

# **EZISYSTEM**

Advanced buried service location technology









## **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 EZiSYTEM 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
- Signal Clamp
- Property Connection Set
- Dual Frequency Sonde

### Users

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



### 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.
- In-built 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**

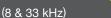
The EZiCAT i-Series locators have multiple modes of operation allowing users to have maximum control at their fingertips.

### 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.

### Generator Modes (8 kHz) (33 kHz)





Locates a specific signal applied by the EZiTEX dual frequency signal generator 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









## **EZICAT i550**

### With additional depth indication feature

### **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.
- In-built test function for testing hardware and software.
- Added benefit of utility depth estimation to 3m for additional survey information (EZiCAT i550 model only).
- 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.

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(8 & 33 kHz)

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### **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



### Additional features

### **Depth indication**

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

## **EZICAT 1600**

### Data logging with LOGiCAT software using connectivity

### **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.
- In-built 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**

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### Generator Modes (8 kHz) (33 kHz)



(8 & 33 kHz)

Locates a specific signal applied by the EZiTEX dual frequency signal generator 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

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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

**EZICAT i600** features full LOGICAT software compatibility. Page 13.



### Additional features

### **Data Logging**

The i600 EZiCAT 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 i600 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 1650**

### Depth indication and data logging with LOGiCAT software using Bluetooth connectivity

### **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.
- In-built test function for testing hardware and software.
- · Added benefit of utility depth estimation to 3m for additional survey information (EZiCAT i550 model only).
- 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.

### Generator Modes (8 kHz) (33 kHz)



(8 & 33 kHz)

Locates a specific signal applied by the EZiTEX dual frequency signal generator 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

**EZICAT i650** features full LOGICAT software compatibility. Page 13.



### Additional features

### **Depth indication**

The EZiCAT i550 features utility depth indication, when used in conjunction with the EZiTEX or Sonde 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 i650 EZiCAT 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.

## **LOGICAT**

### Upload stored records to view locators' use

### **Flexibility**

LOGiCAT software allows you to upload stored records from the EZiCAT i600 and 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 and reveals actual product utilisation.

### **User Identification**

Forces users to become accountable for their actions and identifies those who need additional product training.

### **Detection Mode**

Allows managers to judge the quality and thoroughness of work. As more comprehensive ground surveys are conducted the locator records the mode of operation including the use of a signal generator.

#### **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 and not being used when calibration is due.

#### **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 basic statistical reports from the logged data, allowing users to see how products are utilised and how ground survey teams are using them on-site.



**LOGICAT** features full EZiCAT compatibility. Pages 8 - 11.

### The benefits of data logging in five steps

See better results, more comprehensive ground surveys and a reduction in buried service strikes.



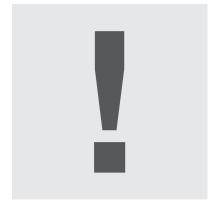
Conduct ground survey gathering data



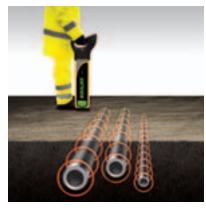
Send logged data to Bluetooth enabled PC



View EZiCAT usage statistics and charts



Make informed decisions to efficiently manage EZiCAT fleet and operators



Implement changes to procedures for better results

## **EZITEX t100**

# The EZiTEX t100 signal transmitter is the latest in cable location design

EZiTEX t100 delivers significantly higher power than previous models generators. 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**

Producing up to 1 watt of power through 8 kHz or 33 kHz dual frequency modes and boasting an IP65 rating, the transmitter is fully protected even in the harshest of conditions.

### **Benefits**

- Four adjustable output levels, delivering a maximum output level of 1 watt.
- Durable waterproof design environmental protection rating of IP65. Robust, compact and lightweight design engineered for tough site conditions.
- Choice of 3 tracing signals.
- 33K everyday site use, generally accepted as an industry standard.

- 8K long tracing and reduced cross coupling.
- 8 and 33K (connection mode).
- Ease of use default output frequency of 33K.
- Externally located clear, audio visual controls. This ensures a robust waterproof design.
- In built test function allowing operators to test the hardware and software functionality of the EZiTEX before use.



EZiTEX t100









## Accessories

### Full range of compatible accessories

### **EZIROD**

The EZiROD enables non-metallic drains, ducts or pipes to be traced when used in conjunction with the EZiCAT and the EZiTEX t100 or other signal generator.

