Temtop

AIRING-2000
Handheld particulate
matter monitor

Introduction

The AIRING-2000 is a small, lightweight, battery-powered, multi-functional handheld particulate mass monitor. Three channels output counts of 0.3µm, 0.5µm, and 1.0µm, particulate matter. It also features PM2.5, PM10, TSP, temperature and humidity, and historical data.

The large screen display and seven-button operation are simple and efficient, making it suitable for quick tests in various scenarios. The built-in high-performance lithium battery allows the instrument to run continuously for at least 4 hours. Meanwhile, the AIRING-2000 has 32GB of built-in storage so that test data can be viewed directly on the display or use a USB stick to export to a PC via the USB port for viewing and analysis.

Important!

★ Do not expose the detector to heavily contaminated environments for long periods, as this can damage the sensor.

★ Do not come into contact with organic solvents, whichinclude silica gel and other adhesives, paintings, drugs, oil and high-concentration gases.

★ Do not use the detector in a humid environment to maintain detection accuracy.

★ Do not cover the air inlet/outlet when using the detector.

★ Do not dismantle the unit yourself. In the event of a defect, contact your dealer instead, who will liaise with the service center and, if necessary, send the device in for repair.

★ Children should only use this device under adult supervision. Keep packaging materials, such as plastic bags and plastic wrap, out of the reach of children as they present a choking hazard.

Overview

Fig.1

① Temperature & Humidity Detection Channel   ② LCD Screen   ③ Power Button
④ Back Button   ⑤ OK Button   ⑥ Intake Duct   ⑦ USB Port
⑧ TYPE-C Port   ⑨ Measure/Wait Button   ⑩ Menu Button   ⑪ Up Button
⑫ Down Button   ⑬ Air Outlet

Specifications

Model	AIRING-2000
Dimensions	228x115x70mm(9x4.5x2.8 in)
Battery Capacity	3500mAh
Battery Life	>4h
Charging Output	DC5V, 2A
PM2.5	Range: 0-9999.9µg/m^3 Resolution: 0.1µg/m^3 Accuracy: ±10µg/m^3 (0-100µg/m^3), ±10% (>100µg/m^3)
PM10	Range: 0-9999.9µg/m^3 Resolution: 0.1µg/m^3 Accuracy: ±10µg/m^3 (0-100µg/m^3), ±10% (>100µg/m^3)
TSP	Range: 0-9999.9µg/m^3 Resolution: 0.1µg/m^3 Accuracy: ±10µg/m^3 (0-100µg/m^3), ±10% (>100µg/m^3)
0.3µm, 0.5µm, 1.0µm	Range: 0-9999999 P/L Resolution: 1 P/L Accuracy: ±30%
Temperature	Range: 0-50°C (32-122°F) Resolution: 0.1°C Accuracy: ±0.5°C (±0.9°F)
Humidity	Range: 0-99%RH Resolution: 0.1% Accuracy: ±5%RH

Note: The above data are from Temtop Laboratory.

Operation

⚠ **Warning!**

★ Indoor use: Keep the room/area airtight for 10 minutes to obtain more accurate results.

★ If battery level shows ▭, please charge the detector promptly to avoid effects during use (also chargeable when turned off).

1. Power ON

Press and hold 🔘 button for 2 seconds to turn on the detector.
After initialization, the instrument enters the default interface.
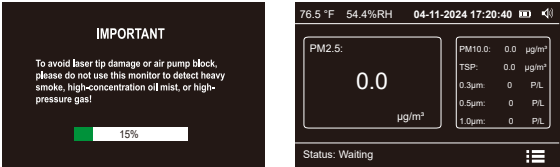It will not start the measurement by default to save the power (Fig.2).

Fig.2

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Press ▶ to start detection, and it will display the real-time data of all parameters.
The instrument defaults to continuous sampling.
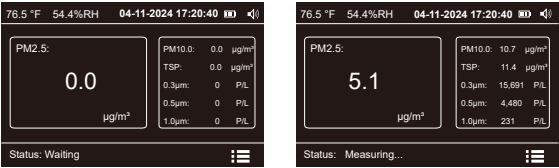During the sampling process, you can press ▶ to pause sampling (Fig.3).

