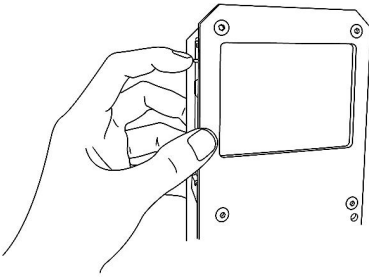# AIR MASTER（空霸）DATASHEET

Check for device : AM7 plus \ AM6 Indoor Air Quality Detector

AIR MASTER OPERATING MANUAL

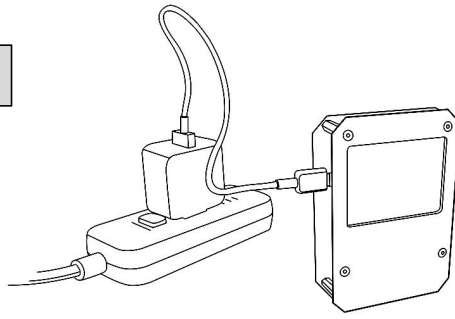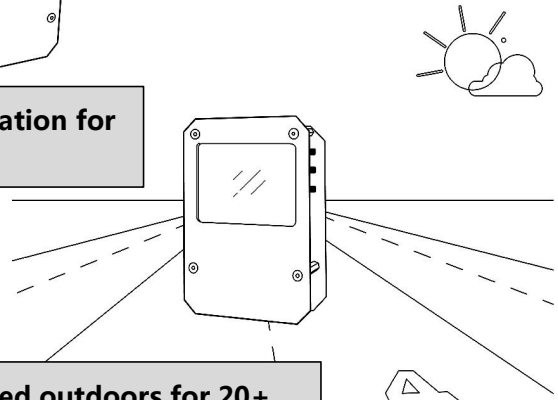V1.13   21 / 11 / 2019

1 Start up
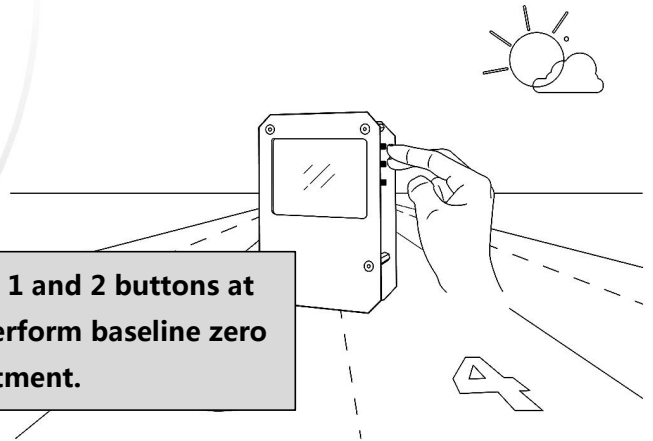
2 Continuous operation for 3 hours

3 Placed outdoors for 20+ minutes (on power)

4 Press and hold the 1 and 2 buttons at the same time to perform baseline zero adjustment.
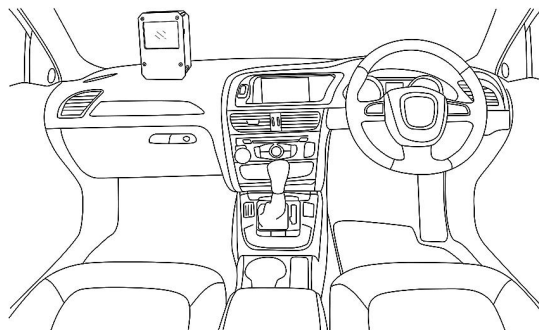
5 Go back to the house and you can use it.

6 It is recommended to perform baseline zeroing once a month.

WEESKY INSTRUMENTS

INDOOR AIR QUALITY DETECTOR

AIR MASTER (空霸) DATASHEET

Check for device : AM7 plus \ AM6

FIRMWARE UPDATE TO 2.73 (NOVEMBER-2019)

https://pan.wps.cn/l/sLw0rwC1Y

Tools

Control Pannel v1.21   Drivers
                             XLoader

https://share.weiyun.com/5cDRx5k

Features

- Miniaturized 7 in 1 home air quality integrated detecting solution.
- Modular unit design, hot swappable sensor components, easier to maintain.
- The formaldehyde detection sensor uses a brand new V4 amp module to provide <150uV low-temperature drift performance.
- Formaldehyde detect sensor provides least significant bit resolution as low as $0.004mg/m^{3.}$
- The new rangy temperature calibration technology allows device adjusting could be done under outdoor environments even at -10 °C.
- Rapid data output capability, all reading data can be recorded every 4 seconds in extended TF card.
- Non consumable materials, 3 to 5 years of average sensor life.

Description

The new AIR MASTER series are air quality detectors which based on modular design theory. Provides up to 7 daily air quality data references. The built-in rangy temperature reading calibration technology allows the user to manually adjust the reading values within the range of -10 to 35 Celsius degrees. The AutoSense technology built-in the V4 formaldehyde amp module suppresses long-term using drift of the formaldehyde sensor and provides 4 seconds faster response data. Fully open design makes the internal airflow exchange smooth, and temperature, humidity detection sensitive, which is more accurate by comparing other competing products using built-in probe and compensation method to calculate temperature. AIR MASTER is better in test speed and precision. The whole device is equipped with 18650 lithium battery, easy to replace and purchase, standard version can provide 6 hours of battery life. AIR MASTER devices can guarantee stable long-term test of 7*24 hours by connecting with micro-USB port.

Air master series devices are mostly used in home air circumstance testing. Depending on the different user requirements, we offered AM6 and AM7 plus. The basic functions and the motherboard of the AM series are all the same. The differences of these two devices are testing contents which are listed below.

Reference

US Environmental Protection Agency: https://www.epa.gov/
China Air Online Analysis Platform: https://www.aqistudy.cn
Reference national standard: GB/T18883-2002

AM7 plus   **AM6 without S8 0053 model**

Technical parameter tables

Contents	Sensor	Testing methods	AM7 Plus	AM 6	Approximation Error	Resolution	Testing range
Temperature	SHT20	R&C	✓	✓	± 1.0 °C	0.1 °C	-25-85 °C
RH			✓	✓	±8%	0.1%	0-99.0%
Formaldehyde	2-FE5 +V4	Electrochemistry	✓	✓	<±0.02 mg/m^3	0.01mg/m^3	0-3.00 mg/m^3
TVOC	TGS2602	Semiconductor oxide	✓	✓	± 0.1 mg/m^3	0.01mg/m^3	0-2.00 mg/m^3
PM2.5/PM10	G10-P303	Laser Mie scattering	✓	✓	±10 ug/m^3	1 ug/m^3	0-999 ug/m^3
Carbon dioxide(CO2)	S8 0053	NDIR	✓		± 50ppm	1ppm	350-5000ppm

