

EM31-MK2

The EM31-MK2 is an updated version of the standard EM31 with the data logger now incorporated into the control console. Ground conductivity and in-phase measurements are read directly from the data logger screen. The data logger is readily removed from the console for easy data handling, or to hand carry during the survey. Real-Time logging is available by connecting a computer directly to the RS-232 output port on the front panel. This option requires the purchase of a special RS-232 interconnect cable.



The EM31-MK2 maps geological variations, groundwater contaminants or any subsurface feature associated with changes in ground conductivity using a patented electromagnetic inductive technique that makes the measurements without electrodes or ground contact. With this inductive method, surveys can be carried out under most geological conditions including those of high surface resistivity such as sand, gravel and asphalt.

The effective depth of exploration is about six metres, making it ideal for many geotechnical and groundwater contaminant surveys. Important advantages of the EM31-MK2 over conventional resistivity methods are the speed with which surveys can be conducted, the precision with which small changes in conductivity can be measured and the continuous readout and data collection while traversing the survey area. The in-phase component is especially useful for detecting shallow ore bodies and buried metal hazardous waste.

Specifications

MEASURED QUANTITIES

- 1: Apparent conductivity of the ground in millisiemens per metre (mS/m)
- 2: In-phase ratio of the secondary to primary magnetic field in parts per thousand (ppt)

PRIMARY FIELD SOURCE

Self-contained dipole transmitter

SENSOR

Self-contained dipole receiver

INTERCOM SPACING

3.66 metres

OPERATING FREQUENCY

9.8 kHz

POWER SUPPLY

8 disposable alkaline "C" cells (approx. 20 h continuous)

MEASURING RANGES

Conductivity: 10, 100, 1000 mS/m

In-phase: ± 20 ppt

MEASUREMENT RESOLUTION

$\pm 0.1\%$ of full scale

MEASUREMENT ACCURACY

$\pm 5\%$ at 20 mS/m

NOISE LEVELS

Conductivity: 0.1 mS/m; In-phase: 0.03 ppt

DATA STORAGE

8,000 records (2 components); 13,000 records (1 component) (ext. memory available)

DIMENSIONS

Boom: 4.0 m extended, 1.4 m stored

Shipping Case: 145 x 38 x 23 cm

WEIGHTS

Instrument: 12.4 kg

Shipping: 28 kg

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