

Complete GPR System for Road Inspection and Analysis

RoadScan™ 30

www.geophysical.com

The affordable RoadScan™ 30 system provides users with an effective tool for quickly determining pavement layer thickness. RoadScan 30 is able to collect data densities not obtainable using other labor-intensive methods. RoadScan data can be acquired at highway speeds, which eliminates the need for lane closures and provides a safer working environment.

Rough roads? No problem since GSSI road antennas are air-launched at a height of 18 inches (46 cm).

Typical Uses

- Measuring pavement thickness
- Base and sub-base evaluations
- Measuring available asphalt prior to milling operations
- Improved integration with FWD and other devices

Advantages

- Data acquired at highway speeds
- No coring required for calibration
- Data quality not affected by rough road conditions

Acquire Data

- Quick determination of pavement layer thickness
- 1.0 or 2.0 GHz antennas provide superior data resolution
- Multi-channel data collection capability allows one to four antennas to be used simultaneously

Deliver Results

- ASCII output files for simple data transfer to other software programs
- Results output as Google Earth™ .kml file



"The RoadScan system has been invaluable on our projects. It not only provides a cost effective tool for pavement and bridge evaluations but it helps our clients accurately define their project scopes."

Todd Majidzadeh, Resource International

RoadScan Solutions

Highway professionals, engineers and transportation departments require a safe, reliable and non-destructive method to evaluate roads for pavement preservation, planning and rehabilitation.

Ground penetrating radar offers users a quick and effective way to determine pavement layer thickness. GPR can evaluate base and sub-base layers with data collection densities not obtainable by traditional labor-intensive methods, such as coring.

The RoadScan Advantage

The RoadScan system, with available accessories, provides all the components necessary to perform a GPR road inspection. The SIR® 30 control unit is a configurable multi-channel system, allowing users the ability to operate one to four antennas simultaneously at high speeds.

New and improved smart antennas simplify set-up with automatic identification to the SIR 30. Customize your system for your specific needs, configure the RoadScan 30 with your choice of accessory antennas.

Measure Asphalt Thickness at Highway Speeds

GSSI's RoadScan system uses air-launched horn antennas, allowing data collection at highway speeds and eliminating the need for lane closures. Transportation professionals can collect hundreds of miles of pavement layer thickness data in just one day.

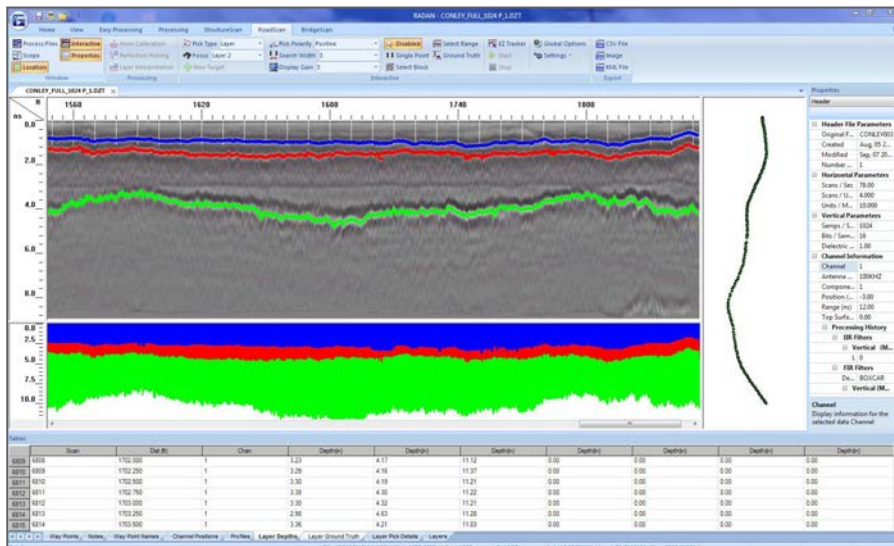
RoadScan On-the-Job

"GPR allows our clients to gather layer thickness automatically at each test station and in a non-destructive manner. It is perfect as a stand alone or a complement to our JILS Falling Weight Deflectometer, a non-destructive pavement testing machine."

