



**The World Leader in
Subsurface Imaging™**

Antennas



The Difference is the Data

With over 37 years experience, GSSI designs and manufactures the world's *best* Ground Penetrating Radar (GPR) antennas. These antennas feature the highest signal-to-noise ratio of any antenna available in the industry, providing the highest quality data and clear, accurate results.

GSSI has developed a series of antennas to meet the needs of a broad range of applications. All antennas are interchangeable with ANY SIR-System. Features include:

- Rugged, military-style connectors
- Long-life replaceable wear skirts
- Coated, sealed electronics
- Rugged, high-density molded cables
- Shielding to eliminate above ground interference
- Operates in all temperature conditions, -20°C to 50°C

Concrete Inspection • Bridge Deck Inspection

High Resolution

New



Depth Range to 0.4 m (12 in)

General Purpose



Depth Range to 0.5 m (18 in)

Deep Penetration



Depth Range to 0.6 m (24 in)

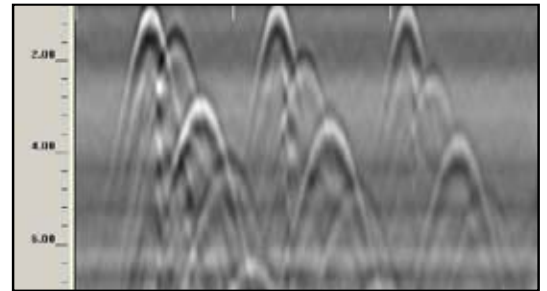
- Weight: 1.8 kg (4 lbs)
- Dimensions: 3.8x10x16.5 cm (1.5x4x6.5 in)



- Center Frequency: 900 MHz
- Depth Range: 0-1 m (0-3 ft)
- Weight: 2.3 kg (5 lbs)
- Dimensions: 8x18x33 cm (3x7x13 in)

2600 MHz

The new 2600 MHz is an ultra-high resolution antenna used to inspect concrete structures to locate embedded rebar, P.T. cables and conduits.

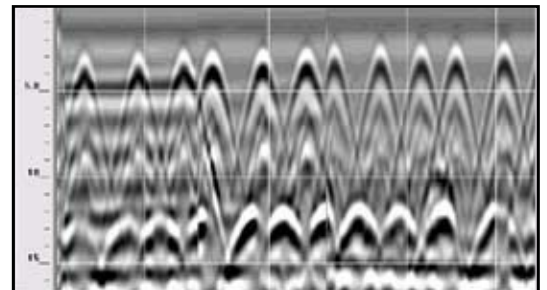


Tightly spaced rebar and conduit

1600 MHz

The 1600 MHz is a high-resolution all purpose antenna used to inspect concrete structures to locate embedded rebar, P.T. cables and conduits.

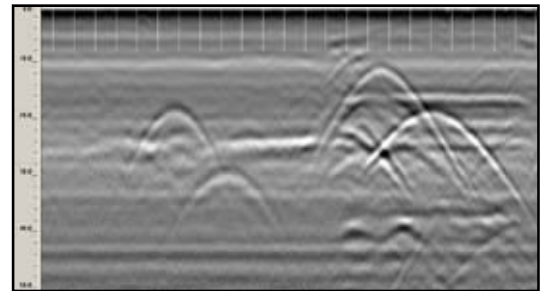
It is used on bridge decks for condition assessment and to determine concrete cover.



Linescan data image showing double rebar mat

1000 MHz

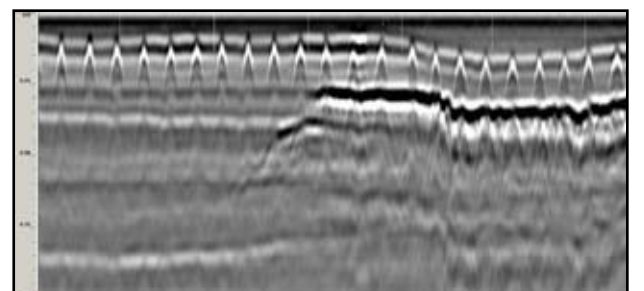
The 1000 MHz antenna represents the state-of-the-art in shallow earth or deeper concrete imaging. This antenna is appropriate in areas where higher frequencies do not provide adequate penetration and lower frequencies do not provide acceptable resolution.



Series of PVC conduits

900 MHz

The 900 MHz antenna is designed for applications requiring shallow penetration down to 1 m (3 ft.), including void detection, concrete thickness assessment and shallow pipe location. It can also be used for location of rebar where space is not limited.