Fig.3

The instrument default PM2.5 data is displayed in the main view box, press ▲ or ▼
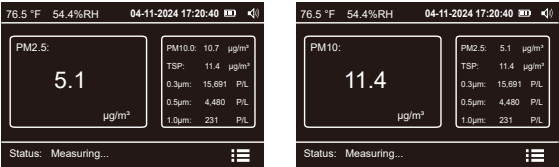to switch the measurement items displayed in the main view box (Fig.4).

Fig.4

2. Setting Menu

Press ☰ to enter the menu screen, then press ▲ or ▼ to toggle between options.
Press ⊙ to confirm your choice to view or change settings (Fig.5).
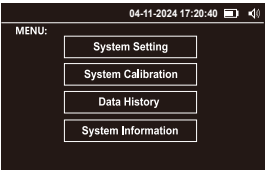
Fig.5

MENU options are as follows:

Menu	Display as...	Description
System Setting	Setting	Set system time, sampling, backlight, and language.
System Calibration	Calibration	Calibrate zero, and k-Factor.
Data History	History	Query, download and delete the data.
System Information	Information	Display system information.

2.1 System Setting

In the system setting interface MENU->Setting, you can set time, sample, backlight adjustment, and language.
Press ⬆ or ⬇ to switch the options (Fig.6) and press ⬛ to enter.
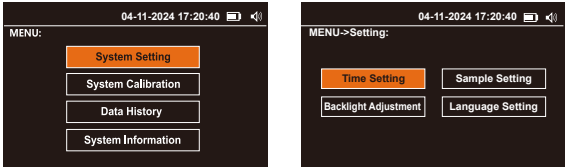
Fig.6

2.1.1 Time Setting

Press the ⬛ key to enter the time setting interface, press the ⬛ key to switch the option, press the ⬆ or ⬇ key to increase or decrease the value, switch to the Save option when the setting is completed, press the ⬛ key to save the setting (Fig. 7).
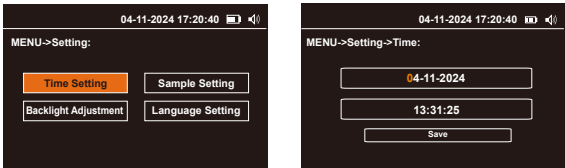

Fig. 7

2.1.2 Sample Setting

In the system setting interface MENU->Setting, press ⬆ or ⬇ to switch to the Sample Setting, and then press ⬛ to enter the sample setting interface (Fig.8).
In the sample setting interface you can set the Temperature Unit, Storage Interval and Warning Setting.
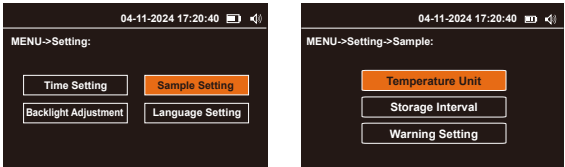
Fig.8

·Temperature Unit

In the system setting interface MENU->Setting->Sample.
Press 🆗 to enter the Temperature Unit interface.
Press 🔼 or 🔽 to select °C or °F.
Then press 🔲 to switch to Save and press 🆗 to save (Fig.9).

04-11-2024 17:20:40 🔋 🔊	**04-11-2024 17:20:40** 🔋 🔊
MENU->Setting->Sample:	MENU->Setting->Sample->Temperature:
Temperature Unit	
Storage Interval	**Temperature Unit:** **°F**
Warning Setting	**Save**
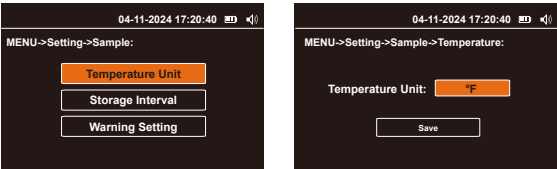
Fig.9

·Storage Interval

In the system setting interface MENU->Setting->Sample.
Press 🔼 or 🔽 to switch to the Storage Interval, and Press 🆗 to enter.
The storage interval 1min, 2min, 5min, 10min, 15min, 30min and 60min is optional.
Press 🔼 or 🔽 key to switch the storage interval.
Then press 🔲 to switch to Save and press 🆗 to save (Fig.10).

