

# GCB-2050

## Datasheet



GCB-2050 is the mid frequency choice available in the dual frequency GCB antenna models. This antenna combines the excellent penetration capabilities of the GCB-200 with a higher resolution achieved with the GCB-500, all in one package.

This is the perfect choice for companies that don't have the luxury of spending too much time in the field and want to collect as much data as possible in a limited time period. This antenna will suffice for all your applications requiring greater depth without the compromise of losing the top resolution involved with lower frequency antennas.

As with all other antennas manufactured by Geoscanners this antenna is fully compatible with the rest of the Geoscanners products. Despite its wide area of applications this antenna is remarkably light and compact.

The GCB-2050 is the perfect choice for the customers oriented to different types of utility and environmental surveys with varying depth and resolution requirements. It provides the resolution quality expected from the GCB-500 for shallow utilities, but it will also extend the possible depth range of application with the data coming from the 200MHz center frequency onboard.



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### Area of Application

- Geotechnical and environmental
- Utility, UST and void detection
- Archeological investigations
- Forensics
- Close to surface void detection

### Mechanical and Environmental Specifications

Dimensions LxWxD (mm/inches)	583x335x222 / 22.95x13.19x8.74
Weight (kg/pounds)	4.8 / 12.78
Fastening points LxW (mm/inches)	210x160 / 8.26x6.30
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	Quarter Wavelength Bowtie
Shield Type	Top and Side Shield
Distance between the TX and RX (mm/inches)	350 / 13.77 (200MHz), 95 / 3.74 (500MHz)
Feed point impedance (Ohms)	347 (200MHz), 368 (500MHz)
Transmitted Pulse Amplitude (Volts)	100
Receiver Sensitivity (µVolts)	14
Dynamic Range (dB)	137
Antenna Bandwidth (at 10dB)	99% (200MHz), 102% (500MHz)
Antenna Center frequency (MHz at 10dB BW)	210 (200MHz), 500 (500MHz)
Survey Wheel Output Voltage (Volts)	5.01

\*Parameters are specified in brackets only when they differ

### Recommended Specifications

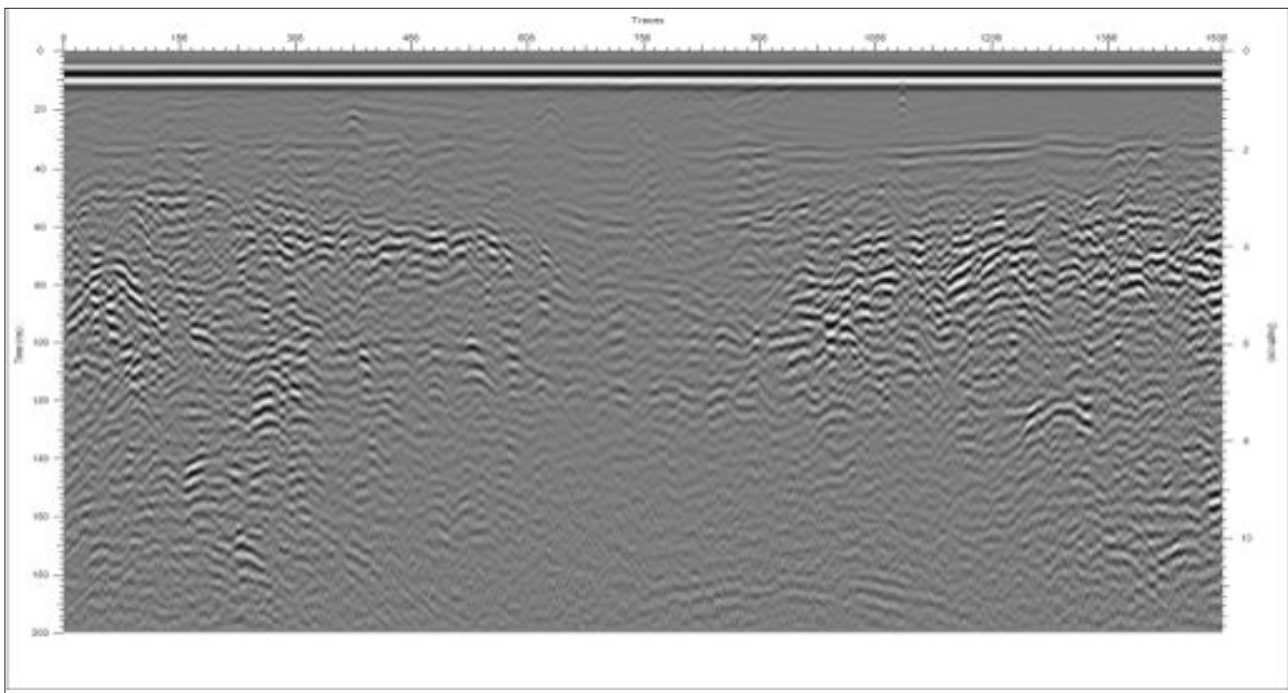
Pulse repetition Frequency, PRF (kHz)	≥50 (200MHz), ≥100 (500MHz)
Scan Rate, Traces/Second	100
Range (ns), (depends on soil penetration)	32 - 256 (200MHz), 12.8 - 64 (500MHz)
Low Pass Filter Cut-Off Frequency (MHz)	420 (200MHz), 1000 (500MHz)
High Pass Filter Cut-Off Frequency (MHz)	90 (200MHz), 250 (500MHz)
Gain	Adjust to 75% Swing

