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**SURFACE SYSTEMS & INSTRUMENTS, LLC**

Custom Test Equipment • Mobile Technology Solutions

[www.smoothroad.com](http://www.smoothroad.com)



# CS9400 Simple Profiler

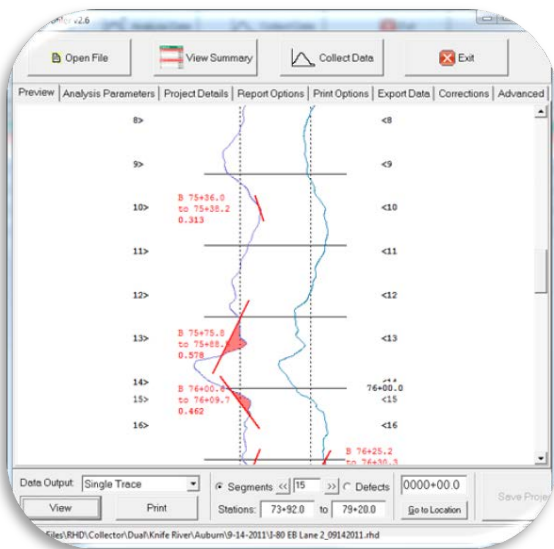


▲ CS9400 as Lightweight Profiling System ▲



▲ CS9400 as High Speed Profiling System ▲

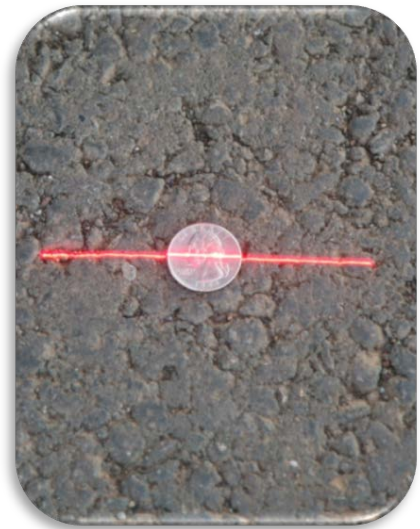
**A Portable, Cost Effective Solution for Precision Smoothness Testing**



▲ Dual Track Reporting ▲

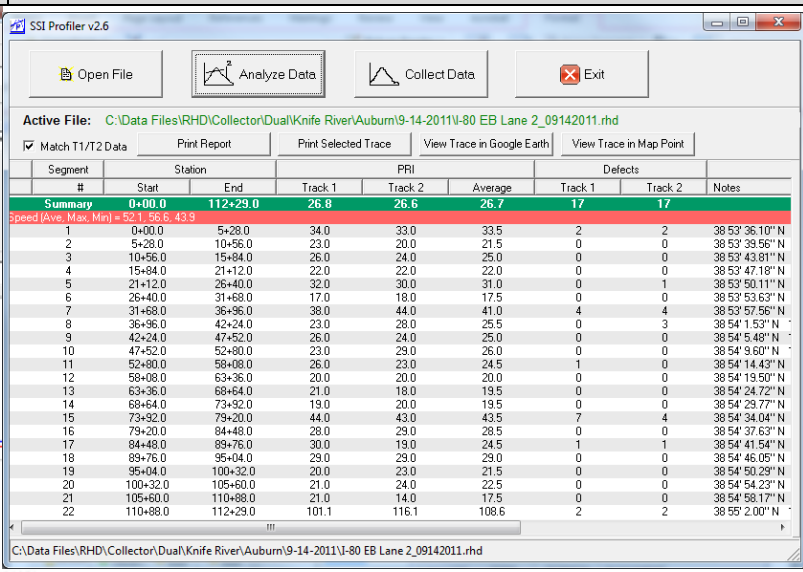
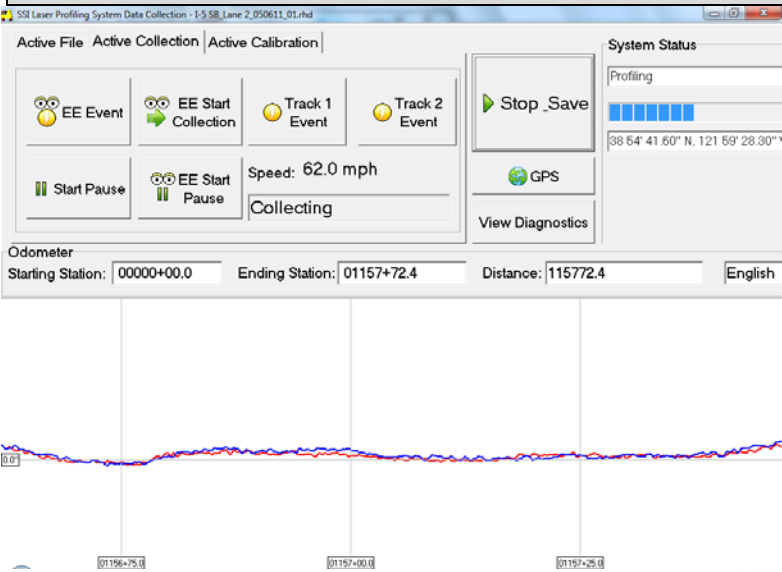