For better flexibility and user need, the product is assembled with several separate test sensors. Users can choose which components to add or replace. The buyers from overseas must notice the 18650 lithium battery is not included due to the shipping restrictions, and the device is not functional without the battery attached. **Please prepare an additional battery after purchasing AIR MASTER detector, install battery, plug in the USB cable before booting the device for the first time.**

New V4 Module
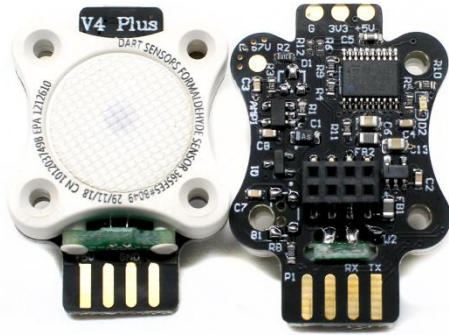
We exclusively designed a brand new V4 module based on DART 2-FE5 formaldehyde sensor electrode, with this module the formaldehyde values can be independently calibrated. This is different from the generic module used in other competing products. The V4 module provides more stable voltage reference to the sensor, excellent amps, and AUTOSENSE technology included.

Device usage limitation

- It is strictly forbidden to use this device under industrial environments with high concentration of pollution. It may cause device sensor overload failure.
- It is strictly forbidden to be used in life-sustaining systems and in critical systems with high data reliability requirements.
- Do not use the device near fire.
- The testing environment temperature should be kept at the rate from 0 to 40 °C.
- Do not use the device under high power loads status, and keep away from electromagnetic radiation sources, negative ion generators.
- Dusty weather, humidifiers may have a temporary influence on the laser sensor of PM detector, and cause incorrect reading values.

Absolute Maximum Ratings

Contents	Parameter	Conditions	Min	Max	Recommend	Unit
T	Normal working temperature	V=5.0V	-25	65	-10-50	°C
T_{zero}	Manual calibrating temperature		-10	40	0-30	°C
RH	Working humidity	T=25°C	0	95	10~85	%
OV_{HCHO}	Maximum formaldehyde exposure concentration (overload)			5		ppm
OV_{TVOC}	Maximum TVOC exposure concentration (overload)	V=5.0V T=25°C	-	10	-	ppm
V_{charge}	Charger Voltage	T=25°C I=1A	4.8	5.2	5.0	V
W	Device power consumption	T=25°C		1.65		W

*Please select standard Micro USB charger with charging current not less than 1A.

The using life of sensors and term of changing

Due to the principle of the sensors, usage life of some sensors is affected by climatic conditions and long-term pollution concentration, and the life expectancy may be different from expected. Under normal household conditions, the recommended time to replace components are listed as follows:

Subject	sensor	average using life	Failure Reason
PM2.5 & PM10	G10-P303	3+ years	Mechanical part included
Formaldehyde(HCHO)	2-FE5 +V4	3 years	Catalyst run out
TVOC	TGS2602	3-5 years	Oxide surface fouling
Carbon dioxide(CO_2)	S8 0053	10+ years	Optical performance degradation
Temperature & RH	SHT20	5+ years	Surface fouling

Ordering Information

We offer a variety of shipping methods, standard single delivery is a package include device, manual and a USB cable. For the convenience of transportation, non-Chinese mainland buyers can only purchase the version without lithium batteries (2600mAh 18650 lithium polymer battery). For batch delivery, 10 dozen per package. Each package contains 120 devices. Contact the buyer for detail shipping information.

For OEM buyers, we offer a version without case that can be shipped separately with the motherboard and sensor. The specific are listed as follows:

Methods	scale	weight	Remarks
single without case	79*95*23mm	127g	Separate components without battery and accessories
single	79*113*30mm	164g	Without battery and accessories
whole box	600*400*500mm	22Kg	Shipping box included

Evaluation of indoor environment testing standard

China Indoor air quality standard GB/T 18883-2002

Air Master will display the results on the screen, and give the judgment ⊘ Excessive or ✔ normal . Air Master is using national standard GB/T 18883-2002 and American standard to evaluate the detecting results.

	parameter	units	standard value	Remarks
1	PM2.5	ug/m^3	< 50	daily average value
2	PM10	ug/m^3	< 50	daily average value
3	Formaldehyde(HCHO)	mg/m^3	< 0.10	1 hour average value
4	TVOC	mg/m^3	< 0.60	8 hours average value
5	Carbon dioxide(CO2)	ppm	< 1000	daily average value
6	TEMPERATURE	°C	16~28	
7	RH	%	30~80	
8	FRESH AIR	m^3/h*p	>30	
...	...			

Indoor contaminant has a cumulative effect. It is necessary to shut the doors and windows for 12 hours before testing. The indoor measurement needs at least 10 minutes. The recommended test temperature should be consistent with the national standard method. The room temperature is 25 degrees Celsius and 1 standard atmosphere (101.325 kPa).

The volatility of formaldehyde and TVOC has a great connection with temperature and humidity. If it is a multi-sample comparison, the same test conditions must be applied.

Since the AIR MASTER series detectors use the principle of electrochemistry to test formaldehyde, it is necessary to eliminate the possibilities of some cross-interference during the test. It is recommended to thoroughly ventilate the room first, then close the doors and windows for 12 hours to prepare for measurement.

For sensitive people, babies, patients with respiratory diseases, should determine the air quality based on the sense of body. The air quality and the correspond reading values is listed below:

Parameter	Excelent	Good	Moderate	Unhealthy	Hazardous	
PM2.5	10	30	50	100	300+	ug/m^3
HCHO	0.01	0.05	0.08	0.10	0.3	mg/m^3
TVOC	0.20	0.40	0.60	1.5	3.0	mg/m^3
CO2	450	750	1000	1500	3000	ppm

Typical Performance Characteristics
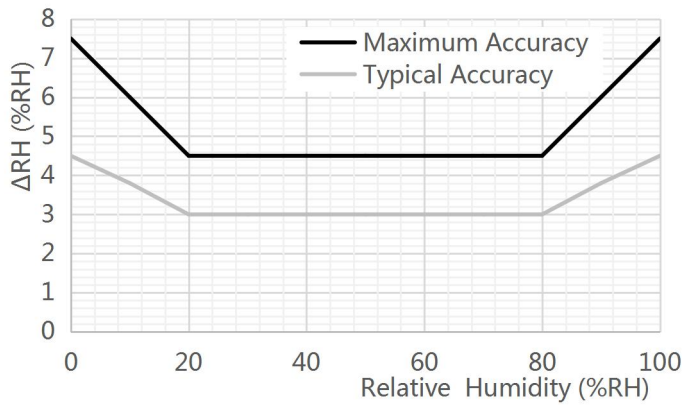
Figure 1 Relative humidity accuracy
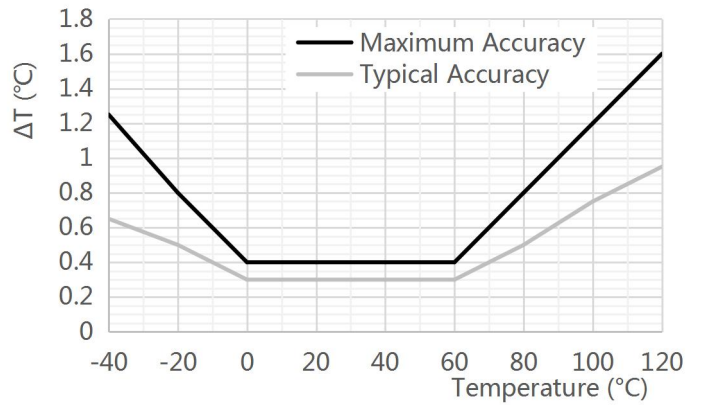
Figure2   Temperature accuracy deviation

Figure 1 Typical and maximal tolerance at 25°C for relative humidity. For extensive information see " SHT20 Data-sheet" .

