

# AeroTrak<sup>®</sup> Handheld Airborne Particle Counter Model 9303



Operation Manual

P/N 6002277, Revision K  
October 2022



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# AeroTrak<sup>®</sup> Handheld Airborne Particle Counter

Model 9303



Operation Manual

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# Manual History

The following is a manual history of the AeroTrak® Handheld Airborne Particle Counter, Model 9303 Operation Manual (P/N 6002277).

<b>Revision</b>	<b>Date</b>
A	November 2008
B	January 2009
C	June 2009
D	July 2010
E	September 2010
F	February 2011
G	November 2012
H	February 2016
J	December 2017
K	October 2022

# Warranty

**Part Number**  
**Copyright**  
**Address**  
**E-mail Address**  
**Limitation of Warranty  
and Liability**  
(effective April 2014)

6002277 / Revision K / October 2022

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- b. Pumps are warranted for hours of operation as set forth in product or operator's manuals;
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**Service Policy**

Knowing that inoperative or defective instruments are as detrimental to TSI as they are to our customers, our service policy is designed to give prompt attention to any problems. If any malfunction is discovered, please contact your nearest sales office or representative, or call TSI's Customer Service department at 1-800-680-1220 (USA) or +001 (651) 490-2860 (International).

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# Safety Information

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

## IMPORTANT NOTICE

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.
- Precaution should be taken to avoid exposure to hazardous radiation in the form of intense, focused, invisible light.
- Exposure to this light may cause blindness.

Take these precautions:

- **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.






## WARNING

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

# 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.

<p>1. Serial number label (back panel)</p>	 <p><b>AeroTrak APC 9303 – 01</b> Channels: 0.3/0.5/5um, 0.1CFM COMPLIES WITH 21 CFR 1040.10 AND 1040.11</p> <p>Manufactured : February 2011</p> <p>*93031107005*</p> <p>9V 2A TSI Incorporated www.tsi.com 500 Cardigan Road Shoreview, MN 55126, USA</p> <p>CE Made in USA</p>
<p>2. Laser radiation label (internal)</p>	<p><b>DANGER!</b> INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM WARNING: NO USER SERVICABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL</p>
<p>3. Laser radiation symbol label (internal)</p>	
<p>4. European symbol for non- disposable item. Item must be recycled.</p>	

---

# Description of Caution/Warning Symbols

Appropriate caution/warning statements are used throughout the manual and on the instrument that require you to take cautionary measures when working with the instrument.

## Caution



### CAUTION

Failure to follow the procedures prescribed in this manual might result in irreparable equipment damage. Important information about the operation and maintenance of this instrument is included in this manual.

## Warning



### WARNING

Warning means that unsafe use of the instrument could result in serious injury to you or cause damage to the instrument. Follow the procedures prescribed.

## Caution or Warning Symbols

The following symbols may accompany cautions and warnings to indicate the nature and consequences of hazards:

	Warns that uninsulated voltage within the instrument may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make contact with any part inside the instrument.
	Warns that the instrument contains a laser and that important information about its safe operation and maintenance is included in the manual.
	Warns that the instrument is susceptible to electro-static dissipation (ESD) and ESD protection procedures should be followed to avoid damage.
	Indicates the connector is connected to earth ground and cabinet ground.

---

# Getting Help

To obtain assistance with this product or to submit suggestions, please contact Customer Service:

TSI® Incorporated  
500 Cardigan Road  
Shoreview, MN 55126 U.S.A.  
Fax: (651) 490-3824 (USA)  
Fax: 001 651 490 3824 (International)  
Telephone: 1-800-680-1220 (USA) or (651) 490-2860  
International: 001 651 490-2860

E-mail Address: [answers@tsi.com](mailto:answers@tsi.com)

Web site: [www.tsi.com](http://www.tsi.com)

## CHAPTER 1

# Introduction and Unpacking

The AeroTrak® Model 9303 Handheld Airborne Particle Counter (particle counter) is a lightweight, handheld particle counter with a backlit LCD display. It operates on the included lithium-ion battery or AC power.


This model has a 0.1 CFM (2.83 L/min) flow rate and counts in user-adjustable bin sizes of 0.3, 0.5/1.0/2.0/2.5, and 5 microns (center channel is selectable). Up to 1500 data sets can be stored and downloaded for analysis and reporting using the TrakPro™ Lite utility included with the device.

