

# UtilityScan

## Locate and Map Underground Utilities with GPR

UtilityScan™ is the most accurate GPR system on the market for the non-destructive designation of all types of subsurface utilities. With UtilityScan, users can immediately locate and mark buried service utilities (i.e., gas, electric and sewer lines).

This system provides real-time horizontal and vertical position of a wide range of utility structures and buried objects. UtilityScan scans most man-made or natural surfaces, returning data with unsurpassed quality. You can trust your results with GSSI's powerful antennas.

### Typical Uses

- Utility detection – metallic and non-metallic
- Environmental remediation
- Damage prevention
- Road inspection
- Geological investigation
- Archaeology and forensics

### Designate Targets

- Real-time data collection
- Back up cursor allows the user to accurately locate targets

### Premium Mobility

- Lightweight and portable
- Durable components tested to withstand the toughest conditions

### Integrated System

- Windows-based user interface
- Ability to save data to an internal hard drive
- GPS integration

### Value

- Multiple antenna options
- Flexible system for concrete and bridge inspection applications
- Two-year warranty



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

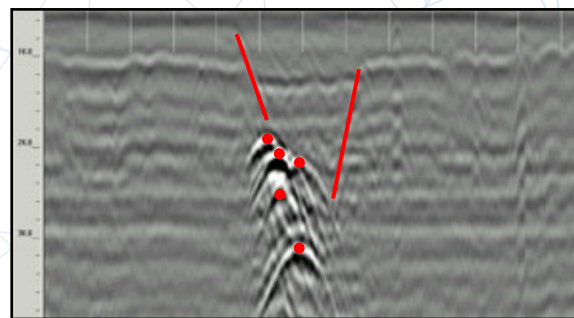
# UtilityScan Solutions

Utility locators, construction professionals, environmental firms and land surveyors need a reliable, non-destructive method to locate subsurface targets prior to digging, trenching, conducting site assessments and mapping.



## Locate and Map Underground Utilities

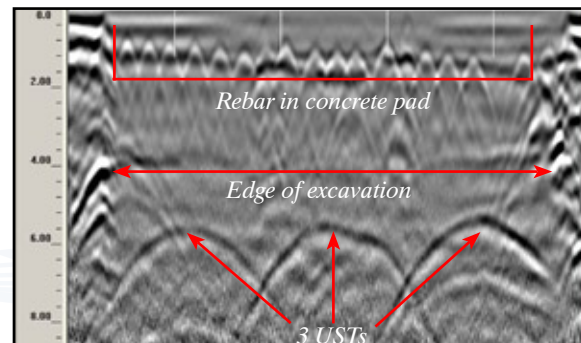
Construction professionals, utility locators and engineers can locate the depth and position of metallic and non-metallic pipes in real time using the GSSI UtilityScan. GPR can enhance one's overall understanding of subsurface targets and obstructions.



*UtilityScan data showing a duct bank with five utilities. Also shown is a well-defined excavation trench.*

## Locate Underground Storage Tanks

Use UtilityScan to accurately pinpoint underground storage tanks and associated piping.



*UtilityScan data depicting storage tanks under concrete pad*

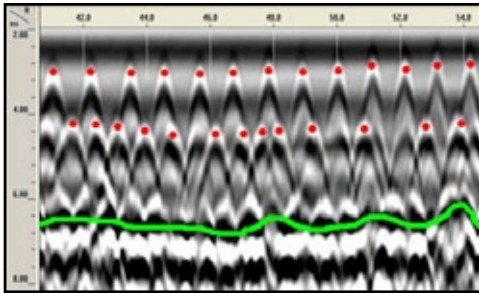
# UtilityScan

## Flexibility

The UtilityScan flexibility allows you to convert the system to different application uses—no new data collection software needed.

### Concrete Scanning and Inspection

Use a 1600 MHz or 2600 MHz antenna to designate reinforcing steel and conduit within concrete structures prior to cutting or coring. Collect quantifiable data on rebar location and areas of deterioration.