Figure 2 Typical and maximal tolerance for temperature sensor in °C.
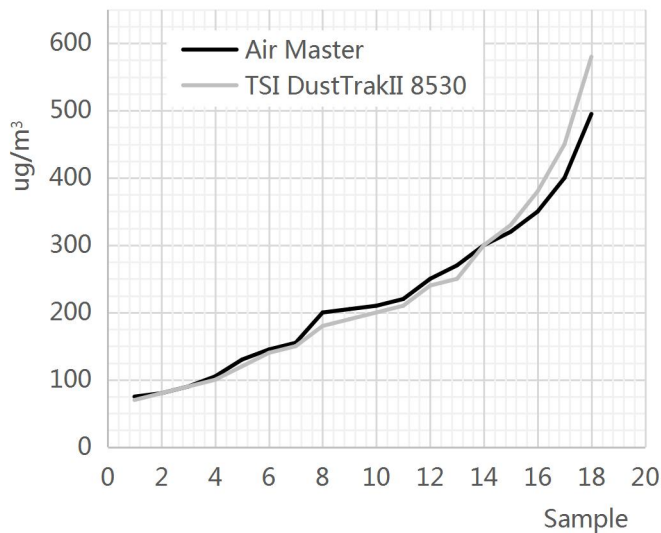
Figure 3 PM2.5 Accuracy
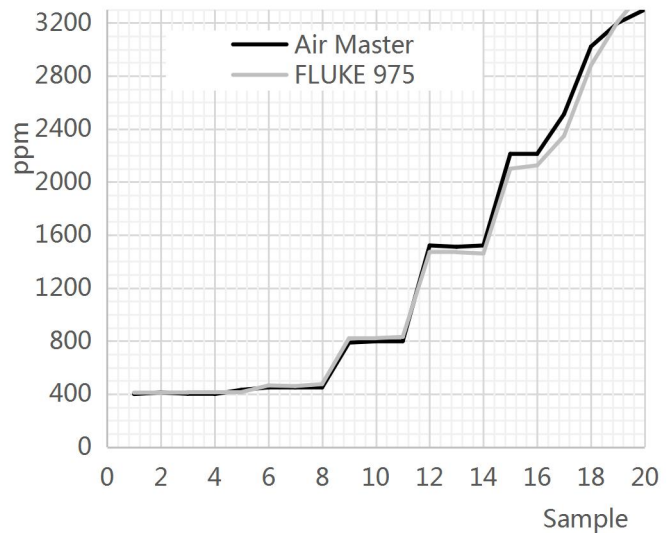
Figure 4 CO2 Accuracy

Figure 3 Typical tolerance at 25°C for PM2.5 accuracy.

Tested gas was using cigarette smoking kernel. Comparing with TSI company' s product DUSTTRAKTM II8530.

Figure 4 Typical tolerance at 25°C for CO2 accuracy.

Under standard circumstance, Comparing with FLUKE 975.
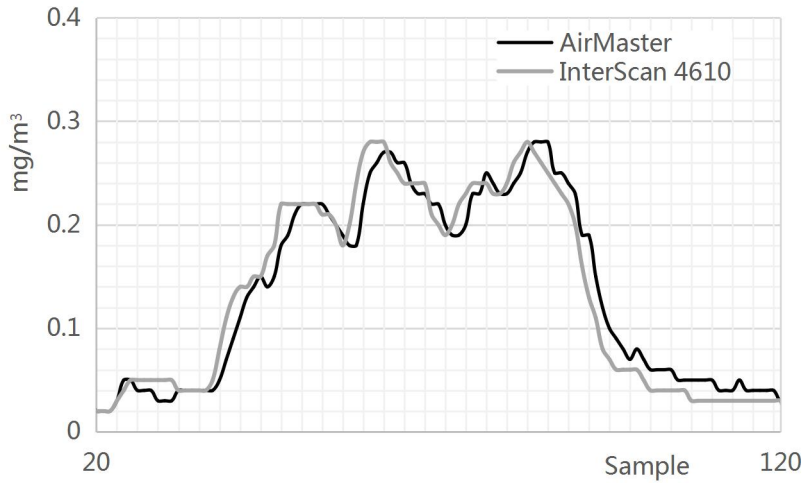
Figure 5 Formaldehyde(HCHO) Accuracy

Table 1 Cross-Interference

Substance	Cross Sensitivity(%)
CO	1
H_2S	No data
H_2	0.1
SO_2	12
NO_2	No data
NO	No data
Cl_2	-3
C_2H_4	No data
NH_3	0.0
CO_2	0.0
Ethanol, methanol	50
Phenol	7
Water vapour	0.0

Figure 5 Typical tolerance at 25°C for Formaldehyde(HCHO) accuracy.

Please noted that in the above comparison test, we were using the pure Formaldehyde (HCHO) gas to make straight contact. However, in the actual home test scenario, other cross-interference gases may be mixed in the air, resulting the readings into uncertain deviations. For more details, please refer to Table 1. Therefore, in the actual production process, we used mixed formaldehyde gas containing TVOC to calibrate the parameters of the machine, in order to neutralized the cross interference of TVOC to formaldehyde sensor that may exist in the home decoration pollution.
If you need to measure the pure formaldehyde concentration, we can also provide models without corrected parameters. To meet some other specific measurement needs. For details, please contact the seller.

