Cable Locating System

elma instruments

EZiCAT Locators
Accurately locating buried utilities for easier and safer cable avoidance

Obtaining accurate information about the location of buried utilities has never been more essential to protect employees and equipment during any excavation project.

Local legislation prescribes the use of a locating device before any kind of excavation takes place. It makes perfect sense to search for, trace and mark all services before work commences.

With all our EZiCAT locators users can detect buried utilities with ease. The EZiSYSTEM range has been specifically designed to reduce human error and to increase site safety with its wealth of intelligent and unique features.

The EZiSYSTEM range makes locating underground cables and pipes a simple and efficient task, increasing your on-site safety and ultimately saving you time and money.

How does the EZiCAT locate?
The EZiCAT range locate buried conductive services by receiving electromagnetic signals which radiate from them.

The EZiCAT's intelligent software interprets the signal data and provides the operator with an audible and visual response to the location and direction of buried utilities.

Range
- EZiCAT i-Series Locators
- LOGiCAT Software
- EZiTEX Signal Transmitter
- EZiROD Service Tracer

Users
- Excavation contractors
- Utility installation contractors
- General repair contractors
- Builders
- Gas and electricity companies
- Cable TV companies
- Pipe laying contractors

EZiCAT i500
High level flexibility and intelligence

Benefits
- State-of-the-art digital signal processing technology (DSP).
- Automatic controls – making the EZiCAT easy-to-use, requiring minimal user experience.
- Power Mode start up ensuring the most potentially dangerous current carrying services are detected first.
- Hazard Zone feature indicating shallow buried service in power, 8 and 33 kHz modes, (within approximately 30cm) alerting increased risk.
- Built-in test function for testing hardware and software.
- LCD screen with built-in light sensor, automatically enabling the backlight in dark conditions.
- Robust, lightweight design, specifically engineered for tough site conditions.
- Service Due Indicator supporting planned maintenance schedules or quality systems by displaying a wrench icon after 12 months.

Flexibility
The EZiCAT i-Series locators have multiple modes of operation allowing users to have maximum control at their fingertips.

Auto Mode (Auto)
Automatically locates power or radio signals, helping to confirm the presence of services upon initial site occupation making cable detection easier and safer.

Transmitter Modes (8 kHz) (33 kHz)
(8 & 33 kHz)
Locates a specific signal applied by the EZiTEX dual frequency signal transmitter to a metallic underground conductor.

Radio Mode (A)
Traces signals originating from distant radio transmitters. These signals penetrate the ground and are reradiated by buried conductive services.

Power Mode
(Default mode)
Locates power signals radiated by energised cables which pose the most significant risk to excavation teams.

Intelligence

Hazard Zone
Buried utilities close to the surface pose a safety risk to site works. The new Hazard Zone function provides an additional warning of the close proximity of buried services, alerting users to the immediate danger.

Pinpoint Assist
Maintains the highest peak reading obtained on the signal strength indicator. The peak hold time can be adjusted between 0 – 5 seconds allowing the operator to quickly and accurately pinpoint the service position.

Signal Service Indicator
SSI enables the user to trace an individual service amongst a multiple of services. The numeric display shows the highest reading over this service, which has the EZiTEX signal transmitter connected to. This ensures the user can follow the service without straying to another.

GEOMAX

EZiCAT™ i500
Cable Avoidance Tool

EZiCAT i500

EZiCAT i550
With additional depth indication feature

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- Built-in test function for testing hardware and software.
- Added benefit of utility depth estimation to 3m for additional survey information.
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Additional Features

Depth Indication

The EZiCAT i550 features utility depth indication, when used in conjunction with the EZiTEX in 8 or 33 kHz modes. Operators can determine the depth of the buried utility, providing an advantage when conducting ground surveys.

EZiCAT i550

EZiCAT i650
Depth indication and data logging with LOGiCAT software using Bluetooth® connectivity

Benefits
- State-of-the-art digital signal processing technology (DSP).
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EZiCAT i650 features full LOGiCAT software compatibility. Page 12.

