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PROMIS Data Sheet

The Promis is a modern implementation of the Slingram technique which uses a coil to produce a primary magnetic field, this is linked by a cable to a receiver sensor at distances between 20 and 200m. The receiver coil measures 3 in-phase components and one out of phase component of the secondary magnetic field induced by ground conductors. Traditional Slingram type techniques only measure the vertical component of the magnetic field, but by measurement of the two additional horizontal components the Promis is able to give information on the strike of any conductive structure that has been intercepted. Penetration depths are determined both by Tx-Rx coil separation and frequency recorded but a rule of thumb is penetration is approximately 1/2 of the inter-coil separation.



The PROMIS Transmitter coil (left) and 3 component receiver (right) in operation. Image courtesy of Iris Instruments.

The system includes 2 inclinometers in the transmitter for horizontal positioning and will record 3 frequencies (at 100m spacing) within 20s, If all 10 frequencies are required then the full measurement process takes 50s.

Through analysing all 3 components of the magnetic field it is possible to derive additional information about conductive dykes and water baring fracture zones, making the system a fast simple tool for shallow mineral exploration and hydrology studies.

Data processing is undertaken using EMSYS software which is provided with the instrument. The package includes editing and processing tools for removing sources of noise and rouge measurements. Data can be exported to a

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number of third party formats for inversion and interpretation.

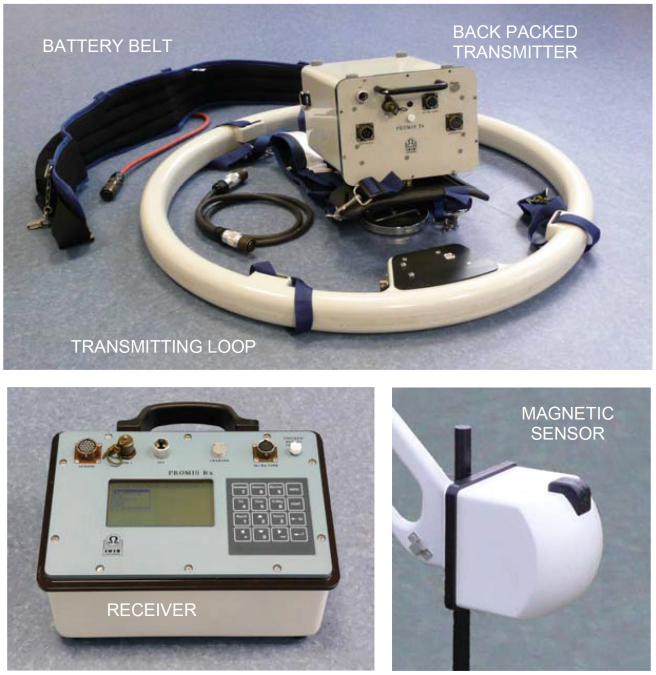
Technical Specifications

Frequencies:	10 from 110Hz to 56,320Hz.
Magnetic moments:	- 360 Am² @ 110 Hz - 320 Am² @ 220 Hz - 280 Am² @ 440 Hz - 235 Am² @ 880 Hz - 220 Am² @ 1 760 Hz - 160 Am² @ 3 520 Hz - 110 Am² @ 7 040 Hz - 60 Am² @ 14 080 Hz - 30 Am² @ 28 160 Hz - 15 Am² @ 56 320 Hz
Dipole offsets:	20, 50, 100, 200 and 400m standard. Other distances on request.
Transmitter loop:	75cm diameter.
Channels:	Single vertical component or 3 component (Hx, Hy & Hz).
Digital conversion:	16bit dynamic range.
Resolution:	0.01% of primary field.
filters:	50Hz notch and overload filters.
Temperature Range:	-20ºC to 70ºC

Gallery

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All the main components of a PROMIS system, Image courtesy of Iris Instruments.

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