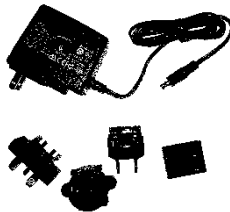






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## Unpacking the AeroTrak® Handheld Airborne Particle Counter

Carefully unpack the AeroTrak® Airborne Particle Counter from the shipping container and verify that all the items shown in the photos below and listed in the following tables are present. Contact TSI® immediately if items are missing or broken.



### Model 9303 AeroTrak® Airborne Particle Counter Parts List

Qty.	Item Description	Part/Model	Reference Picture
1	AeroTrak Airborne Particle Counter	9303-01	

Qty.	Item Description	Part/Model	Reference Picture
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 for 21 CFR Part 11 compliant data downloading (includes manuals)	N/A	Available on TSI® website: <a href="https://tsi.com/support/tsi-software-and-firmware/">https://tsi.com/support/tsi-software-and-firmware/</a> .
1	Operation and Service Manual	6002277	Available on TSI® website: <a href="https://tsi.com">tsi.com</a> . Log into “My Account” to view manual.
1	Quick Start Guide	6002238	
1	Calibration Certificate	N/A	

## Optional Accessories

The following photo and table list optional accessories. If you ordered optional accessories, make certain they have been received and are in working order.

Item Description	Part/Model	Ref.
Stainless Steel Isokinetic inlet	700004	
Isokinetic probe (used with tubing)	700001 AL 700002 SS	
0.1 cfm Barb Inlet Fitting	700020	
Tubing, Superthane 1/8-inch ID x 1/4-inch OD, Clear 100 Ft Box	700009	
Light Duty Carry Case	700115	

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## CHAPTER 2

# Getting Started

This chapter provides information to help you use the Model 9303 including:

- [Installing the Isokinetic Inlet](#)
- [Providing Power](#)
- [Quick Start](#)

---

## Installing the Isokinetic Inlet

The Isokinetic Inlet smoothly accelerates air into the inlet of the instrument. To install, simply screw the probe directly onto the threaded inlet nozzle.



**Installing an Isokinetic Inlet**

# Providing Power

The Model 9303 may be powered using its internal rechargeable lithium-ion battery or through an AC power cord.

## NOTICES

- When using AC power, the battery is charging when the red LED next to the power connector is on.
- Removing/changing the lithium-ion battery or disconnecting AC power does not cause the loss of data.
- You should fully charge the battery before use.



## WARNING

The battery supplied by TSI® (700019) has built in protection against explosion and fire hazard. **DO NOT** use a substitute.



## WARNING

**DO NOT** use non-rechargeable batteries in this instrument. Fire, explosions, or other hazards may result.

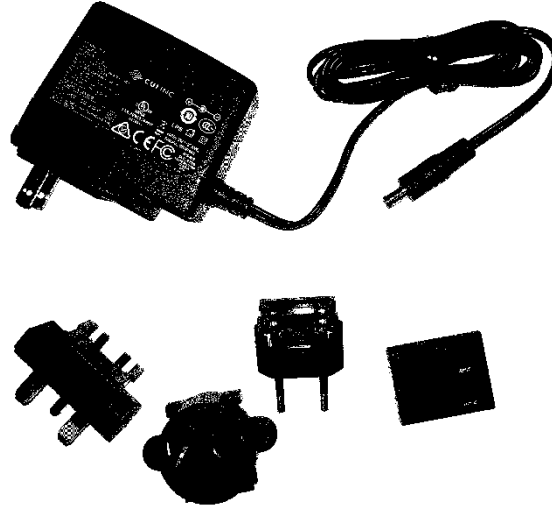
## Installing the Battery

1. The battery is shipped separately and has to be installed before use.
2. Remove the battery cover on the back side of the handle with a small, flat-blade screwdriver.
3. Connect the battery to the socket as shown below.
4. Insert the battery with the connector at the top and replace the battery cover. Make sure all wires are inside and not pinched in the cover. **DO NOT** over-tighten the screw.
5. Fully charge the battery before use.



## To Use AC Power

1. Remove the AC transformer parts from their package and identify the appropriate plug for your needs. Plugs are available for all common countries.



2. Remove the insert from transformer using the slide lock and tilt the insert out.



3. Tilt the appropriate plug into the transformer receptacle.



4. Make sure it locks into place.

5. Plug the DC end of the transformer cord into the counter.
6. Plug the AC end of the transformer cord into an AC outlet.
7. The Power LED lights when the battery is charging. When the Power LED is off, the battery is fully charged.
8. When the battery is charged, unplug the power supply.

