



Carbon dioxide detector Instruction Manual



HT-501

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hti-instrument.com

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Product introduction

This product is a type of multiple-function tester for testing carbon dioxide concentration, temperature and humidity and is widely used for environmental quality detection in industrial production, hotels and department stores, offices and meeting rooms, libraries, warehouses, hospitals and other sites.

Considerations



1. The product adopts imported electronic sensors and micro processors that belong to precision electronic elements. The product should be kept away from places with water, fire, and combustible gasoline and strong electromagnetic interference, etc to prevent the device from influence on or damage.
2. Don't block. Avoid strong wind and hot wind blowing towards the air sampling inlet of the device at the same time.
3. Wet cotton cloth or 95% alcohol should be used to wipe or clean the instrument at the time of cleaning. Don't use





abrasive agents or corrosive liquid for cleaning to avoid damage to the instrument.

4. Don't dismantle or remodel the product without permission.

Key function



-  Key: press to power on/off the device
-  Key: 1. when change is made to setting of the product, used as “+1” function to increase the value. 2. Unit switching between Fahrenheit degree and degree centigrade.

-  Key: 1. At the display state of main interface, open or close CO2 concentration alarm; 2. when setting the function, move leftwards to change the item.
-  Key: when setting is made for the product, move rightwards to change the item.
-  Key: 1. when change is made for setting of the product, used as “-1” function to decrease the value. 2. At the manual mode, the button to start record.
-  Key: Hold down to enter setting function interface.

Display description

1. Carbon dioxide display area

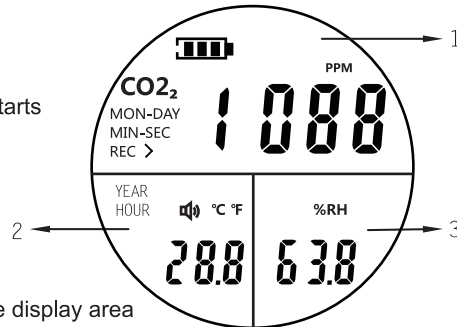
 : Battery level indicator

PPM: Carbon dioxide concentration unit

CO2: Chemical formula of CO2

MON: month

DAY: day
MIN: minute
SEC: seconds
REC: record starts




2. Temperature display area

°C / °F : degree centigrade, Fahrenheit degree

YEAR : year

HOUR: hour

 : Sound alarm enabled

3. Humidity display area

%RH: humidity unit

Use of the product

1. Power on

Press the power key to power on. The instrument begins preheating. LCD displays the count down of 30 seconds (at the moment, operation of any key is invalid). After end of count down, the instrument enters the normal measurement interface.

2. Power off

Press the power key to power off at the measurement state.

3. Alarm value and time setting

Hold down “MODE” key for two seconds to enter setting of carbon dioxide alarm value. Press the left and right key to select the position to be changed. The selected figure will be flashed. Press up and down keys to adjust value of flashed position. After completion of setting, press “MODE” key to save and enter setting for the next item. The same method is used for setting of “year, month, day” and “hour, minute, second”. After completing time setting, press “MODE” key to save and return to the measurement interface.

Note:

* The factory default carbon dioxide concentration alarm value is 2000PPM.

* To check the time, it is necessary to hold down “MODE” key to enter the setting function.

* Above setting can also be completed with use of software in computer. Please refer to introduction to “software application”.

4. Alarm information

After the alarm function is opened, when the concentration of carbon dioxide reaches the alarm value, the buzzer give out sound for alarm. When users get to know the alarm information, press the left key to close the alarm sound. To open again, press the left key again.

5. Charging:

The product has built-in chargeable lithium battery. When the screen displays low battery, please charge the product in time with use of the attached power adaptor (micro USB mobile phone charger may also be used). Computer USB port may also be connected to charge the product.

Carbon dioxide grading guidance

Non mandatory reference grading

- a) 250-350ppm—general outdoor air level;
- b) 350-1,000ppm—the typical value for resident space with good ventilation;
- c) 1,000-2,000ppm—the air grade insufficient oxygen, sleepy, it is enough to cause complaint.
- d) 2,000—5,000ppm—the air grade of stasis, obsolescence and sweltering air grade; make people headache, sleepy accompanied with loss of concentration, attention distracted, quick heart beat and slight nausea.
- e) >5,000ppm—serious anoxia may be resulted in if exposed into it, lead to permanent brain damage, coma or even death.

Product parameters

Power supply: 3.7V lithium battery

Record mode: manual measurement, immediate measurement

Record storage: 12700

Response time: 1 second

Carbon dioxide measurement scope: 0~9999PPM

Accuracy: $\pm 70\text{ppm} \pm 3\%$ readings (0~5000)

Resolution: 1PPM

Temperature measurement scope: $-10 \sim 70^{\circ}\text{C}$ ($14 \sim 158^{\circ}\text{F}$)

Resolution: $0.1^{\circ}\text{C} / ^{\circ}\text{F}$

Temperature measurement accuracy: $\pm 0.3^{\circ}\text{C}$ ($10 \sim 55^{\circ}\text{C}$)

Others are $\pm 1.2^{\circ}\text{C}$

Humidity measurement scope: 0% RH~99.9%RH

Resolution: 0.1%

Accuracy: $\pm 3\%$ ($10 \sim 90\%$)

Work condition: $0 \sim 50^{\circ}\text{C}$, $0 \sim 85\% \text{RH}$ (no condensation)

Storage condition: $-20 \sim 60^{\circ}\text{C}$, $0 \sim 90\% \text{RH}$ (no condensation)

