SMOKETRAK

A portable real-time particulate monitoring station for bushfire plume tracking, wood fire pollution tracking and more.

JUNE 2025





INTRODUCING THE SMOKETRAK

The SmokeTrak is a portable real-time particulate monitoring station built around the highly successful DustTrak unit from TSI Incorporated.



REAL-TIME DATA FOR QUICK RESPONSES

Designed principally for tracking of smoke particulate, the SmokeTrak is ideal for applications such as bushfire smoke plume tracking, identification of highly polluting domestic wood fires and for tracking of point sources of particulate matter.

The system is fully transportable and can sit in any vehicle, measuring and showing real-time particulate levels, with data then also accessible via the internet. Using the popular Google Maps software, particulate levels are graphically displayed on a street level and can be used to track particulate sources down to an individual site. Real-time data for quick responses.



Screenshots of domestic wood fire smoke in suburban Melbourne, Winter 2015.

FEATURES

- Supports monitoring of PM1.0, PM2.5, PM4.0, PM10.0 providing separate measurements for each and also a total
- Automated Google Maps tracking and supports API functions available for Google Maps (customer to provide sim card)
- Mapping of mass concentration of particulate matter on a street-by-street (and even-house-by house) basis
- Visual indications of threshold excedences and colour indications of smoke levels overlaid on Google Maps, giving an instantaneous overview of smoke intensity
- Real-time reporting and data access via the Cloud; internet data update is typically every minute
- On-board GPS and antenna for accurate location information
- On-board data manager for data logging and for internet connectivity
- On-board tablet device displays the positional information and particulate concentrations (customer to provide sim card)
- On-board real-time configurable alarm to provide operator with immediate notification of high particulate concentrations
- Operates from 12V DC vehicle supply with built in UPS to prevent loss of data when vehicle switched off (AC Mains input optional)
- Typical vehicle operating speed of 30kph provides a resolution of one reading per 8 meters
- Visual and audible alarm capability on unit, with email and SMS alerts if unit is unattended





Larger red circles indicating higher concentrations of particulate output and their locations on Google Maps.

SPECIFICATIONS

| Particle Size Range | 0.1 to 15µm |
|-----------------------------------|---|
| Aerosol Concentration Range | 0.001 to 150 mg/m3 |
| Flow Rate | 3.0 L/min |
| Power | 12V DC vehicle power supply with built in UPS for when vehicle is switched off; mains power adapter also provided |
| Data Storage | Cloud storage greater than five years |
| Log Interval | User adjustable; factory default every 5 seconds when GPS auto detects movement, 1 minute when stationary |
| Time Constant | User adjustable, 1 to 60 seconds |
| Display | Size Segregated Mass Fractions for PM1, PM2.5, Respirable, PM10 and Total All displayed |
| Communications | 3G network (Telstra) |
| Tablet | 10" Android or Apple tablet with 3G or 4G (customer to provide sim card) |
| Operational Temp | 32 to 120°F (0 to 50°C) |
| Dimensions | 55.9 x 35.1 x 22.9cm 13kg |
| Inclusions | TSI 8533 DustTrak DRX Auto Zero Module 10" tablet, modem-logger Wheeled pelican style carry case 12V DC power supply User Manual Calibration certificate for DustTrak Software |

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KENELEC SCIENTIFIC

Our company:

Established in 1962, Kenelec Scientific is one of Australia's leading scientific and environmental technology companies. Based in Melbourne, with distributors located throughout Australia and New Zealand, we are industry leaders in the supply of globally sourced, latest generation technologies at competitive prices.

Our services:

Sales

Buy the latest equipment from some of the most trusted brands in the industry.

Rental

Short and long term hire available on an extensive range of instruments.

Calibration

Professional calibration of your instruments in our accredited laboratories.

Validation

Wide range of validation services to ensure compliance with regulations.

Service & Repairs

Local after-sales service and support from our experienced technicians.

Education

Product education and support available in-house, onsite or online.

Financing

Secure your equipment without relying on up-front capital funding.

More solutions:

In addition to the SmokeTrak, we also offer a number of off-the-shelf smoke monitoring solutions as well as custom-built systems to meet your exact requirements.



SMOKESWITCH

A unit designed for applications such as computer data centres and large shopping complexes, where high smoke levels in the environment can cause issues.

TSI AM520 SIDEPAK™ PERSONAL AEROSOL MONITOR

A unit that can offer real-time data and provide both audible and visual alarms will enhance the safety of workers that can be exposed to high smoke levels as part of their job.





DUSTTRAK SYSTEMS

Our robust environmental dust & aerosol monitoring systems are designed for 24/7 operation in harsh outdoor settings as well as industrial workplaces.

Don't see your solution here?

Just tell us what you're looking to measure, and we can create a system tailored to your specific needs.

We look forward to working with you.





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