---

## Quick Start

The best way to quickly get started is to refer to the printed “Quick Start Guide” included with your instrument. It will help you to quickly set up the instrument and begin sampling. Refer to the sections below for more detailed information on configuring and running the instrument.

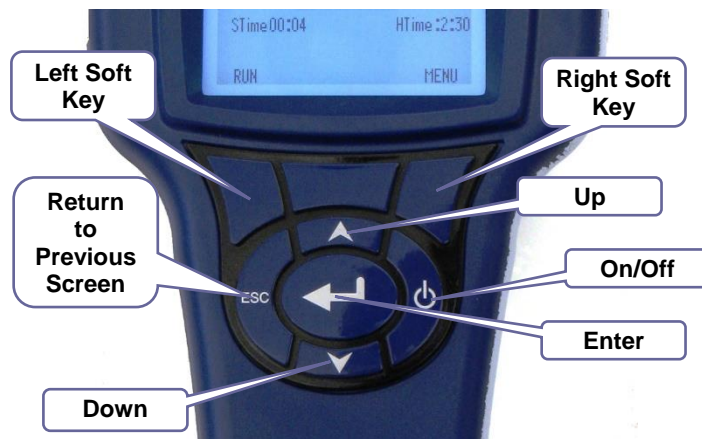
# CHAPTER 3

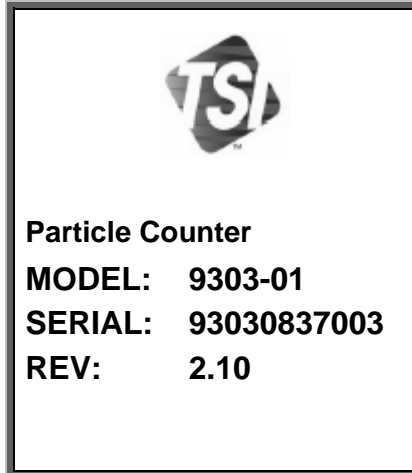
## Operation

The Model 9303 is controlled using the integral keys and the backlit display.



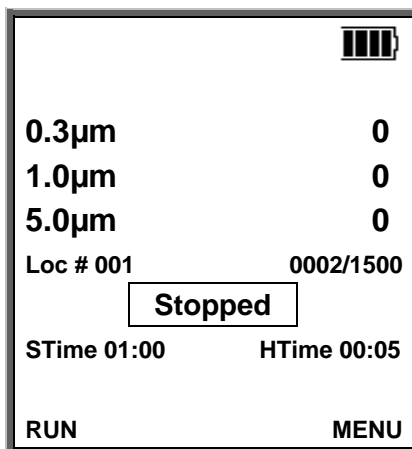
To turn on the instrument, press the **On/Off** key. A splash screen will appear for three seconds, displaying the TSI® logo, model number, serial number, and firmware version number (see below).





**Splash Screen**

The instrument is ready for operation when the default screen (shown below) appears.



**Default Screen**

**NOTICE**

To turn off the instrument, press and hold the **On/Off** key for 5 seconds. The instrument turns off.

---

## Warm-up Time

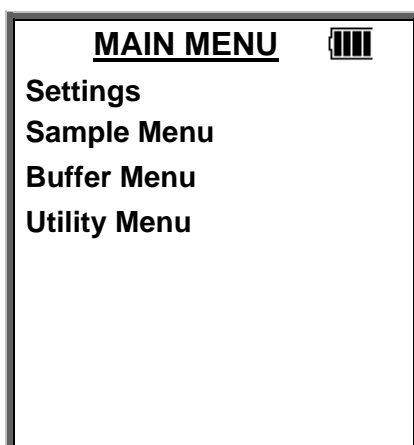
An initial warm-up period of 15 minutes is recommended before sampling with the Model 9303. The warm-up period allows time for the optics to reach a steady-state temperature. This will result in more repeatable results. Neglecting the warm-up time may result in an overestimation of particle size (approximately 10 percent). Neglecting the warm-up time will not have a significant effect on particle concentration; therefore, a zero count can still be performed without waiting for the warm-up period.

---

## Main Menu and Basic Operation

Press **Menu** on the Default Screen to display the Main Menu.

### Main Menu



**Main Menu**

From the Main Menu you can select other menus:

Menu	Description
<b>Settings</b>	Set language, time and date, time and day format, and screen settings.
<b>Settings</b>	Set sample mode, cycle mode, sample time, hold time, cycle count, sample units, and channel 2 size.
<b>Buffer</b>	View the number of records stored in the Model 9303, display buffer records, and clear the buffer.
<b>Utility</b>	Adjust the pump speed, turn data logging on and off, and select the sampling location.