### Bridge Deck Inspection

By substituting a 1600 MHz antenna for the 400 MHz or 270 MHz antenna in the UtilityScan cart, users can determine the condition of aging bridge decks, parking structures and obtain accurate concrete cover depth on new structures.



## Customize Your System

### Choose your depth preference

1



0 - 12 feet\*  
(0 - 4 m)  
400 MHz Antenna



0 - 18 feet\*  
(0 - 6 m)  
270 MHz Antenna

### Choose your survey cart

2



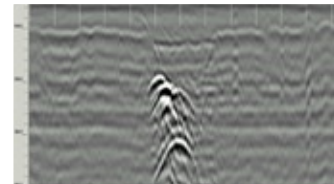
Rugged Cart



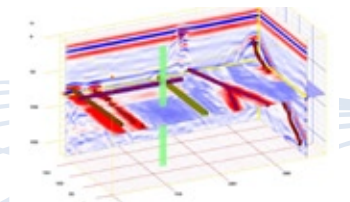
Standard Cart

### Choose your data presentation

3



Real-time 2D Profiles



RADAN 3D Data

\*Depth of penetration may vary depending upon ground conditions. Contact GSSI for more details.

# Survey Solutions



## Rugged Cart System

- Weather resistant design
- Portable design with removable handle
- Durable construction
- Multiple antenna options (2600 MHz to 270 MHz)
- Internal integrated survey wheel encoder
- 16-inch removable wheels
- Adjustable bracket to change the controllers viewing angle
- Robust military spec survey wheel connector
- Marking paint can holders
- Compatible with SIR-3000



## Standard Cart System

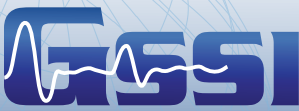
- Lightweight and flexible design
- Portable and foldable
- Configurable antenna deployment options with center or front mounts
- Multiple antenna options (2600 MHz to 400 MHz)
- Integrated survey wheel encoder
- 20-inch front and 24-inch back removable wheels
- Adjustable bracket to change the controllers viewing angle
- Robust military spec survey wheel connector
- Compatible with SIR-3000 and SIR-20

## System Includes

- SIR-3000 control unit
- 400 MHz or 270 MHz antenna
- Rugged survey cart or Standard survey cart
- Control cable
- Transit case for SIR-3000
- Two batteries and battery charger
- AC adapter
- User manual
- Sun shade
- Training (at GSSI: NH or CA)

## Control Unit Specifications

- Image Capacity: Internal: 500 2'x2' data images
- External Memory: Based on Compact Flash size
- Internal Memory: 2 GB
- Display: 8.4 inch, full-color, 800x600 resolution  
64K colors, clearly visible in sunlight
- Post-processing: On-screen
- Battery: Internal (3 hours), 10.8 VDC
- Ports: RS232, compact flash memory,  
USB master & slave
- Environmental: Water-resistant

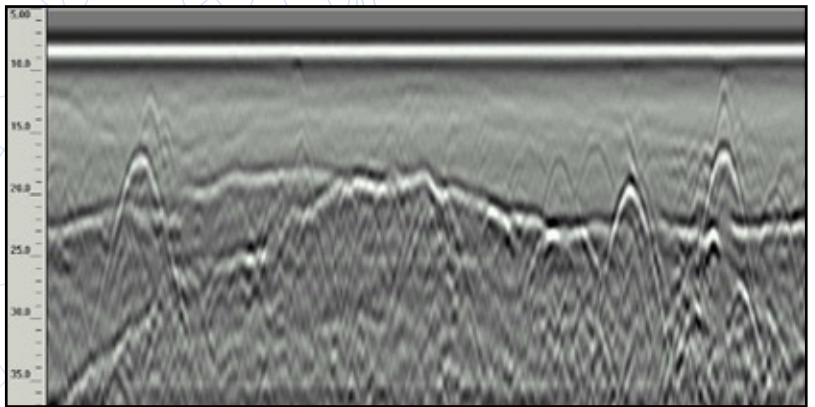


# Utility Locating Antenna Solutions

## 400 MHz Antenna

The 400 MHz is ideally suited for detection and mapping of utility pipes, as well as shallow engineering and environmental applications.

