

FLB-250

Datasheet



FLB-250 is an air launched ground penetrating antenna developed to cover the need for non-contact antennas in applications where full contact is not possible. The implemented antenna design makes the emitted footprint as narrow as possible, allowing for better transition of the EM wave energy into the material under survey.

FLB-250 has been optimized to offer a good front to back ratio to allow for operation in urban environments. However, its primary application is for geology survey in very rough terrain where the use of ground coupled antenna may be prohibitive or in the fast acquisition road surveys.

FLB-250 has been successfully combined with HA-1000 or HA-2000 horn antennas. This allows the gathering of information about the deeper layers of the road in one pass together with the shallower road information provided from the horn antennas.





Area of Application

- Rough and uneven terrain where ground coupled antennas cannot be used
- Geology surveys in highly uneven terrain
- Deeper layer information on high speed road surveys
- Volcanic ash layer measurements from helicopters
- Air born glacier surveys

Mechanical and Environmental Specifications

Dimensions LxWxD (mm/inches)	510x470x162 / 20x18.5x6.3
Weight (kg/pounds)	6.35 / 14
Fastening points LxW (mm/inches)	210x160 / 8.26x6.30
Ingress Protection	IP65
Operating Temperature (°C / °F)	from -25 to +40 /from 14 to +104
Relative Humidity (%)	99 (NC)

Electrical Specifications

Antenna Type	Feed Loaded Bowtie
Shield Type	Top and Side Shield
Distance between the TX and RX (mm/inches)	200 / 7.9
Feed point impedance (Ohms)	385
Transmitted Pulse Amplitude (Volts)	128
Receiver Sensitivity (µVolts)	14
Antenna Bandwidth (at 10dB)	104%
Antenna Center frequency (MHz at 10dB BW)	235
Survey Wheel Output Voltage (Volts)	5.01

* This data is preliminary based on limited amount of units

Recommended Specifications

Pulse repetition Frequency, PRF (kHz)	≥100
Scan Rate, Traces/Second	100
Range (ns), (depends on soil penetration)	64-256
Low Pass Filter Cut-Off Frequency (MHz)	500
High Pass Filter Cut-Off Frequency (MHz)	125
Gain	Adjust to 75% Swing
Distance from surface (mm / inch)	500 - 1000 / 19.7 – 39.37

Accessories**

- GST-806 - Car survey trailer
- SVC-822 - One wheel cart
- CMH-203 - Three antennas car mounting kit
- TL250 - Protective skid plate

**Accessories are not included

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