

# Gekko-120

## Datasheet



The antennas from the Gekko series are compact, lightweight, ultra-wide band ground penetrating antennas from the VHF radio frequency band.

They have an improved signal to noise ratio and more precise resolution compared to similar devices from other manufacturers. Gekko antennas are therefore excellent for applications where deep penetration, good resolution and maneuverable GPR systems are desirable.

Gekko-120 is fully compatible with the rest of the Geoscanners equipment. It is easily mounted on the GST-806 cart, designed specifically to be used on cars or other vehicles, or with the SVC-820 cart (standard 4 wheel cart).

Just as with the rest of the Geoscanners antennas, Gekko-120 is designed with the end user in mind. It can be used in both monostatic mode or in bistatic mode. Depending on which mode is desirable by the user, the antenna comes equipped with top of the line Geoscanners plug-in electronics; TR-501 for monostatic mode or a combination of RX-501 and VHT-501 for bistatic mode. By including the transceivers in the antenna, we made sure that the end user receives a highly integrated device with all the matching already made to give the best possible results.

Note: The information in this datasheet is based on the latest information at the time of publication. Geoscanners AB® reserves the right to make changes at any time, without notice to color, specifications, accessories, materials and models. For more information contact the Geoscanners AB Sales Department +46(0)92153020. ©2015 Geoscanners AB, Sweden.



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### Area of Application

- Deep geological surveys
- Glacier surveys and monitoring
- Water level mapping
- Alluvial deposits and layer mapping
- Dam structural integrity surveys, embankment control

### Mechanical and Environmental Specifications

Dimensions LxWxD	800x120x222 mm (x4.7x8.7 inches)
Weight	2.5kg (pounds)
Fastening points LxW	260x60 mm (10.23x2.36 inches)
Ingress Protection*	IP54
Operating Temperature**	from -30°C to +75°C (from 14°F to +104°F)
Relative Humidity	99% (NC)

\*TR-501 attached

\*\*Antenna only, for the electronics refer to the appropriate datasheet.

### Electrical Specifications

Antenna Type	Wu-King Inverted Folded Bowtie
Shield Type	Unshielded
Feed point impedance	270* Ohms
Antenna Bandwidth	90%* (at 10dB)
Antenna Center Frequency	120 MHz (at 10dB BW)
Front to back ratio	0 dB
Gain	2 dB

\*This data is preliminary based on limited amount of units.

### Recommended Specifications

Pulse repetition Frequency, PRF	50 kHz
Scan Rate	25 Scans/Second
Range (depends on soil penetration)	128 ns – control unit maximum
Low Pass Filter Cut-Off Frequency	60 MHz
High Pass Filter Cut-Off Frequency (MHz)	240 MHz
Gain	Adjust to 75% Swing

### Accessories\*

- GST-806 Car survey trailer
- SVC-820 Standard 4 wheel cart
- K-100B Adapter for SVC-820
- ASH-822 Hand carrier for one Gekko antenna

\*Accessories are not included

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