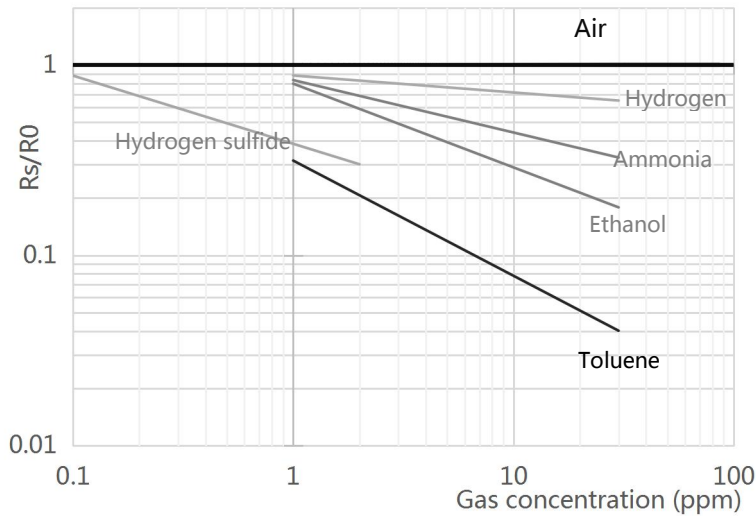**Figure 6 TVOC Sensitivity Characteristics**
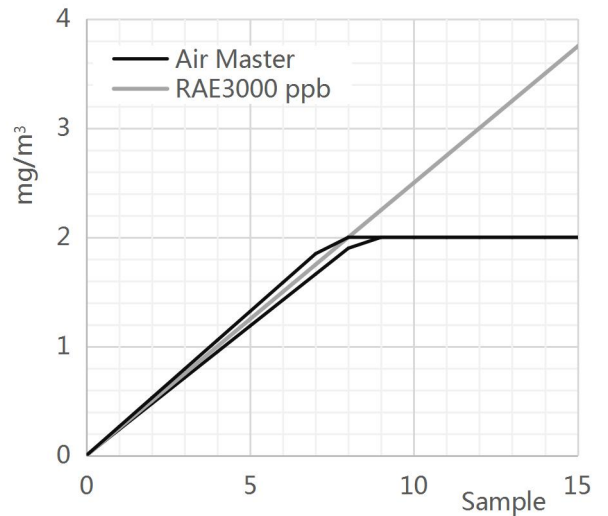
Figure 7 TVOC Accuracy

Figure 6 Typical sensitivity characteristics, all data having been gathered at standard test conditions. The Y-axis is indicated as sensor resistance ratio (Rs/Ro) ,This value stands for sensitivity of the sensor, with more rapid reading changing, more sensitive the sensor reacts to this type of gas.
Figure 7 Typical tolerance at 25°C for TVOC accuracy. Testing accuracy is The maximum range of TVOC is 2 mg/m^3, Measurement accuracy is ±0.1mg/m3

AIR MASTER Operating Manual

Cautions

- Please put the device on the desk while using it, make it straight against the table will help you to get the correct reading values. If you want to use it when walking outside or moving, please do not cover the right and left sides of the device, it will influence the sensor of temperature and Formaldehyde(HCHO).

- Do not use it on the bed. It may cause test values drifting, and it is not safe to use.

- When using this device after calibrating, it will still need 10 more minutes to finish the self-adjusting process to make sure getting the correct reading values.

- If there is a need to get more accurate Formaldehyde(HCHO) reading values, please shut down the tested venue's windows and doors for at least 12 hours. (International standard)

- Do not use this device in a severe contaminated environment. It will cause the sensory overload and may leave damage to the sensor permanently.

- The dusty surrounding environments will jeopardize the laser sensor of PM2.5/10 detector. the result of PM readings could be much lower than the real data.

- Please do not short-circuit the battery, do not put the device under high-temperature circumstance or any other environment that can leave damage to this electronic device.

- Stay away from silicon steam, shampoo or other chemical reagents. Do not use a plastic bag to store the device for a long time.

- For preventing long-term drift, seasonally calibrate the product and set it into background values every month to maintain optimum performance.

- 11. When under outdoor environment for calibrating baseline background values, try to do it in a clear and sunny day with PM2.5 <50 ug/m^3. It can help detector get a cleaner background reference value, which will improve the accuracy.

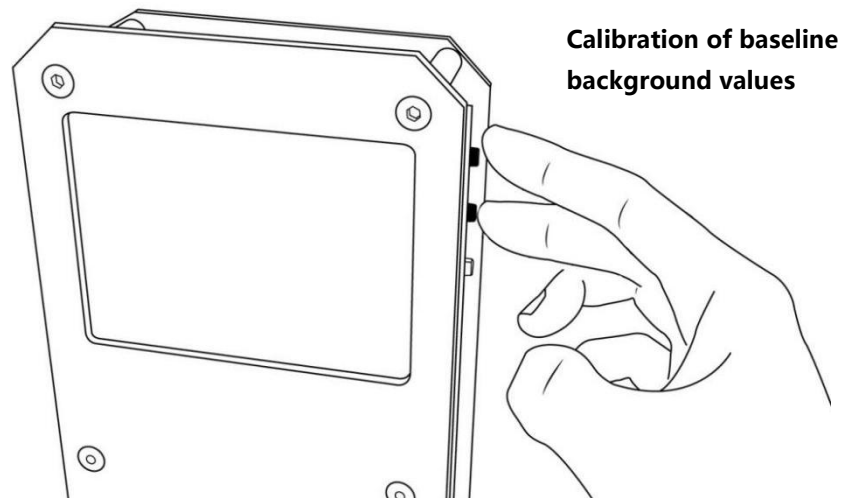## Calibrate device and set baseline background values Before Using
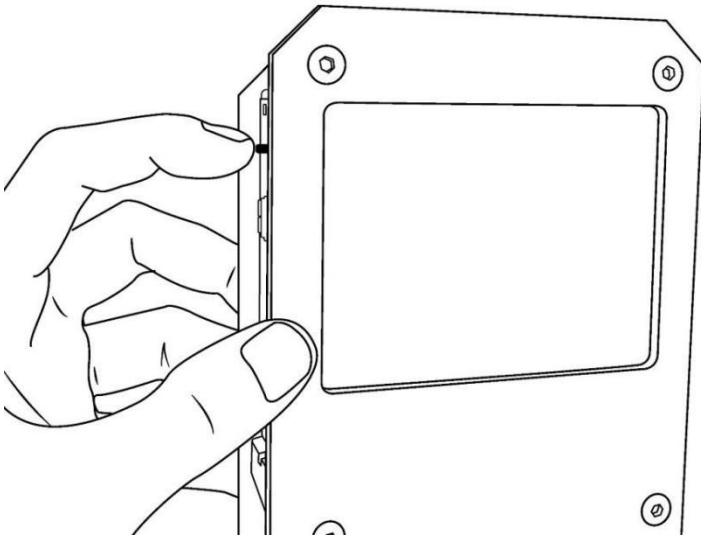
Unpack the package for the first time and turn on the device for at least 3 hours. Plug in the USB charger and turn it on continuously for more than 3 hours. The purpose is to let the sensor components heat itself and dissipate the plastic smell in the package. During this process, the TVOC values will gradually decrease, which is the normal process of the sensor itself to preheat and remove pollutants which can interfere with the testing results.

After 3 hours processing, keep the device powered on, and move it to outdoor to achieve the baseline background reading values.

In order to obtain accurate TVOC and formaldehyde values. Please keep it on after 3 hours of booting, then leave the device outdoors for 20 minutes (the temperature is required not under -10 Celsius, and the weather should not be overcast or rainy) until the value is reduced to a minimum, it is possible that both TVOC and HCHO are 0, or have some background values. At this time, press and hold the right side keys both 1 and 2 for 3 seconds. After releasing the button you should hear a beeping sound, and the display values change the color. The baseline background reading calibration of the sensor will be complete after that.

