

GCB-2000

Datasheet



GCB-2000 is one of our extensive series of microwave frequency antennas developed for maximum resolution with outstanding stability of the signal. The dead zone of this antenna has been heavily reduced and optimized to provide a clean and sharp near the surface data. For these reasons this antenna performs very well for very shallow surveys where the size of the targets is very small.

Being a ground coupled antenna means that we are able to obtain better penetration than high frequency directional antennas such as horn antennas. This however, also means that the preferred method of survey is mounted onto hand held holders or general purpose survey carts when using it for surveying asphalt layers.

Like all our antennas the GCB-2000 is designed to withstand the most demanding environmental conditions found in a diversity of survey sites. High quality connectors and high industry standard materials have been used to ensure utmost quality. The skid plate is easily changed right on the field and does not require any special tools for that, adding value to an already low maintenance device.





Area of Application

- Concrete inspection
- Ice thickness measurements
- Snow measurements
- Low speed road and bridge assessment surveys
- Forensics

Mechanical and Environmental Specifications

Dimensions LxWxD (mm/inches)	248x120x97 / 9.76x4.72x3.81
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
Relative Humidity (%)	99 (NC)

Electrical Specifications

Antenna Type	Bow tie antenna
Shield Type	Top and Side Shield
Distance between the TX and RX (mm/inches)	66 / 2.6
Feed point impedance (Ohms)	292
Transmitted Pulse Amplitude (Volts)	40
Receiver Sensitivity (µVolts)	14
Dynamic Range (dB)	137
Antenna Bandwidth (at 10dB)	99%
Antenna frequency range (MHz at 10dB BW)	800-4000
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)	5-20
Low Pass Filter Cut-Off Frequency (MHz)	4000
High Pass Filter Cut-Off Frequency (MHz)	1000
Gain	Adjust to 75% Swing

Accessories*

- MWH-132 - Microwave hand cart

*Accessories are not included

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