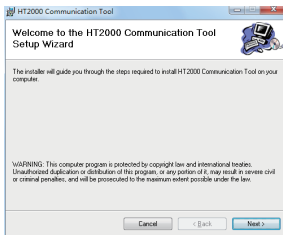
Software installation

Open the CD ROM, Select “Setup” file to install as shown in the figure blow:

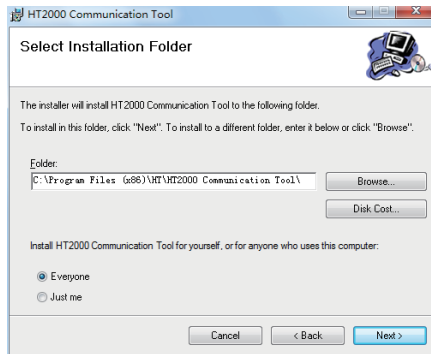
Or enter the download center through the official website www.hti-meter.com to find:“CO2(english)” download, the installation method is the same.



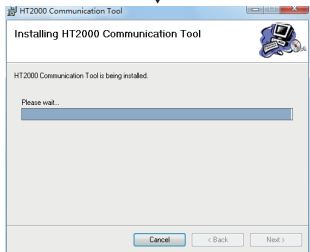
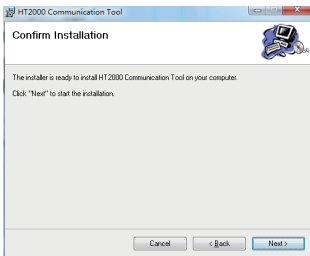
We will enter the installation page. Please click “next” shown in the figure below:



Next, we may select the installation location by with use of “Browse” to install the software to your desired location as shown in the figure below:




Then click “next” after confirmation to skip to the next interface. Click “next” again and it enters the installation state as shown in the figure below:




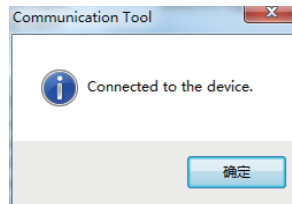
After completion of installation, click “close” and the software is installed.

Software application

1. Connect/disconnect

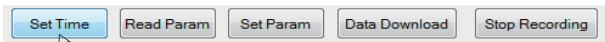
We use data transmission line to connect the computer and the instrument. Click  connection. Appearance with the following prompt indicates successful connection.

Click  to disconnect.



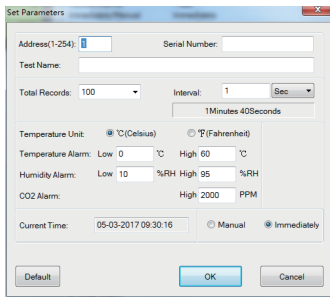
2. Adjust the clock

Is it troublesome to set the time on the instrument? After connecting with the computer, we can carry out adjustment only by clicking “Set Time”. It is synchronous with the computer as shown in the figure below:

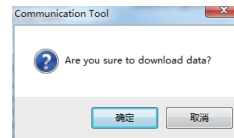


3. Method I for recording and receiving data

Ensure to click “set param” before making record. After the setting interface pops out, please set correct parameters as appropriate. You may refer to “carbon dioxide grading guidance” for setting. The measurement mode is “Immediately”. Then click “OK” after completion. If it is not necessary to change the parameters, click “OK” directly.



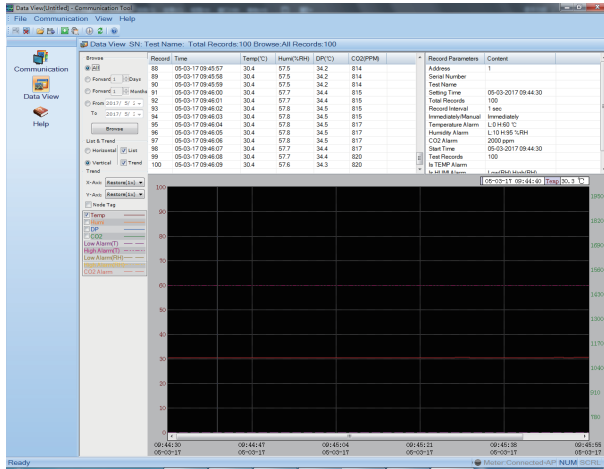
We see that “REC” on the display screen flashes (the flashing frequency is the same as record interval), indicating that measurement of the instrument is carried out with record synchronously. The data obtained through record can only be checked only it is received. Click “Data Download” and the following window pops out.



Save the received data as shown in the figure:



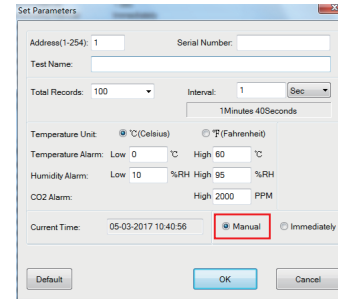
After completion of saving, the data can be checked, as is shown in the figure:



4. Method II for recording and receiving data

We need to go out for measurement at many occasions. It is very troublesome to connect with a computer at the site. At such condition, we only need to use manual measurement and take back the recorded data that will be check after connection with a computer as shown in the figure below:

We need to connect the instrument with a computer first for setting the data. After connection is completed, click “set param” to enter the parameter setting interface as shown in the figure below:



The parameter setting is the same as mentioned above. The difference is that we will select manual measurement. After completion of the setting, exit and plug off the data line and take the instrument to the destination. Press “REC” key on the instrument to begin recording the data. After we bring the instrument back and connect it with a computer, click “ Data Download”. The data we received is the data we measured and record outdoors.

Note: the data stacking is not allowed for record. Click on “Set Param” every time will overwrite previously recorded data. Therefore, please save measurement data in time.