



SURFACE SYSTEMS & INSTRUMENTS, INC.

Custom Test Equipment • Mobile Technology Solutions

California

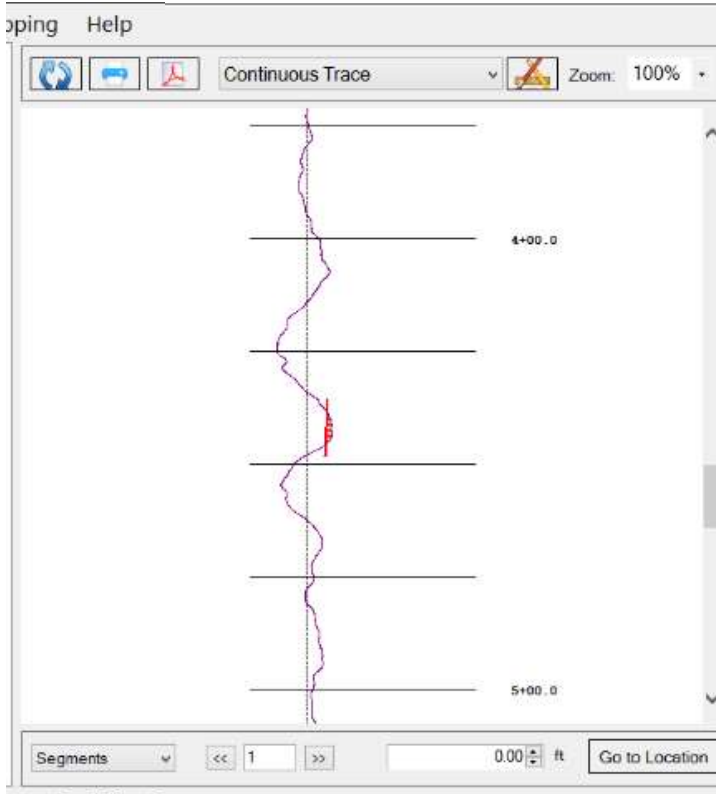
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smoothroad.com

CS8900 ACCESS PROFILER



- ▲ Longitudinal Profile, Cross-Slope, Forward Slope, GPS, Images ▲
- ▲ Localized Roughness Dimensions Calculated ▲
- ▲ Easy Software for Calibration, Collection and Analysis ▲

- ▲ Multiple Sensors for Profile & Slope Measurement ▲
- ▲ Configurable Data Sampling Interval ▲
- ▲ Durable, Lightweight Hardware ▲

Fully Automated Device for Measuring Sidewalk Accessibility Criteria



Panasonic
TOUGHBOOK®



- ▲ Compatible With GPS/GIS Applications ▲

- ▲ Rugged Computer ▲

- ▲ Reusable Container for Storage and Shipping ▲

HARDWARE FEATURES

- Professionally engineered hardware platform.
- Operational in minutes (attach handle, connect computer and cables).
- Large pneumatic tires support rollability on uneven sidewalks.
- Entire system fits in reusable container for storage and shipping.
- Modular, portable design: core components serviceable in the field.
- All components can ship express to minimize downtime.
- Multiple sensors combined for optimized profile, slope and GPS outputs with SSI proprietary instrumentation and filtering algorithms.
- Frame maneuvers easily for bi-directional data collection.
- Current model Panasonic Toughbook CF-20 military specification notebook computer with daylight readable Touchscreen.
- Designed for outdoor use (shock mounting, resists dust and moisture)
- Toughbook detaches and works with other software or applications.
- Extended capacity Li-Ion battery for full day (>8 hours) of testing.
- Battery meter accurately displays discharge level.
- GPS subsystem with real-time display of GPS position, correlation of GPS with profile stations, and Google Earth visualization.
- Raw data compatible with GIS applications.
- Survey option (merges CS8900 data with RTK corrected GPS).
- Buy or Rent. • On-site customer training and support worldwide.

SOFTWARE FEATURES

- Outputs evenness, cross-slope, running grade, GPS, and images.
- Reports ride quality under DOT specifications and test methods.
- Data proven to be accurate and repeatable.
- Easy, feature rich Windows software programs for calibration, data collection and analysis.
- On-Screen user's manual and instructions for software operation.
- In-field test results with viewing of profile traces and reports.
- Longitudinal profile reports WPRI (Wheelchair Pathway Roughness Index) IRI, MRI, HRI, PRI, RN, and Areas of Localized Roughness.
- Profile reports and traces available on-screen, in PDF images, Excel templates, hard copy print out, or electronic formats.
- User defined sampling Interval: (capable of 1"/25.4 mm sampling; equivalent to ASTM E950 Class I profiling device).
- Encrypted raw data for infinite recalculation of settings
- Real time diagnostics monitor system health and ease support.
- Auto detected software updates (internet connection required).
- Data infinitely rewritable with variable analysis parameters (English or Metric units, profile indexes, filters, localized roughness).
- Software license for desktop computers supplied for multi-user viewing, analyzing, printing and emailing of CS8900 data using SSI Profiler software.

TECHNICAL SPECIFICATIONS*

Profile Device Classification/Rating	• ASTM E950 Class I equivalent. • World Bank Standard—Class 1 profiling device.
Test Results and Data Outputs	• Profile: PRI, IRI, MRI, HRI, PRI, RN Indexes Computed. • Cross-slope. • Running Grade. • Data Formats: PDF, Excel, CSV/ASCII, ERD/PPF (ProVal), GIS, GPX/KML and user specified formats.
Localized Roughness (Evenness)	• Dimensions of bumps/dips measured with maximum amplitude of peaks and troughs calculated. • User configurable templates for separately calculating dimensions of bumps and dips.
Measurement Units	• English/Metric (variable, re-writeable).
Operating Speed	• 0.0–1.4 mph (0-2.3 kph) (slower speed required for best results on rougher or coarse surfaces.)
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	• ±0.25mm (±0.001 inch) per 254 mm (12 inch) wheelbase.
Grade Measurement Resolution	• 1 in 4.7 or 12 degrees (higher degree measurement supported upon request).
Cross-Slope Resolution	• ±0.25mm (±0.01 inch)
Longitudinal (Distance) Resolution	• +/- 0.025%.
Power Supply	• Main system battery: extended capacity 12V Lithium Ion battery. Notebook PC runs on CS8900 main battery or separately on internal battery. Estimated battery life designed to exceed 8 hours.
Weight	• ~40 lb/18.1 kg (without Toughbook computer, 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: 15 -140°F (-10 to 60°C). Storage: -50-170°F (-30-75°C).
Data Collection Electronics	• SSI proprietary embedded microprocessor based electronics architecture (ISO 9001 fabricated).
Operator Computer	• Panasonic Toughbook CF-19 military specification notebook PC with touchscreen controls.
Operating System	• MS Windows 7 Professional operating system. • SSI built Windows software for calibration, data collection and feature rich data analysis/reporting.
Data Storage	• Typical notebook hard drive (250-500GB) stores >200000 miles (320000 km) of profile data. Raw data files are transferable through portable storage media or email attachment.
Data Formats	• SSI binary encrypted format. Export routines for GIS, GPX/KML, ERD/PPF, PDF, Excel, CSV, ASCII.
Options	• Survey subsystem (RTK GPS or total stations). • Texture laser.

*Specifications and availability subject to change without notice.

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