Each of these menus is described in the remainder of this chapter.

## Basic Operation

This section explains the basic operation for using the keypad and starting sampling.

### Using the Keypad



Use the up and down keys to highlight a menu or a menu option then:

- If left and right arrows (< >) appear at the bottom of the screen, use the left and right soft keys to select the option you want. Generally, there will be only 2 or 3 options. Soft keys change function depending on the display above them. For instance, in the picture above, the left soft key is labeled **RUN** and the right soft key is labeled **MENU**. The center soft key is not currently used.
- If no arrows appear at the bottom, press the **Enter** key to bring up a secondary window from which you can make a selection or modify a setting.

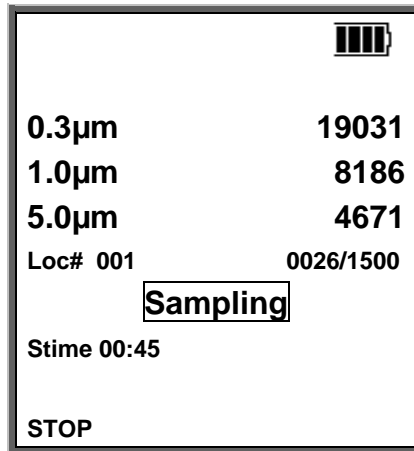
Use the up and down keys to perform operations such as increasing a value. Use the right soft key and left soft keys to move right and left.

The **ESC** key always brings you back to the previous screen.



## Start Sampling

To start sampling, press the **left** soft key (below "RUN"). The Model 9303 begins collecting samples immediately if set to manual mode or according to the parameters you have set for automatic mode.

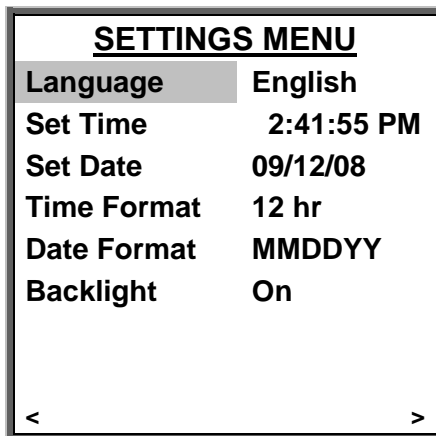


To stop sampling at any time, press the **STOP** soft key.



# Settings Menu

The Settings Menu lets you set language (supported in future), current time and date, select the time and day format, and set certain screen settings.



**Settings Menu**

The following table describes the options of this menu and the parameters you can set.

Option	Description	Parameters
<b>Language</b>	Use < and > to set the language in which information is displayed.	English (other languages may be offered)
<b>Set Time</b>	Press the <b>Enter</b> key to go to a secondary screen where you can set the current time.	Hours, minutes, seconds
<b>Set Date</b>	Press the <b>Enter</b> key to go to a secondary screen where you can set the current date.	Day, month, year
<b>Time Format</b>	Use < and > to set the time format in which time is displayed (and saved in the sample records).	12 hr; 24 hr
<b>Date Formats</b>	Use < and > to set the date format in which the date is displayed (and saved in the sample records).	DD/MM/YY; MM/DD/YY
<b>Backlight</b>	Use < and > to set whether the backlight on the display is on or off. Note that battery life is approximately 15% less with the backlight enabled.	On – backlight is always on Off – backlight is always off

# Sample Menu

The Sample Menu sets sample mode, cycle mode, sample time, hold time, cycle count, sample units, and channel 2 size.

<b>SAMPLE MENU</b>	
<b>Sample Mode</b>	<b>COUNTS</b>
<b>Cycle Mode</b>	<b>AUTO</b>
<b>Sample Time</b>	<b>01:00</b>
<b>Hold Time</b>	<b>00:30</b>
<b>Cycle Count</b>	<b>010</b>
<b>Sample Units</b>	<b>LITER</b>
<b>Chan 2 Size</b>	<b>0.5µm</b>
<	>

Sample Menu

The following table describes the options of this menu and the parameters you can set.

