Dimension:  $160\times 122\times 28\text{mm}$

Weight: approx  $240\text{g}$ (Batteries included)

### 3. Product Description



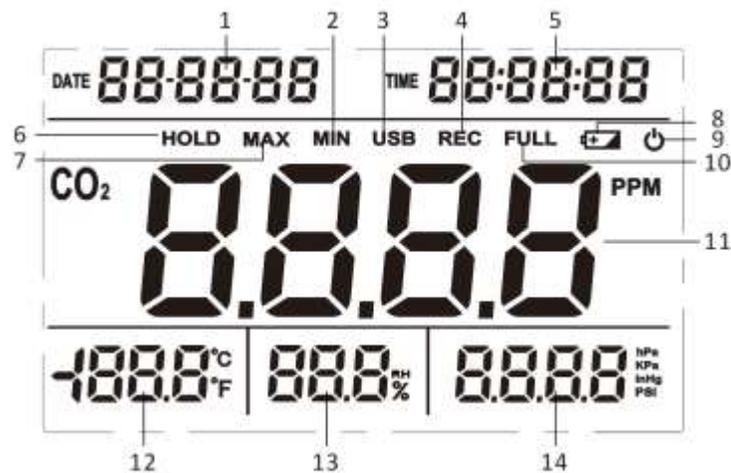
1. LCD

display

2. Backlight/Snooze button
3. Wall-mounted
4. CO<sub>2</sub>/Temperature/Humidity/Barometric pressure sensor
5. Stand
6. Battery cover
7. Temperature units:°C/°F
8. Barometric pressure:hPa, kPa, inHg,PSI
9. Hold function
10. Max/Min reading function
11. Non-Auto power off button
12. Rec button
13. Rec button
14. Power button
15. Adaptor socket
16. Null
17. USB socket

NOTE:Hold and Press 12.13.Rec buttons to start recording datas.

#### 4. LCD Display



1. Perpetual calendar

2. Min reading
3. USB connecting symbol
4. Date recording symbol
5. Time display
6. Hold mode
7. Max reading
8. Low battery warning symbol
9. Power off symbol(non-auto power off)
10. Date recording full capion
11. CO2 mmeasuring reading
12. Air temperature reading
13. Humidity reading
14. Barometric pressure reading

## **5.Product Operation**

### **1.Turning the Anemometer On and Off**

A.Press the Power button briefly to turn the anemometer on.

B.Press the Power button for more than one second to turn the anemometer off.

C.After 10 minutes without any operation the anemometer will power off automatically.

D.To disable Auto Power Off hold the Set button down while turning the unit on. You will see the Power Symbol appear on the LCD. Warning, if you disable Auto Power Off, the meter will stay on until the battery runs out unless you turn it off manually by holding down the Power Button.

### **2.Backlight**

Press the Backlight button to turn the backlight on or off.

### **3.Hold Function**

To freeze the current reading, press the Units button ; Press it again to exit this mode.

NOTE:Time display will not be freezed uner Hold mode.

### **4.Changing the Measurement Units**

A.Press the Temperature units button to switch the units:°C/°F

B.Press the Barometric bressure buttonn to change the units:hPa, kPa, inHg,PSI

### 5.Max/Min Value Measurement Function

This function allows you to track the maximum, minimum of your readings for any parameter each time you power on the unit. In any measurement parameter mode briefly press the Max/Min button to display the Maximum Reading. A second press will display the Minimum, a third press will return the meter to the real-time current readings.

Max: In this mode the meter will display the maximum value registered since it was powered on.

Min: When in this mode the meter will display the minimum value registered.

NOTE: The Max, Min values will be reset when the meter is turned off.

### 6.Recording function

a. Press two REC buttons at the same. The REC icon will appear on screen. The meter will now begin logging datas. This

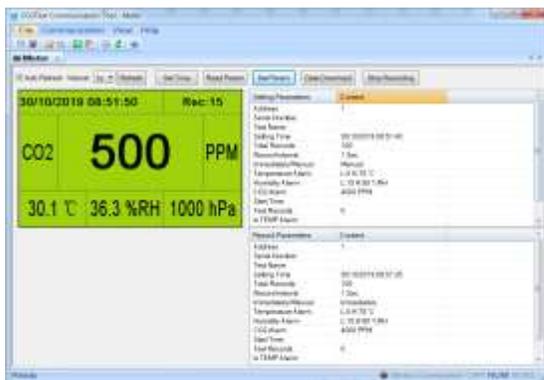
will only function after the parameters have been set via PC.

b. The meter will continue to record until you turn the meter off, the meter memory reaches full capacity or the batteries run out.

