

QUICK START GUIDE

AEROTRAK[®] HANDHELD AIRBORNE PARTICLE COUNTER

MODEL 9303

Thank you for purchasing a TSI AeroTrak[®] Model 9303 Handheld Airborne Particle Counter (particle counter). This guide will help you quickly begin using your particle counter.

More detailed information is in the manual located on the included TrakPro[™] Lite Secure Software CD. Please refer to the Operation Manual if you have questions on the operation of your new particle counter.

Safety

This section gives instructions to promote safe and proper handling of the AeroTrak[®] Handheld Airborne Particle Counters.

IMPORTANT

There are no user-serviceable parts inside the instrument. Refer all repair and maintenance to a qualified factory-authorized technician. All maintenance and repair information in this manual is included for use by a qualified factory-authorized technician.

LASER SAFETY

The Model 9303 Handheld Airborne Particle Counter is a Class I laser-based instrument. During normal operation, you will not be exposed to laser radiation. However, precaution should be taken to avoid exposure to hazardous radiation in the form of intense, focused, visible light. Exposure to this light may cause blindness. **DO NOT** remove any parts from the particle counter unless you are specifically told to do so in this manual. **DO NOT** remove the housing or covers. There are no user-serviceable components inside the housing.



The use of controls, adjustments, or procedures other than those specified in this manual may result in exposure to hazardous optical radiation.

WARNING

The battery supplied by TSI (700019) has built in protection against explosion and fire hazard. **Do not** use a substitute. **Do not** use non-rechargeable batteries in this instrument. Fire, explosions, or other hazards may result.

Labels




Advisory labels and identification labels are attached to the outside of the particle counter housing and to the optics housing on the inside of the instrument.

1. Serial number label (back panel)	
2. Laser radiation label (internal)	<p>DANGER! INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM WARNING: NO USER SERVICABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL</p>
3. Laser radiation symbol label (internal)	
3. European symbol for non-disposable item. Item must be recycled.	

Unpacking

1. Carefully unpack the particle counter from the shipping container and verify that all the items listed in the following table are present.
2. Contact TSI immediately if items are missing or broken.



Qty	Item Description	Part/ Model	Reference Picture
1	AeroTrak® Airborne Particle Counter	9303-01	
1	AC power adapter and country-specific plugs	700021	
1	Isokinetic inlet	700003	
1	Battery Pack	700019	
1	Computer cable, USB A to mini-B	700036	
1	HEPA zero filter	700005	
1	TrakPro™ Lite Secure Software CD for 21 CFR Part 11 compliant data downloading (includes manuals)	7001901	
1	Operation Manual	6002277	Included on TRAKPRO™ Lite Secure Software CD
1	Quick Start Guide	6002238	
1	Calibration Certificate	N/A	

- Additional items may be included if you ordered accessories or spare parts.

Power

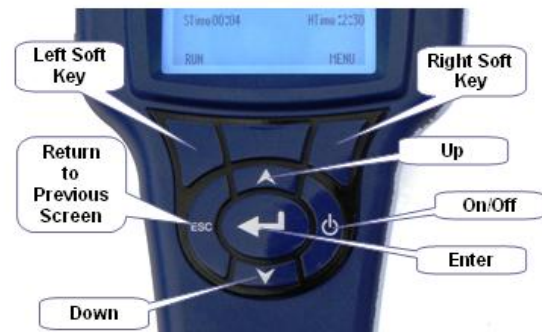
- The battery is shipped separately and has to be installed before use.
- Remove the battery cover on the back side of the handle with a screwdriver and connect the battery to the socket. Replace the battery cover. Do **not** over-tighten the screw.



- Fully charge the battery before use.
- Select the appropriate country-specific power plug for the AC power adapter and install the plug.
- Insert the DC end of the power cord into the DC Adapter Socket on the particle counter and plug the power supply into an AC source (100-240 VAC, 50-60 Hz, 0.6 A).

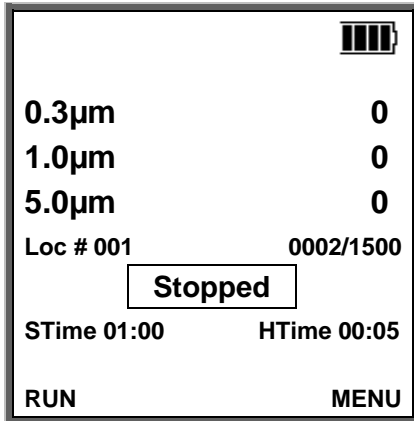


- The Power LED lights when the battery is charging. When the Power LED is off, the battery is fully charged.
- When the battery is charged, unplug the power supply.



