The World Leader in Ground Penetrating Radar

Antennas

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With nearly four decades experience, GSSI continues to design and manufacture the world's best Ground Penetrating Radar (GPR) antennas. GSSI antennas feature the highest signal-to-noise ratio of any antenna available in the industry, providing the highest quality data with clear and accurate results. GSSI has developed a series of antennas to meet the needs of a broad range of applications.

Features Include

- Rugged, military-style connectors
- Long-life replaceable wear skids
- Coated, sealed electronics
- Rugged, high-density molded cables
- Operates from -20°C to 50°C

Center Frequency	Depth of Penetration	Typical Applications
2600 MHz*	0-12 in (0.4 m)	Concrete Evaluation
2000 MHz Palm	0-12 in (0.4 m)	Concrete Evaluation
1600 MHz*	0-18 in (0.5 m)	Concrete Evaluation
900 MHz	0-3 ft (0-1 m)	Concrete Evaluation, Void Detection
400 MHz*	0-12 ft (0-4 m)	Utility, Engineering, Environmental, Void Detection
270 MHz*	0-18 ft (0-6 m)	Utility, Engineering, Geotechnical
200 MHz	0-30 ft (0-9 m)	Geotechnical, Engineering, Environmental
International		
100 MHz	5-50 ft (2-15 m)	Geotechnical, Engineering, Mining
15-80 MHz	0-150 ft (0-50 m)	Geotechnical
Air-Launched		
2.0 GHz*	0-2.5 ft (0-.75 m)	Pavement Thickness and Road Condition Assessment
1.0 GHz*	0-3 ft (0-.9 m)	Highway and Bridge Deck Evaluations

* Smart antenna functionality

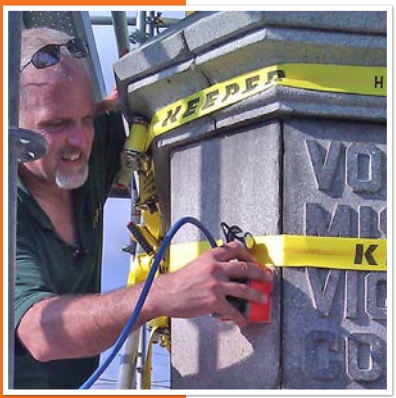
"Seeing all the different ways to use GSSI GPR has been beneficial to what services we can offer our customers."

Curtis Hoag, GPRS Charlotte

2600 MHz - High Resolution Concrete Inspection

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

Center Frequency	2600 MHz
Depth Range	0-12 inches (0.4 m)
Antenna Weight	4 lbs (1.8 kg)
Dimensions	1.5x4x6.5 in (3.8x10.16.5 cm)
Model	52600S



2000 MHz - Compact, Integrated Concrete Antenna

The Palm Antenna offers users the ability to reach tightly spaced areas that were previously inaccessible such as corners, against walls and around obstructions.

The Palm Antenna is most often used with the SIR® 3000 and SIR® 20 control units. The antenna includes a dedicated survey wheel, a replaceable skid plate, and removable handle to reduce antenna height, if necessary. The Palm Antenna weighs in at approximately one pound.

Center Frequency	2000 MHz
Depth Range	0-12 inches (0.4 m)
Antenna Weight with Control Cable	3 lbs (1.3 kg) with 10 ft (3 m) cable 4 lbs (1.8 kg) with 22.75 ft (7 m) cable
Dimensions	4.1x3.6x6 in (104.5x91.5x154.7 mm)
Model	62000 - 003 (3 m cable) 62000 - 007 (7 m cable)

1600 MHz - General Purpose Concrete Antenna

The 1600 MHz is a high-resolution, all-purpose antenna used to inspect concrete structures to locate embedded rebar, post tension cables and conduits. It is also a popular choice for bridge deck condition assessment and to determine concrete cover.

Center Frequency	1600 MHz
Depth Range	0-18 inches (0.5 m)
Antenna Weight	4 lbs (1.8 kg)
Dimensions	1.5x4x6.5 in (3.8x10.16.5 cm)
Model	51600S

900 MHz - Concrete Assessment / Void Detection

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.

Center Frequency	900 MHz
Depth Range	0-3 ft (0-1 m)
Antenna Weight	5 lbs (2.3 kg)
Dimensions	13x7x3 in (33x18x8 cm)
Model	3101D (U.S./Canada), 3101A (International)

300 / 800 MHz - Dual-Frequency Antenna

The 300/800 MHz dual-frequency antenna is GSSI's first digital antenna. The combination of two frequencies allows users to locate targets at depths of up to 5 m (16 ft), ideal for utility, archaeological and environmental surveys.

Center Frequencies	300 and 800 MHz
Typical Range	4 m / 12 ft
Maximum Range	7 m / 21 ft
Antenna Weight	12 lbs (5 kg)
Dimensions	13.2x12.2x5.9 in (33.5x31x15 cm)
Model	D50300/800

400 MHz - Utility Detection and Mapping

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)
Antenna Weight	11 lbs (5 kg)
Dimensions	12x12x6.5 in (30x30x17 cm)
Model	50400S

270 MHz - Utility Mapping and Shallow Engineering

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)
Antenna Weight	18.5 lbs (8.6 kg)
Cable Weight	2.1 lbs (.95 kg)
Dimensions	18x18x6.5 in (45x45x17 cm)
Model	50270S

200 MHz - Geotechnical and Environmental

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

Center Frequency	200 MHz
Depth Range	0-30 ft (0-9 m)
Antenna Weight	45 lbs (20.5 kg)
Dimensions	24x24x12 in (60x60x30 cm)
Model	5106 (U.S./Canada), 5106A (International)

100 MHz - Deep Subsurface Investigation

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 (bottom, left) is a versatile antenna pair that can operate in three different configurations to optimize performance.

	Monostatic	Bistatic
Center Frequency	100 MHz	100 MHz
Depth Range	5-50 ft (2-15 m)	3-100 ft (1-30 m)
Antenna Weight	28 lbs (13 kg)	60 lbs (26 kg)
Dimensions	10x38x22 in (25x96x56 cm)	10x38x22 in (25x96x56 cm) each
Model	3207AP	3207F

15-80 MHz - Multiple Low Frequency Antenna

The multiple low-frequency antenna (MLF) 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
Depth Range	0-150 ft (0-50 m)
Antenna Weight	33-50 lbs (15-23 kg)
Dimensions	47-136 in. length (120-600 cm) adjustable
Model	3200 MLF

1.0 and 2.0 GHz - Horn Antennas for Road Evaluation

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 SIR® 30 system.

	2.0 GHz*	1.0 GHz*
Center Frequency	2.0 GHz	1.0 GHz
Depth Range	0-2.5 ft (0-.75 m)	0-3 ft (0-.9 m)
Antenna Weight	16 lbs (7.3 kg)	16 lbs (7.3 kg)
Dimensions	8.25x21.9x19.5 in (21x55.6x49.5 cm)	8.25x21.9x19.5 in (21x55.6x49.5 cm)
Model	Model 42000S	Model 41000S

*Hardware/Software Noise Rejection Filter
Protected by U.S. Patents 8,115,667, 8,102,298 and 7,982,657

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