



WTEM-2 Deep Transient Electromagnetic System

TEM techniques are used to

- Map geologic structure in search of geothermal sources, groundwater, and aggregate deposits.
- Environmental and engineering uses range from delineating salt-water intrusion and contaminant migration to determining permafrost and depth to bedrock.
- Locating buried metal objects such as abandoned wells, pipelines, UST (underground storage tanks) and UXO.

Main features:

- High reliability, low power consumption
- Remote control
- Multiple channels, high measurement accuracy
- The transmitter synchronized controller designed with a better GPS module and antenna of higher sensibility.
- Short turn-off time function provides software with accurate turn- off time to enable it to give accurate data.
- Friendly and powerful control interface

Question 1: the depth?

The depth of investigation can vary from 10s of meters to over 1000 meters, depending upon

- a. the size of the transmitter loop being used,
- b. available power from the transmitter,
- c. ambient electromagnetic noise.

Question 2: the advantages ?

- a. TEM does not require long electrode arrays as DC electrical method;
- b. TEM has better depth resolution than DC resistivity, particularly for mapping conductive aquitards (confining layers) in resistive sections.



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WTEM-2D/60 Transmitter

Transmitting voltage	12V~200 V DC
Transmitting current	≤60A
Current measurement precision	±1%
Power supply frequencies	0.0625Hz, 0.125Hz, 0.25Hz, 0.5Hz, 1Hz, 2Hz, 4Hz, 8Hz, 16Hz, 32Hz
Transmitting waveform	+ON, OFF, -ON, OFF, equal width and dual polarity
Turn-off delay time	160ns (Pure resistance load)
Damping resistance	1000Ω
Transmitting coil	0.1km* 0.1km single turn ~ 2km*2km single turn
Synchronization mode	external synchronization (cable, GPS, Quartz clock)
Power supply	internal 12V8.6Ah rechargeable battery (or external 12V power supply) lasting for over 8 hours
Dimension	486 * 392 * 192 mm
Weight	12.7kg
Working temperature	-10°C~+50°C

WTEM-2T/GPS Transmitter Synchronized Controller

- Fast synchronization.
- Synchronization accuracy is high, synchronization error is less than 250ns.
- Supports multiple control signal frequencies.
- Real-time satellite signal display.

Power source	Built-in high-capacity lithium battery, working time ≥ 20 hours.
Volume	270mm * 246mm * 123mm
Weight	2.5kg



WTEM-2J Receiver

Number of channel	1
Pre-amplification gain	32 times
Main amplification gain	128 times
Band-pass	0~50k Hz (liner phased filter), full band-pass 0~400k Hz
Suppression	80dB
A/D	16 bit
Min sample interval	1μs
Trace number	≤128
Stacking times	1~9999 time
Synchronization mode	cable, GPS, GPS+quartz clock
Power source	internal 12V rechargeable battery (or external 12V power supply) lasting for about 16 hours work
Ports	Bluetooth, infrared and serial port
Dimension	340mm* 295mm *152mm
Weight	5.3kg
Working temperature	-10°C~+50°C



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