Gary Sanati
President
Foundation Mechanics, Inc. (dba JILS)

"Using RoadScan provides several important advantages, first and foremost, is worker safety. The RoadScan is a great alternative to coring and keeps our crew out of traffic, which provides a safer working environment. In addition to safety aspects, GPR provides us with significantly more data, which allows us to make better economical and engineering decisions."

Steve Colson
Maine DOT



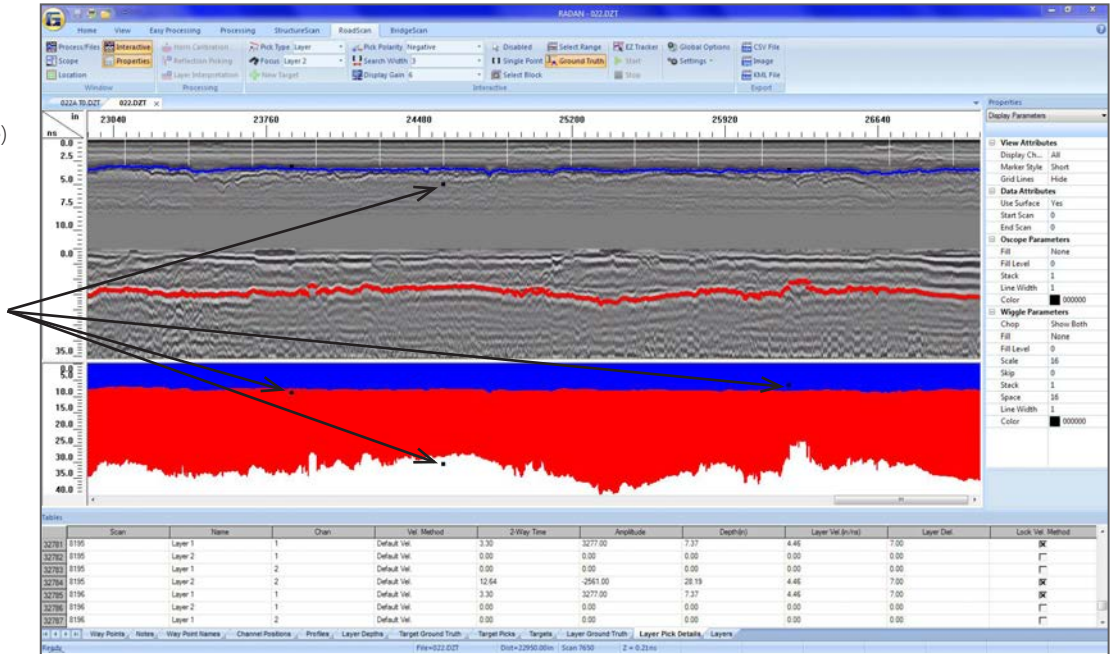
Data illustrates the base layer (green) with original pavement (red) and pavement overlay (blue); collected with RoadScan 30.

Base and Sub Base Evaluations

GPR provides engineers and transportation departments with an effective tool for evaluating base and sub-base layers with data collection without the need to core.

Dual-channel data represents pavement layer data (top profile) collected with 2.0 GHz antenna and base layer data collected with 400 MHz antenna (bottom profile).

Black dots indicate the value of core data.

