TXU-30 Multi-function Geophysical Current Source

- Compact, portable
- Uses 200–240 V, 50 Hz, 60 Hz, or 400 Hz, 3-phase motor generator
- Permanently synchronized to GPS time ±0.5 μs
- Linear ramp better than 5 μs/ampere (turnoff characteristic for TEM)
- For all common EM geophysical techniques

IP	Induced Polarization: Frequency and Time Domain, Phase and Spectral IP
CSAMT	Controlled Source Audio Magneto-Tellurics in scalar, vector, and tensor modes
TDEM, FDEM	All common Time and Frequency Domain Electromagnetics functions



Specification: September 2006. Subject to change without notice.

TXU-30 Multi-function Current Source

The most advanced controlled current source available for electrical methods geophysical exploration, the TXU-30 is compact and portable. It combines substantial output power (20 kW) with advanced electronics and GPS technology.

Simplified MG Requirements

The new design eliminates dependence on specialized motor generators. Now, you can buy or rent a suitable MG from any convenient local supplier, and that means—

- no more service and spare parts supply headaches.
- possible capital cost savings.
- reduced shipping costs. (Over the life of the product, this can add up to considerable savings!)

Advanced Controls—Easy to Use

Advanced microprocessor control provides superior performance across the board. Large, bright LEDs display instrument status and critical values. Simple, straightforward controls make it easy to adjust all operating parameters within allowable limits.

Climate-Controlled Exploration!

Use the cable-linked remote control panel to operate the TXU-30 from up to 30 m away. Manage your EM transmissions in the comfort of a heated or air-conditioned field truck cab! You'll also appreciate being able to talk with the rest of the crew by mobile phone or radio without having to fight the noise of the MG.

High S/N Ratios—Precision Synchronization

In highly resistive areas in the past, users have relied on dangerously high voltages in an attempt to achieve an adequate signal-to-noise ratio at the receiver. The TXU-30's built-in GPS (Global Positioning System) satellite-synchronized timing control, coupled with companion GPS-synchronized receivers, solves this problem. Because the entire system is synchronized, receivers can maintain proper registration while stacking even extremely weak signals. The signals can be stacked as long as necessary until the S/N ratio is acceptable.

Wired or Wireless Data Links

The TXU-30 continuously saves time series records of its output current and voltage on a removable 512 MB flash memory card. This information, required for deconvolution calculations in Spectral IP, can be transmitted to a companion receiver system over either a wireless or an optional cable link.

Alternatively, the data on the flash memory card can be uploaded to the post-processing computer via a high-speed, low-cost interface.

Summary Specifications

Dimensions & Weight, transmitter	52 cm W x 44.5 cm H x 60 cm D 52.5 kg	**Input Voltage**	200–240 V at 50/60/400 Hz
Dimensions & Weight, controller	47 cm W x 15 cm H x 36.5 cm D 6.5 kg	**Frequency Range**	256 s to 9600 Hz (Frequency Domain) 128 s to 30 Hz (Time Domain)
Environmental	Operating: –20°C to 45°C Storage: –35°C TO 50°C	**Timing Control**	GPS synchronized ±0.5 µs
Maximum Power Output	20 kW at 25°C, sea level	**User Interface**	Cable-connected control panel
Duty Cycle	100%, 50%, 33%, 25%	**Fault Protection**	Input voltage out of range Output voltage out of range Output current out of range Power stack temperature high
Efficiency	90% at full power		
Current Range	1–40 A, 0.5–20 A		
Voltage Range	25–1000 V		

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