

# Cable Tracing and Locating EZi & ULTRA Systems





## Cable Avoidance and Tracing systems, increase on-site

### EZiSYSTEM

Every year site workers are injured and equipment damaged due to accidentally striking buried cables and pipes. As the complexity of large underground networks continually increases, knowing the location of buried cables and pipes prior to excavation work has never been so important.



#### i-Series

##### **Easily avoid buried cables and pipes before excavation work**

The EZiSYSTEM cable avoidance equipment makes locating buried cables and pipes easy and efficient. With an EZiCAT i-Series locator there is no need to manually adjust the sensitivity, with the unique Automatic Pinpointing feature users can simply press the trigger and start locating.



#### xf-Series

##### **Easily locate and trace buried utilities over greater distances**

The EZiSYSTEM xf-Series utility locating and tracing equipment makes locating buried utilities easy and efficient. The xf-Series locators have additional low frequencies enabling you to locate and trace utilities over longer distances and in congested environments. With an EZiCAT locator there is no need to manually adjust the sensitivity, with the unique Automatic Pinpointing feature users can simply press the trigger and start locating.





**safety, minimise human error and save time and money**

## ULTRA SYSTEM

The complexity of large underground utilities networks is continually increasing. So obtaining precise information on the location of specific buried cables and pipes has never been so important in order to protect buried assets during ground excavation work and supporting the mapping and surveying of these existing utilities.

### **Easily locate cables and pipes with pinpoint accuracy**

The ULTRA System has unique flexible operating modes to help you easily decide the right mode for your locating application and site conditions.

The intelligent utility locator monitors the signal interference levels in all available modes and recommends which to use for the best results.

Saving you time and giving you increased confidence in your results.



# EZiCAT i500/i550 Cable & pipe locators

## Robust and easy-to-use cable locators

### Increase your on-site safety

Robust locators engineered for ease-of-use and packed full of well-known, beneficial features. Making avoiding and locating buried utilities an easy and efficient task. These locators are simple to operate, enabling users to simply press the trigger and start locating.

All EZiCAT locators come with the unique Automatic Pinpointing feature which makes locating buried utilities easy and simple. You do not need to manually adjust the sensitivity of the locator because the locator does this for you automatically. Ensuring that you are using the optimum sensitivity for the environment you are locating in.

The EZiCAT i500/i550 has all the well-known features you need to locate buried utilities effectively.

- **Automatic pinpointing**
- **Depth estimation (i550 only)**
- **Modes:**
  - Power (default)
  - Radio
  - Auto
  - 8kHz
  - 33kHz
- **Hazard zone**
- **Pinpoint assist**
- **Signal strength indicator**
- **Built-In self test**
- **Service due indicator**



Technical data	i500	i550
Frequency / Mode	Power 50 Hz or 60 Hz; Radio 15 kHz to 60 kHz; Transmitter 8 kHz and 33 kHz; Auto = Power + Radio modes	
Depth	Power to 3m; Radio to 2m; Transmitter dependant on transmitter or sonde type	
Depth estimation		10% of depth in line or sonde (0.3 to 3m depth range)
Protection	IP54	
Batteries	6 x AA alkaline (IEC LR6) supplied	
Battery life	40 h intermittent use (at 20°C)	
Weight & dimensions	2.7kg - 760mm (H) x 85mm (D) x 250mm (W)	

# EZiCAT i650 Cable & pipe locator

## Fully integrated data logging and depth indication

### Intelligent data logging locators

The intelligent i650 locator has fully integrated data logging capability, logging information on how and when the locator has been used. This data can help you identify training needs of users and for traceability of locating following a near miss, cable strike or similar incident. You can quickly download the locating data via Bluetooth® to the LOGiCAT software on your PC, Android tablet or mobile phone, then analyse the data using the easy to understand reports.

All EZiCAT locators have the unique Automatic Pinpointing feature which makes locating buried cables and pipes easy and simple.

No need to manually adjust the sensitivity, the locator does this for you automatically. Ensuring that you're using the ideal sensitivity for the environment you're locating in.