After reading values calibration, the reading values of HCHO should be 0.01mg/m^3, and the TVOC should be 0.00~0.14mg/m^3, which is the background value. The device is good to use with the calibration done properly.

The calibration process is suggested to be done every other month after using. There is no need to calibrate the device every time.

Calibration of baseline background values

Checking device battery state

Plugging in the USB cable and a green LED light will remain flashing at the lower left corner of the screen, indicating the battery is in charging state. The light each time flashes once, indicating the battery power remains less than 25%. Turn off the device and this LED remains solid, it means the battery is fully charged. The battery can be used for about 6 hours. Please charge the device with a charger specification of 5 volt, 1A or above.

How to Operate and Button function

1 .Page

2 .Funciton

3 .TF Card

4 .WIFI mode
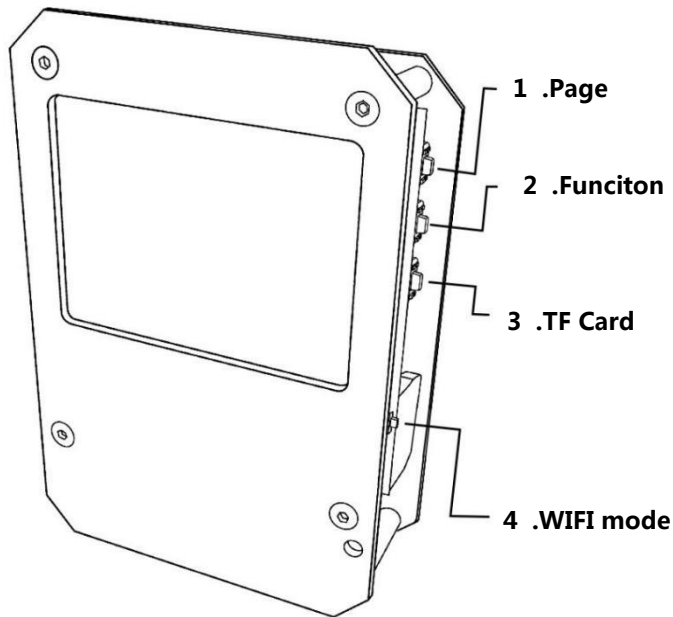
1, Side button 1 - Change the page of display

2, Side button 2 - On the second screen long press for three seconds to clear history data, unlock time adjustment(time could also be synchronized after connecting with the Internet).

While turning on the device at the starter interface, press button 2 can switch language into Chinese/English.

3, Side button 3 - On the first screen, press and hold for 3 seconds to turn on/off the SD (TF) data recording.

4, Side button 4 - Press and hold for 4 seconds to turn on/off Wifi connection (users form none mainland China area can not using Wifi connecting function for now)

5, Side button 1+ 2 - On the first screen Press 1+2 button for 3 seconds at the same time, to calibrate the HCHO and TVOC baseline background reading values (Noticed that device should be powered on and operate after 20 minutes under outdoor environments).

6, Side button 1+ 3 - On the first screen Press 1+3 button for 3 seconds at the same time, to only calibrate the TVOC baseline background reading values (Notice that device should be powered on and operate after 20 minutes under outdoor environments).

Calibration of CO2 to 400ppm
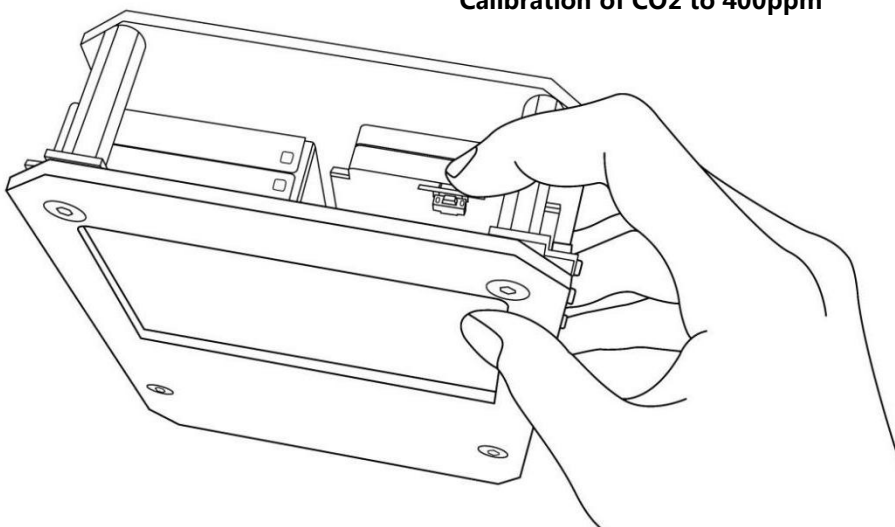
7 , Calibrate CO2 function

On the top of the S8 0053 sensor module, there is a small button, long press it for 7 seconds, you can calibrate the CO2 value and set it back to 400 ppm. Please note that this operation is not required very often. However, if you want to adjust the CO2 values, you need to turn the machine on for more than 20 minutes, and press the button outdoors.

Do not hold the button for more than 15 seconds. Otherwise a numerical error will occur. Please repeat the operation above to set it correct.

User Interface function introduction

Firmware 2.7 version welcome interface

On this interface, users can press the function button No. 2 to switch the display language. AIR MASTER series products currently supports Chinese, and English.

Main pollution indicators

Air Master will display the results on the screen, and give the judgment ⊘Excessive or ✔ normal . Air Master is using national standard GB/T 18883-2002 to evaluate the detecting results.
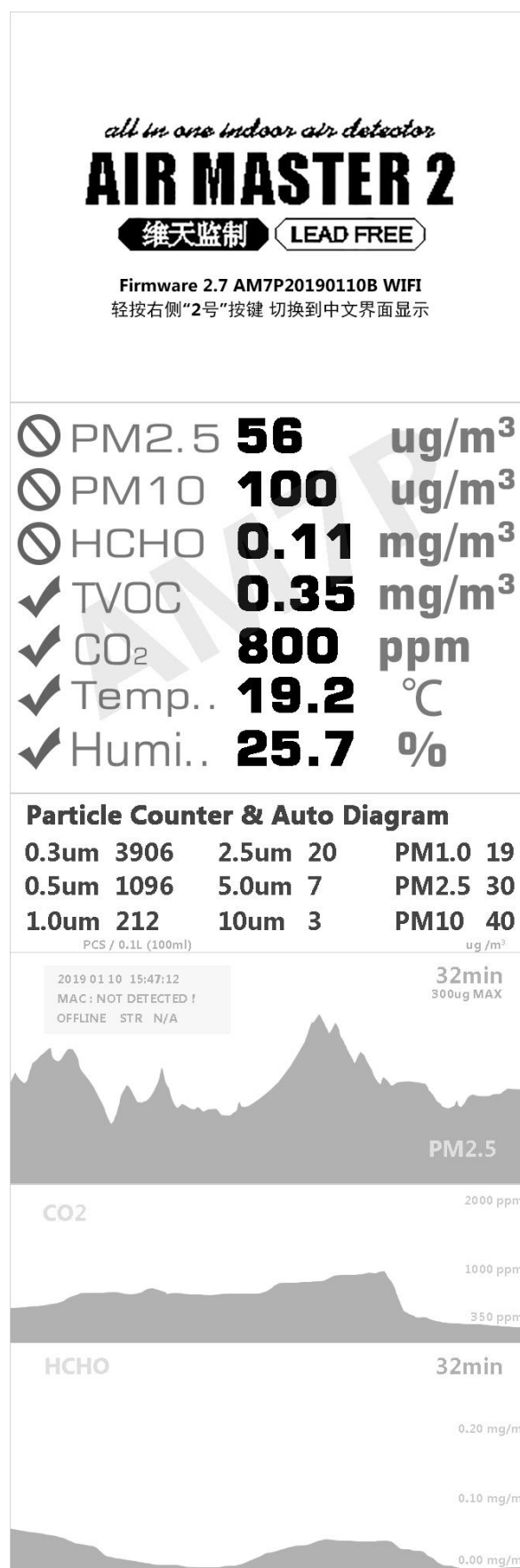
Particle detection counter and PM2.5 chart

