

GCB-1000

Datasheet



The GCB-1000 ground coupled antenna is part of the Geoscanners microwaves frequency antenna series. The purpose of this antenna is to be able to define small structures in concrete at shallow depths without compromising the penetration of it. It is possible to do rebars mapping, central heating pipes mapping, ice thickness in winter roads, as well as asphalt thickness measurements in surveys where the antenna can be in contact with the road.

This antenna has been proven on many occasions to be the best all-in-one tool for concrete inspections and ice roads as well. Stability and clear output result in good data that can easily be interpreted.

No matter if you are doing concrete surveys or measuring the thickness of iceroads, GCB-1000 is one of our antennas that will not let you down. Crisp clean data that the antenna provides is very important once we start to focus our survey efforts on shallower regions. Because of it's high frequency you will be able to locate smaller objects and provide extreme precision when it comes to determining the depth to objects. This is why the GCB-1000 antenna is also often used for detailed and high precision shallow utility surveys or forensics.





Area of Application

- Concrete inspection
- Ice thickness
- Snow measurement
- Low speed Road and Bridge assessment surveys
- Shallow utility
- Forensics

Mechanical and Environmental Specifications

Dimensions LxWxD (mm/inches)	248x200x97 / 9.76x7.87x3.81
Weight (kg/pounds)	1.05 / 2.31
Fastening points LxW (mm/inches)	124x100 / 4.88x3.93
Ingress Protection	IP65
Operating Temperature (°C / °F)	From -25 up to +40 / From 14 up to 104

Electrical Specifications

Antenna Type	Bow tie antenna
Shield Type	Top and Side Shield
Distance between the TX and RX (mm/inches)	98 /3.8
Antenna Bandwidth (at 10dB)	135%
Antenna Center frequency (MHz at 10dB BW)	1000
Survey Wheel Output Voltage (Volts)	5.01

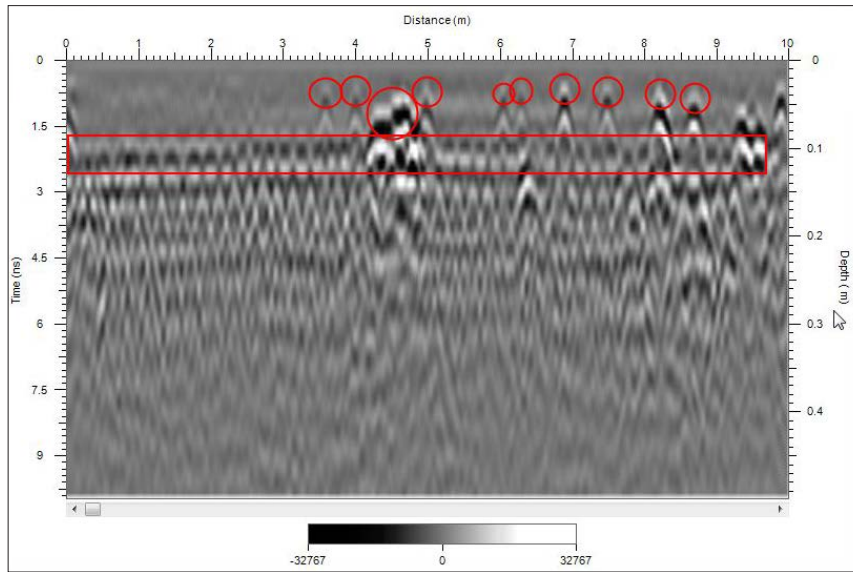
Recommended Specifications

Pulse repetition Frequency, PRF (kHz)	≥100
Scan Rate, Traces/Second	100
Range (ns), (depends on soil penetration)	5-25
Low Pass Filter Cut-Off Frequency (MHz)	2000
High Pass Filter Cut-Off Frequency (MHz)	500
Gain	Adjust to 75% Swing

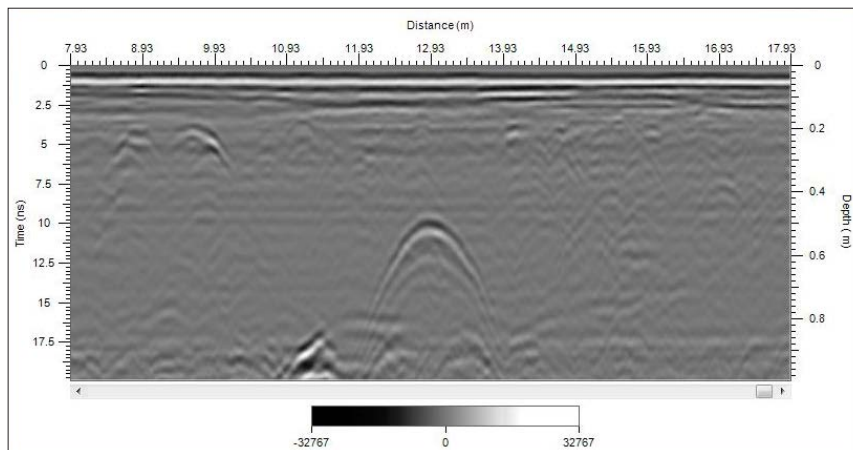
Accessories*

- K-1000 adapter for a SVC-820 cart
- GST-806 road survey trailer
- MWH-131 microwave antenna hand cart

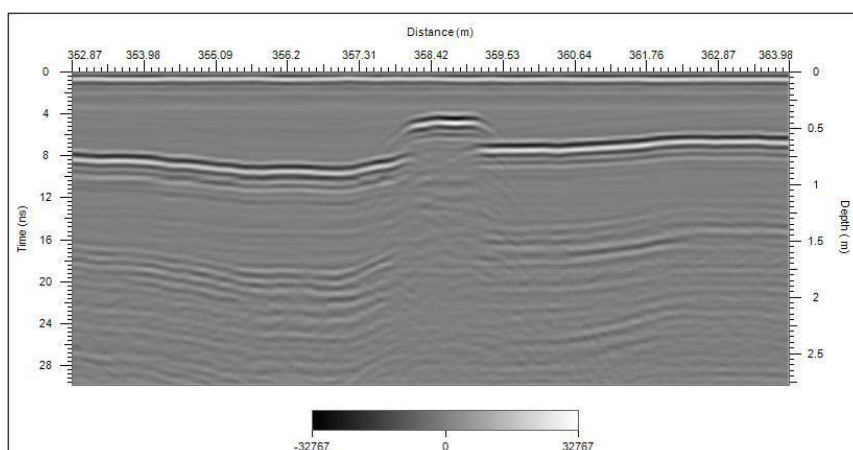
*Accessories are not included



1. Concrete deck inspection (bottom rebar mesh and some utilities visible)



2. Shallow utility surveying



3. Ice road thickness measurements

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