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EM63 Flex Data Sheet

A dynamic system which enables the user to further utilise the Time Domain Electromagnetic methods (TDEM) to detect and characterise UXO's. The flexibility of the EM63 Flex enables multiple full-transient data collection from each of the receiver coils and includes a real-time filter which analyses the magnetic soil response and enhances target detection (Fig.1.).

Designed to be adaptable and used in a various environments, the EM63 Flex can be configured to support the project application and specific survey requirements the customer may require. The maximum number of receiver coils that can be used for each application is four, which can give you a swath distance of four meters in length.

When using a multitude of EM61-MK2 coils, the EM63-MK2 console can be independently used to support the full-transient data collection.This instrument can accurately measure the full TEM response at 26 geometrically spaced time gates over a large amplitude and time range.

Ferrous and non-ferrous metallic targets will have a greater response due to the high power of this system enabling the user to detect objects with high precision and enhance the probability of detection. For example, a 60mm mortar shell can be detected to a depth > 95cm and a larger target to a maximum depth of 6m beneath the sensor (depending on the site conditions).



Fig.1. Showing the typical survey set up and tow vehicle arrangement of the EM63 Flex (Image courteously provided by Geonics)

The software used to acquire the data includes the support of real-time visualisation (Fig.2.) and anomaly recognition; the GeoDroid processing software further allows the user to quality assess, control and characterise targets.

Features:

- Precise measurement of Full-transient EM response; as many as 26 geometrically spaced time gates over a large amplitude/time range
- The EM61MK2 four gate response is user selectable.
- Metallic detection (ferrous and non-ferrous) of object of varying sizes; a 60mm mortar shell can be detected to a depth > 95cm and larger target to a maximum depth of 6m beneath the sensor
- Real-Time software of the magnetic response from soil and lithological units which increases probability of detection and a reduction of false-positive alarms.
- GeoDroid data processing software used for quality assessment, control and target charactisation
- Can be deployed in a variety of different configurations, increasing productivity and can be controlled by a

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single console

- GPS compatibility, supports accurate data positioning ; an alarm will sound if the GPS connection is lost
- Real-time software includes the data visualisation tools with different parameter selection

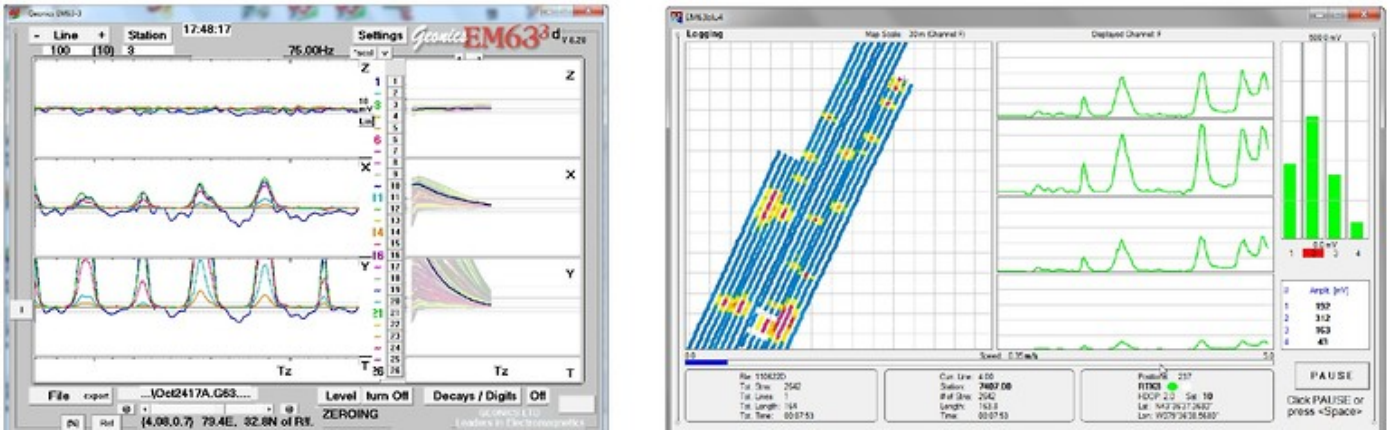


Fig.2. Shows the real-time display options for the EM63 Flex data (Image courteously provided by Geonics)

Product Dimensions

Physical	Dimensions (L x W x H)	Weight
(instrument only)	1.0 m (x4 air cored coils) x 0.5 m (x4 air cored coils) x	

Technical Specifications

Time Gates / Measured Quantity:	26 geometrically spaced gates over a range of 180 us to 29 ms, secondary response in mV for each of the four main channels
Base frequency:	7.5,30,75 and 150Hz adjusted for a 60Hz or 50Hz power line
Current Waveform:	Rectangular bipolar current, 12 A maximum (i.e. 7.5 A maximum at 150Hz for a large tx Loop (9.5m)
EM Source:	9.5m or 5.45m in length
System Controller:	Panasonic Toughbook (Optional)
Storage:	Solid-state memory with 2000 h capacity
Digital Interface:	RS232, USB and network connection
Positioning:	External GPS
Aquisition Speed and Dynamic range:	15 records per second, 18 bits

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Operating Temperatures:	-20 Degrees Celsius to 60 degrees Celsius
Calibration:	External test coil (optional)

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