This interface mainly displays data related to particles. It includes 6 particle counters, counting scales from 0.3um to 10 um, the unit of the data is PCS/0.1L. This item is for reference only and is not used as a quantitative basis. The lower side is the concentration curve of PM2.5. Shows the recent 32min pollution situation.

CO2 and HCHO chart

This interface shows the curves for two contaminants, CO2 and formaldehyde.

The user can clear the current chart by long pressing the function button No. 2. You can also set the chart duration by pressing the function button No. 2 after clearing the chart. AIR MASTER supports curve recording from 32 minutes to 12 hours. The recording function does not require a TF card. If you want to change the display real time clock, please refer to the following sections.

all in one indoor air detector

AIR MASTER 2

维天监制 LEAD FREE

Firmware 2.7 AM7P20190110B WIFI
轻按右侧"2号"按键 切换到中文界面显示

⊘	PM2.5	**56**	ug/m³
⊘	PM10	**100**	ug/m³
⊘	HCHO	**0.11**	mg/m³
✔	TVOC	**0.35**	mg/m³
✔	CO₂	**800**	ppm
✔	Temp..	**19.2**	℃
✔	Humi..	**25.7**	%

Particle Counter & Auto Diagram

0.3um	3906	2.5um	20	PM1.0	19
0.5um	1096	5.0um	7	PM2.5	30
1.0um	212	10um	3	PM10	40

PCS / 0.1L (100ml)   ug /m³

2019 01 10 15:47:12
MAC : NOT DETECTED !
OFFLINE STR N/A

32min
300ug MAX

PM2.5

CO2   2000 ppm

1000 ppm

350 ppm

HCHO   32min

0.20 mg/m³

0.10 mg/m³

0.00 mg/m³

Using TF card to record the reading data

First need to purchase a new TF card and format it into FAT32, the device support maximum 32GB extension, here we recommend 8GB TF card.

The data will be recorded every 4 seconds. that include 7 major environment elements values, date and time. It will produce about 1MB data everyday. Using card reader to connect the TF card to computer and the data can be edited in Excel.

	A	B	C	D	E	F	G	H	I	J
1	INVALID	DATE	TIME	PM2.5	PM10	HCHO	VOCs	CO2	TEMPERATURE	HUMIDITY
2	*	2017/2/20	0:16:27	26	29	0.02	0.16	410	23	20
3	*	2017/2/20	0:16:31	25	27	0.02	0.16	410	23	20.9
4	*	2017/2/20	0:16:37	26	27	0.02	0.16	410	23	20.5
5	*	2017/2/20	0:16:41	27	32	0.02	0.16	410	23	20
6	*	2017/2/20	0:16:47	28	32	0.02	0.16	410	23	19.7
7	*	2017/2/20	0:16:51	30	33	0.02	0.16	410	23	19.8
8	*	2017/2/20	0:16:57	30	32	0.02	0.16	410	23	19.8
9	*	2017/2/20	0:17:01	29	36	0.02	0.16	410	23	19.6
10	*	2017/2/20	0:17:07	30	36	0.02	0.16	410	23	19.8
11	*	2017/2/20	0:17:11	30	39	0.02	0.16	850	23	19.6
12	*	2017/2/20	0:17:17	29	34	0.02	0.16	850	23	19.8
13	*	2017/2/20	0:17:21	30	32	0.02	0.16	840	23	19.8
14		2017/2/20	0:17:27	24	26	0.03	0.16	840	23	19.8
15		2017/2/20	0:17:31	23	23	0.03	0.16	840	23	19.9
16		2017/2/20	0:17:37	23	24	0.03	0.16	840	23	19.8
17		2017/2/20	0:17:41	23	24	0.03	0.16	830	23	19.9

Enable the TF recording function

1、 Turn off device, inset the TF card on the right side. Turn on the device and the data will be automatically recorded on the card. User can see a recording sign on the screen , it means the recording function is activated.

2、 Users who do not want restart the device can also activate recording function. Insert TF card, holding button 3 for two seconds, and the recording will be activated.

The way to stop recording is similar, holding button 3 for 2 seconds and the recording sign will disappear from screen, the recording function is shutting down, and TF card can be removed safely.If the user is not remove TF card like what described above, it will probably damage the data even the TF card itself. so please remember to stop the recording function then remove the TF card.

Timestamp synchronization

Users can connect the device by using serial port, connect it with computer by USB cable, and install CP2012 driver on the computer. and use the Serial port utility to transfer time adjusting command on the computer.(you can find the software and drives in attachments). the sending message is demonstrated in the screenshot below. after clicking the send button, the data in TF card will be updated and the time will be changed, too.