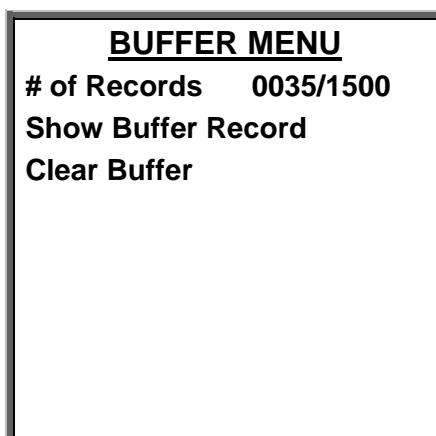
Option	Description	Parameters
<b>Sample Mode</b>	Use < and > to set the sampling mode.	Concentration (see notice below); counts
<b>Cycle Mode</b>	Use < and > to set the sampling mode.	<b>Manual</b> – the counter will start when the RUN soft key is pressed and stop only when the STOP soft key is pressed. <b>Auto</b> – the counter will start when the RUN soft key is pressed and turn on and off automatically to follow the sample time, hold time and cycle count parameters below.
<b>Sample Time</b>	Press the <b>Enter</b> key to go to a secondary screen where you can set the sample time.	Minutes and seconds up to 99:59 (see note below)
<b>Hold Time</b>	Press the <b>Enter</b> key to go to a secondary screen where you can set the time between samples.	Minutes and seconds up to 99:59
<b>Cycle Count</b>	Press the <b>Enter</b> key to go to a secondary screen where you can set the number of samples to take.	1 to 999

Option	Description	Parameters
<b>Sample Units</b>	Use < and > to set the sampling units.	Liter; cubic feet
<b>Channel 2 Size</b>	Use < and > to set the bin size for channel 2. (This is the only channel that can be set to more than one value.)	0.5, 1.0, 2.0, 2.5 µm

<b>NOTICE</b>
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 and timing statistics associated with a short sample.

## Buffer Menu

The Buffer Menu lets you view the number of records stored in the Model 9303, display buffer records, and clear the buffer.



### Buffer Menu

The following table describes the options of this menu and the parameters you can set.

Option	Description	Parameters
<b># of Records</b>	Shows the number or sample records stored in the Model 9303.	None
<b>Show Buffer Record</b>	Press the <b>Enter</b> key to go to a secondary screen where you can select the record (by sample number) of the record you want to view.	Any record number (up to 1500)
<b>Clear Buffer</b>	Press the <b>Enter</b> key to clear all samples in the buffer. You will be asked to confirm your request.	None

<b>BUFFER RECORD</b>	
<b>Record#:</b>	<b>0313</b>
<b>Date:</b>	<b>12/27/08</b>
<b>Time:</b>	<b>05:50:45</b>
<b>0.3µm</b>	<b>000566473</b>
<b>0.5µm</b>	<b>000534571</b>
<b>5.0µm</b>	<b>000072056</b>
<b>Location:</b>	<b>111</b>
<b>Sample Time:</b>	<b>01:00</b>
<b>Hold Time:</b>	<b>00:00</b>
<b>&lt;</b>	<b>&gt;</b>

**Example of a Buffer Record**

Use the < and > softkeys to scroll through the records, Enter to go back one screen and **ESC** to go back to the Buffer Menu.

<b>NOTICE</b>
If the buffer is filled to its capacity of 1500 records, the instrument will continue to count and save records but the next record after 1500 will be saved in record number 1, then 2, etc. This way the most recent 1500 records are always preserved.

---

## Utility Menu

The Utility Menu lets you adjust the pump speed, turn data logging on and off, and select the sampling location.

<b>UTILITY MENU</b>	
<b>Pump Speed</b>	<b>099</b>
<b>Data Logging</b>	<b>ON</b>
<b>Location</b>	<b>120</b>

**Utility Menu**

The following table describes the options of this menu and the parameters you can set.



<b>CAUTION</b>	
If you turn Data Logging off, no data will be saved to the buffer.	

Option	Description	Parameters
<b>Pump Speed</b>	Press the <b>Enter</b> key to go to a secondary screen where you can increase or decrease the pump speed. (The pump may slow down with age, or it may be necessary to increase the speed if there are flow restrictions – such as long tubing). Use a flow meter to check the flow when taking critical measurements, and adjust the pump speed as necessary.	0 to 255
<b>Data Logging</b>	Use < and > to turn data logging on and off.	ON; OFF
<b>Locations</b>	Press the <b>Enter</b> key to go to a secondary screen where you can select a location number.	0 to 250

## CHAPTER 4

# Data Handling

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## USB Computer Communication



### Mini USB Port

The Model 9303 is equipped with a USB-compatible cable for uploading and downloading information to a PC. The cable plugs into the left side of the instrument as shown above.