Air void underneath a concrete slab

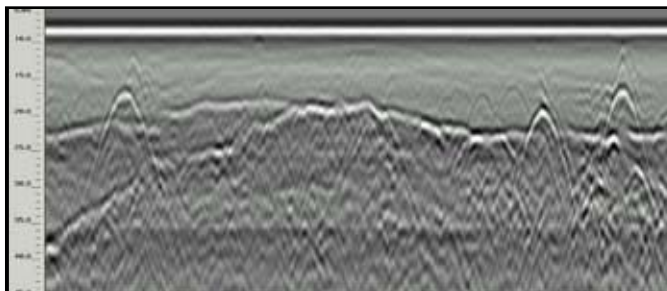
Utility Detection/Mapping • Environmental/Geotechnical



- Center Frequency: 400 MHz
- Depth Range: 0-4 m (0-12 ft)
- Weight: 5 kg (11 lbs)
- Dimensions: 30x30x17 cm (12x12x6.5 in)

400 MHz

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



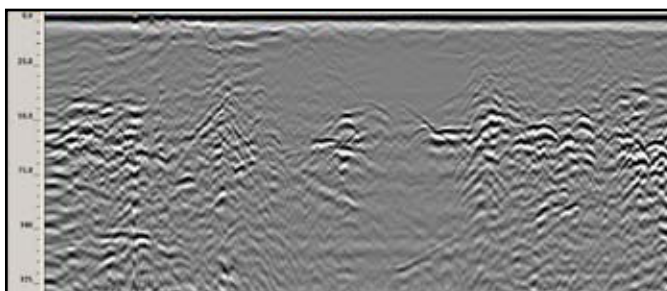
Data image showing multiple utilities and a bedrock profile



- Center Frequency: 270 MHz
- Depth Range: 0-6 m (0-18 ft)
- Weight: 8.6 kg (18.5 lbs)
- Dimensions: 45x45x17 cm (18x18x6.5 in)

270 MHz

The 270 MHz is suited for deeper utility, engineering and geotechnical applications.



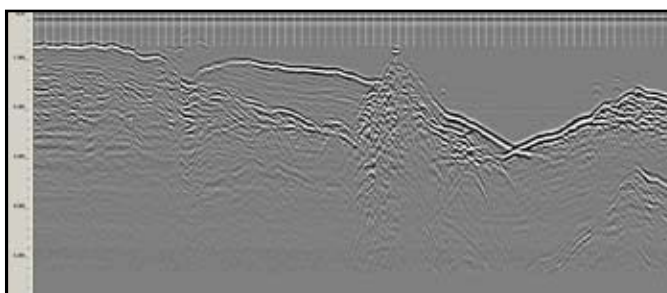
Bedrock profile overlain with a glacial till



- Center Frequency: 200 MHz
- Depth Range: 0-9 m (0-30 ft)
- Weight: 20.5 kg (45 lbs)
- Dimensions: 60x60x30 cm (24x24x12 in)

200 MHz

The 200 MHz can penetrate to a depth of 9 meters (30 feet) which makes it well suited for geotechnical and environmental applications, as well as archaeological investigations.



*Bathymetric profile of a river.
Notable features include: bedrock horizon, gravel lenses and fish.*

Highway Inspection

2 GHz 1 GHz



The 2 GHz and 1 GHz air-launched (horn) antennas are pavement thickness and road condition assessment tools that can be used at highway speeds with the SIRveyor SIR-20 system. The Model 4108F antenna is FCC-approved.

2 GHz Horn

- Center Frequency: 2 GHz
- Depth Range: 0-.75 m (0-2.5 ft)
- Weight: 7.3 kg (16 lbs)
- Dimensions: 21x55.6x49.5 cm (8.25x21.9x19.5 in)

1 GHz Horn

- Center Frequency: 1 GHz
- Depth Range: 0-.9 m (0-3 ft)
- Weight: 7.3 kg (16 lbs)
- Dimensions: 21x55.6x49.5 cm (8.25x21.9x19.5 in)

Geotechnical • Environmental • International Only

100 MHz



The 100 MHz antenna is used for deep subsurface applications. The 100 MHz monostatic (left) combines the transmit and receive electronics in a single antenna housing. The 100 MHz bistatic (right) is a versatile antenna pair that can operate in three different configurations to optimize performance.



Monostatic

- Center Frequency: 100 MHz
- Depth Range: 2-15 m (5-50 ft)
- Weight: 13 kg (28 lbs)
- Dimensions: 25x96x56 cm (10x38x22 in)

Bistatic

- Center Frequency: 100 MHz
- Depth Range: 0-30 m (0-100 ft)
- Weight: 28 kg (61 lbs)
- Dimensions: 25x96x200 cm (10x38x79 in)

15-80 MHz



The multiple low-frequency antenna is designed for the deepest radar penetration possible. The antenna design consists of interchangeable elements; by changing the length of the antenna, you change the transmission frequency. This antenna can be deployed in discrete measurements (stacking) or continuous profile data collection modes.

- Center Frequency: 15-80 MHz adjustable
- Depth Range: 0-50 m (0-150 ft)
- Weight: 15-23 kg (33-50 lbs)
- Dimensions: 120-600 cm in length (47-136 in) adjustable

Note: FCC-Approved antennas for use in the U.S. include: Model 5100, Model 3101D, Model 5103, Model 5104, Model 5106, Model 4105 and Model 4108F



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