C.A.T Locator features

1. On/Off
   Press to turn the C.A.T on or off.

2. Loudspeaker
   Detachable speaker for use in noisy environments.

3. Function switch
   Selects locate mode: Power, Radio, Genny.

4. Battery compartment
   To replace batteries, open the access cover using a screwdriver or coin. Use eight LR6 or AA alkaline batteries.

5. Warning
   When using the C.A.T in noisy environments, the speaker can be detached and held closer to the ear. To avoid excessive noise exposure it is advisable to hold the speaker no closer than 15cm (6") from the ear. Prolonged use at this level should be avoided.

Genny Transmitter features

1. On/Off button
   Press and hold to reduce speaker volume.

2. Direct Connection socket

3. Loudspeaker

4. Battery compartment
   To replace batteries, open the access cover using a screwdriver or coin. Use four LR20 or D alkaline batteries.

5. Storage compartment
   Holding Connection Cable, Ground Stake and Ground Cable.

C.A.T+ Locator features

1. Signal strength

2. Depth

3. Mode

4. Clockface

The basic features of the C.A.T+ are the same as the C.A.T but with the addition of a liquid crystal display.

Genny+ Transmitter features

The only differences between the Genny and Genny+ are that the signal radiating from the Genny+ and the tone from its speaker are continuous rather than pulsed. Operationally they are similar.

Operation of Power and Radio modes

1. Regularly check your C.A.T and Genny, in all modes, over a cable which gives a response you are familiar with.

2. Power mode
   - For detection of power signals radiated by loaded cables. These are often found ‘re-radiated’ by nearby conductors. Select Power using the Function switch. Press and hold the On/Off switch. Replace batteries if no initial ‘bleep’ is heard to confirm good battery condition.
   - Rotate the Sensitivity control fully clockwise for maximum sensitivity but reduce if there is a blanket signal across the site.
   - The Genny is used to apply a tone to a buried conductor. This signal can be traced using the C.A.T, the Genny+ or both the C.A.T and Genny.

3. Radio mode
   - For detection of radio signals originating from distant radio transmitters. These penetrate the ground and are re-radiated by buried conductors. However, they are not always present.
   - Clip the ground lead to the earth stake which should be placed in the ground 3 to 4 paces away, and at right angles to the target line.
   - Alternatively the ground lead may be clipped to the rim of a valve box or manhole cover. Use the spool lead to extend the earth connection if necessary.

4. Direct Connection
   - Direct Connection is the most effective form of signal transmission to a valve, meter, junction box or other access point.
   - Clip the ground lead to the earth stake which should be placed in the ground 3 to 4 paces away, and at right angles to the target line.
   - Alternatively the ground lead may be clipped to the rim of a valve box or manhole cover. Use the spool lead to extend the earth connection if necessary.

5. Locating with the C.A.T and Genny
   - The Genny is used to apply a tone to a buried conductor. This signal can be traced using the C.A.T located on a ‘bleep’ or a very slow bleep, replace the batteries.
   - Switch the C.A.T to Genny mode and begin to trace the line from the point of application. Pinpoint using the same method as described for Power and Radio modes.
   - The C.A.T+ Locator features

   - Sweep holding the C.A.T upright and at your side. Continue the sweep beyond the perimeter of the area to be excavated.
   - The presence of a buried conducting pipe or cable will be indicated by a tone emitted from the loudspeaker.
   - Keep the blade of the C.A.T vertical and move slowly backwards and forwards over the conductor, reducing the sensitivity for a narrower response. With the C.A.T+ use the meter deflection to aid pinpointing.
   - Maximum meter deflection will indicate the position of the conductor.
   - When directly over the conductor and with the sensitivity level set for a narrow response, rotate the C.A.T on its axis until the signal minimum is found. The blade is now in line with the conductor.
   - Trace the conductor out of the area, marking the position as required with chalk or paint.

   - WARNING

   - Connection to a power cable sheath should only be undertaken by qualified personnel.

