



SURFACE SYSTEMS & INSTRUMENTS, INC.

Custom Test Equipment • Mobile Technology Solutions

California

1845 Industrial Drive
Auburn, California 95603
Telephone: (530) 885-1482
Facsimile: (530) 885-0593

Kansas

307 Plymate Lane
Manhattan, Kansas 66502
Telephone: (785) 539-6305
Facsimile: (785) 539-6210

smoothroad.com

Inertial Profiler



▲ CS9300 Inertial Profiler ▲

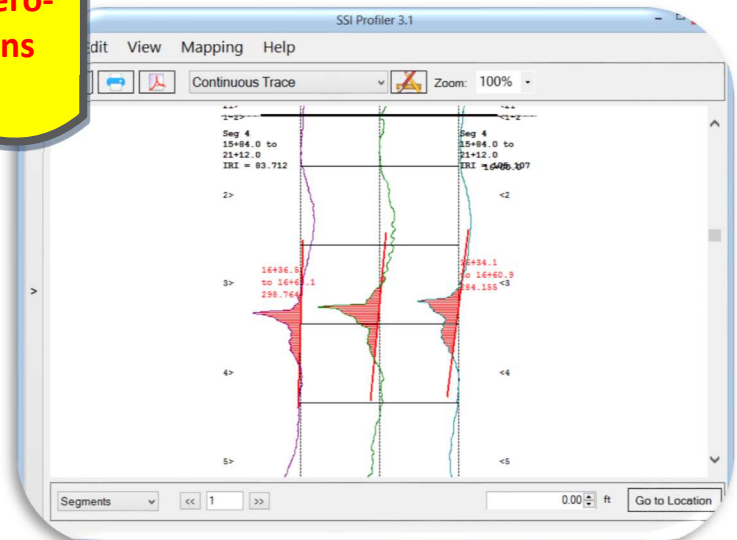


▲ CS9100 Mid-Mount Inertial Profiler ▲

GPS-DMI & Zero-Speed Options



▲ 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 5 to >100 mph (8-160 kph).
- Meets  **E950**,  **M328, R054, R056-057**
- Meets or exceeds all Class I requirements of **ASTM E950**.
- Zero-Speed Option:** collect certifiable data through vehicle stoppages and at **ANY** speed: **0-100 mph**.
- Gocator 5 kHz  **wide beam lasers** for best results on textured asphalt and concrete pavements.
- ±10g accelerometers with 0.0001g resolution.
- Record profile wavelengths of ~0.25 feet (7.62mm) to at least 8000 feet (2438 meters).
- Collection system removable for use on other vehicles.







Compliance and Equipment

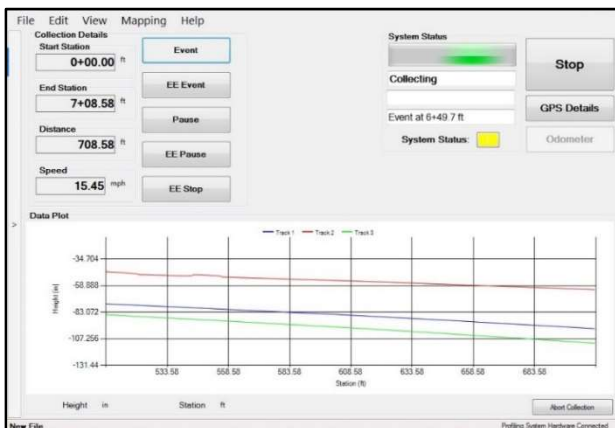
- Complies with all commonly used agency specifications.
- Equipped with industrial grade sensors and connectors.
- Core electronics manufactured in an ISO 9001 facility.
- TOUGHBOOK** rugged computer on all systems.
- Docking station mount accessible by driver or passenger.
- Connects to host vehicle's 12-volt power supply.

Operation, Training & Support

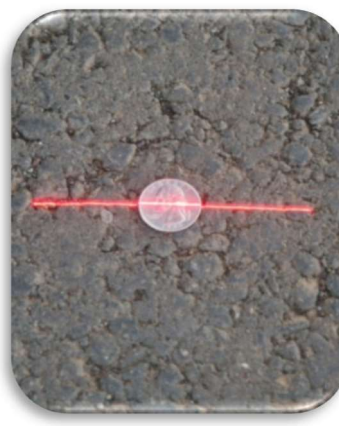
- Designed for safe one-person operation.
- Speed range: 1-inch sampling at 5-70 mph (8-113 kph).
- Operating temperature: 32°-128°F (0°-53°C).
- Waterproof core components.
- Automatic software updates with SSI Profiler 3 
- In field replacement of portable, modular components.
- Warranty** and rapid response **customer support** on all profiling system hardware and software components.
- Options:** **GPS-DMI**, survey GPS with CAD output, HD camera, rut measurement, texture and more.
- Worldwide multi-lingual operator training available.

Best-In-Class Profiling System Software

-  Windows 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 
- 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 display of profile traces, position and speed.
- Electric Eye data triggers on each side of system function at 30+ feet (10+ meters).
- User programmable keyboard shortcuts.
- Continuous Collection function tracks vehicle position below 5 mph and resumes inertial data at 5 mph or more.
- 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**, ASTM E1274), Ride Number (RN).
- Multiple outputs for **Areas of Localized Roughness**: IRI based roughness with configurable thresholds; Rolling Straightedge, Profilograph must-grind bumps, Texas 1001-S localized roughness, Boeing Bump reporting.
- Raw data is rewritable: change parameters at any time.
- User defined filtering values for high and low pass filters.
- View system diagnostics and raw sensor data for monitoring performance and identifying support issues.
- Export data into  (PPF, ERD),  PDF,  Excel, CSV, PRO, GPS/GIS, CAD/LAS (survey systems).
- Encrypted data for compact file size and security.



▲ Computer Instructed Calibration and Data Collection Routines ▲



▲ Gocator Wide Footprint Laser ▲



▲ In-Cab Touchscreen Computer ▲

Surface Systems & Instruments, Inc.

California Division

1845 Industrial Drive, Auburn, California 95603

Tel: (415) 383-0570 • Fax: (415) 358-4340

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Kansas Division

307 Plymate, Manhattan, Kansas 66502

Tel: (785) 539-6305 • Fax: (785) 539-6210

info@smoothroad.com