▲ Compact Kit Ships and Stores Easily ▲



▲ Wide-Footprint Laser ▲

HARDWARE FEATURES	SOFTWARE FEATURES
<ul style="list-style-type: none"> <li>• Portable profiling system attaches to lightweight or high speed vehicles (requires a 2 inch towing receiver and 12V power supply).</li> <li>• ASTM Class I profiling system.</li> <li>• Guaranteed to meet or exceed agency requirements (State DOT, Transport Ministry, FHWA, AASHTO M328, R054, R056-R057).</li> </ul>	<ul style="list-style-type: none"> <li>• Self-instructing programs for calibration, collection and analysis.</li> <li>• Safe operation on touch-screen Toughbook computer.</li> <li>• On-Screen user's manual.</li> <li>• Real time diagnostics monitor profiling system health and facilitate prompt resolution of support issues.</li> </ul>
<ul style="list-style-type: none"> <li>• 100% Non-contact inertial system—no sensors touch road surface.</li> <li>• Core components field installable and available by express shipping</li> <li>• Rugged suitcase enclosure for notebook computer, on-board printer (with power assisted paper spooling). • AC/DC power supplies.</li> </ul>	<ul style="list-style-type: none"> <li>• Instant test results and on-screen view of profile traces and reports.</li> <li>• Collection system pauses when speed drops below &lt;5mph (8 kph).</li> <li>• Add new profile data to existing files for comparison of original condition with constructed surfaces.</li> </ul>
<ul style="list-style-type: none"> <li>• Professionally engineered mounts are vibration free and allow for vertical and horizontal repositioning of sensor modules.</li> <li>• Current model <a href="#">Toughbook 19</a> fully rugged computer with daylight readable Touchscreen controls.</li> </ul>	<ul style="list-style-type: none"> <li>• All industry standard profile indexes supported [International Roughness Index (IRI and MRI), Half Car Ride Index (HRI), Profile Ride Index (PRI or PI), and Ride Number (RN)].</li> <li>• User-adjustable parameters to meet specifications (project details, data filters, bump/dip templates, blanking band, and user defined).</li> </ul>
<ul style="list-style-type: none"> <li>• All-in-Cab operation—collect/analyze data without leaving vehicle.</li> <li>• Wide range of speeds (~5 mph to 70 mph).</li> <li>• Reusable container for secure shipment and storage.</li> </ul>	<ul style="list-style-type: none"> <li>• Unmatched precision in detecting surface features exact dimensions of localized roughness—<i>Proven and Guaranteed!</i></li> <li>• Localized roughness reported by adjustable height and length templates, or by IRI thresholds.</li> <li>• Length and peak amplitudes of grind/fill areas separately calculated.</li> </ul>
<ul style="list-style-type: none"> <li>• Multiple triggers for collection, pauses and events: (1) SSI reverse direction mode collects exact stations without pre-marking test sections, (2) right and left electric-eye sensors trigger by reflective tape, and (3) on-screen push button for manual triggering.</li> </ul>	<ul style="list-style-type: none"> <li>• Profile results available on-screen and in PDF, ERD, PPF, and spreadsheet formats (with populated Excel templates supplied).</li> <li>• Colorized traces and highlighted areas of bonus/penalty.</li> <li>• Fully compatible with ProVal software.</li> </ul>
<ul style="list-style-type: none"> <li>• Optional wide footprint laser reduces impact of single point sensor on grooves, concrete tines, and coarse textures on ride index values and areas of localized roughness.</li> </ul>	<ul style="list-style-type: none"> <li>• SSI Validation Engine software supplied for assessing same surface repeatability, accuracy and cross-correlation.</li> </ul>
<ul style="list-style-type: none"> <li>• GPS subsystem with real-time display of GPS position, GPS correlation with profile stations, and Google Earth integration.</li> <li>• Survey option combines profile data, corrected GPS, and cross-slope to generate surface topography in survey format</li> </ul>	<ul style="list-style-type: none"> <li>• License supplied for use of Profiler software on desktop or multiple computers (allows viewing, analyzing, printing and emailing of profile data by multiple users).</li> <li>• Raw data encrypted for security and unlimited post-processing.</li> </ul>



▲ Computer Instructed Data Collection and Calibration Routines ▲ ▲ Immediate Results with Advanced Data Analysis Features

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