AT Instruction

NO.	Function	Command	Example
1	Time stamp synchronization	at+time=YY/MM/DD/hh/mm <\r><\n>	at+time=2017/02/13/02:53 <\r><\n>
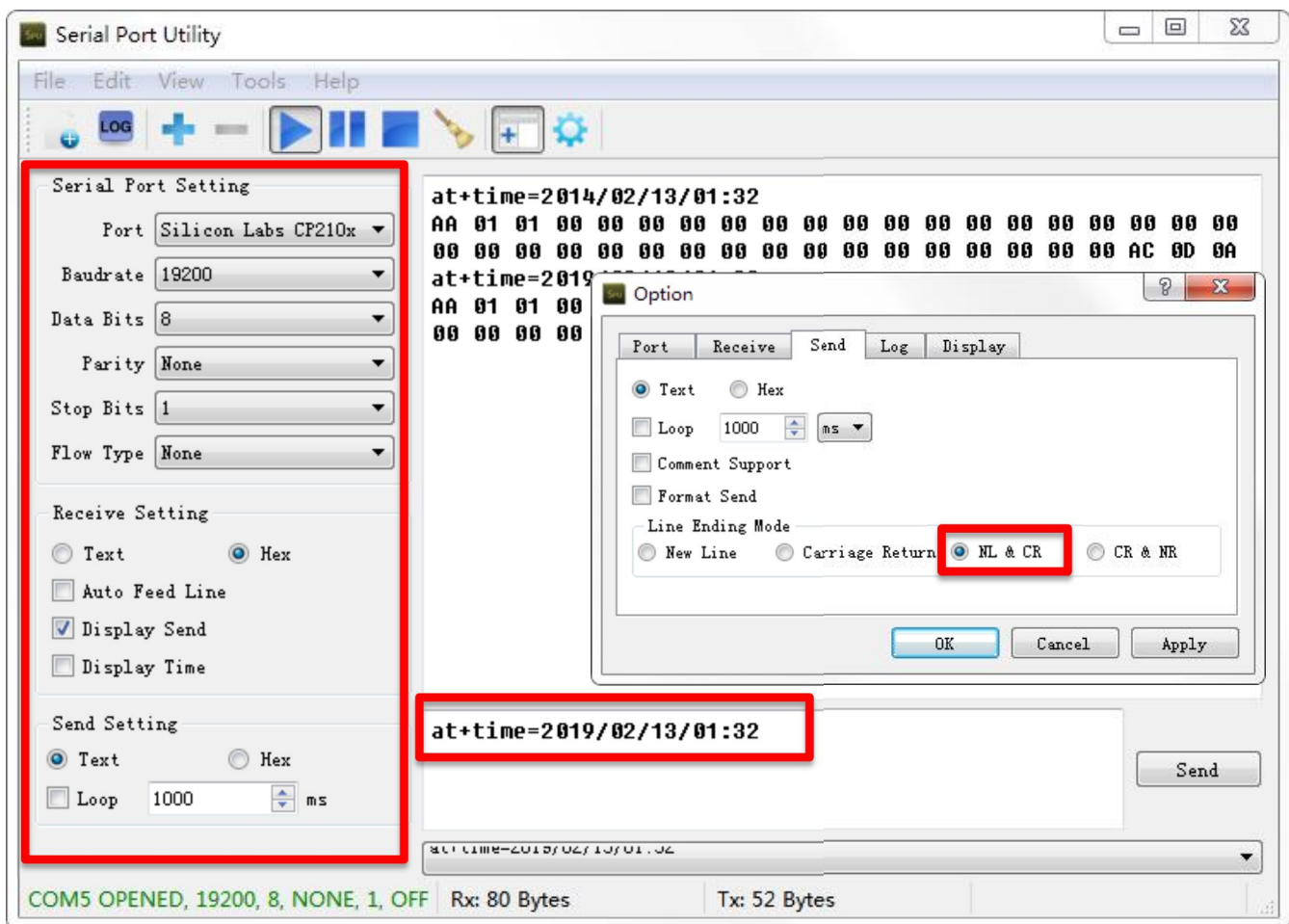
When using the serial port to send the serial command, please notice that the end identifier is "NL & CR", the default baud rate for communication is 19200 bps, 8N1, and use lowercase for sending "at" instructions.

Tip: If you want to synchronize the time automatically, you can also use the following UI interface, or connect the device to the WIFI network (users from outside mainland China can't connect to the network temporarily).

User Interface (Base on LabVIEW)

AirMaster connects to a computer and synchronizes system time automatically .

Users can use the USB serial port to transfer data with the device by connecting the USB to a computer, install the CP2012 driver, and run the Air Master Control Panel software on the computer. The computer will automatically synchronize the system time of the AirMaster and display the real-time pollution data.

Specific steps are as follows:
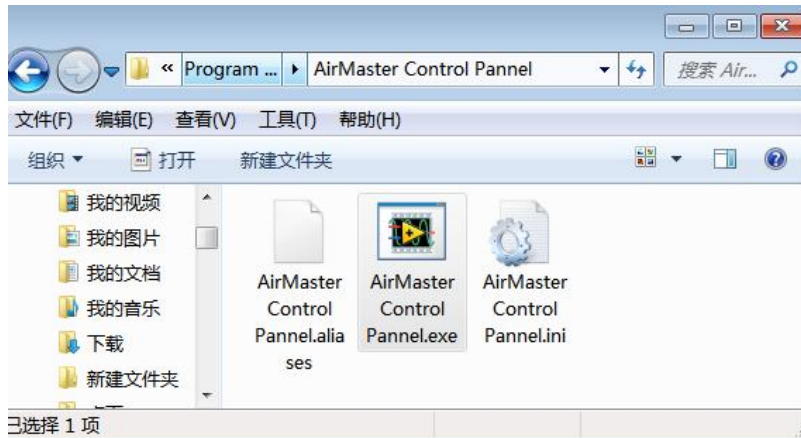
1, First extracts and install Air Master Control Panel and serial driver CP210x_Windows_Drivers.

2, Find the AirMaster Control Panel installation directory under C:\Program Files (x86)\AirMaster Control Panel

3, Run AirMaster Control Panel.exe.

4, Select the corresponding serial port number. You can find the serial number of the device in the system device manager. Silicon Lab CP210x corresponds to the serial port number (COM3). Click OPEN to read the data normally.

The baud rate is 19200 bps and there is no need to medicate the value. After clicking the OPEN button, the device and the computer will be connected.

If users want to change the value of the ordinate of the chart or adjust the display style, Right-clicking on the dynamic chart and find the setting function.
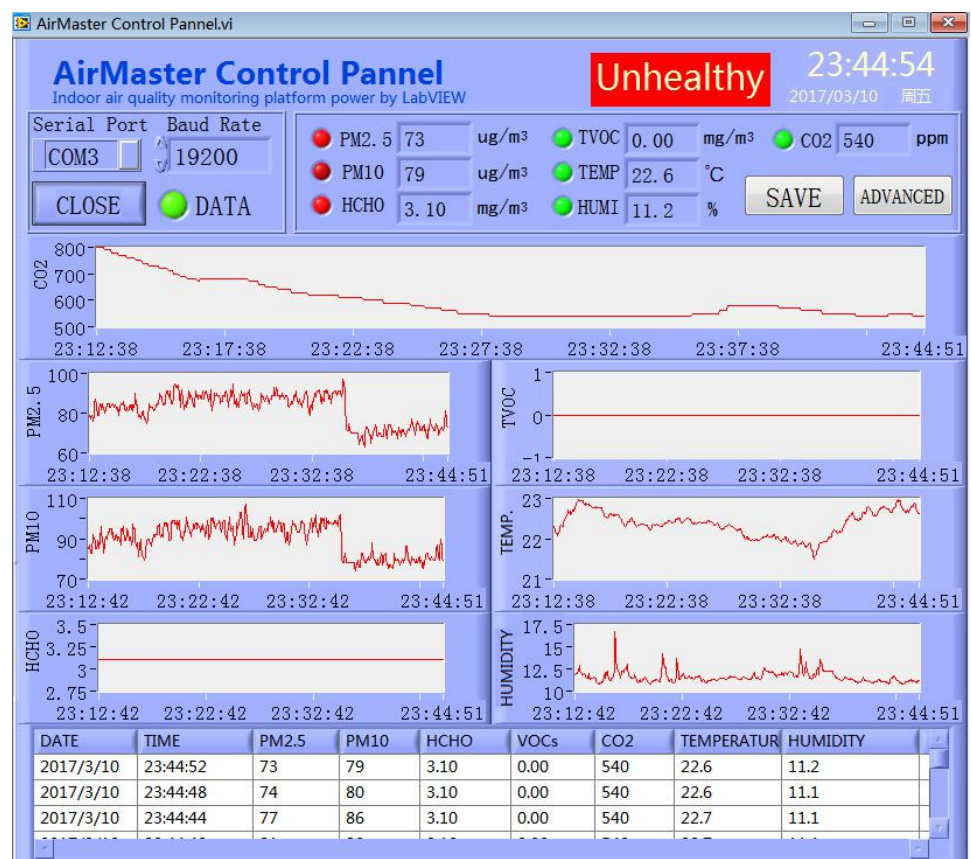
Firmware Update

