



VTEM

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WORLD LEADING HELICOPTER TIME-DOMAIN EM TECHNOLOGY

Geotech's time-domain electromagnetic system (VTEM) utilizes modern advances in digital electronics and signal processing. The proprietary receiver design delivers exceptionally low noise levels which, when coupled with a high dipole moment transmitter, results in unparalleled resolution and depth of investigation.

Features:

- 25/30 Hz base frequency for penetration through conductive cover
- Large dipole moments for greater depth of exploration
- Concentric Transmitter-Receiver Loop provides high spatial resolution and accurate interpretation
- Locate drilling targets directly from airborne data
- System is field configurable for various applications including: base metals, nickel sulphides, uranium, kimberlites and geological mapping
- Easily transportable worldwide with quick assembly



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Description

Geotech's VTEM (Versatile Time-domain ElectroMagnetics) system offers a field-selectable transmitter waveform and up to 625,000 NIA dipole moment.

The standard configuration is a 25/30 Hz base frequency with a selectable one- to five-turn loop depending on the application. Transmitter duty cycle is approximately 40% on-time, so conductors are saturated more effectively. The standard waveform is set as a boxcar. This combination of high dipole moment, up to a 7-ms-long transmitter pulse and low receiver noise results in greater depths of exploration.

The VTEM system includes a high-resolution cesium magnetometer, sampling 10 times per second.

Specifications

Transmitter

Transmitter coil:	Vertical axis
Pulse:	Boxcar
Pulse width:	1 – 30 ms (selectable)
Base frequency:	25 – 200 Hz (selectable)
Peak dipole moment:	up to 625,000 NIA
Transmitter loop area:	540 m ²
Max current:	310 amperes

Receiver

Receiver coil:	Z axis
Sample rate:	up to 200 kHz (selectable)
Bandwidth:	up to 50 kHz
Spherical noise rejection:	Digital, 3 levels
Industrial noise rejection:	Digital, 50/60 Hz
Data recording:	1 GB Flash card

Mechanical

Nominal survey airspeed:	90 km per hour
EM transmitter/receiver flying height:	30 m AGL
Outside operating temperature:	-40°C to +45°C
Power requirement:	up to 90 amperes
Shipping length:	2.5 m
Weight:	up to 400 kg
Installation/Assembly time:	within a day

(Specifications Subject To Change)



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