04-11-2024 17:20:40 🔋 🔊	**04-11-2024 17:20:40** 🔋 🔊
MENU->Setting->Sample:	MENU->Setting->Sample->Time:
Temperature Unit	
Storage Interval	**Storage Interval:** **1** min
Warning Setting	**Save**
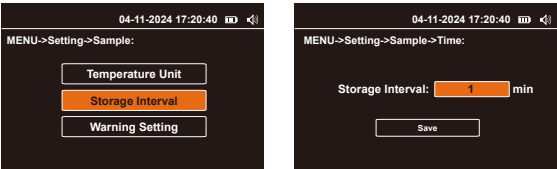
Fig.10

·Warning Setting

In the system setting interface MENU->Setting->Sample.
Press 🔼 or 🔽 to switch to the Warning Setting, and Press 🆗 to enter. Press 🔲 to select the on or off alarm switch.
Press 🔼 or 🔽 to select PM2.5, PM10, TSP, 0.3μm, 0.5μm, and 1.0μm, press 🆗 to select the modification item and press 🔲 to toggle the modified value, then press 🔼 or 🔽 to modify the alarm threshold.
Press 🔼 or 🔽 to switch to Save when the setting is complete and press 🆗 to save (Fig.11).

04-11-2024 17:20:40 🔋 🔊	**04-11-2024 13:31:25** 🔋 🔊
MENU->Setting->Sample:	**Warning Switch:** **ON**
Temperature Unit	PM2.5 0012.0 μg/m² 0.3μm 0050000 P/L
Storage Interval	PM10 0012.0 μg/m² 0.5μm 0050000 P/L
Warning Setting	TSP 0012.0 μg/m² 1.0μm 0050000 P/L
	Save **Default**
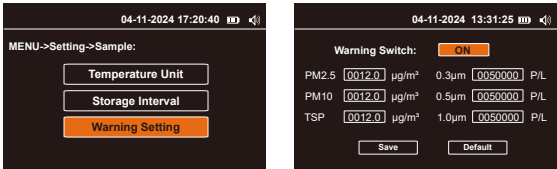
Fig.11

Note: The product factory default settings will be restored when the default settings are made.

2.1.3 Backlight Adjustment

In the system setting interface MENU->Setting.
Press ▲ or ▼ to switch to the Backlight Adjustment, and press ⊕ to enter.
Press ▲ or ▼ to select 1, 2 and 3.
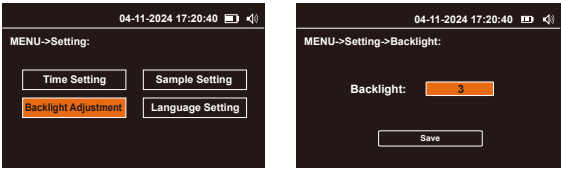Then press ▤ to switch to Save and press ⊕ to save (Fig.12).

Fig.12

Note: The factory default screen backlight level is 3.

2.1.4 Language Setting

In the system setting interface MENU->Setting.
Press ▲ or ▼ to switch to the Language Setting, and press ⊕ to enter.
Press ▲ or ▼ to select English or 中文.
Then press ▤ to switch to Save and press ⊕ to save (Fig.13).
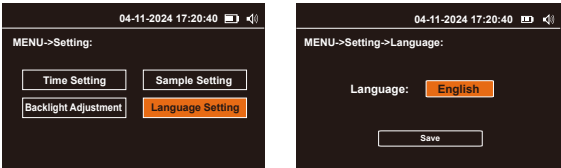
Fig.13

2.2 System Calibration

In the system calibration interface MENU->Calibration, you can operate
Zero Calibration and K-Factor Calibration.
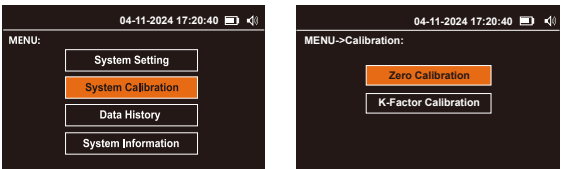Press ▲ or ▼ to switch the option and press ⊕ to enter (Fig.14).

