



SURFACE SYSTEMS & INSTRUMENTS, INC.

Custom Test Equipment • Mobile Technology Solutions • FF/FL • Road Profilers • Panasonic Toughbooks

California

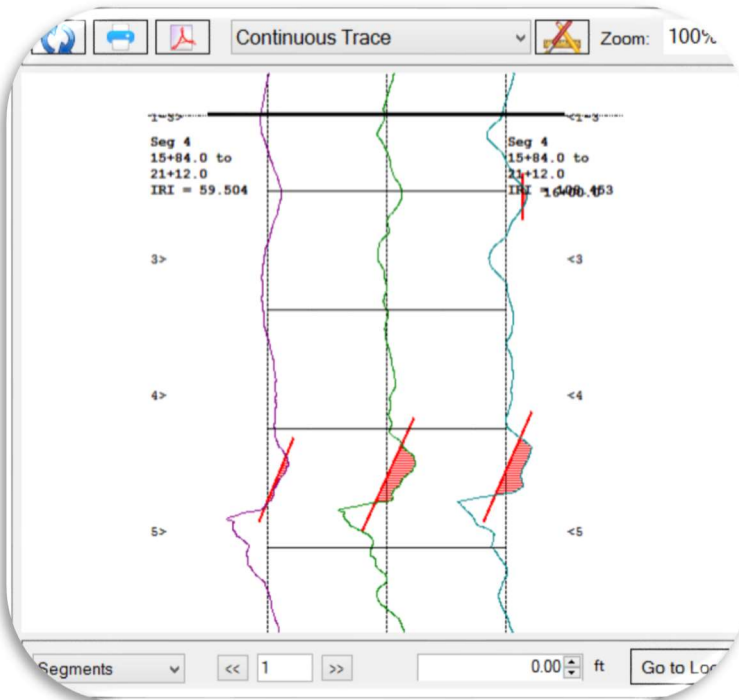
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CS8800 WALKING PROFILER



- ▲ Longitudinal Profile for Smoothness • Transverse Profile for Rut Depth ▲
- ▲ Multiple Data Formats: ERD/PPF (ProVal), CAD/GIS, PDF & Excel ▲
- ▲ Simple Software for Calibration, Collection and Analysis ▲
- ▲ Immediate On-Screen Results • GPS for Feature Tagging & Mapping ▲

- ▲ Rugged, Portable Hardware ▲
- ▲ Configurable Sampling Interval, 1" (25mm) default ▲
- ▲ Laser Option for Pavement Texture ▲