- Automatic pinpointing
- Fully integrated data logging
- Bluetooth® connectivity
- Depth estimation
- Modes:
  - Power (default)
  - Radio
  - Auto
  - 8kHz
  - 33kHz
- Hazard zone
- Pinpoint assist
- Signal strength indicator
- Built-In self test
- Service due indicator



### Technical data

### i650

Frequency / Mode	Power 50 Hz or 60 Hz; Radio 15 kHz to 60 kHz; Transmitter 8 kHz and 33 kHz; Auto = Power + Radio modes
Depth	Power to 3m; Radio to 2m; Transmitter dependant on transmitter or sonde type
Depth estimation	10% of depth in line or sonde (0.3 to 3m depth range)
Protection	IP54
Batteries	6 x AA alkaline (IEC LR6) supplied
Battery life	40 h intermittent use (at 20°C)
Weight & dimensions	2.7kg - 760mm (H) x 85mm (D) x 250mm (W)
Bluetooth®	Enabled
Compatibility	CSV file compatibility program
Memory size	32Mb memory

# EZiCAT i750 Cable & pipe locators

## With GPS technology and data logging capability



### Increased confidence in cable locating activities

The intelligent EZiCAT i750 cable locator has fully integrated GPS technology and data logging capability, providing you with information on where, when and how the locator has been used. This is very useful to help identify training needs of users and for traceability of locating following a near miss, utility strike or similar incident. This information can then be transferred via Bluetooth® to LOGiCAT software, making downloading and analysing the data quick and easy. This data is useful to help identify training needs of users and for traceability of locating following a near miss, utility strike or similar incident.

The EZiCAT i750 has all the well-known features you need to locate buried utilities effectively, along with the unique Automatic Pinpointing feature which makes locating buried cables and pipes easy and simple.

You don't need to manually adjust the sensitivity of the locator because the intelligent locator does this for you. Ensuring that you are using the optimum sensitivity for the environment you are locating in.

- Automatic pinpointing
- Fully integrated GPS
- Fully integrated data logging
- Bluetooth® connectivity
- Depth estimation
- Modes:
  - Power (default)
  - Radio
  - Auto
  - 8kHz
  - 33kHz
- Hazard zone
- Pinpoint assist
- Signal strength indicator
- Built-In self test
- Service due indicator

### Technical data

Technical data	i750
Frequency / Mode	Power 50 Hz or 60 Hz; Radio 15 kHz to 60 kHz; Transmitter 8 kHz and 33 kHz; Auto mode = Power + radio modes
Depth	Power to 3m; Radio to 2m; Transmitter dependant on the transmitter or sonde type
Depth estimation	10% of depth in line or sonde (0.3 to 3m depth range)
Protection	IP54
Batteries	6 x AA alkaline (IEC LR6) supplied
Battery life	40 h intermittent use (at 20°C)
Weight & dimensions	2.7kg - 760mm (H) x 85mm (D) x 250mm (W)
Bluetooth®	Enabled
Compatibility	CSV file compatibility program
Memory size	64Mb memory
GPS type	Chipset*: u-blox®GPS, Technical Data: Type: L1 frequency, C/A code
GPS accuracy**	Position 2.5m CEP, SBAS 2.0m CEP
GPS start time	Cold 34s typical; Warm 34s typical; Hot 1s typical

\*All data/information according to manufacturer u-blox®GPS; Cable Detection does not assume any liability whatsoever for such information.

\*\* Accuracy is dependant upon various factors including atmospheric conditions, multipath, obstructions, signal geometry and number of tracked satellites.



# EZiTEX t100/t300 Signal transmitters

Improve utility detection in areas of high signal interference

The t-Series signal transmitters are compact, robust and easy to use. They are dual frequency transmitters that have been designed in conjunction with the EZICAT cable locators to easily and accurately avoid, trace or locate buried cables and pipes.

We would always recommend using a EZiTEX signal transmitter whenever you are trying to locate buried utilities.

