

TOMKATs & SIGENdt USER GUIDE



TOMKATs

1. On/Off Switch

Press this switch to turn the unit on. Release it to switch the unit off.

2. Mode Selector Switch

Use this switch to select the required operating mode. The three modes are:

Power

Radio

Generator

(The method for using the different modes is described later).

3. Sensitivity Control Knob

This is used to eliminate background noise and minimize the response width of the instrument.

4. Battery Housing

Change the units batteries by accessing this panel.

5. Speaker

The speaker allows the operator to hear signal confirmation.

NOTE: To avoid too much exposure to noise do not hold the speaker too close to the ear when in use and avoid using it for long periods.

The speaker can be unscrewed on the TOMKATs and held close to the ear when locating in noisy environments. When not in use the speaker should be replaced back into its housing.

The TOMKATs and SIGENdt Signal Generator combine to make the perfect tools for cable avoidance. Their rugged construction ensures long life and reliability whilst the simple controls promote effective use with minimal training.

Preparation for use : TOMKATs

Depress the On/Off switch to turn the unit on. Release it to switch the unit off. When the switch is depressed the unit will emit a beeping sound.

If the TOMKAT does not emit a beep when switched on, replace the batteries. The TOMKAT is powered by eight 1.5v Alkaline AA cells, which are located in the battery housing on the side of the instrument.

To replace the batteries, remove the panel, push the two retaining clips towards the panel and lift it out of the casing. Remove the batteries and fit new ones. Switch on the instrument and ensure that the beep noise can be heard.

Note: To ensure peak performance always replace the batteries as a set.

The TOMKATs is now ready for use.

1. Lift the TOMKATs so that your middle finger can operate the On/Off switch. This leaves the forefinger free to operate the sensitivity control and mode switch.
2. Turn the mode switch to Power Mode.
3. Turn the sensitivity knob fully clockwise.

Location Procedure



Safety Warning: Although the TOMKATs will locate most services there are some cables which do not radiate signals and which cannot be located with the TOMKAT. Always excavate with care.

Always check for correct operation by using P mode to locate a power cable with which you are familiar and to ensure that the response is what you expect.

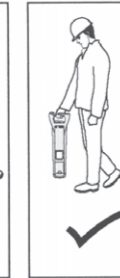
Not all cables carry current, and the TOMKATs will not detect these in P mode. For the TOMKATs to locate cables in P mode, they must be carrying sufficient current.

Underground pipes can often emit power and radio signals. The TOMKATs cannot recognise if the service is a cable or pipe and will only indicate the presence of a service. Buried services do not always radiate a detectable signal. To locate these cables use the TOMKATs in conjunction with the SIGENdt. This is the most accurate method for locating, tracing, and identifying a cable.

Locating



Warning: There are some cables that cannot be detected using P mode. Once a search of the area has been completed in P mode perform



the search again with the TOMKATs in R mode.

Before starting to locate, consult local utility offices to obtain as much information as possible regarding the underground services in the proposed search area. If available, obtain a utility map of the area as this will assist you in the location of buried services.

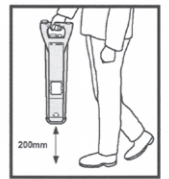
When using the TOMKATs always hold it upright and do not swing it from side to side (see illustration)

Reinforcing steel bars in concrete can interrupt signals from an underground service by spreading the signal or deflecting it. If you suspect that this is happening lift the locator about 200mm (8"0) from the ground whilst locating.

To locate a cable:-

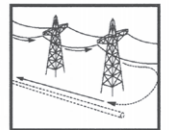
Power Mode

Power signals are those which are emitted by current carrying cables. The current is often generated by nearby load carrying conductors as shown in the diagram.



Radio Mode

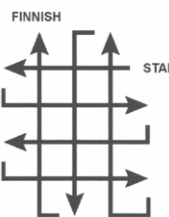
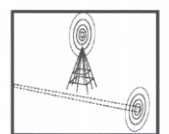
These are often low voltage signals generated by remote radio transmitters. The signals enter the ground and are re-generated by buried conductors.



Note: These signals are not always present.

1. Switch on the instrument, select P mode and ensure the sensitivity control knob is turned fully clockwise.

2. Search the area in a grid-like fashion using the sensitivity control knob to reduce background noise and continue searching until there is no further beeping noise from the instrument or you are outside of the search area.

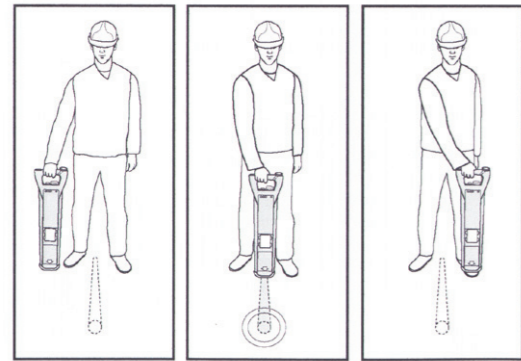
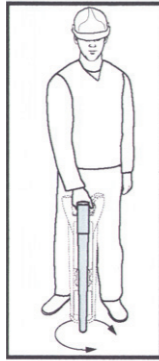


.....Locating (carried on)

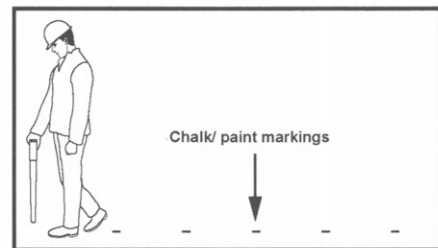
3. Return to the mid point of the signal and, holding the **TOMKATs** level, rotate it about its axis until the minimum signal is found. Use the sensitivity control to obtain a narrow response (See illustration).

