Product Name	**GAOTek Portable Gas Monitor**
Product SKU	**GAOTek-FGD-103**
Product URL	https://gaotek.com/product/gaotek-portable-gas-monitor/

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GAOTek Portable Gas Monitor

1. Power On/Off

Put the detector in clean air, and press the "ON/OFF " for three seconds, the detector will be turned on and the pump will start to work. The screen displays the following interface successively: Brand and Logo, main parameter interface, and initialing countdown. The countdown would be 60 or 120 seconds, which is to make sure that the sensors are fully activated. After the countdown, the device enters the normal detection interface. Take the detector out of the detected environment and wait for the data to get down to zero, then press the "ON/OFF " to turn off the detector.

2. Zero Calibration

Zero calibration must be done in clean air. Better to do it once after an alarm happens.

Press "MENU" to enter parameter setting mode, select "calibrate zero", and press "ON/OFF " to enter the mode.

Observe the value of "real-time concentration ". If the reading is not zero and the drifting is too big when the reading is stable, then it is necessary to conduct zero-point calibration.

Press "ON/OFF ", the real-time concentration will go back to zero, and press "ESC" to go back to detection mode, gas concentration values also back to zero.

Note: Zero calibration of oxygen detector, nitrogen detector, and carbon dioxide detector (target gases are components of the air) can not be done in the air. Only the target point calibration (the value of target point concentration is the standard concentration value in the clean air) can be done.

3. Process Of Over-Range Incorrect Operation

Users should avoid using gases that exceed the measure range to impact the sensor, because it will affect the lifespan and sensitivity of the sensor, even, "poison" the sensor. If there is any over-range incorrect operation that makes the detector display a concentration at a large reading, the remedy is to take the device out of the environment immediately put it in clean air for over half an hour, and then observe the reading, if it keeps going down, then wait until the reading back to zero before powering it off, and do the zero-point calibration next lime before using it.

If the reading is maintained at full scale, the user should send the device back to the manufacturer or agent for repair or replacing the sensor.

Note

*If the detector is used for the gas cylinder detection, considering the high pressure in the cylinder, please use a pressure regulator, and keep it as the below data:

Flow rate: 900mL~1200ml/minute

Pressure: 0.1MPa or 1Bar

*Please put the detector in clean air for about 5 minutes and wait for the data to fall down to normal before turning it off after measurement.

4. Read Before Operation (For PID Sensors)

If the detector is equipped with a high-resolution PID sensor (which means the resolution is 0.001ppm), after the detector is turned on in clean air, it must be placed in clean air for 10-15 minutes before entering the target environment for detection.

If the detector is equipped with a Normal-resolution PID sensor (which means the resolution is 0.01ppm,0.1ppm,1ppm), after the detector is turned on in clean air, it must be placed in clean air for 5 minutes before entering the target environment for detection.

The factory default of the detector is the standard VOC gas detection mode, the CF coefficient of this mode is 1, so when the detector is turned on, it is in the standard VOC detection mode. If you want to detect other VOC gases, let's say N2H4 as an example. Before detecting N2H4, it is necessary to enter the "Gas CF set" and change the coefficient to 3, and then perform the detection. If you press the ESC key to exit after the modification, then this coefficient is only valid at the current startup. After the detection is completed and the shutdown is completed, you need to set the above settings again at the next startup; if you press the “ ” key to save after the modification, the coefficient will still be valid for the next startup.

Customers can detect other VOC gases by correcting the corresponding CF coefficient according to the CF coefficient table of other gases provided by us.

When there are different Voc gases in the environment at the same time, the displayed gas value is the comprehensive concentration value of the mixed gas.

5. Operation Interface

When the detector is turned on completely, the device will enter the detecting interface. The gas type will be shown on the top left, and the time and battery power will be on the right. In the middle, there is the real-time concentration. If the detector has with data storage function, there will be the storage status at the top of the concentration: ON or OFF, and the total storage number. There will be BEEP-ON at the bottom left, which means the alarm is on. The PUMP-ON at the bottom right, which means the pump is working

6. Power On / Off

Put the detector in clean air, and press the “ON/OFF” for three seconds, the detector will be turned on and the pump will start to work. The screen displays the following interface successively: Brand and Logo, main parameter interface, and initialing countdown. The countdown would be 60 or 120 seconds, which is to make sure that the sensors are fully activated.

After the countdown, the device enters the normal detection interface.

Take the detector out of the detected environment and wait for the data to get down to zero, then press the “ON/OFF” to turn off the detector

7. Alarm Point Set

Press “Menu”, choose the “Alarm point set”, and start to set the alarm value.

There are LOW POINT and HIGH POINT for set, press “MENU” to move the cursor to the value you want to set, and press the “PLUS” or “MINUS” to change the value. After the setting is done, press “ON/OFF” button to save the settings.

8. Pump Speed Set

Press “Menu”, choose the “Pump speed set”, and start to set the pump speed.

Changing the pump speed doesn't have influence on gas detection now.

9. Zero Calibration

Zero calibration must be done in clean air. Better to do it once after an alarm happens.

Press “MENU” to enter parameter setting mode, select "calibrate zero", and press “ON/OFF” to enter the mode. Observe the value of “real-time concentration”. If the reading is not zero and the drifting is too big when the reading is stable, then it is necessary to conduct zero-point calibration.

Press “ON/OFF”, the real-time concentration will go back to zero, and press “ESC” to go back to detection mode, gas concentration values also back to zero.

Note: Zero calibration of oxygen detector, nitrogen detector, and carbon dioxide detector (target gases are components of the air) cannot be done in the air. Only the target point calibration (the value of target point concentration is the standard concentration value in the clean air) can be done.

10. Process of Over-range incorrect operation

Users should avoid using gases that exceed the measure range to impact the sensor, because it will affect the lifespan and sensitivity of the sensor, even, "poison" the sensor. If there is any over-range incorrect operation that makes the detector display a concentration at a large reading, the remedy is to take the device out of the environment immediately put it in clean air for over half an hour, and then observe the reading, if it keeps going down, then wait until the reading back to zero before powering it off, and do the zero-point calibration next time before using it. If the reading is maintained at full scale, the user should send the device back to the manufacturer or agent for repair or replacing the sensor.

Password!

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11. Calibrate span

Note: Calibration needs to be done by professionals and with necessary accessories and standard gas.

Prepare the standard gas before starting the span calibration. In detection mode, press “MENU”, select “calibrate span”,

Press the ON/OFF button to enter. Then you will need to enter a password. (If you need a password, please contact the manufacturer to get it)

After entering the password successfully, press ON/OFF to enter the span calibration interface, as shown in the picture.

The interface will display “concentration”, and “set value. The concentration is the result got from the calculation of several internal calibration parameters. The process of calibration is the process to recalculate the internal parameters of the device. The set value is the value need to be entered manually; it should be the concentration of the standard gas to be calibrated. Select the parameter under the current interface, modify its value with “PLUS” and “MINUS” button.

The calibration process is as below:

1. Connect the detector with standard gas cylinder by T-shape hose, Ensure that the bypass flowmeter has flow to empty.

2. Enter the span calibration interface, set the “SET value” as the standard gas concentration.

3. Release the standard gas to the detector in a flow rate of 900-1200mL/min. The value of “concentration” will become larger gradually, and become stable after 30seconds.

4. When the value of “concentration” is stable, press the “ON/OFF” button, the value of “concentration” will be same with or almost same with the “Set value”. The calibration is finished.

5. Cut off the standard gas supply. Press “ESC” to go back to the detection interface