



SURFACE SYSTEMS & INSTRUMENTS, INC.

Custom Test Equipment • Mobile Technology Solutions

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smoothroad.com

Inertial Profiler



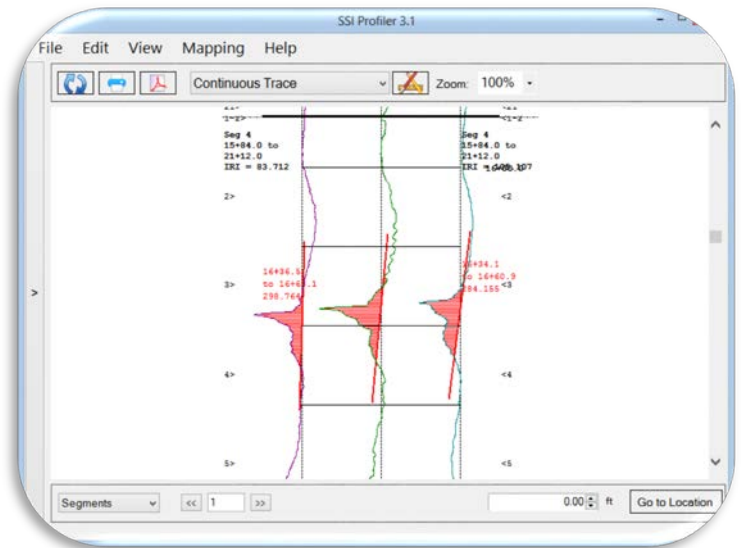
▲ CS9300 Inertial Profiler ▲



▲ CS9100 Mid-Mount Inertial Profiler ▲



▲ GPS Tracking Thru Profile Data in SSI Profiler 3, Google Earth/Maps ▲







▲ IRI and Localized Roughness Displayed by Individual Track ▲

Precise Surface Profile Measurement at Highway Speeds

DOT Compliant QA/QC Testing on All Pavement Types

Meets ASTM/AASHTO Standards Easy Collection & Analysis Software Productive & Reliable (=Quick ROI)

Profiling System Specifications

- Collect data up to 70 mph (112 kph)
- Meets  **E950**,  **M328, R054, R056-057**
- Meets or exceeds all Class I requirements of **ASTM E950**.
- 1 inch sampling interval at all collection speeds.
- Features  LMI Technologies' new  5 kHz Gocator **wide beam lasers** for asphalt and concrete pavements.
- ±5g rated Accelerometers with 0.0001g accuracy.
- Proven ability to replicate wavelengths of ~0.25 feet (7.62mm) in excess of 760 feet (231.6 meters).
- All sensors and electronics removable for reuse on an SSI CS8700 lightweight profiling system.


Compliance and Equipment

- Complies with all commonly used agency specifications.
- Equipped with industrial grade sensors and connectors.
- Core electronics manufactured in an ISO 9001 facility.










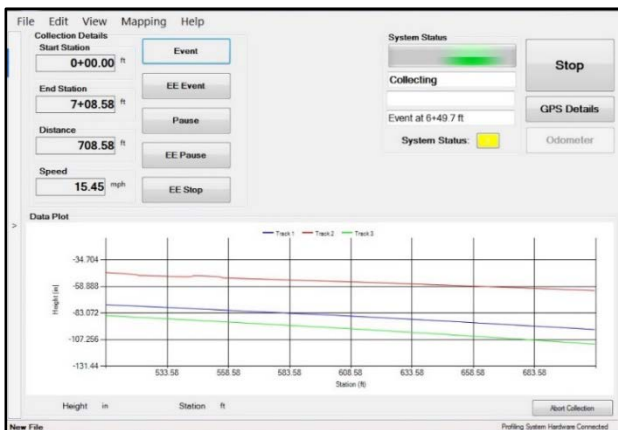
- **TOUGHBOOK** rugged computer on all systems.
- Custom docking station mount for comfort and access.
- All systems run off of a 12 volt power supply

Operation, Training & Support

- One person operation. All in cab operation.
- Speed range: 1 inch sampling for all speeds (5-65 mph)
- Operating ambient temperature range: 32° to 110° F
- Moisture: profiling system components impervious to moisture (but quality of data degrades on wet pavement).
- Worldwide multi-lingual operator training available.
- Automatic software updates with SSI Profiler 3  v2014
- In field replacement of portable, modular components.
- **Warranty** and rapid response **customer support** on all profiling system components and operations.
- **Options:** high resolution GPS (RTK corrected) with CAD output, HD camera, rut measurement, printer and more.

Best-In-Class Profiling System Software

-  Windows 7/8/10 Professional software programs.
- Easy calibration instructions for bounce test, laser verification, accelerometer and distance calibrations.
- On screen visual aids and fast reporting of profile results.
- Support for  Google Earth,  Google Maps and  Microsoft MapPoint
- Navigate to locations within profile data using real time **GPS Tracker** and navigational/mapping capabilities.
- User selectable parameters for English and Metric units.
- Real time data display of profile trace.
- Electric Eye data triggers on each side of system function at 30+ feet (10+ meters).
- User programmable keyboard shortcuts
- SSI "Continuous Collection" software suspends collection below 5 mph and resumes when speed exceeds 5 mph.
- Pause areas integrated into collection. View paused areas separately or exclude.
- Multiple Profile Indexes: **IRI** (International Roughness Index, Mean IRI (**MRI**), Half Car Ride Index (HRI), Profile Ride Index (**PRI**), Ride Number (RN).
- Multiple outputs for **Areas of Localized Roughness:** IRI based roughness based on user specified thresholds; Rolling Straightedge, Profilograph must-grind bump template, Texas 1001-S localized roughness,
- Raw data is rewritable: change parameters at any time.
- User defined filtering values for high and low pass filters.
- Patented multiple trace reporting capability.
- Export data into  **PROVAL** (PPF, ERD),  PDF,  Excel, CSV, PRO, CAD, Survey, and Text
- Data is encrypted for security.



▲ Computer Instructed Calibration and Data Collection Routines ▲

▲ Gocator Wide Footprint Laser ▲

▲ In-Cab Touchscreen Computer ▲

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