4. Rotate the locator about its axis by 90° so that it will be across the run of the service at that point.

5. Move the locator backwards and forwards across the service whilst reducing the sensitivity to give a narrow response width. The locator is now directly above the service and at right angles to it.



6. To trace the line of the service, walk along the expected direction moving the locator from side to side with the blade at 90° to the line of service. Always keep the locator vertical and, using marker paint or chalk, mark the route of the service as required.



7. Repeat the procedure using R mode and with the sensitivity control turned fully clockwise.

SIGENDt - Signal Generator

1. Multi Mode Switch

OFF OFF

I Induction mode

C Connected

2. High & Low switch

Coupling
Controls the volume output of the SIGENDt

3. Output Mode switch

Selects either **Continuous** or **Intermittent**.

4. Utility Compartment

Supplied as standard with direct connection leads and an earth stake. (Optional extras include Live plug connector and Signal Clamp).



Locating with the TOMKATs & SIGENDt Pre-use test

Before using the **TOMKATs** with the generator, perform a functional check as follows:

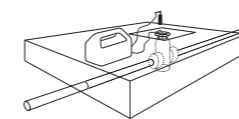
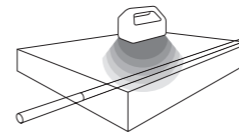
1. Place the generator on the ground and switch it on.
2. Ensure there is a sound from the speaker.
3. Place the **TOMKATs** on the ground with the foot facing towards the generator, with the **TOMKATs** switched on and set to maximum sensitivity, check that there is an audio response.

Induction

In this method, the generator signal is induced onto the cable and the **TOMKATs** is used to trace the signal.

To trace a cable in induction mode, proceed as follows:

1. Locate the assumed position of the cable and mark its position.
2. Place the generator over the assumed cable position and switch it on.
3. Switch on the **TOMKATs** and select G mode. Starting at a distance of approximately 10 paces from the generator trace the cable and mark its position.



Direct connection

In this locating method the generator is directly connected to the cable by means of a cable attached to a suitable connection point such as a junction box or meter.



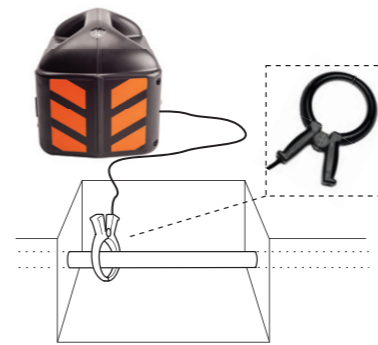
Warning: Direct connections should only be made by suitably qualified users.

Using the optional Signal Clamp

The **Signal Clamp** applies a **SIGENDt** signal safely to the pipe or live cable of up to 100mm (4 inches) in diameter, without interrupting the supply.

Method

Plug the **Signal Clamp** into the **SIGENDt's** connection socket. Place the Clamp around the pipe or cable ensuring the jaws are fully closed. Switch the **SIGENDt** on. Open and close the Clamps jaws.



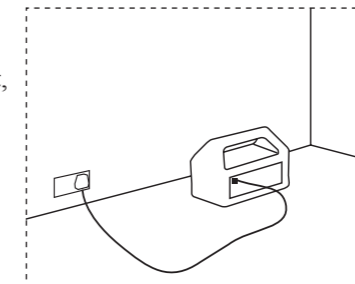
An earth connection is not required but efficient signal transfer is only achieved if the target conductor (Cable) is grounded at both ends. Power cables tend to be installed like this.

Using the optional Live Plug Connector

The Live Plug Connector allows the **SIGENDt** to be powered by connecting to a domestic power socket in the home or street.

Method

Connect the Live Plug Connector to the **SIGENDt**, inside the accessory panel on the side and the 3 pin plug, to the domestic power socket. Switch on the power socket and the **SIGENDt**.



Using the optional Sonde Signal Transmitter with the TOMKATs

The **5 Meter Sonde** is a small battery powered, self-contained, waterproof transmitter which can be attached to drain rods or any movable device that can be propelled inside non-metallic pipes.



Method

- Always start a new job with fresh batteries,
1. Attach the **SONDE** to a drain rod using the correct connector.
 2. Place the **SONDE** on the ground and set the **TOMKATs** to Generator mode.
 3. Hold the **TOMKATs** in line with the **SONDE** and check for a signal.
 4. Insert the **SONDE** approximately 1m/3yd into the duct/pipe and adjust the **TOMKATs** sensitivity to receive the signal clearly.

Ghost Signals?

A ghost signal can occur when sensitivity is incorrectly set on the **TOMKATs**, typically it appears before and behind the centre of the main signal position.

To reduce the occurrence of a ghost signal, simply reduce the sensitivity of the **TOMKATs**, allowing it to receive only the main signal emitted by the **SONDE**.

