



SURFACE SYSTEMS & INSTRUMENTS, LLC

Custom Test Equipment • Mobile Technology Solutions

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www.smoothroad.com

SSI PRODUCT OVERVIEW

High Speed Profiling Systems



▲ Robust Front Mount System ▲



▲ Portable Rear Mount System ▲

High Speed Profiling Systems: Collect high resolution surface profile data at speeds from 5 to 70 mph with SSI's ASTM E950 Class I Profiling Systems. Guaranteed to comply with agency specifications and certification tests (including TXDOT Test 1001-S and AASHTO PP51-02). SSI's high speed profiler is proven to be more accurate than any profiler in the industry in re-creating actual surface profile and the physical dimensions of localized roughness. The SSI high speed profiling system is available in several configurations, including (1) a robust front mount installed on the front or rear of industry standard vehicles, (2) a portable rear mount system that transmits profile data by RF radio, requiring no wiring other than a 12V power supply, or (3) a custom mid-mount system with data collection modules embedded between the wheels of trucks or vans. SSI representatives assist with on-site installation of the systems, which consist of collection sensors (lasers/accelerometers), a distance measurement interface, proprietary data collection computer, and an in-cab work-station (Toughbook computer and onboard printer). Windows software routines are safely operated by one person using Touchscreen controls. On screen viewing of data collection and immediate test results. Instant PDF images and Excel exports of data. Optional GPS subsystem correlates profile data with GPS coordinates and with Google Earth.

Lightweight and Multiple Purpose Profilers: SSI's lightweight profiler and hybrid multiple purpose profiling system (works as a lightweight or a high speed system) are an ASTM E950 Class I Profilers. Guaranteed to meet DOT

specifications and certification tests (including TXDOT Test 1001-S and AASHTO PP51-02). For concrete or coarse textured pavements, the recommended laser is the Selcom RoLine (with 100 point 4 inch/100mm data sample) to minimize roughness values. SSI can prove that these systems are more accurate than other systems in recreating the actual surface profile and detecting the exact dimensions of localized roughness. SSI's lightweight systems have a patented Windows software programs. The systems allow quick access to recently paved surfaces for swift corrective measures. Test from 5-25 mph with the lightweight profiler and 5-60 mph with the multiple purpose systems. Immediate on-screen results in all common indexes (IRI, PI, RQI, HRI, etc.). Touchscreen controls with menu driven routines for calibration, data collection, and analysis ease operator training and field use. Easy electronic storage and transfer of data files. Self-installing software updates by email or internet download. All sensors and instrumentation are portable and replaceable by express shipping. **NEW—Survey, Design and 3-D Machine**

Control Systems: SSI now offers systems for construction surveying, design and machine control. Using multiple differential GPS and RTK (real time kinematics) instrumentation and advanced software, these systems can be integrated with SSI's profilers or function as stand-alone systems. Contact SSI for details.

Lightweight and Hybrid Profilers



▲ Lightweight Profiler ▲



▲ Multiple-Purpose Profiler ▲

Walking Profiler



Walking Profiler: SSI's CS8800 measures various surface profile indexes (IRI, PRI, FF, FL, etc.) and precise depictions of localized roughness. The samples at 1 inch (25mm) intervals. Designed based on SSI's profilograph and inertial profiling system technology, the CS8800 records surface profile by measuring precise movements of distance and elevation changes that are processed with SSI's proprietary data collection electronics and advanced digital filtering methods. The only device of its kind operated with a Windows XP computer with a wireless interface, the CS8800 pairs cutting edge electronic technology with SSI's feature rich profiling application software. Raw data exports to commonly used formats (ERD, ASCII Excel, etc.). The CS8800 collapses into a portable container that can be safely stored and easily transported. Optional high resolution surface texture measurements with Selcom RoLine 100 point laser sensor. For details, call SSI at (800) 662-5656 or visits SSI's website at <http://www.smoothroad.com/products/walking/>.



Road and Bridge Computerized Profilograph Systems: In partnership with James Cox & Associates (Auburn, CA), the inventor of the commercial profilograph, SSI offers the only true California type profilograph system. Computerized systems with SSI's patented Windows operating system are available in 25' road or 12' bridge configurations. Mechanical systems and optional trailers are also available. SSI's profilographs are widely accepted by DOT agencies and are guaranteed to pass certification requirements. The computerized systems feature patented technology with bi-directional data collection and dual trace profile reports. The Windows operating system and Toughbook computer with a touchscreen greatly ease training and field operation. Raw profile data is encrypted and can be re-analyzed, avoiding any costly recollection of profile data after operator errors. Profile data can be exported to PDF images and Excel spreadsheets, with automatic bonus and penalty calculations. The weatherized detachable housing runs on AC or DC power supplies and can be used in the field or office.



Computerized Profilograph

Profilograph Retrofit & ProScan



Windows System Upgrades to Existing Profilographs: All the benefits of the new SSI-Cox Windows profilograph operating system can be installed as a retrofit item on most models of mechanical or computerized profilograph systems. On-screen menu-driven software routines for calibration, data collection, and data analysis. Real time views of profile traces and PRI values, as well as an audible and visual display of the dimensions of must grind bumps and dips in real-time. Instant viewing profile traces and test results. Easy electronic storage and transfer of data files. View/print data in the field or office. Optional GPS coordinates display in correlation with profilograph stationing and viewing of overhead pictures in Google Earth.

ProScan Automated Scanning System for Mechanical Profilographs: SSI also offers The ProScan system, which scans mechanical profilograph traces into a digitized raw data file equivalent to a computerized profilograph output. The new Windows version of ProScan

allows users to quickly determine PI values and precise locations of must-grind bumps and dips. ProScan reduces data analysis time to a small fraction of the labor involved with hand reduction of profilograph traces. User-selectable and re-writable data analysis parameters. ProScan is widely accepted by DOT agencies and the FHWA.

Panasonic Toughbook Computers and In-Vehicle Workstation: SSI carries the full line of rugged and semi-rugged Panasonic Toughbook computers and accessories. The same rugged computers most specified and trusted by military, police and fire agencies are available at discounted pricing from SSI. Many models and configurations are offered, including custom features Touchscreens, backlit keyboards, Wide Area Networking (Sprint, Verizon, Cingular, etc.), GPS and more. SSI also offers in-vehicle mounting solutions for creating in-vehicle work stations to securely mount Toughbook computers and peripherals into industry standard vehicles. Installation assistance is available. For specifications and pricing, visit <http://www.smoothroad.com/products/toughbook/> or call (800) 662-5656.

Toughbook Computers



Asphalt & Concrete Tools & Measuring Wheels



Specialty Tools: SSI offers numerous asphalt and concrete finishing tools, such as highway checking tools, straightedges, lutes, groovers, and other specialty tools. A full line of distance measurement wheels is also available. For a complete parts and price list, visit <http://www.smoothroad.com/products/actools/> or call SSI at (800) 662-5656.

Laboratory Test Equipment: SSI offers a variety of material test equipment, including kneading compactors, presses, rolling thin film ovens, axial testing systems, and shear testing systems. For specifications and pricing, visit <http://www.smoothroad.com/products/testequip/> or call SSI at (800) 662-5656.

SSI Rentals: SSI's profiling system products and Toughbook computers are available for rental on short or long term basis (with or without a trained operator). Purchase discounts available after end of rental

Material Test Equipment



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