

Cable Avoiding Tool & Signal Generator

U Scan II and Scansmitter

Enables you to detect the location of electric cables and metal pipework preventing damage to utilities when excavating.

Code 49510 / 49519

EQUIPMENT CARE

The C.A.T. and Generator are each powered by 4xLR14 batteries.

Never push the equipment beyond its design limits. If it will not do what you want with reasonable ease, assume you have the wrong tool for the job. Ask at your local HSS Hire Shop for advice.

Handle the equipment with care. Avoid dropping it, knocking it, or otherwise exposing it to damage.

Never expose the equipment to excessive moisture, dust or dangerous/corrosive chemicals.

Keep the equipment clean. You will find this less of a chore if you clean up regularly rather than wait until the end of the hire period.

When not in use, store the equipment somewhere clean, dry and safe from thieves.

FINISHING OFF

Clean the equipment by wiping it over with a damp cloth, before returning it to your local HSS Hire Shop.



... have you been trained

The law requires that personnel using this type of equipment in the workplace must be competent and qualified to do so.

Training is available at HSS Training
0845 766 7799

...any comments?

If you have any suggestions to enable us to improve the information within this guide please e-mail your comments or write to the Safety Guide Manager at the address below
e-mail: safety@hss.com

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This method should never be used to apply a signal to **ELECTRIC CABLES**.

Plug the black plug into the socket in the base of the Signal Generator. Connect the crocodile clip (red lead) onto the appropriate service. Place the earth stake into the ground, at right angles to, and as far from the service as possible, connect the black lead onto the earth stake.

Make sure you do not drive the earth stake into any services below it.

Switch the Signal Generator ON/OFF Mode selector to the mid position. The unit will emit a high beep every 2 seconds (this confirms the batteries are ok) If the beep stops, STOP and replace the batteries.

After a short time the beep will change to a lower tone indicating a good earth connection.

BASIC TECHNIQUES

The area to be excavated should always be tested in both power and radio mode.

Mark out the area to be excavated using line marker or chalk. Never mark services using pegs or other sharp objects.

Always sweep the area in two directions – north to south and east to west.

Holding the C.A.T. upright with the blade edge off the ground, sweep the area in a grid like pattern taking care not to 'swing' the unit. Cover the area until either a signal is located or until you are fully satisfied that the area has been adequately tested first in power mode then in trace mode.

To discover the direction of the service you have located, rotate the C.A.T. when directly over the service. The direction will be shown when the meter display drops to zero and no sound is emitted.

Mark any services found clearly.

TO OPERATE THE C.A.T. IN CONJUNCTION WITH A SIGNAL GENERATOR...

Switch on the Generator, check that a high pitched tone is being emitted every 2 seconds

The C.A.T. will pick up stray signals from the Generator for approximately 5 metres, beyond 5 metres the C.A.T. will act normally allowing you to locate audibly as well as visually.

With the C.A.T. switched ON 'sweep' over the area to be excavated, listening for the high pitched tone and checking the meter on the C.A.T. When the meter peaks, this indicates the service is directly below the arrows on the C.A.T. unit.

GENERAL SAFETY

For advice on the safety and suitability of this equipment contact your local HSS Hire Shop.

Keep children, animals and bystanders out of the work area.

Never use this equipment if you are ill, feeling tired, or under the influence of alcohol or drugs.

This equipment should only be used by a competent person who has read and understood these instructions.

Caution

The C.A.T. and Signal Generator will identify most underground services BUT the absence of a positive indication does not guarantee the non existence of a pipe, cable or service.

ALWAYS EXCAVATE WITH CARE.

Check the equipment before use, if it shows signs of damage or excessive wear, return it.

Ensure work area is tidy, well lit and ventilated.

If the equipment fails, or is damaged, return it. Do not attempt to repair it yourself.

Information on COSHH regulations is available from your local HSS Hire Shop.

GETTING STARTED

CABLE AVOIDING TOOL (C.A.T.)...

The C.A.T. has three modes, each for detecting services in a different way.

POWER MODE 'P':

Detects live electric cables which have a current flowing through them. Some electric cables may be live but there may not be a current flowing through them. To ensure there is a current flowing, ask for an appliance to be switched on, such as an electric cooker or an immersion heater.

RADIO MODE 'R':

Detects re-radiated signals from metallic objects such as pipes and cables. **The re-radiated signal range is approximately 16-20khz.** In this mode the C.A.T. will only detect electric cables and metallic pipes not plastic.

SIGNAL GENERATOR MODE 'S':

Detects signals produced by the signal generator.

TO USE THE C.A.T. ...

IN POWER MODE:

Select the 'P' mode and rotate the sensitivity control to maximum (clockwise). Lift the C.A.T. by the handle and apply pressure to the switch. You

will hear a single beep test signal confirming that the batteries are serviceable. The unit is ready to detect buried power cables.

IN RADIO MODE:

Select the 'R' mode and rotate the sensitivity control to maximum (clockwise). Lift the C.A.T. by the handle and apply pressure to the switch. You will hear a single beep test signal confirming that the batteries are serviceable. The unit is ready to detect buried metal objects re-radiating a radio signal.

POWER, RADIO & SIGNAL GENERATOR MODE:

On locating a signal, reduce the sensitivity of the signal if the meter is reading more than 2. The metre reading rises then falls as you pass over a service. Continue to sweep until the highest signal (maximum response) has been obtained.

Having found the maximum response, turn the sensitivity control down so that the meter is reading just above 1/4 scale and the audio beep can just be heard

Now rotate the C.A.T. about its vertical axis, when the signal is at its greatest, the C.A.T. is positioned at 90degrees to the path of the buried service.