Additional Features

Depth Indication
The EZiCAT i650 features utility depth indication, when used in conjunction with the EZiTEX in 8 or 33 kHz modes. Operators can determine the depth of the buried utility, providing an advantage when conducting ground surveys.

Data Logging
The EZiCAT i650 records and stores information whilst in use. Information is recorded every second after completion of the initial start-up routine. These records are stored in the locators memory and can be retrieved and transferred via Bluetooth® to a PC or other electronic device for analysis. Storage time is approximately 80 hours use.

LOGiCAT Software
Allows you to upload the stored records to view the locators use, simply upload all records or search by date.

Bluetooth® Connectivity
The EZiCAT i650 locator has the added benefit of Bluetooth® wireless connectivity. It allows the EZiCAT to integrate seamlessly with mobile mapping technology to log survey data, in addition to enabling wireless Bluetooth® data transfer.

EZiCAT i650

EZiTEX Signal Transmitter
Delivering significantly higher power than previous model transmitters

This improved performance will allow users to:

- Trace services over a greater distance.

- Improve service detection in areas of high signal interference.

- Improve depth estimation when using a depth locator.

Flexibility
Compact design with an IP65 rating, the transmitter is fully protected even in the harshest of conditions.

EZiTEX t100
Producing up to 1 watt of power.

Benefits

- Four adjustable output levels, delivering a maximum output level of either 1 watt (EZiTEX t100).

- Durable weatherproof design.

- Environmental protection rating of IP65. Robust, compact and lightweight design engineered for tough site conditions.

- Choice of 3 tracing signals.

- 33 kHz everyday site use, generally accepted as an industry standard.

- 8 kHz long tracing and reduced cross coupling.

- 8 and 33 kHz (connection mode).

- Ease of use – default output frequency of 33 kHz.

- Externally located clear, audio visual controls. This ensures a robust waterproof design.

- Built-in test function – allowing operators to test the hardware and software functionality of the EZiTEX before use.

LOGICAT
Upload stored records to view locators' use

Accessories
Full range of compatible accessories

Flexibility
LOGiCAT software allows you to upload stored records from the EZiCAT i650 to view the locators use, simply upload all records or search by date. Upload information includes:

Time and Date
Identifies when and at what time ground surveys were conducted.

Usage Duration
Determines how long survey teams searched for buried services.

Detection Mode
As more comprehensive ground surveys are conducted the locator records the mode of operation including the use of a signal transmitter.

Service Detection
Discovers quickly if any buried services were detected during surveys and even determines the signal strength shown on the locator.

Product Fleet Management
Displays and monitors the service and calibration dates of your locator fleet, ensuring they are kept in perfect working order.

Diagnostic Check
Displays locators which have failed the EST (Extended Self Test) and removes them from the active fleet for immediate repair. This reduces the possibility of defective equipment being used on-site.

Management Reports
Produces simple to interpret statistical reports from the logged data, allowing users to see how products are utilised.

EZiROD
The EZiROD enables non-metallic drains, ducts or pipes to be traced when used in conjunction with the EZiCAT and the EZiTEX.

The EZiROD's coiled fibre-glass rod, which protects the central copper tracing conductor, is available in lengths of 30 metres, 50 metres, or 80 metres. The fibre-glass rod is inserted and pushed along in the service under investigation. The EZiTEX is connected, and the tracing signal is located on the surface by the EZiCAT.

Signal Clamp
For use with the EZiTEX signal transmitter, enabling connection to cylindrical metallic services (e.g. pipes, insulated electricity cables).

Dual Frequency Sonde
Compact dual frequency signal transmitter used to trace drains, sewers and other non conductive services. The Sonde can be attached to a range of equipment including drain rods, boring tools and inspection cameras.

Property Connection Set
For use with the EZiTEX signal transmitter. Connection of a tracing signal to any internal power distribution system outlet.