- Improved utility detection in areas of high signal interference.
- Improved detection of inactive utilities such as street lights.
- Enables depth estimation, when using a depth estimation cable locator.
- Enables you to locate non conductive utilities (e.g plastic, concrete etc) when used in conjunction with EZiSYSTEM accessories.

Using an EZiTEX signal transmitter will significantly improve the locate process and reduce utility damage.



## EZiTEX t100

1 Watt signal transmitter.  
A robust signal transmitter for use before excavation work.

## EZiTEX t300

3 Watt signal transmitter.  
Ideal to use if you are frequently locating in areas with high signal interference, or larger excavation areas.

- **Clear audio and visual controls**
- **Modes:**  
33kHz  
8kHz  
8kHz and 33kHz (connection mode)
- **Built-In self test**



### Technical data

	t100	t300
Frequency / Mode	8 kHz, 33 kHz and mixed 8/33 kHz	
Protection	IP67 (case Lid closed); IP65 (case lid open)	
Direct connection (300 Ohms)	Up to 1W max	Up to 3W max
	connected to a buried service with an impedance of 300 Ohms	
Induction (max)	Up to 1W max	
Power output	4 levels	
Batteries	4 x D alkaline (IEC LR20) supplied	
Battery life	30 h intermittent use (tat 20°C)	
Weight & dimensions	2.5 kg - 105mm (H) x 190mm (D) x 235mm (W)	

# EZiCAT i550xf Cable & pipe locators

## Robust and easy-to-use utility locator

### Increase your locating and tracing range

EZiCAT i550xf is a robust and easy to use locator. The addition of low frequency tracing modes makes tracing buried utilities over long distances an easy and efficient task.

EZiCAT xf-Series locators start in the last mode used and have two lower frequencies (512Hz and 640Hz), making them ideal for tracing buried utilities over long distances.

As with all EZiCAT locators the EZiCAT i550xf has the unique Automatic Pinpointing feature which makes locating buried utilities easy and simple. You don't need to manually adjust the sensitivity of the locator because the locator does this for you automatically. Ensuring that you are using the optimum sensitivity for the environment you are locating in.

The EZiCAT i550xf has all the well-known features you need to locate buried utilities effectively.

- **Automatic pinpointing**
- **Depth estimation**
- **Modes:**
  - Power (default)
  - Radio
  - Auto
  - 8kHz
  - 33kHz
  - 512Hz
  - 640Hz
- **Hazard zone**
- **Pinpoint assist**
- **Signal strength indicator**
- **Built-In self test**
- **Service due indicator**



Technical data	i550xf
Frequency / Mode	Power 50 Hz or 60 Hz; Radio 15 kHz to 60 kHz; Transmitter 8 kHz, 33 kHz, 512 Hz & 640 Hz; Auto = Power + Radio modes
Depth	Power to 3m; Radio to 2m; Transmitter dependant on transmitter or sonde type
Depth estimation	10% of depth; Line mode - 0.3m - 3m; Sonde mode - 0.3m to 9.99m
Protection	IP54
Batteries	6 x AA alkaline (IEC LR6) supplied
Battery life	40 h intermittent use (at 20°C)
Weight & dimensions	2.7kg - 760mm (H) x 85mm (D) x 250mm (W)



# EZiCAT i750xf GPS & data logging cable locator

## With GPS technology and data logging capability

### Increased confidence in cable locating activities

The highly intelligent i750xf locator has fully integrated GPS technology and data logging capability, logging information on how, when and importantly where the locator has been used. This data can help you identify training needs of users and for increased traceability of locating following a near miss, utility strike or similar incident. Giving you increased confidence in your organisations utility locating activities.

You can quickly download the locating data via Bluetooth® to the LOGiCAT software on your PC, Android tablet or mobile phone, then analyse the data using the easy to understand reports.

The i750xf locator, as with all xf-Series locators, has the added benefit of extended low tracing frequencies, making locating and tracing buried utilities over long distances an easy and efficient task.

All EZiCAT locators, have the unique Automatic Pinpointing feature which makes locating buried utilities easy and simple. No need to manually adjust the sensitivity, the locator does this for you automatically. Ensuring that you're using the ideal sensitivity for the environment you're locating in.

