Transient Electromagnetic Prospector

This prospector applies a 200A square wave for continuous power supply using a portable power source. The power supply method employs a large currency small coil, with a 25m transmitting coil, to achieve prospecting depth.

Overview

Transient Electromagnetic Prospector (TEM)

The Transient Electromagnetic Prospector is a professional-grade geophysical instrument designed for subsurface exploration using time-domain electromagnetic methods. By leveraging conductivity and magnetoconductivity differences, it effectively identifies underground water, mineral deposits, and geological structures at depths exceeding 1000m. The system features a robust industrial PC controller, high-performance signal processing, and advanced anti-jamming technologies to ensure reliable data collection in challenging field conditions.

Key Advantages

System Highlights	High Power Output, Deep Prospecting Capability, Industrial PC Control, Advanced Anti-Jamming, High Sampling Rate, Rugged Design

Receiver Specifications

Sampling Rate Options

- 1μS
- 4μS
- 16μS

Receiver Performance

140 dB	1 μV	16 Bit
Dynamic Range	Background Noise	A/D Converter Resolution

Hardware Configuration

Component	Specification
CPU	Pentium IV 500M
Memory	128M
Storage	40G
Display	800x600 TFT

Transmitter Specifications

Transmitter Power	12 KW
Currency Strength	1-60 A
Output Voltage	12-96 V

Applications

Primary Applications

Geothermal Exploration • Oil & Gas Census • Mineral Detection • Groundwater Assessment • Geological Disaster Survey • Coal Bed Detection