Precision Device for Pavement Smoothness, Transverse Profile & Texture



Panasonic
TOUGHBOOK®



- ▲ Laser Option for Texture & Short-Wave Features ▲

- ▲ Rugged Computer ▲

- ▲ Reusable Case for Shipping and Storage ▲

HARDWARE FEATURES	SOFTWARE FEATURES
<ul style="list-style-type: none"> • ASTM E2133 compliant. • Proven 99% repeatable. • Sampling Interval: 1"/25.4 mm default (ASTM E950 Class I equivalent profiling device). Adjustable (.25"-6"; 6.35 -150 mm). • Guaranteed compliance with specifications (AASHTO, ASTM, DOT). • Qualified reference device for certification of inertial profilers. • Modular, portable design: all core components can ship express and are field replaceable. • Current model Panasonic Toughbook CF-20 military specification notebook computer with daylight readable Touchscreen controls. • Professionally engineered, self-balancing frame with zero lateral tilting. • Assembles in minutes (by attaching handle and computer). • Entire system fits in reusable container for storage and shipping. • Multiple sensor inputs (encoders/inclinometers) processed with SSI proprietary collection electronics and filtering methods for best profile. • Bi-directional collection and reporting of multiple profile traces on a single report (patented technique for lateral surface evaluation). • Rear wheelbase options available: 250mm (9.85") or 305mm (12"). • Extended capacity Li-ion battery for full day (>10 hours) of testing. • GPS subsystem with choice of accuracy configurations: Low (2-3 meter), Medium (0.7 meter) or High (2-5 cm, with subscription or RTK). • 3D survey option (merges profile with corrected GPS or total stations). • Pavement texture (MPD) option with spot or 3D wide footprint laser. • Worldwide support and on-site training. • CS8800 rentals available. 	<ul style="list-style-type: none"> • Reports IRI, MRI, HRI, PRI, RN, and Localized Roughness (with adjustable templates). • Transverse profiles for rut depth. • Optional FF/FL and Americans with Disabilities Act (ADA) sidewalk access reporting (e.g. cross-slope, running grade, evenness, more). • Instant test results and viewing of profile traces and reports. • Outputs longitudinal profile, transverse profile, elevation data, slope, ERD/PPF (for ProVal), CAD/GIS and text formats. • Multiple trace reporting allows cross-surface analysis of parallel profile traces (patented by SSI). • Append data to existing files for comparison of original surface condition with corrected surface. • On-Screen user's manual and instructions for software operation. • Profile reports and traces available on-screen, in PDF images, Excel (templates supplied), hard copy prints, or electronic formats. • Colorized traces and highlights of bonus/penalty profile areas. • Encrypted raw data for infinite reanalysis with variable parameters • Software updates by auto-installing internet download. • Real time diagnostics monitor system health and ease support. • GPS subsystem has real-time position display, merges GPS with project stations, GPS Tracker for navigation, and Google Earth export. • Data infinitely rewritable with configurable analysis parameters. • Desktop license supplied for viewing, analyzing, printing and emailing of CS8800 data using SSI Profiler software.

TECHNICAL SPECIFICATIONS*

Device Classification/Rating	• ASTM 2133 (and E950 Class I equivalent). • World Bank Standard—Class 1 profiling device.
Test Results and Data Outputs	• IRI, MRI, HRI, PRI, RN, Boeing Bump, configurable localized roughness outputs; PDF, CSV, Excel, ERD/PPF and GPS/GIS formats. • Optional FF/FL (floor flatness/levelness) or ADA Access reporting.
Localized Roughness	• Dimensions of bumps/dips reported with amplitudes of peaks/troughs. Configurable parameters for localized roughness for IRI and rolling straightedge methods. Boeing Bump airfield reporting.
Measurement Units	• English/Metric (variable, re-writeable).
Operating Speed	• 0.0 – 1.0 mph (0-1.7 kph) (slower speed required for best results on rougher or coarse surfaces.)
Sampling Interval	• Default of 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 Grade Measurement Resolution	• ±0.0025mm (±0.0001 inch) per: (1) 305 mm (12 inch) wheelbase, or (2) 250mm (10 inch) wheelbase. • 1 in 4.7 or 12 degrees.
Longitudinal (Distance) Resolution	• +/- 0.025%.
Power Supply	• Main system battery: extended capacity 12V Lithium Ion battery. Notebook PC runs on CS8800 main battery or separately on internal battery. Estimated battery life designed to 12-16 hours.
Weight	• ~40 lb/18 kg (without Toughbook computer, battery, accessories or carrying case).
Dimensions	• 34.5" (L) x 18.0" (W) x 12.125" (H) [collapsed, 36.5" with handle extended].
Environmental	• Operating Temperature: 0 -140°F (-20 to 60°C). Storage: -50-170°F (-30-75°C). 0-92 % relative humidity.
Data Collection Electronics	• SSI proprietary embedded microprocessor-based electronics architecture (ISO 9001 fabricated).
Operator Computer	• Panasonic Toughbook 20 military specification notebook PC with touchscreen controls.
Operating System	• Microsoft Windows 10/11 Professional operating system. • SSI built Windows software for calibration, data collection and feature rich data analysis/reporting.
Data Storage	• Typical notebook hard drive (500GB-1TB) stores >200,000 miles (320,000 km) of profile data. Raw data files are transferable through portable storage media or email attachment.
Data Formats	• SSI proprietary encrypted format. Export routines (supplied) for ERD/PPF (for ProVal), PDF or Excel.
Options:	• GPS integrated with profile data. • Survey subsystem (RTK GPS or total stations). • Texture laser.

*Specifications subject to change without notice.

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