---

## Installing Software

1. The TrakPro™ Lite Secure Data Transfer utility and user manuals are available on TSI's website: <https://tsi.com/support/tsi-software-and-firmware/>.
2. To install the communications software and drivers, follow the on-screen instructions.
3. See the *TrakPro™ Lite Secure (version 3.0 or later) Software User's Guide* (P/N 6004404) for installation instructions.

### NOTICE

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

*(This page intentionally left blank)*



## CHAPTER 5

# Maintenance

### NOTICE

There are no user-serviceable parts inside this instrument. Opening the instrument case may void the warranty. TSI® recommends that you return the AeroTrak® Airborne Particle Counter to the factory for any required maintenance or service not described in this manual.

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## Maintenance Schedule

TSI® recommends annual factory cleaning and calibration for the AeroTrak® Airborne Particle Counter. See [Chapter 7, "Contacting Customer Service"](#) for service/calibration.

### Recommended Field Maintenance Schedule

Item	Frequency
Zero check	Daily (or as defined by application).
Factory cleaning and calibration	Annually.
Cleaning the instrument enclosure	As needed.

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## Zero Check

The zero check ensures that the instrument is properly assembled and free from leaks, residual particles and electronic noise.

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## Cleaning the Instrument Enclosure

To clean the enclosure, dampen a lint-free cloth and gently wipe the surface until surface contamination is removed.

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## CHAPTER 6

# Troubleshooting

Symptom	Possible Cause	Corrective Action
<b>Counts are too low.</b>	<p>Instrument is being operated outside temperature or relative humidity specifications.</p> <p>Internal parts have been damaged because instrument was stored at a temperature greater than 122 °F (50 °C) or shipped with battery installed and turned on causing excessive heat.</p> <p>Instrument has contamination on the optics due to condensation or excessive loading.</p> <p>Laser or pump is damaged.</p> <p>Unit is due for calibration.</p>	<p>Operate instrument within specifications.</p> <p>Return to factory or factory authorized service centers for service.</p> <p>Return to factory or factory authorized service centers for service.</p> <p>Return to factory or factory authorized service centers for service.</p> <p>Return to factory or factory authorized service centers for service.</p>
<b>Instrument does not turn on.</b>	<p>On/off switch is not being pressed properly.</p> <p>Battery is dead.</p> <p>AC cord is not plugged into unit.</p>	<p>Press and hold on/off switch for one second.</p> <p>Recharge battery or connect to AC power.</p> <p>Connect AC cord.</p>

Symptom	Possible Cause	Corrective Action
<b>Instrument does not meet zero count specification</b> (<1 particle/5 min).	HEPA filter is not connected properly and room air is leaking into the HEPA filter assembly.	Check that the HEPA filter has been tightly connected to the inlet. Check that rubber O-ring (black) on the inlet is in place.
	Residual particles from previous samples are shedding off internal parts and into the optics.	Purge instrument by running the instrument for 10 to 15 minutes or longer before attempting zero count test.
	The filter assembly or inlet are dirty or contaminated with particles.	Clean the HEPA filter fitting or run an extended test to clean out particles.
	An internal component has been damaged due to operation outside of temperature specifications or one or more excessive bumps or jolts, and electronic noise is inducing false counts.	Return to factory or factory authorized service centers for service.
	A leak has developed in the aerosol flow path.	Return to factory or factory authorized service centers for service.
	Internal optics have become dirty.	Return to factory or factory authorized service centers for service.
<b>Battery does not charge</b>	The battery may not be installed or is disconnected.	Check battery.
<b>Low Battery Indicator</b>	Low battery.	Recharge battery or connect AC cord
<b>Software does not connect to unit</b>	No connection or power.	Check that USB is connected to instrument and instrument is turned on.
	Unit is running a sample or in a sub menu.	Stop sample and make sure screen shows main view.

## CHAPTER 7

# Contacting Customer Service

This chapter gives directions for contacting people at TSI® Incorporated for technical information and directions for returning the AeroTrak® Handheld Airborne Particle Counter for service.

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## Technical Contacts

- If you have any difficulty setting up or operating the AeroTrak® Model 9303, or if you have technical or application questions about this system, contact an applications engineer at TSI® Incorporated, 1-800-680-1220 (USA) or (651) 490-2860 or e-mail [technical.services@tsi.com](mailto:technical.services@tsi.com).
- If the AeroTrak® Model 9303 does not operate properly, or if you are returning the instrument for service, visit our website at [tsi.com/service](http://tsi.com/service), or contact TSI® Customer Service at 1-800-680-1220 (USA) or (651) 490-2860.