- Automatic pinpointing
- Fully integrated GPS
- Fully integrated data logging
- Bluetooth® connectivity
- Depth estimation
- Modes:
  - Power (default)
  - Radio
  - Auto
  - 8kHz
  - 33kHz
  - 512Hz
  - 640Hz
- Hazard zone
- Pinpoint assist
- Signal strength indicator
- Built-In self test
- Service due indicator



### Technical data

### i750xf

Frequency / Mode	Power 50 Hz or 60 Hz; Radio 15 kHz to 60 kHz; Transmitter 8 kHz and 33 kHz; Auto = Power + Radio modes
Depth	Power to 3m; Radio to 2m; Transmitter dependant on transmitter or sonde type
Depth estimation	10% of depth; Line mode – 0.3m – 3m; Sonde mode – 0.3m to 9.99m
Protection	IP54
Batteries	6 x AA alkaline (IEC LR6) supplied
Battery life	40 h intermittent use (at 20°C)
Weight & dimensions	2.7kg - 760mm (H) x 85mm (D) x 250mm (W)
Bluetooth®	Enabled
Compatibility	CSV file compatibility program
Memory size	64Mb memory
GPS type	Chipset*: u-blox®GPS, Technical Data: Type: L1 frequency, C/A code
GPS accuracy**	Position 2.5m CEP, SBAS 2.0m CEP
GPS start time	Cold 34s typical; Warm 34s typical; Hot 1s typical

\*All data/information according to manufacturer u-blox®GPS; Cable Detection does not assume any liability whatsoever for such information.

\*\* Accuracy is dependant upon various factors including atmospheric conditions, multipath, obstructions, signal geometry and number of tracked satellites.

# EZiTEX t300xf Signal transmitters

## Locate more buried utilities over longer

The t300xf signal transmitters is compact, robust and easy to use. It has four frequencies designed to trace buried utilities over long distances when used in conjunction with the EZiCAT xf-Series cable locators.

We would always recommend using a EZiTEX xf-Series signal transmitter whenever you are trying to locate buried utilities using an xf-Series EZiCAT locator.

- Improved utility detection in areas of high signal interference.
- Improved detection of inactive utilities such as street lights.
- Enables depth estimation, when using a depth estimation cable locator.
- Enables you to locate non conductive utilities (e.g plastic, concrete etc) when used in conjunction with EZiSYSTEM accessories.

Using an EZiTEX signal transmitter will significantly improve the locate process and reduce utility damage.



### EZiTEX t300xf

3 Watt signal transmitter.

Ideal to trace buried utilities over long distances and if you are frequently locating in areas with high signal interference.

- **Clear audio and visual controls**
- **Modes:**
  - 33kHz
  - 8kHz
  - 8kHz and 33kHz (connection mode)
  - 512Hz
  - 640Hz
- **Built-In self test**



#### Technical data

Technical data	t300xf
Frequency / Mode	8 kHz, 33 kHz and mixed 8/33 kHz
Protection	IP67 (case Lid closed); IP65 (case lid open)
Direct connection (300 Ohms)	Up to 3W max connected to a buried service with an impedance of 300 Ohms
Induction (max)	Up to 1W max
Power output	4 levels
Batteries	4 x D alkaline (IEC LR20) supplied
Battery life	20 h intermittent use (at 20°C)
Weight & dimensions	2.5 kg - 113mm (H) x 206mm (D) x 250mm (W)

# ULTRA System locators

## Easily locate cables and pipes with pinpoint accuracy

The ULTRA System locators are multi-frequency precision locators for locating and tracing buried cables and pipes.

They offer advanced operating capability with over 70 operating modes. Enabling the operator to optimise the settings, controls and operating modes to maximise the locators performance in the most challenging and complex site conditions.

The locator has a clear graphical LCD screen, with auto-pinpointing directional arrows. The screen is large and clearly laid out. It is daylight visible and backlit ensuring confident and fast locating in all operating conditions day or night.