HEADPHONE SOCKET:

Plugging a set of headphones into the socket will automatically mute the speaker and enables the operator to work in noisy environments.

SIGNAL GENERATOR...

The Signal Generator can be used to apply a distinct signal by induction or connection. To locate metal services which either do not carry live electric current or do not re-radiate radio signals.

The Signal Generator is supplied with an earth stake and crocodile clip ended connection lead set. To access these, turn the fastener anti-clockwise and remove the accessory hatch cover under the unit.

The signal generator is used to apply a direct signal to a specific service, however, the signal may re-radiate to nearby services.

INDUCTION MODE:

Place the Generator over the service and at right angles to it.

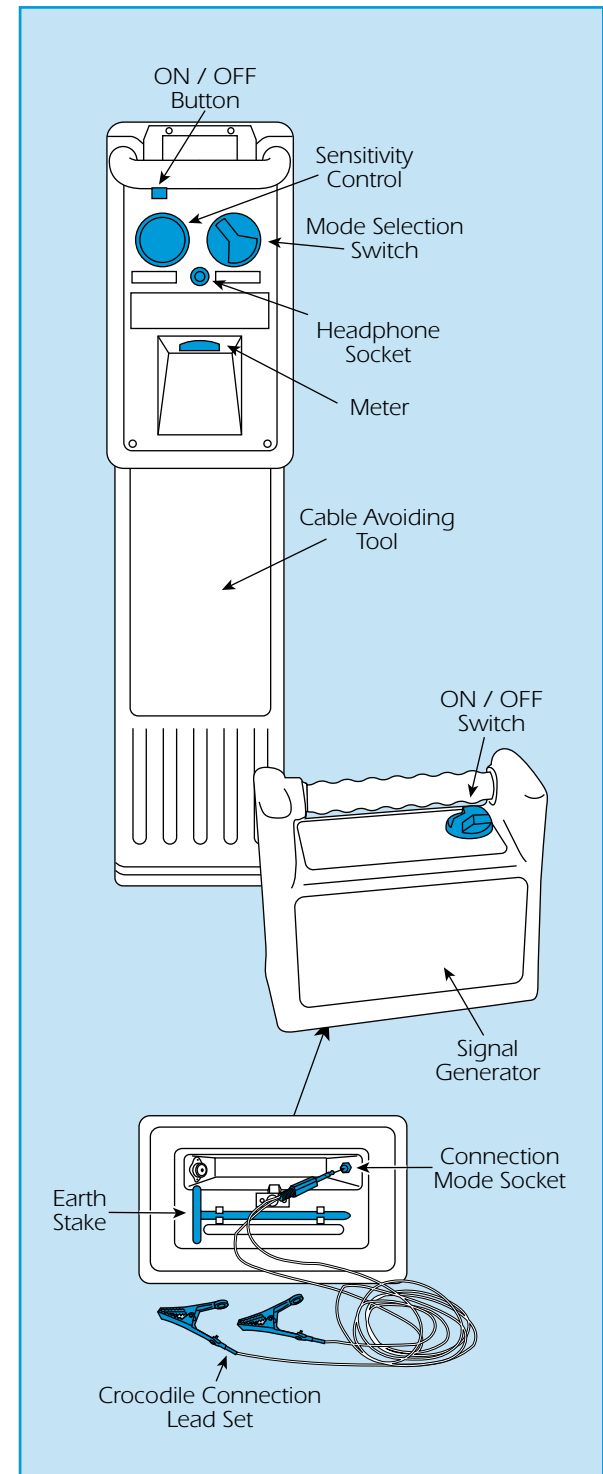
When the signal generator is switched to the induces mode it emit an audible high pitched tone.

A signal will be sent down the chosen service to be picked up by the C.A.T.

CONNECTION MODE:

Allows you to put a direct signal on to a buried service when in connection mode.

You may apply a signal to a service in this mode by connecting the crocodile clip connectors.



Know Your Symbols

HSS have created clear Icons to inform the hirer of their responsibilities towards the safe use of hire equipment.

These are designed to reduce the amount of different safety information labels required for each product for hire.

General use PPE / Warning

Clearly marked minimum PPE will be visible on all equipment,



Correct PPE must be worn



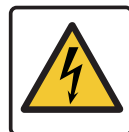
HAV Hand Arm Vibration



Danger Rotating blade



Danger Hot exhaust



Danger Electric shock



Caution Abrasive Wheel



Caution Finger trap

Fuel and Supply Types



Pe
Petrol



Di
Diesel



2t
2 - Stroke Petrol



EI
Electric

Safe Procedures

All hirers must understand and respect the safe procedures of all equipment.

It is the responsibility of the hirer to maintain and return the equipment in a clean condition and good working order.



Ro
Read OPS Guide



Ou
Outdoor Use only



HI
Heavy Lifting



Cd
Check Oil daily



Cf
Check Fuel daily



Cw
Check Water daily



Bc
Battery Care



Sh
Safe Height Working



Swl
Refer to Data Plate



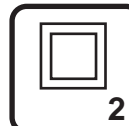
V
Check Power Voltage Data Plate

Electrical Safety

Safe wiring procedures.



Ea
Must be Earthed Class 1



Doi
Double Insulated Class 2



Enl
Earth Live Neutral Wire Coding

Return Responsibility

Charges apply to equipment returned dirty and damaged.



Cc
Cleaning Charge



Rc
Repair Charge