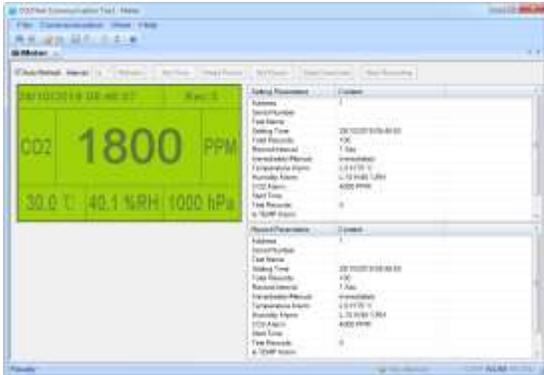
### 7. Software installation and operation Guide

1.Run the Setup.EXE file in the folder “CO2Test(EN)” in the setup disk.

2.Meter Communication



3.1.With the meter connected to the PC,Click **Communication > Connect** in the menu, or the button  to  in the toolbar to manually connect the meter.



You can click the  button in the toolbar or Communication > Disconnect from the menu to disconnect. If there is any communication failure the meter will automatically disconnect its current connection. If you fail to obtain a connection please check:

- a. USB lead is connected correctly or is not faulty
- b. There is sufficient battery life remaining on the meter
- c. The meter driver is installed successfully

If the problem persists please contact your supplier.

Upon connection the meter will power on, if not already switched on, and begin real-time sampling on the software simulation display on the left of the software screen (depending on refresh settings, see section 3.2). It will also display on the LCD screen as per normal.

Note: if the parameters have already been set ready for recording with the immediately option selected (see section 3.5) the meter will begin recording upon connection.

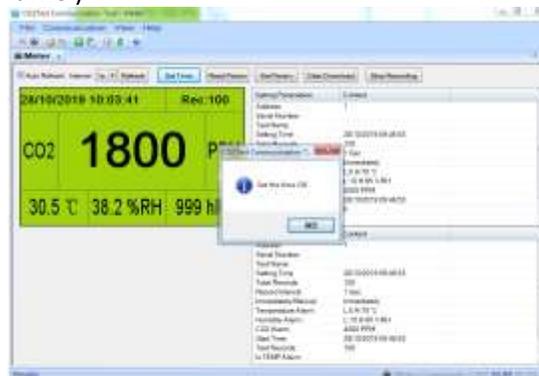
### 3.2 Refresh

When you tick the "Auto Refresh" box the software will automatically query the meter and display the current meter information: current time, sample information and measurement settings. You can select refresh interval in seconds (s), range between: 1-10 seconds.

If the "Auto Refresh" box is not checked, the display can only be updated to the current reading(s) by clicking the Refresh button or refresh icon  in the toolbar manually.

3.3. After online connection, click "Set time" to update the current time.

Attention: (the user from different countries must calibrate the time after connection, the update time will be same as the computer time)

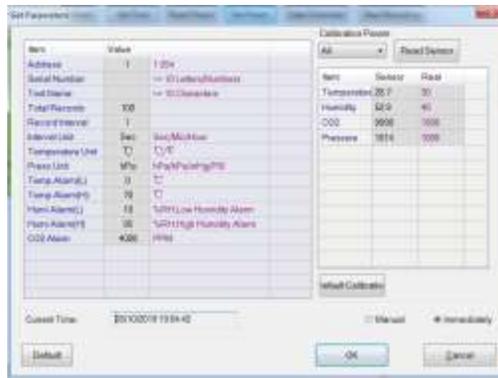


### 3.4 Read Parameters

Click the button Read Param button or from the main menu Communication > Read Parameters to display the parameters set on the meter in the bottom right table.

After the meter has collected the data you can repeat this action and the table will update with additional information from the recording session.

3.5 Click "Set Param" then enter into below interface to set parameter

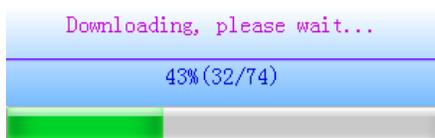


### 3.6 Download datas:

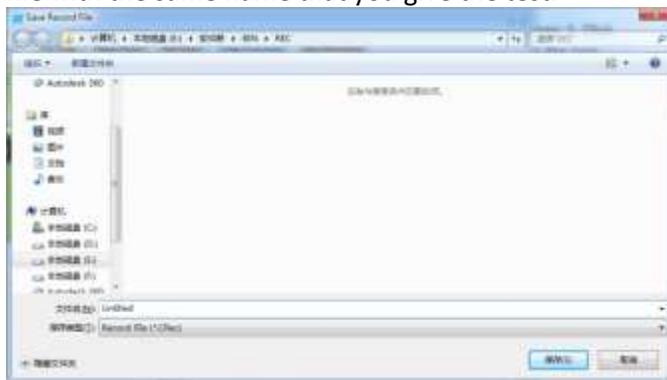
The data record should be downloaded after each test.