   - Method

   - Plug the Connection lead into the Genny connection socket and attach the red lead to the target line. If necessary clean the connection point to ensure a good electrical contact.

   - Power mode

   - Radio mode

   - Direct Connection
Induction

Induction is a convenient and quick way of applying the Genny signal to a pipe or cable where limited access does not permit direct connection or use of the Signal Clamp.

Place the Genny over the assumed position of the conductor in the orientation shown. Start tracing the cable or pipe at least five paces from the Genny with the C.A.T in Genny mode. Working too close to the Genny may give false readings as the Genny+ is greater than 30 paces (see ‘Taking depth readings using the C.A.T+’).

If using the C.A.T+ do not attempt to take depth readings until the distance between the C.A.T+ and Genny+ is greater than 30 paces (see ‘Taking depth readings using the C.A.T+’).

Active search using Induction

Placing the Genny on one side sweeps an area with Genny signal.

Alternatively, use a two man technique to search an area for buried utilities.

Using the optional Signal Clamp

The Signal Clamp applies a Genny signal safety to a pipe or live cable up to 30mm (1.188 inches) diameter, without interrupting the supply.

Method

Plug the Clamp into the Genny Connection socket. Place the Clamp around the pipe or cable ensuring the jaws are closing correctly a drop in speaker tone will be heard.

An earth connection is not necessary but efficient signal transfer is only achieved if the target conductor is grounded at both ends. This is usually the case with power cables.

Using the optional Live Plug Connector

The Live Plug Connector applies the Genny signal to a live domestic power socket and, via the domestic wiring system, to the service cable and supply cable in the street.

Method

Connect the Live Plug Connector to the Genny socket and the power socket.

Switch on the power socket and the Genny.

Note

The Live Plug Connector provides protection to 250Vac.

Using the optional Mouse Signal Transmitter

The Mouse is a small self-contained watertight transmitter which can be detected by the C.A.T when switched to the Genny mode.

Method

Replace the battery in the Mouse. Attach the Mouse to a drain or using an appropriate connector (purchased separately).

Place the Mouse on the ground, set the C.A.T to Genny mode and, whilst holding the C.A.T in line with the Mouse, check that a signal is being received. Insert the Mouse approximately 1/2 into the duct/drain and adjust the C.A.T sensitivity to receive the signal.

A ghost signal appears before and behind the main signal position. Reduce the C.A.T sensitivity to receive only the main signal.

Taking line depth measurement using the C.A.T+

Depth measurement is only possible when using the C.A.T+ in the Genny mode with a Genny+ transmitter.

Method

Locate the utility as described previously. Ensure that the depth measurement position is at least 30 paces from the Genny, especially if the signal application is by Induction method.

Hold the C.A.T still, vertical and at right angles to the buried line. Momentarily depress the depth button. The display will show a clock face followed by the depth measurement.

Taking Mouse depth measurements using the C.A.T+

Depth measurement is only possible when using the C.A.T+ in the Genny mode with a Mouse+ transmitter, identified with a central orange band.

Method

Locate the main Mouse signal as previously described. Hold the C.A.T vertically and in line with the Mouse. Press and hold the depth button until ‘M’ appears on the display. A clock face will appear in the top right hand corner of the display while the depth calculation is made. The approximate depth to the Mouse will then be displayed on the meter.

C.A.T+ error codes

Indicates very shallow conductor

Indicates conductor out of range

Indicates depth measurement attempted in R or P mode which is not available.

WARNING

Do not use the C.A.T+ depth measurement to decide if mechanical digging over buried conductor is appropriate.

Taking Induction readings

Method

Using the optional Live Plug Connector

The Live Plug Connector applies the Genny signal to a live domestic power socket and, via the domestic wiring system, to the service cable and supply cable in the street.

Method

Connect the Live Plug Connector to the Genny socket and the power socket.

Switch on the power socket and the Genny.

Note

The Live Plug Connector provides protection to 250Vac.