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 t100 is connected, and the tracing signal is located on the surface by the EZiCAT.

### **Signal Clamp**

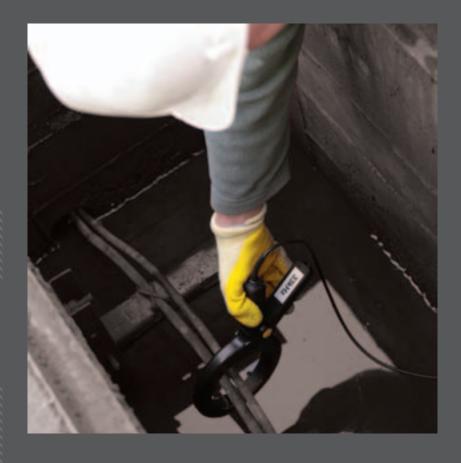
For use with the EZiTEX t100 8/33 signal generator, enabling connection to cylindrical metallic services (e.g. pipes, insulated electricity cables).

### **Property Connection Set**

For use with the EZiTEX t100 signal generator. Connection of a tracing signal to any internal power distribution system outlet.

### **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.



Accessories









# **Specifications**

### **EZiSYTEM** product specification

EZiCAT i500	
Frequency / Mode	Power mode 50 Hz or 60 Hz, Radio mode 15 kHz to 60 kHz
	Generator mode 8 kHz and 33 kHz, Auto mode = Power + Radio mode
Depth	Power to 3m, Radio to 2m, Generator mode to 3m
Protection	Conforms to IP54
Bluetooth	Not available
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
	Generator mode 8 kHz and 33 kHz, Auto mode = Power + Radio mode
Depth	Power to 3m, Radio to 2m, Generator mode to 3m
Depth estimation	10% of depth in line or sonde (0.3 to 3m depth range)
Protection	Conforms to IP54
Bluetooth	Not available
Batteries	6 x AA alkaline (IEC LR6 supplied)
Battery life	40 hours intermittent use (at 20°C)
Weight	2.7kg including batteries

EZiCAT i600	
Frequency / Mode	Power mode 50 Hz or 60 Hz, Radio mode 15 kHz to 60 kHz
	Generator mode 8 kHz and 33 kHz, Auto mode = Power + Radio mode
Depth	Power to 3m, Radio to 2m, Generator mode to 3m
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	80hrs of data

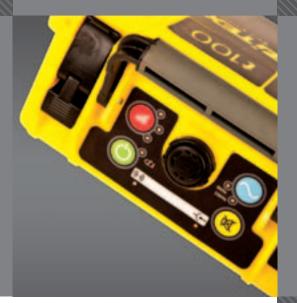
Specifications

EZiCAT i650	
Frequency / Mode	Power mode 50 Hz or 60 Hz, Radio mode 15 kHz to 60 kHz
	Generator mode 8 kHz and 33 kHz, Auto mode = Power + Radio mode
Depth	Power to 3m, Radio to 2m, Generator 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	80hrs of data

EZiTEX t100	
Operating transmission frequencies	8.192kHz, 32.768kHz, mixed 8/33
Output power	4 levels
Induction (Max)	Up to 1W max
Direct connection (100 Ohms)	Up to 1W max when connected to a buried
	service with an impedance of 100 Ohms
Battery type	4 x D alkaline (IEC LR20), supplied
Battery life (typical use at 20°C)	30hrs intermittent use
Weight	2.4kg/5.3 lbs including batteries
Dimensions	180mm (H) x 260mm (D) x 280mm (W)
IP rating (case lid closed)	IP65
IP rating (case lid open)	IP54

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	8.192kHz, 32.768kHz
Output power	4 levels
Induction (Max)	Up to 1W max
Direct connection (100 Ohms)	Up to 1W max when connected to a buried
	service with an impedance of 100 Ohms
Battery type	1 X LR6 (AA) alkaline
Battery life (typical use at 20°C)	40hrs intermittent use at 20°C/68°f in 8kHz mode or 33kHz mode
Weight	0.18kg/0.4lbs
Dimensions	38mm (H) x 120mm (W)



Dealer stamp



Cable Detection Limited
A Leica Geosystems company

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More information on cable avoidance tools at cabledetection.co.uk