Turn the device on and connect to the computer via USB. Use the Xloader serial burning software to update the firmware. In the software UI please selected and change the device model into Mega (ATMEGA2560), please notice do not choose the wrong section. For specific setting, please check the picture on the right. In the HEX file column please selects the latest .hex firmware file, which is usually stored in the root directory of the firmware package.

 After the setting is completed, click Upload, the device will flash and enter the programming state, which takes about 30 seconds. It will restart automatically after successfully burning the firmware.

 Turn on the device, At the start up interface which shows the brand logo, check the firmware version under to determine whether the update is successful.
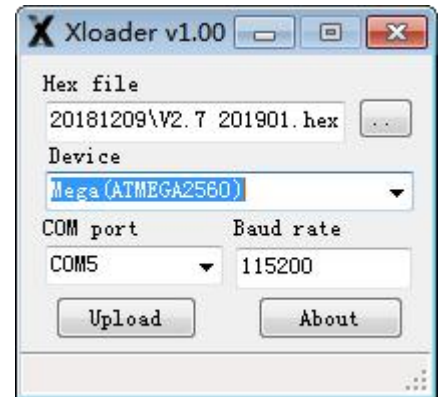
Common questions

1.   How to test in normal condition?

Turn the device on for 10 minutes under testing environment, then you can check the data.

2.   How to test formaldehyde accurately?

1, Keep indoor ventilate.
2, Keep the doors and windows shut for 12 hours.
3, Do not use perfume, face cream, facial milk in the room. In order to avoid test data interfere, alcohol and other artificial chemicals are forbidden using in the room, too.

3.   Why are the TVOC values always display 0?

The reason is that you have not done the reading calibration properly, or you have committed incorrect operation while using the device. Please follow the steps above to calibrate the device outside.

4.   Formaldehyde(HCHO) value is suddenly high?

When users preparing the dinner, the HCHO values will be higher because of excessive accumulation of organic matter in the room.If you encounter sudden formaldehyde reading increase, pay attention to whether there are any cooking, alcohol, perfume (fragrance gas), smoking, etc. in the environment. When testing formaldehyde, you need to avoid these artificial cross-interference factors. The test is recommended to ventilate first, then sealed the chamber for 12 hours. Testing rooms that are not in check-in states would work best.

5.   If the HCHO formaldehyde reading is between 0.08 to 0.09, can I move in?

If the test room is already a room where someone has settled. Then this value may indicate that the room is not suitable for living in, Please keep indoor ventilate, while the reading values decreased to 0.05. Generally, by completely changing the air circulation, it can be lowered to 0.05, which is safe for people to stay. If it is a new home, no one is stationed, despite there is no human interference, the value is 0.09, or even higher than 0.1, that means the HCHO is at a danger level, ventilation is considered for a period of time before moving in.

6.   The components are not plugged in? How to check?

The sensor parts are all hot-swappable, and if a sensor probe is not plugged in, N/A will appear on the screen in place of numbers.

7.   How to keep the device while not using it?

Do not kept the device in a sealed plastic bag, as this will affect the long-term performance of the chemical probe, and may cause permanent damage to the sensor . It is recommended to place the device in a clean, ventilated box.

8.   Keep connecting with the USB cable and charging the device, does it affect the using life?

The instrument can run continuously for 7*24, however, the mechanical parts inside the machine sensor will wear out in long-term operation. Continuous using throughout the year will shorten the life of the detector probe. In addition, the lithium battery is in a fully charged state for a long time, which will shorten storage of the battery.

Equipment failure problems analysis

1.   No display screen, screen freeze, or text error?

Most of the screen freeze(display values can no longer change, stuck at the starter screen), and bugs are caused by device FLASH area is rewritten, need to burn the firmware is required while these problems occur.

Solution:

For firmware burning, the device should be connected with PC by USB cable, and download this upgraded firmware on PC, which is a small sized zip file , the firmware could be updated on the computer. https://pan.wps.cn/l/sLw0rwC1Y

2.   Unable to connect and using the Wifi to transfer data?

The device does not recognize while using the official account.The device can only be connected with 2.4G WIFI signal. If the router comes with the 5G signal or a dual-band mixed signal. Solutions for this scenario will be turn off the router's 5G band first, using a smartphone to link 2.4G Wifi first, then scan the QR code. After the link is established, the phone can go back to connect the 5G network of the router.

3.   There is strange noise when using the USB cable to charge, the device can't boot normally?

There is buzzing sound, which is mainly caused by the battery not being powered. Generally, the battery is damaged, or the battery is in a disconnected state, and the battery has poor contact with the positive and negative electrodes (the metal dome is flattened or stained).

Solution:

1, Charging 20 minutes, see if the battery is connected.

2, Remove the battery and check if the metal shrapnel on both sides is squashed. You can lever it up with a pen tip or something sharp to make the battery back to normal state.

3, After reinstalling the battery, plug in the USB cable to check if it can be turned on.

4, If not, please replace the battery.

5, If still not working, please contact customer service.

4.   The device suddenly turns into the white screen?

The cause of this problem is mostly related to static electricity or bad screen soldering.

If the white screen is caused by pressing a button, the system may be frozen. Please follow the solution of the first problem to update the firmware.

For hardware problems, please contact customer service.

5.   The device has abnormal noise?

As long as the device has a mechanical part, this problem will not be avoided. The noise mostly comes from the PM2.5/10 device components, which has a fan inside. Replace this part if it has any abnormal sound.

6.   Does the humidifier cause PM2.5\PM10 data to rise?

The water mist of the humidifier will cause the PM to rise because the laser device will be blocked by small droplets. Please keep the device away from the humidifier.