



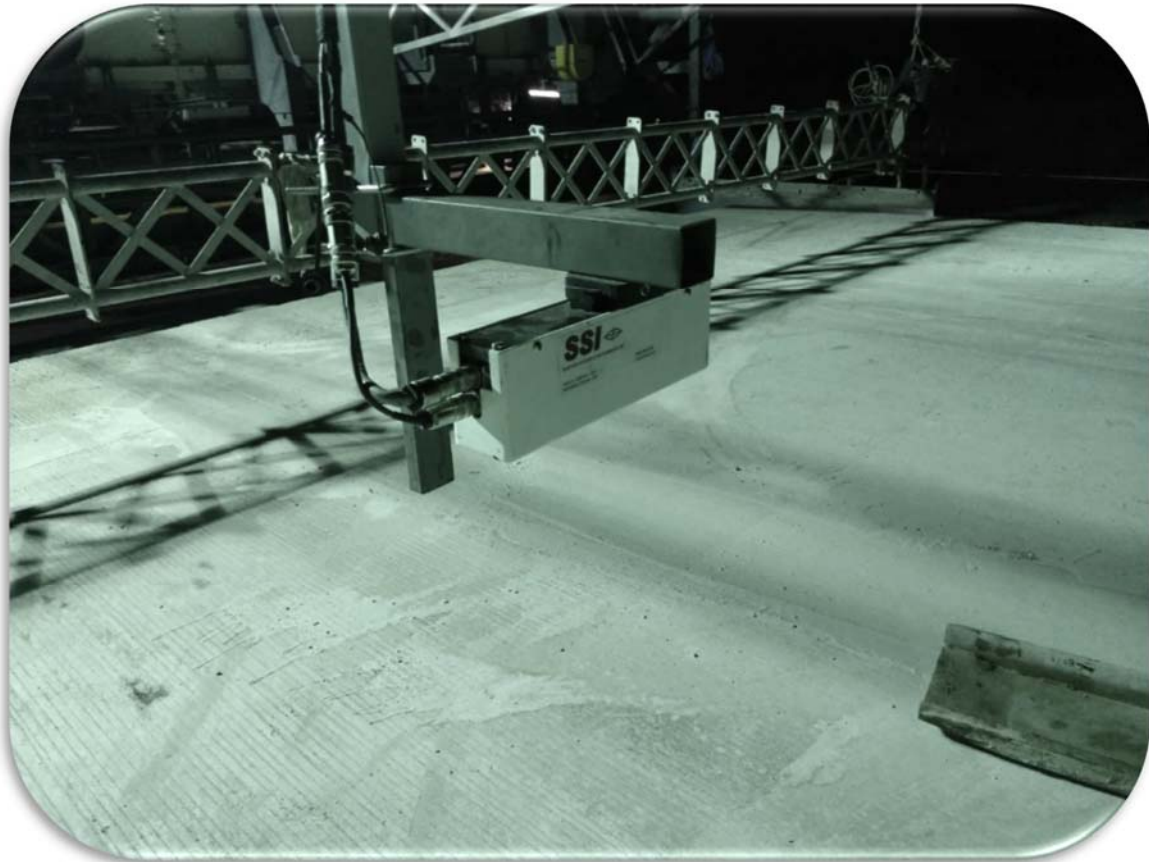
SURFACE SYSTEMS & INSTRUMENTS, INC.

Custom Test Equipment • Mobile Technology Solutions

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smoothroad.com

CS7800 DYNAMIC SURFACE PROFILER (FOR ASPHALT AND CONCRETE PAVERS)