## International Contacts

### Service

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**E-mail:** [tsifrance@tsi.com](mailto:tsifrance@tsi.com)

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# Returning the AeroTrak<sup>®</sup> Handheld Airborne Particle Counter for Service

Visit our website at [tsi.com/service](https://www.tsi.com/service) and complete the on-line “Service Request” form or call TSI<sup>®</sup> at 1-800-680-1220 (USA) or (651) 490-2860 for specific return instructions. Customer Service will need this information when you call:

- The instrument model number
- The instrument serial number
- A purchase order number (unless under warranty)
- A billing address
- A shipping address

Use the original packing material to return the instrument to TSI<sup>®</sup>. If you no longer have the original packing material, seal off any ports to prevent debris from entering the instrument and ensure that the display and the connectors on the instrument front and back panels are protected.

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# APPENDIX A

## Specifications

All specifications meet or exceed JIS B9921. They are subject to change without notice.

<b>Size Range</b> .....	0.3 to 25 $\mu\text{m}$
<b>Channel Sizes</b> .....	0.3 $\mu\text{m}$ and 5.0 $\mu\text{m}$ fixed; 0.5, 1.0, 2.0, or 2.5 $\mu\text{m}$ selectable middle channel.
<b>Counting Efficiency</b> .....	50% at 0.3 $\mu\text{m}$ ; 100% for particles > 0.45 $\mu\text{m}$ (per ISO 21501-4 and JIS)
<b>Concentration Limits</b> ..	2,000,000 particles/ft <sup>3</sup> at 5% coincidence loss
<b>Light Source</b> .....	Long life laser diode
<b>Zero Count Level</b> .....	<1 count / 5 minutes (per ISO 21501-4 and JIS B9921)
<b>Flow Rate</b> .....	0.1 CFM (2.83 L/min)
<b>Calibration</b> .....	NIST traceable with TSI <sup>®</sup> calibration system
<b>Sample Probe/Tubing</b> .	Isokinetic sampling probe
<b>Sampling Modes</b> .....	Manual and automatic
<b>Sampling Time</b> .....	1 second to 99 minutes 59 seconds
<b>Sampling Frequency</b> ....	1 to 999 cycles or continuous
<b>Exhaust</b> .....	Internal HEPA filter
<b>Vacuum Source</b> .....	Internal pump
<b>Communication Mode</b> .	USB serial output
<b>Data Storage</b> .....	1,500 sample records
<b>Status Indicators</b> .....	Low battery and service
<b>Display</b> .....	3.2-in. (8.1 cm) 160 x 160 monochrome LCD
<b>External Surface</b> .....	High impact injection molded plastic
<b>AC Power</b> .....	110 to 240 VAC 50-60 Hz Universal in-line power supply with country specific plugs
<b>DC Power</b> .....	9 VDC @ 1.5 A
<b>Battery</b> .....	Rechargeable Li-Ion
<b>Battery Life</b> .....	Up to 4.5 hours of continuous use
<b>Recharge Time</b> .....	< 3 hours
<b>Dimensions (L x W x H)</b>	9.1 x 6.3 x 2.4 in. (23 x 11 x 6.2 cm) (without isokinetic inlet)
<b>Weight</b> .....	1.3 lbs (0.58 kg) with battery