Running the Particle Counter

1. Turn on the unit with the On/Off button.
2. To turn the power off, hold the On/Off button down for more than 5 seconds. This prevents accidentally turning off the instrument when using the other buttons.
3. The Main screen is shown below. Turn the pump on by pressing the Left Soft Key (under "RUN").



4. To access the main menu, press the Right Soft Key with "MENU" above it. From the Main Menu you can select submenus:
 - Settings – to set language, time and date, time and day format, and screen settings.
 - Sample Menu – to set sample mode, cycle mode, sample time, hold time, cycle count, sample units, and channel 2 size.
 - Buffer Menu – to view the number of records stored in the Model 9303, display buffer records, and clear the buffer.
 - Utility Menu – to adjust the pump speed, turn data logging on and off, and select the sampling location.
5. The submenus are explained in detail in the Operation Manual.

Navigating Menus

1. You can move between settings on the sub menus with the Up/Down arrow keys. If a setting has two or more values, use the Left and Right Soft Keys (under < and >) to cycle between values.
2. If the setting has more than a few possible values, then the Left and Right Soft Keys are not available. Instead, select **Enter** to display a screen where the value can be edited with the Up/Down keys as well as the Left and Right Soft Keys. Use **ESC** to save the new value and return to the previous menu.

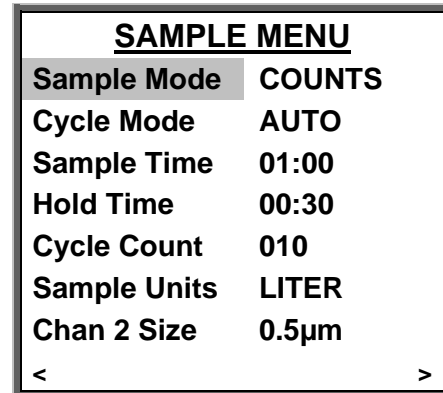
Set up Time/Date

1. Select **MENU** to go to the Main Menu and then select the Settings sub-menu. Set the Time Format to 12 or 24 hr time format

2. Set the Date Format to DDMMYY or MMDDYY date format.
3. Use Set Time to enter the current time.
4. Use Set Date to enter the current date.
5. Change the Backlight setting if desired. Press **ESC** to return to the Main Menu.

Set Up Sampling

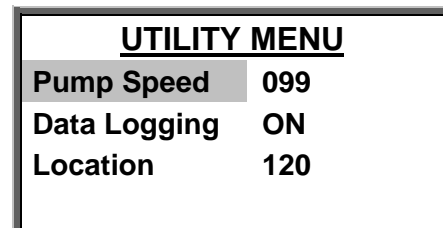
1. From the Main Menu, select **Sample Menu**.
2. Change settings so they match the example below.



3. Press **ESC** to return to the Main Menu.

NOTE	
When concentration sample mode is used with short sample times (less than 30 seconds), the concentration may not be accurate due to the poor counting & timing statistics associated with a short sample.	

4. Finally, select the Utility Menu and set the Data Logging mode and Location as shown. **DO NOT** change the pump speed.
5. Press **ESC** twice to return to the Main Screen.



Collecting Samples

1. Press **RUN** using the Left Soft Key. This turns on the pump and the particle counter runs for 10 cycles that are one minute long with 30 second hold times in-between.
2. Use the Buffer Menu to review the data.

Software

1. The TrakPro™ Lite Secure Data Transfer utility and user manuals come on a CD that was packaged with your particle counter.
2. To install the communications software and drivers, insert the CD into your computer drive and follow the on-screen instructions.
3. See the *TRAKPRO™ Lite Secure Software User's Guide* (P/N 6004404) on CD (P/N 7001901) for installation instructions.

NOTE

Make sure the particle counter is connected before you run the software.

Checking Flow

1. Periodically check the inlet flow of the instrument with an external flow meter standard.
2. Connect a flowmeter standard to the inlet and turn on the instrument.
3. From the main menu, select the Utility menu
4. Select the Pump Speed and move the speed setting up or down as needed to match the flow standard at 2.83 L/min (0.1 cfm).
5. When the flow is set, select **ESC** to go back to the main menu.
6. Disconnect the flowmeter.



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