



RCD-2000 LASER PAVEMENT SECTION TEST SYSTEM



SINCE 2006

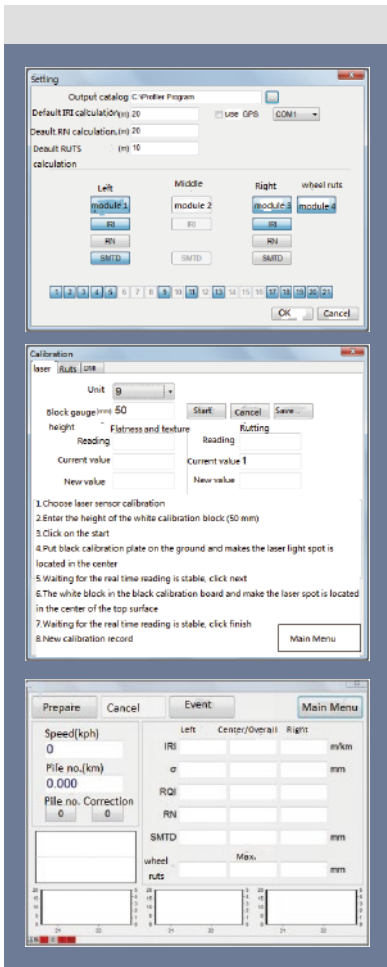
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STANDARD: ASTM E950

The RCD-2000 is a testing system that can measure and collect data on several different road surface properties. It adopts advanced laser detection technology and traditional inertial reference transfer detection theory, and is widely used to detect the indicators and characteristics of highways, roads, airport runways, etc. It can measure International roughness index(IRI), Flatness standard deviation (σ), Observation play score (RN), Driving quality index (RQI), Pavement texture depth (SMTD), Wheel ruts, Speed and driving distance, and display each index and distance curve in real time.

FEATURES

- ⊙ Adopt professional road detection laser sensor(Belarus brand) and high precision acceleration sensor(America brand).
- ⊙ Confirm to ASTM E950, and meet surface texture measurement class I standard requirement.
- ⊙ Cross section calculation model complete adopt the university of Michigan (UMTRI) and US Federal Highway Administration (FHWA) road cross-section measurement system synthesis algorithm of area.
- ⊙ The test process is not affected by the speed of the loaded vehicle, and the vehicle speed can be changed in a larger range(30-80km/h) without affecting the test result.
- ⊙ Continuous, uninterrupted and unlimited mileage detection, real-time data storage.
- ⊙ The Ethernet communication method is adopted between the host of the test system and the computer, and a laptop computer is used for the test.



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RCD-2000

CONFIGURATION LIST



Laser pavement fracture surface test system	1 set
Distance measurement system	1 set
Vehicles refitted accessories	1 set
Special tool kits	1 set
Standard spare parts	1 set
Data collecting & analyzing software	1 set
Laptop	1 set
Factory calibration certificate	1 set
Operate manual	1 set



SPECIFICATIONS

TEST ITEMS

International roughness index(IRI)
 Flatness standard deviation (σ)
 Observation play score (RN)
 Driving quality index (RQI)
 Pavement texture depth (SMTD)
 Wheel ruts
 Speed and driving distance

IRI/WHEEL RUTS LASER DEVICE		STRUCTURAL DEPTH LASER	
IRI laser	Riftek RF603 125/500	Model	Gocator 1350
Wheel ruts laser	Riftek RF603 245/1000	Response frequency	20 kHz
Response frequency	9.4kHz	Sampling frequency	40 kHz
Distance from the earth	375/745mm	Distance from the earth	300mm
Measurement Range	$\pm 250/500$ mm	Measurement Range	± 100 mm
Resolution	<0.001m	Resolution	<0.02mm
Protection Grade	IP67	Protection Grade	IP67
Accuracy	<0.5mm	linear	<0.15mm
ACCELERATION SENSOR		Communication method	ethernet network
Measurement Range	± 2.5 g	DISTANCE SENSOR	
Accuracy	$\leq 1\%$	Pulse number	2000 Pulse/R
Resolution	1 μ g	Resolution	<0.001m
Response frequency	0.7~7700Hz	Measurement accuracy	<0.05%
Sampling interval	≥ 1 mm(Arbitrarily set)	Vertical profile height detection accuracy	<0.5mm
IRI range	0~20m/km	Vertical profile wavelength range	1mm~200m
IRI resolution	0.1m/km	Continuous test distance	Unlimited
Detection Repeatability	Coefficient of deviation CV<3%	Cross Section measure road width	3500mm
DETECTION SPEED		SMTD resolution	0.01mm
IRI	20~100km/h	SMTD accuracy	0.05mm
SMTD	20~70km/h	Wheel ruts test range	0~200mm
rutting(Wheel ruts)	20~100km/h	Wheel ruts test resolution	0.1mm
Reporting interval	Any length above 5m	Power supply	DC12V