Fig.14

2.2.1 Zero Calibration

Under the Zero Calibration interface, press ⬛ to start calibrating.
It takes about 90 seconds countdown. After the countdown finishes, the display prompts a reminder to confirm the calibration finishes successfully and will return to the MENU-Calibration interface automatically (Fig. 15).
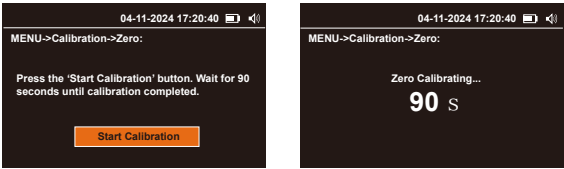

Fig.15

2.2.2 K-Factor Calibration

Make sure the instrument is in a stable environment.
Press ⬛ to perform a K-factor mass concentration calibration. The product will turn on the pump and collect data for 60 seconds, then proceed to the K Factor Mass Concentration Calibration screen.
Press ⬛ or ⬛ to switch the cursor, press ⬛ to select the modification item, and press ⬛ to toggle the modified value, then press ⬛ or ⬛ to increase or decrease the value.
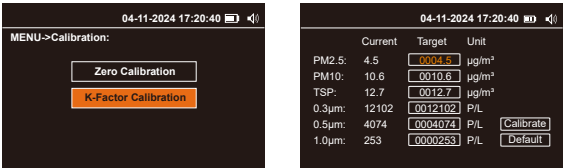Press ⬛ or ⬛ to switch to calibrate after the setting is completed, press ⬛ to calibrate (Fig.16).

Fig.16

Note: The product factory default settings will be restored when the default settings are made.

2.3 Data History

In the data history interface MENU->History, you can operate Data Query, History Download and History Deletion.
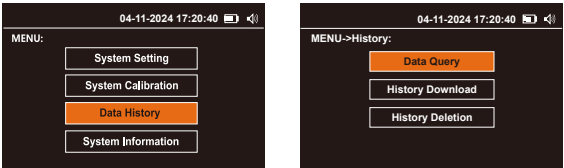Press ⬛ or ⬛ to switch the option and press ⬛ to enter (Fig.17).

Fig.17

2.3.1 Data Query

In the query interface, you can press month data. Press 🔳 to enter the month selection interface, by default the system will automatically recommend the current month. If you need data for other months, you can press 🔼 or 🔽 to increase or decrease the value. When finished, press 🔳 to switch to the query and press 🆗 to enter the query (Fig.18).
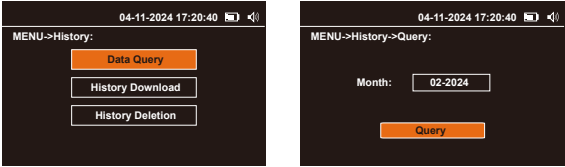

Fig.18

2.3.2 History Download

In the History Download interface, insert a USB device such as a USB flash drive or card reader into the USB port of the monitor, If the USB device is successfully connected, press 🆗 to download the data (Fig. 19).
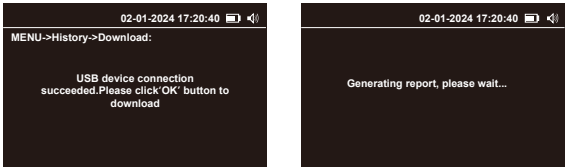

Fig.19

After downloading the data, unplug the USB device and insert it into the computer to find a folder prefixed with the product serial number, for example, "TT1246070001-062120241754". You can view and analyze the data now.
If the USB device fails to connect or there is no USB device connected, the display will prompt a reminder. Please reconnect it or try again later (Fig. 20).

Fig.20

2.3.3 History Deletion

In the History Deletion interface, data can be deleted by month or all.
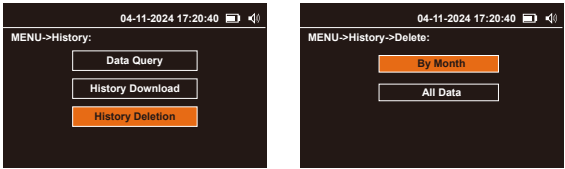Press ▲ or ▼ to switch options and press ◉ to enter (Fig. 21).