### Accessories\*

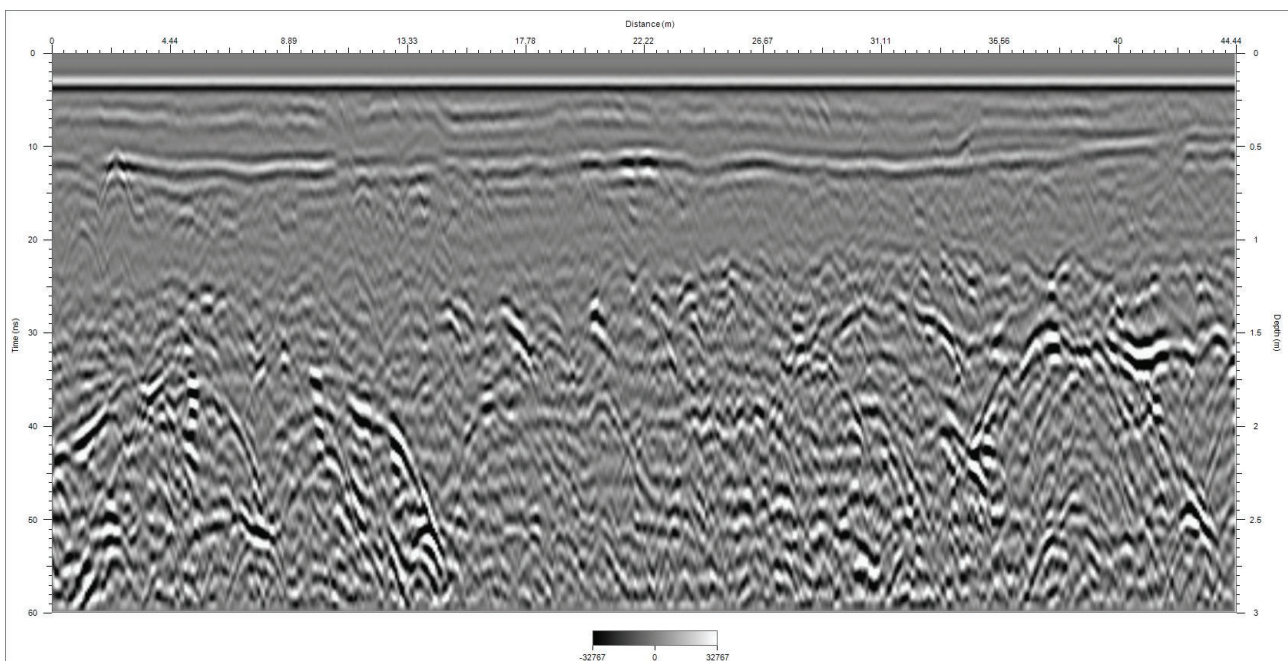
- Tray S37 antenna tray with belts
- SVC-820 4-wheel survey cart
- GSH-490 rough terrain survey trailer

\*Accessories are not included





1. Typical data from the 200MHz channel.



2. Typical data from the 500MHz channel.

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