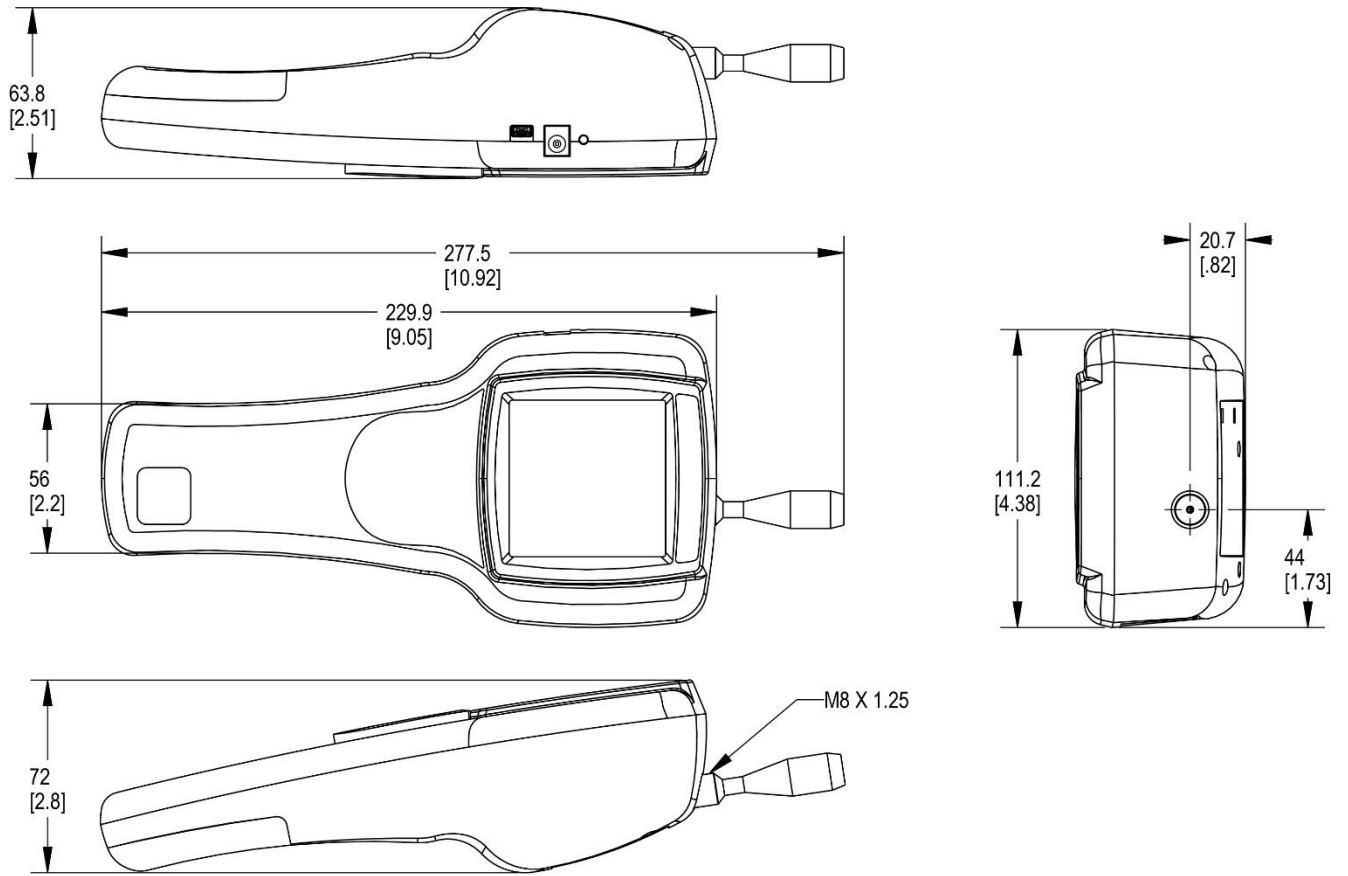
<b>Standards</b> .....	CE, JIS B9921, ISO 21501-4
<b>Warranty</b> .....	1 year (extended warranties available)
<b>Operating Conditions</b> .	41° to 95°F (5° to 35°C) temperature and 20% to 95% non-condensing relative humidity
<b>Storage Conditions</b> .....	32° to 122°F (0° to 50°C) temperature and up to 98% non-condensing relative humidity
<b>Included Accessories</b> ..	Operational manual available on <a href="http://tsi.com">tsi.com</a> , power supply, battery, isokinetic inlet, purge filter, USB cable and TrakPro™ Lite data download software
<b>Optional Accessories</b> ..	Spare battery, isokinetic probe, sample tubing and carrying case

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## Compliance

<b>CE Marking</b> .....	EN61326 / EN 55011, Class BA: Radiated Emissions EN61326 / EN 55011, Class BA: Conducted Emissions EN61000-3-2: Harmonics EN61000-3-3: Voltage Fluctuations EN61000-4-2: Electrostatic Discharge Immunity EN61000-4-3: Electromagnetic Field Immunity EN61000-4-4: Burst Immunity EN61000-4-6: Conducted PS Immunity EN61000-4-5: Surge Immunity EN61000-4-8: Rated Power-Frequency Field Immunity EN61000-4-11: Voltage Dips\Short Interruptions Immunity
<b>RoHS Marking</b> ..	Yes
<b>Laser Safety</b> .....	Complies with 21 CFR 1040.10 and 1040.11

# Dimensional Diagram



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**Knowledge Beyond Measure.**

**TSI Incorporated** – Visit our website [www.tsi.com](http://www.tsi.com) for more information.

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