Fig.21

• By Month

For the Monthly Data interface, the current month will auto display by default. If you need to delete other months, please press ▤ switching to the year and month options, then press ▲ or ▼ to increase or decrease the value. After complete, press ▤ to switch to Delete and press ◉ to complete the delete(Fig.22).
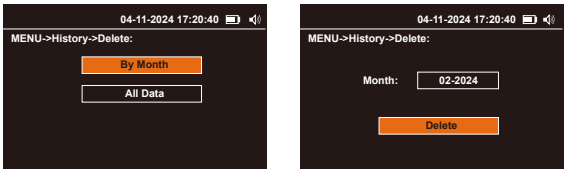
Fig.22

• All Data

For the All Data screen, the display will prompt 'Are you sure you want to delete the data?' Press ◉ to confirm the deletion (Fig. 23).
Wait for the deletion to complete, if the data has been successfully deleted the display will prompt a reminder and automatically return to the Menu-History screen.
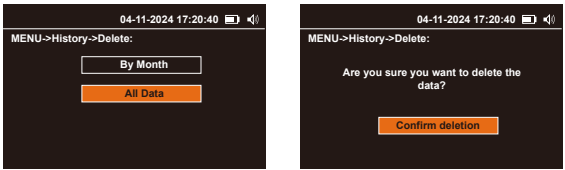
Fig.23

2.4 System Infomation

The System Infomation interface shows the following information (Fig.24)


MENU:		MENU->Information:
System Setting		Model: AIRING-2000
System Calibration		Serial Number:TT1246070001
Data History		Firmware Version: V1.00
System Information		Brand: Temtop
		TEL: (+1)408-898-2866

Fig.24

3. Power OFF

Press and hold ⏻ for 2 seconds to turn off the monitor (Fig.25).

Shutting down...

Fig.25

What's Included

Detector x 1
USB Cable x 1
User Manual x 1
Calibration Certificate x 1
Battery Charger (Includes 4 adapters)* x 1

* Battery Charger Schematic and Operation Example:

American Standard   Australian Standard   European Standard   British Standard

Example:

1. Installation

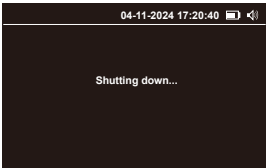Snap Switch

LOCK

2. Removal

LOCK — OPEN

OPEN

1. Installation:
Hold the "Snap Switch" in your left hand and turn it in the " LOCK " direction with your right hand.

2. Removal:
Hold the "Snap Switch" in your left hand and turn it in the " OPEN " direction with your right hand.

Troubleshooting

Failure	Possible Causes	Solution
Noise	The flow is excessive	Flow calibration
	The pump is faulty	Send to the service center
Cannot be turned on, no display	Battery discharged	Charge the battery for 3.5 h
	The battery is faulty	Send to the service center
Display is on, but pump does not run	Low battery level	Charge the battery for 3.5 h
	The pump is faulty	Send to the service center
Detected value is not reliable	Flow deviation	Flow calibration
	Inlet screen clogged	Check the inlet screen
	Contamination inside the monitor	Replace the filter element
		Send to the service center
Unable to charge the battery	The battery is faulty	Send to the service center
	Charger failure	Contact the service center

Warranty

Temtop warrants the included detector for 1 year from the date of original purchase. The item can be exchanged or returned within 30 days if the defect is not caused by artificial damage.

Item	Warranty Period
Detector	1 year included
Accessories	N/A

Before return or delivery for repair, please check if the following √ items are ready:

	Detector & Accessories	Complete Package	Proof of Purchase*	Gift (if any)
Return	√	√	√	√
Exchange	√	√	√	
Repair	√		√	

* Including invoice, order number and etc.

Temtop warranty does NOT include:
•Malfunction or damages caused by artificial damage or modification.
•Other deliberate damages.
•Damage caused by natural events.

Temtop