If there is a data record stored on the meter, it can be downloaded to the computer via 3 options: 1. Click the Date Download button, 2. From the main menu Communication > Data Download, 3. Click the  icon on the toolbar.

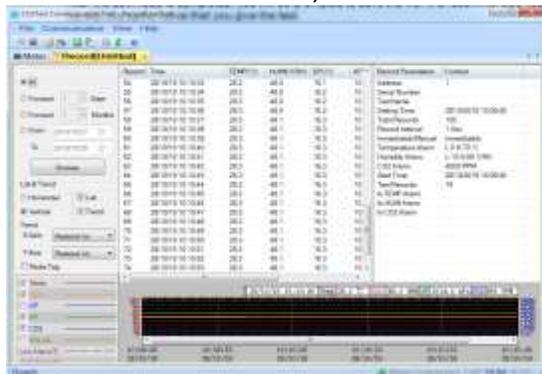
The download progress will then be displayed.



After the download is completed, you will be prompted to save the file. It is recommended you save the file with the same name that you give the test.



Click the "Save" button and switch to the **Record View** to browse the data records and trend chart of the saved file. If cancelled, the data records will not be saved.



Click top menu bar File>export could export datas to be “Excel” and TXT” format (see below TXT file picture)



### 3.7 Stop Recording

If the meter is recording click the “Stop Recording” (Power Off) button to stop.

### 4.0 Menu Bar



### 4.1 File Menu



#### 1. Open

To open the “.WRec” data record files for viewing in “Record View”.

#### 2. Export

Allows you to export the current data into an Excel or text format file.

#### 3. Copy Trend To Clipboard

Copy the trend chart of data record to the clipboard, to be used elsewhere

#### 4. Exit

Exit and Close the software.

### 4.2 Communication Menu



#### (1) Connect

After connecting the meter to the USB, click and the software will connect to meter and switch to the meter communication view.

#### (2) Disconnect

When the software is connected to the meter, click and the connection session will end.

#### (3) Read Parameters

Displays the parameters set on the meter in the bottom right table. Repeat after a data recording session to update.

#### (4) Set Parameters

Set up the parameters for the meter data recording session.

#### (5) Set Time

The meter has no clock chip, press this to sync it with the time on your computer.

#### (6) Data Download

From the meter, download the data to the computer and save it, then switch to the Record View, to begin browsing the data.

### 5.1 Browse Time/Date Range

(1) All: no filter condition, view all data records.

(2) Forward days: from current date forward a number of days.

(3) Forward months: from current month forward to number of months.

(4) Data range: from date1 to date 2 range filter records.

### 5.2 List & Trend arrangement

(1) Horizontal/Vertical: List and trend are arranged in left and right (bottom of the screen), or top and bottom (on the right of the screen).

(2) Show/Hide: Show or hide list or trend.

### 5.3 Operation of trend chart

(1) X、 Y axis zoom in/out: According to the item in the combo box to zoom in/out from X/Y axis.

(2) Node flag: When checked, each recorded sound sample will show on the graph with a circle mark. If there are many records, the circle marks will be less detectable.

## 6. Battery Replacement

If the meter does not power on as usual or the low battery icon appears on the LCD display, please replace the batteries as soon as possible. Press down and push the battery cover downwards as per the arrows indicate and insert 4pcs new AA 1.5V batteries and replace the battery cover. Dispose of the old batteries in an environmentally safe and sound manner at a recycling point.

**DO NOT DISPOSE OF IN YOUR BIN!**

## 7. Operating Precautions

1. The meter should be placed upright. If placed in low temperature and high humidity environment, after measurement, the meter should be placed upright until vaporizing is completed and before reading the data in the device.

2. If meter is connected to the PC, some battery power can be saved.

3. Any stored data will be permanently erased when the parameters are reset. To enable you to save this data before it is lost, click Cancel and then you need to download data.

4. Always ensure that the remaining charge in the battery is sufficient to last the complete duration of your logging exercise. If in doubt, we recommend that you always install a fresh battery before logging critical data.

### Trouble Shooting:

1. Power on but no display or the display disappears

a. Check the battery is in place with good contact to the pins and the correct way round.

b. Remove battery for one minute and re-install.

- c. Replace the batteries.
- 2. For all other issues please contact your supplier.

### **8.Warranty**

This meter has a one year warranty for a period of one year from date of purchase.

This warranty covers normal operation and does not cover batteries (including leaks), misuse, abuse, alteration, tampering, neglect, improper maintenance or improper calibration. Nor can the warranty be used as an excuse for a false claim simply because you have changed your mind after the initial 14 day period. Proof of purchase is required for warranty repairs.