- Center Frequency: 400 MHz
- Depth Range: 0-12 ft (0-4 m)
- Weight: 11 lbs (5 kg)
- Dimensions: 12 x 12 x 6.5 in (30 x 30 x 17 cm)
- Model 5103A

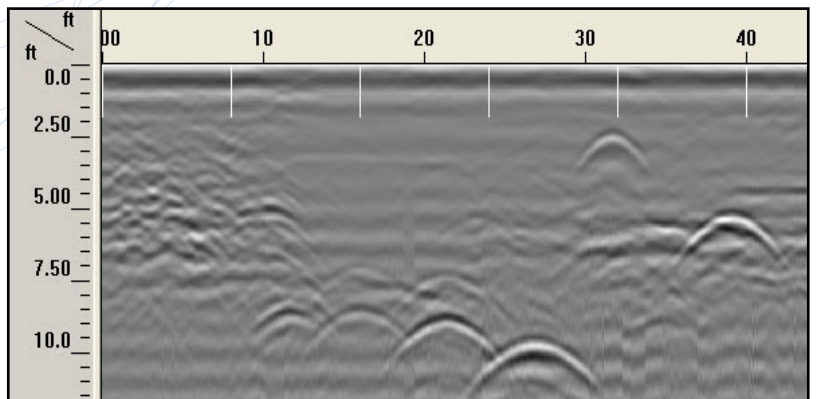


*Data showing several utilities with bedrock horizon.*

## 270 MHz Antenna

The 270 MHz is ideally suited for detection and mapping of utility pipes, as well as shallow engineering and environmental applications.

- Center Frequency: 270 MHz
- Depth Range: 0-18 ft (0-6 m)
- Weight: 18.5 lbs (8.6 kg)
- Dimensions: 18 x 18 x 6.5 in (45 x 45 x 17 cm)
- Model 5104 (U.S.), Model 5104A (International)



*Six miscellaneous utilities at multiple depths with backfill on left side.*



# Software Solutions: Interactive 3D

## RADAN Software

RADAN™ is GSSI's post-processing software. With its modular design, this program allows users to select the processing functions that best suit their needs.

RADAN is Windows™ based, providing a familiar and easy-to-use environment for all levels of experience.

## Get More from Your Data with RADAN's Interactive 3D Module

RADAN's Interactive 3D Module provides powerful features for post-processing GSSI's GPR data and offers enhanced 3D viewing options in a single dialog box. Features include:

### User-Friendly Interface

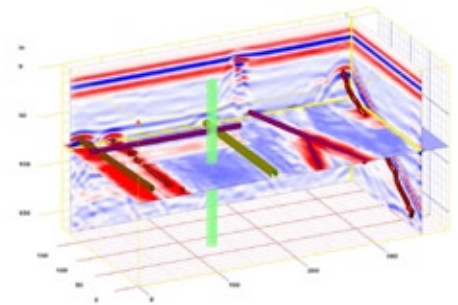
- Built for all levels of experience-RADAN's Interactive 3D Module is a Windows™ based software program that provides a familiar and easy-to-use setting for post-processing GPR data.
- Enhanced and simplified 3D viewing.

### Easy Data Processing

- Take some of the human error out of the equation with semi-automatic mapping of rebar locations and depths on simple concrete structures.

### Interactive Interpretation

- Draw in or edit shapes that relate to your survey site (i.e. pipes, drums, line).
- Stretch, shrink or zoom-in on files as desired for customized presentation results.
- Slice through segments of data along various planes for easy interpretation and supplementary information.
- Analyze multiple views of 2D and 3D data simultaneously.



### Module Versatility

- This module allows for a broad range of civil/structural applications, including structures with different types of reinforcement. Use the Structure ID Module in other applications to automatically find point targets such as utility crossings or archaeological features with lower frequency antennas.

### GPS Integration

- GSSI's external data logger accepts data from any GPS outputting the NMEA GGA format.

### Generic Output Files

- Outputs files for integration into AutoCAD (2D & 3D .dxf) and ArcGIS (.shp).

### Help Feature

- Help feature includes key information, several "how to" guides, index and search feature.