The ULTRA Advanced Locator sets itself apart by intelligently monitoring other frequencies that are interfering with the signal you're locating or tracing and recommends which frequency to use for the best results. Saving you time and giving you increased confidence in your results.

Overall the ULTRA System is:

- Easy to use
- Pinpoint accuracy
- Flexible operating modes to suit the most challenging site conditions.

- Remote controlled transmitter
- Signal interference monitor
- Signal direction enabled
- 22 configurable frequencies
- Modes:
  - Power (default)
  - Radio
  - Transmitter
  - Sonde



### Technical data

Frequency / Mode

### ULTRA locators

Power 50Hz, 100Hz and 450Hz; Radio 15kHz to 60kHz; Transmitter 512Hz, 314Hz, 8192Hz, 32768Hz, 83.1kHz and 200Hz; Sonde Preset 512Hz, 640Hz, 8192Hz, 33768Hz and 83.1kHz (22 frequencies user configurable)

Antenna configuration

Single peak, twin peak, null, total signal or left/right (cable only)

Depth

Power to 3m; Radio to 2m; Transmitter to 4.6m; Sonde to 6m

Depth estimation

5% of depth in line or sonde (0.2m to 4.6m depth range)  
10% of depth Sonde 4.6m to 6m

Protection

IP65

Bluetooth®

Enabled

Shutdown

Selectable auto shutdown after 5, 10, 20 or 30 minutes

Operating temperature range

-20° C to 50° C

Batteries

2 x D alkaline (IEC LR20) not supplied

Battery life

60 h intermittent use (at 20°C)

Weight & dimensions

2.18 kg - 700mm (H) x 325mm (D) x 122mm (W)



# ULTRA System Signal transmitter

## For all utility locating and tracing

The ULTRA System Transmitters are our most advanced, high performance models yet. The transmitters are ideally suited for complex and challenging sites conditions. They are lightweight and have 12 configurable frequencies that perform well tracing over long distances and also for high impedance cables.

The 12 Watt advanced transmitter is remote controlled, which enables the user to quickly and simply adjust the tracing frequency to adapt to the most challenging and complex site conditions.



- Remote controlled transmitter
- Signal direction enabled
- 12 configurable frequencies
- Modes:
  - Connection
  - Induction
  - Clamp

### Technical data

Technical data	ULTRA Transmitters
Frequency / Mode	512 Hz, 3140 Hz, 8192 Hz, 32768 Hz, 83.1 kHz, 200 kHz (12 frequencies user configurable)
Protection	IP65
Direct connection (Max)	12 Watt (model specific) when connected to a buried service with an impedance of 100 Ohms
Batteries	10 x D alkaline (IEC LR20) not supplied
Battery life	Up to 100 h intermittent use (level 2 output at 20°C)
Shutdown	Selectable auto shutdown after 1, 2, 3, 4, 5, 6, 7 or 8 h
Operating temperature range	-20° C to 50° C
Weight & dimensions	3.5 kg - 255mm (H) x 190mm (D) x 305mm (W)

# LOGICAT Software

## Upload stored records to view locators use

LOGiCAT Software is used to manage and analyse the data collected from cable locating activities. For use with the EZiCAT i600 or i700 Series cable locators, the data can be downloaded via Bluetooth® to the LOGiCAT software to enable quick and easy analysis and reporting of cable locating activities. The data can then be used to identify training needs of users and for traceability of cable locating activities following a near miss, utility strike or similar.

LOGiCAT Software enables you to easily extract and upload stored data from your EZiCAT data logging and GPS cable locator(s), then analyse and report on the following traceable data:

- **GPS positioning of use (i750, 750xf):** Provides GPS data on where the cable locator has been used.
- **Time and date of use:** Identifies when and at what time ground surveys were conducted.
- **Usage duration:** Helps identify if the cable locating equipment has been used for a sufficient amount of time.
- **User identification:** Makes users accountable for their actions and identifies those who need additional product training.
- **Detection mode used:** Enables managers to analyse the quality and thoroughness of modes used.
- **Service detection:** Discovers quickly if any buried cables or pipes were detected during surveys.
- **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.



