

OhmMapper Resistivity Mapping System

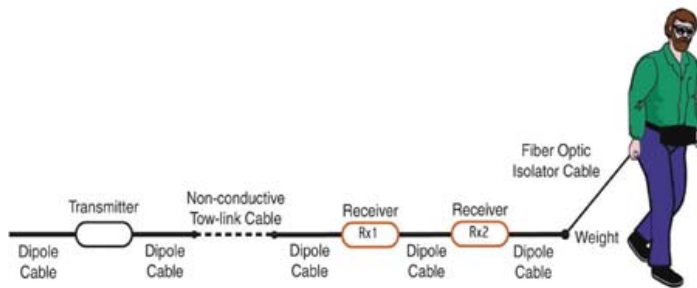
The OhmMapper is a capacitively-coupled resistivity meter that measures the electrical properties of rock and soil without cumbersome galvanic electrodes used in traditional resistivity surveys. A simple coaxial-cable array with transmitter and receiver sections is pulled along the ground either by a single person or attached to a small all-terrain vehicle. Thus, data collection is many times faster than systems using conventional DC resistivity.

Multiple passes with the OhmMapper, at different transmitter-receiver spacings, permit electrical sounding done at a fraction of the time of expanding-spread resistivity or electromagnetic methods. Data collection is continuous so the near surface is finely sampled, providing high quality data even in areas with complex geology.

The OhmMapper's DataMapper console provides graphical display of both position and data. View the last five profiles or scroll a window through the entire data set – right in the field.

Features & Benefits:

- No Metal Electrodes Required
- Single Person Operation
- Low Power Consumption
- Rapid Deployment
- Fast Data Acquisition
- Optimized for Use in
- Highly Resistive Areas (permafrost, deserts, sand, snow, resistive geology, even roads and pavement)



Applications:

- Groundwater Exploration
- Engineering Studies
- Minerals Exploration
- Geologic Mapping
- Archaeological Studies
- Academic Research
- Dike and Levee Inspection



Specifications:

Operating principle: Constant-current capacitively-coupled, dipole-dipole resistivity Operating range: Less than 1 OhmMeters to greater than 100,000 OhmMeters Cycle Rate: Signal sample and data logging rate at 2 times per second

Data Storage: 2 Mbytes of nonvolatile RAM

Audio Output: Metronome, signal amplitude, disconnect

Visual Output: 320 by 200 graphic LCD display, daylight visible with selectable outputs for:

- **Data Display:** 5 line profiles of resistivity
- **Internal Clock:** Resolution of 0.1 drift <1 second/day.

Weight: Console: 1.6 kg

Transmitter: 2 kg

Receiver: 2 kg

Battery pack/Harness: 1.6 kg

Array Depressor Weight: 3 kg (estimate) Transmitter specifications:

- Frequency under 18 kHz
- Output current: variable from 16 mA to 0.25 mA

Receiver Specifications:

- Dipole lengths: 5 m, 10 m, 15 m, 20 m, longer lengths optional
- Input Specifications: 5 Mhos
- Measured Voltage Accuracy: 1%
- Input Voltage Range 0-2 V RMS
- Power Line Rejections: >100 dB

Spacing:

- Variable Spacing

Dimensions:

- Console: 15 x 8 x 28 cm
- Battery: 8 x 14 x 20 cm

Battery:

- Transmitter receiver: 12 V DC
- Console: 28 V DC
- Internal battery backup for clock and nonvolatile RAM

Survey Types:

- Continuous, constant-offset dipole-dipole resistivity. (Multi-line with constant transmitter-receiver spacing for plan-view mapping.)
- Variable-offset, dipole-dipole resistivity. (Variable transmitter-receiver spacing for multiple