The benefits of data logging in five steps

See better results, more comprehensive ground surveys and a reduction in buried service strikes.
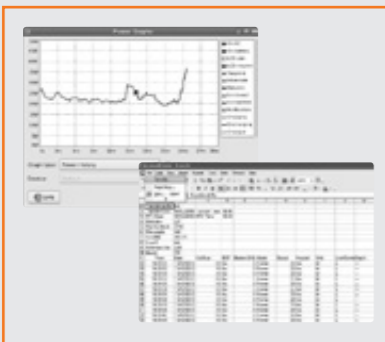
1 Conduct ground survey gathering data

2 Send logged data to Bluetooth® enabled PC

3 View EZiCAT usage statistics and charts

4 Make informed decisions to efficiently manage EZiCAT fleet and operators

5 Implement changes to procedures for better results

EZiROD

Signal Clamp

Dual Frequency Sonde

Specifications
EZiSYSTEM product specifications

Locators

EZiCAT i500

Frequency / Mode	Power mode 50 Hz or 60 Hz, Radio mode 15 kHz to 60 kHz
	Transmitter mode 8 kHz and 33 kHz, Auto mode = Power + Radio mode
Depth	Power to 3m, Radio to 2m, Transmitter mode to 3m
Protection	Conforms to IP54
Batteries	6 x AA alkaline (IEC LR6 supplied)
Battery Life	40 hours intermittent use (at 20°C)
Weight	2.7kg including batteries

EZiCAT i550

Frequency / Mode	Power mode 50 Hz or 60 Hz, Radio mode 15 kHz to 60 kHz
	Transmitter mode 8 kHz and 33 kHz, Auto mode = Power + Radio mode
Depth	Power to 3m, Radio to 2m, Transmitter mode to 3m
Depth Estimation	10% of depth in line or sonde (0.3 to 3m depth range)
Protection	Conforms to IP54
Batteries	6 x AA alkaline (IEC LR6 supplied)
Battery Life	40 hours intermittent use (at 20°C)
Weight	2.7kg including batteries

EZiCAT i650

Frequency / Mode	Power mode 50 Hz or 60 Hz, Radio mode 15 kHz to 60 kHz
	Transmitter mode 8 kHz and 33 kHz, Auto mode = Power + Radio mode
Depth	Power to 3m, Radio to 2m, Transmitter mode to 3m
Depth Estimation	10% of depth in line or sonde (0.3 to 3m depth range)
Protection	Conforms to IP54
Bluetooth®	Standard
Batteries	6 x AA alkaline (IEC LR6 supplied)
Battery Life	40 hours intermittent use (at 20°C)
Weight	2.7kg including batteries
Compatibility	CSV file compatibility program
Memory Size	32Mb memory
Capacity	80 hours of data

Signal Transmitter

EZiTEX t100

Operating Transmission Frequencies	8 & 33 kHz, mixed 8/33
Output Power	4 levels
Induction (Max)	Up to 1W max
Direct Connection (300 Ohms)	Up to 1W max when connected to a buried service with an impedance of 300 Ohms
Battery Type	4 x D alkaline (IEC LR20), supplied
Battery Life (typical use at 20°C)	30 hours intermittent use
Weight	2.4kg/5.3 lbs including batteries
Dimensions	105mm (H) x 190mm (D) x 235mm (W)
IP Rating (case lid closed)	IP65
IP Rating (case lid open)	IP54

Accessories

EZiROD

Protection	Conforms to IP54
	(30/50/80 metre coil of copper conductor sheeted by fibre glass)
Weight	3kg/3.25kg/3.5kg

Dual Frequency Sonde

Operating Transmission Frequencies	8 & 33 kHz
Battery Type	1 X LR6 (AA) alkaline
Protection	Fully Submersible
Battery Life (typical use at 20°C)	40 hours intermittent use at 20°C/68°F in 8kHz mode or 33 kHz mode
Weight	0.18kg/0.4 lbs
Dimensions	38mm (D) x 120mm (L)