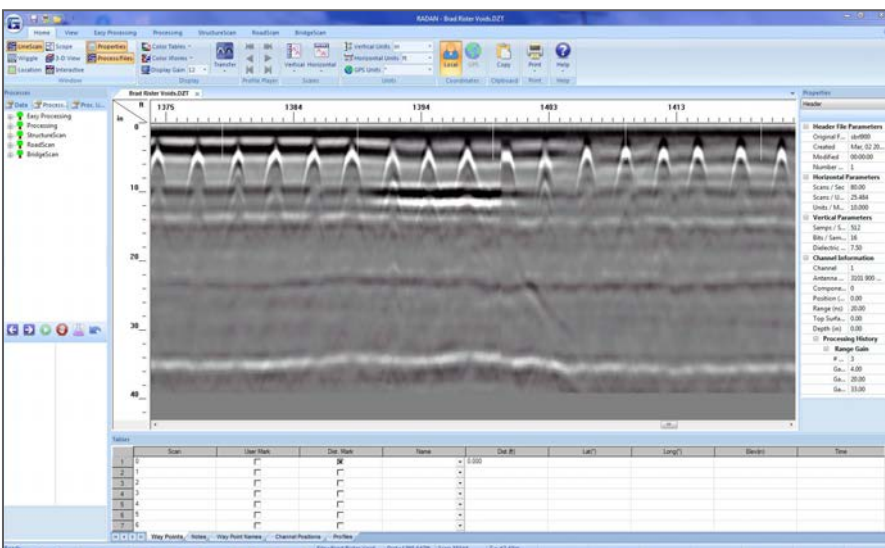


Locate Voids in Roadways

Construction professionals, engineers and transportation departments can identify and delineate voids under the surface with ground penetrating radar (GPR).



Rack mount, multi-channel SIR 30.



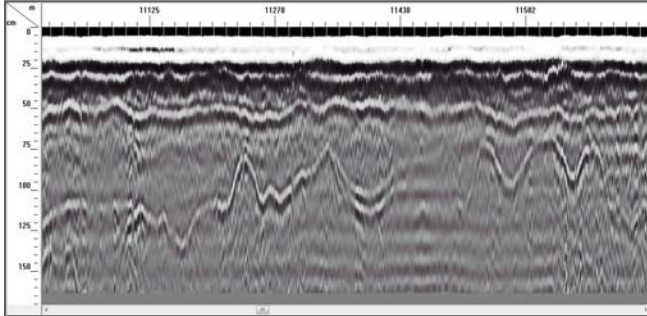
Vehicle-mounted RoadScan system integrated with FWD.

Data shows void under concrete pavement, collected with a 900 MHz antenna.

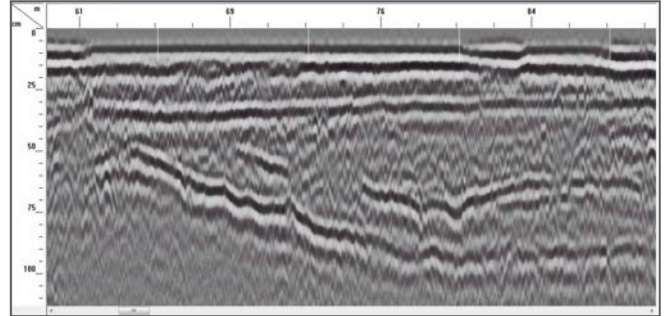
RoadScan Flexibility

Obtain Additional Information with Accessory Antennas

Use a 900 MHz or 400 MHz antenna to obtain additional information on base or sub-base layers.



400 MHz data showing base and sub-base layers.



900 MHz data showing subsurface structure with several layers.

SIR® 30 Control Unit Specifications

System	
Antennas	Compatible with most GSSI antennas
Number of Channels	Records data from 1 to 4 hardware channels simultaneously
Data Storage	Internal memory: 4 channel 500 GB Internal SSD 2 channel 250 GB Internal SSD GPS data logged internally
Display Modes	Linescan and O-scope. In Linescan display, 256 color bins are used to represent the amplitude and polarity of the signal
Operational Modes	External laptop, standalone with external monitor and keyboard and a remote command set
Operating	
Operating Temperature	-10°C to 50°C external (14°F to 122°F)
Power	260W max (120W typical) at 95-250VAC 50/60Hz or +10VDC to +28VDC
Transmit Rate	Up to 800 KHz (International), US/Canada and CE rates depend on antenna type
Input/Output	
Available Ports	Antenna inputs (2 or 4), Survey wheel, Marker, DC power input, Serial RS232 (GPS port), Sync connector, Accessory connector, HDMI video, Ethernet to PC, 4 USB ports
Mechanical	
Dimensions	17.7 x 13 x 5.1 in (45 x 33 x 13 cm)
Weight	18.5 lbs (8.4 kg)
Relative Humidity	<95% non-condensing
Storage Temperature	-40°C to 60°C

System Includes

- SIR® 30 control unit
- 1.0 or 2.0 GHz horn antenna with Smart ID module
- Wheel-mounted Distance Measuring Instrument (DMI)
- 7 meter control cable

Additional system specifications and antenna mount options available at:
www.geophysical.com



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