### The benefits of data logging in 5 steps

- 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

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

# ACCESSORIES

## Full range of compatible accessories



### EZiROD

The EZiROD is a flexible rod which enables the detection of non-metallic drains, ducts or pipes when used in conjunction with the EZiTEX signal transmitter and EZiCAT cable locator.

It is available in lengths of 30m, 50m or 80m.

The EZiROD is inserted and pushed along the utility under investigation. The EZiTEX signal transmitter is used to apply a trace signal which is then detected by the EZiCAT cable locator.

#### Ideal for:

- Tracing the path of small diameter pipes or drains
- Locating blockages or collapses in drains
- Locating or tracing non-metallic pipes that don't produce a signal.



### Signal Clamp

The Signal Clamp is a lightweight, robust 100mm clamp used to apply a traceable signal to buried conductive utilities, when used in conjunction with an EZiTEX signal transmitter.

It operates in 33kHz.

The Signal Clamp is clamped around the utility under investigation. The EZiTEX signal transmitter is used to apply a trace signal which is then detected by the EZiCAT cable locator.

#### Ideal for:

- Locating and tracing the path of a specific utility
- For highly congested areas of buried utilities
- To increase the thoroughness of your utility survey.



### Multi Clamp (512Hz-33kHz)

The Multi Clamp is a robust 80mm clamp used to apply a traceable signal to buried conductive utilities, when used in conjunction with an EZiTEX signal transmitter.

It operates in with frequencies from 512Hz to 33kHz.

The Multi Clamp is clamped around the utility under investigation. The EZiTEX signal transmitter is used to apply a trace signal which is then detected by the EZiCAT cable locator.

#### Ideal for:

- Locating and tracing the path of a specific utility
- For highly congested areas of buried utilities
- To increase the thoroughness of your utility survey.





### Dual Frequency Sonde

This dual frequency compact Sonde can be used to trace drains, sewers and other nonconductive utilities. It acts like a signal transmitter and can be attached to a range of equipment including drain rods, boring tools and inspection cameras.

Once attached to a rod (or similar) the Sonde can be inserted and pushed along the utility under investigation.

Using an EZiCAT cable locator trace the route of the utility or find the position of the blockage.

It operates in 8kHz or 33kHz as indicated by it's flashing LED.

#### Ideal for:

- Tracing the path of a pipe or drain
- Locating blockages or collapses in drains
- Locating or tracing non-metallic pipes that don't produce a signal.
- The depth range of the Sonde is up to 5m.



### MAXiSONDE (8kHz-33kHz)

This dual frequency Sonde can be used to trace drains, sewers and other nonconductive utilities. It acts like a signal transmitter and can be attached to a range of equipment including drain rods, boring tools and inspection cameras. Once attached to a rod (or similar) the Sonde can be inserted and pushed along the utility under investigation. Using an EZiCAT cable locator trace the route of the utility or find the position of the blockage.

It operates in 8kHz or 33kHz as indicated by it's flashing LED.

#### Ideal for:

- Tracing the path of a pipe or drain
- Locating blockages or collapses in drains
- Locating or tracing non-metallic pipes that don't produce a signal.
- The depth range of the Sonde is 12m.



### Property Connection Set

The Property Connection Set is used to apply a traceable signal to live electricity power cables when used in conjunction with the EZiTEX signal transmitter. This will enable you to trace the power cable around the outside of the property to the mains feed or outbuildings such as garages.

It operates in 33kHz.

The Property Connection Set is plugged in to a live power socket. The EZiTEX signal transmitter is used to apply a trace signal which is then detected by the EZiCAT cable locator.

#### Ideal for:

- Quickly and easily identifying the electricity cable.



## About GeoMax

We are an internationally active company developing, manufacturing and distributing quality construction and surveying instruments delivering outstanding price-to-performance. Its comprehensive product portfolio includes easy-to-use, yet highly productive range of total stations, GPS/GNSS, lasers, optical and digital levels.

GeoMax is part of Hexagon, a leading global provider of integrated design, measurement and visualisation technologies.



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