▲ Installs on Pavement Lay-Down Equipment For Real Time Smoothness Testing ▲



Panasonic
TOUGHBOOK

▲ SSI Live Charts: Two Track Profile, Speed, IRI, PSD, GPS, more ▲

▲ Multi-purpose Rugged Computer ▲



CS7800 Dynamic Surface PROFILER

HARDWARE FEATURES	SOFTWARE FEATURES
<ul style="list-style-type: none"> Built for asphalt or concrete pavers. Adjustable sampling interval (default one inch / 25.4 mm). (equivalent to ASTM E950 Class I profiling device). Multiple track configurations available. 	<ul style="list-style-type: none"> Real time display of profile, speed, ride values, areas of localized roughness, PSD (power spectral density) and GPS. Multiple profile statistics supported (e.g. IRI, PRI, RN, and RMS).
<ul style="list-style-type: none"> Modular, portable design. Sensors adjust laterally and vertically for flexibility in configuring system on multiple machines. Core components field installable; store and ship in reusable case. 	<ul style="list-style-type: none"> Feature rich Windows software programs for calibration, data collection and analysis. Output formats include ProVal (ERD/ PPF), PDF, Excel, 3D survey (PNEZD, PLLHD, GPGGA), raw profile, and simulated profilograph.
<ul style="list-style-type: none"> Professionally engineered, durable hardware. Profile measurement by proprietary laser/inclinometer platform. Distance measurement using 5th wheel or GPS DMI. Optional wide beam lasers for height measurements. 	<ul style="list-style-type: none"> Multiple trace reporting allows cross-surface analysis of parallel profile traces. Append data to existing files for continuous profile measurement. On-Screen user's manual and instructions for profiling software.
<ul style="list-style-type: none"> Transfer data to inertial profiler or GPS device for navigation GPS accuracy options from 2.3 ft (.7 m) to ~ 0.8" (2 cm) GPS to RTK. GPS correlated with project stations; real time trace navigation and Google Earth/Maps integration. 	<ul style="list-style-type: none"> Profile reports and traces available on-screen, PDF, Excel, or electronic format (for email or desktop computers). Colorized traces and highlights of bonus/penalty profile areas. Encrypted raw data for reanalysis with variable parameters.
<ul style="list-style-type: none"> Powered by host machine's 12-48V power supply or generator. Toughbook military specification computer with static hard drive and daylight readable Touchscreen controls. 	<ul style="list-style-type: none"> Automatic software updates via internet. Real time diagnostics monitor system health and ease support.
<ul style="list-style-type: none"> Buy or Rent. •On-site assistance with install, training and support. Optional 3D elevations (RTK GPS or Total Stations). Coming soon: thermal imaging option for intelligent compaction. 	<ul style="list-style-type: none"> Configurable analysis parameters (English or Metric units, profile indexes, filters, localized roughness, etc.). Software license for use on other computers.

TECHNICAL SPECIFICATIONS*

• Device Classification/Rating	•ASTM E950 Class I equivalent. World Bank Standard—Class 1 profiling device.
• Test Results and Data Outputs	•IRI, HRI, PRI, RQI, RN, CA Bridge, Variable localized roughness templates. PDF, Excel, ERD/PPF and raw strip trace formats.
• Localized Roughness	•Dimensions of bumps/dips measured with maximum amplitude of peaks and troughs calculated. Configurable template for reporting localized roughness as IRI, profilograph, straightedge, or DOT specific methods.
• Measurement Units	•English/Metric (variable, re-writeable).
• Operating Speed	•0.0–Maximum speed of any paver.
• Sampling Interval	•Default = 1 inch (25.4 mm). Alternate sampling intervals configurable.
•Profile Accuracy	•0.381 mm (±0.015 inch) per 45.7 meters (50 yards).
•Height Measurement Precision	•±0.0025mm (±0001 inch) per 254 mm (12 inch) wheel-base.
•Grade Measurement Resolution	•1 in 4.7 or 12 degrees.
• Longitudinal (Distance) Resolution	•+/- .025% (via 5 th wheel or GPS DMI).
• Power Supply	•12 volt power supply from host machine.
• Weight	•~20 lb/5 kg.
• Dimensions	•34.5" (L) x 18.0" (W) x 12" (H).
• Environmental	•Operating Temperature (PCC): 32 -140°F (-0 to 60°C). Storage: -50-170°F (-30-75°C).
• Data Collection Electronics	•SSI proprietary embedded microprocessor based electronics architecture (ISO 9001 built).
• Operator Computer	•Panasonic Toughbook military specification notebook PC with touchscreen controls.
• Operating System	•MS Windows 7/8/10 Pro operating system. •Custom Windows software for calibration, data collection and feature rich data analysis.
• Data Storage	•Typical notebook hard drive (250-5000GB) stores >200000 miles (320000 km) of profile data. Raw data files are transferable through portable storage media or email.
• Data Formats	•Raw data encrypted. Export routines supplied for ProVal (ERD/PPF) CAD, PDF and Excel.
• Options:	•3D Survey (RTK or Total Stations). •Multiple track systems •Texture •Cross-slope.

*Specifications subject to change.

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