

SIGNAL STACKING RESISTIVITY METER

Model SSR – MPDT



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The IGIS Microprocessor based Signal Enhancement Resistivity Meter Model SSR – MPDT is a high quality microprocessor based data acquisition system incorporating several innovative features. The instrument design incorporates several advanced techniques of digital circuitry to make it reliable geophysical tool that provides high quality data useful for all types of mineral and groundwater exploration research etc.

The SSR-MPDT sends the entire current into the ground without wasting power for constant current generation thus increasing the signal strength to probe deeper layers.

The advanced design of SSR-MPDT Resistivity Meter achieves excellent depth penetration with relatively low power transmission. It utilizes the signal stacking upto 64 successive readings to achieve the beneficial signal enhancement. In the presence of random (noncoherent) earth noises, the signal to noise ratio of the SSR-MPDT measurement will be enhanced by N where N is the number of individual readings. Hence SSR-MPDT Resistivity meter can be used for depths of upto 600m under favourable geological conditions.

Applications

- Ground Water Exploration
- Bed Rock Investigations
- Delineation of Geological Structures
- Resistivity Sounding /profiling /imaging /strip profiling.
- Sand and Gravel Deposit Identification
- Mineral Investigations
- Geophysical Field Training

SPECIFICATIONS

Input Power Source	: 24V rechargeable Lithium-ion batteries
Power Output	: 100watts (Current upto 2 Amp) 400V(800V peak to peak) Automatic voltage selection.
Frequency	: 0.3Hz (Approx.)
Noise Rejection	: 95 db
Potential Measuring range	: Microprocessor based unit with measurement resolution of 10 micro volts.
Range selection	: Automatic
Resistance Range	: 10^{-5} to 10^4 ohms.
Self potential cancellation	: Automatic
Dynamic Range	: 15 bits
Data Averaging	: Upto 99 cycles
Input Impedance	: 10 Mega Ohm
Accuracy	: $\pm 1\%$
Interaction with the System	: 20x4 Alphanumeric Liquid Crystal Display.
Measurement Display	: Stack No./Stacks selected, Current and running average of Resistance.
Interaction with system	: 3 Button user friendly pre instructions
Output	: Average Resistance value (R),
Data transfer	: The received Direct "R" value can be transferred through USB port of the unit SSR-MPDT to a windows PC.
Depth Penetration	: upto 600 m under favorable geological conditions
Protection	: Protected against circuit overloads.
Error Signals for	: Poor current and Potential electrode grounding and Discontinuity of current electrode

IGIS GEOPHYSICAL INSTRUMENTS

The circuit technology, the building structure and housing design make IGIS instruments widely acceptable as

● Functionally Accurate

● Operationally convenient

● Ruggedly Field Worth

Specifications are likely to change with R&D.

IGIS also makes custom-build resistivity meters to individual specifications.

IGIS Instruments carry one-year guarantee against manufacturing defects.

Manufactured by:



**Integrated Geo Instruments
& Services (P) Limited**

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