



## terraTX-50 External Transmitter

The terraTX-50 is a high power field transmitter capable of delivering 50Amps to a transmitter loop, designed to be used in conjunction with a terraTEM unit. The period is controlled by the terraTEM or the inbuilt GPS Synchronisation Module. The ramp and the full Tx current waveform are directly inputted into the terraTEM. This makes the system simple to operate, freeing up operators from inputting key system parameters into the console after each sounding.

The transmitter current and turn-off time depend on the transmitter loop resistance and inductance, along with the input voltage. Inbuilt damping resistors allow the operator to tune the response through a wide variety of loops typically encountered in geophysical and geotechnical surveys.



The terraTX-50 base system comes complete with the console, battery pack (designed to hold 2 x 12V batteries), battery charger, 5m synchronisation cable, loop input cable, Tx output cable, console power cable, three battery interlink cables, and an operation manual on CD. Optional enhancements available for use with the terraTX-50 include a 200m synchronising cable supplied on a reel, to be used in place of the 5m synchronisation cable.

Optional GPS or Crystal Synchronisation Modules are available. This option is fitted internally within both the terraTEM and terraTX-50 consoles, with no noticeable weight increase. The outer dimensions of both consoles remain unchanged. The GPS and Crystal Synchronisation Modules link the transmitter and receiver consoles, to provide a trigger waveform and to transmit bipolar waveform respectively. This option has been designed with the goal of keeping equipment intuitive, compact and operationally simple. The recent improvement of mounting these synchronisation modules internally provides greater flexibility to the operator, simplifying field procedures for fixed loop, downhole surveys, and in-loop surveys when cable synchronisation is not possible or practical. It is possible to synchronise multiple receivers to the same transmitter. The approach adopted for the GPS Synchronisation means there is no requirement for the receiver to be anywhere in proximity to the transmitter, even during the initialisation stage.



## terraTX-50 Specifications

- 250V loop input voltage.
- 1 - 50Amps output current.
- Bipolar waveform with 50% duty cycle.
- Fast turn-off time (i.e. 40 microsec at 50Amps into a 50m x 50m loop; 8 microsec at 10Amps into a 50m x 50m loop).
- Cable (5m) timing synchronisation as standard.
- GPS, Crystal and extended cable (200m) optional for timing synchronisation.
- Convection cooled using heatsink with an optional fan for additional cooling.
- terraTX-50 console displays information including the loop input voltage and loop current information, as well as overheating and over current warnings. The operator can also choose from preset period and damping values.
- terraTX-50 console includes inbuilt overload protection.
- External battery pack, designed to provide 24V power to the console, allowing for continuous operation throughout the day.
- Operating temperature of -20 to + 50 degrees Celsius.
- terraTX-50 console measures 46cm x 36cm x 16cm, weight 10kg.
- terraTX-50 battery pack measures 28cm x 25cm x 18cm, weight 12 kg (when loaded with 2 x 12V batteries, not included in purchase).



Tx Current (Amps)		Tx Voltage (Volts)		Tx Ramp (us)	
34.6		48.4		---	
Tx On/Off		Period (ms)		Damping Adj. Ramp	
ON		40		100 1	
Synch. Mode		Cable			
<input type="checkbox"/>		<input checked="" type="checkbox"/>			
Local Time: 06/03/15	H/S Temp: 27.8C	Console Tx Loop: 25.3V	Serial No. 0212027		
Time: 06/03/15	Amb. Temp: 32.1C				

