

a specific service, however, the signal may re-radiate to nearby services.

INDUCTION MODE...

Place the Generator over the service and in line with it. When the signal generator is switched on the unit will emit an audible high-pitched pulsed tone (continuous or intermittent depending on selection).

The speaker volume can be switched between loud and quiet using the 'loud/mute' switch.

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

CONNECTION MODE...

This method should NEVER be used to apply a signal to LIVE ELECTRIC CABLES.

Twin Clip Lead...

Insert the plug into the socket on the signal generator's control panel. Connect the crocodile clip (red lead) onto the appropriate service, it may be necessary to clean the connection point with a wire brush or scraper. 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.

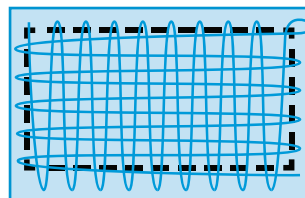
Switch the signal generator's ON/OFF power output level control fully clockwise. The tone will drop in pitch to confirm that a good earth connection has been made.

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 locator 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 radio mode.

To discover the direction of the service you have located, rotate the locator when directly over the

service. The direction will be shown when the meter indicates a peak and the speaker emits a narrow band of response

Mark any services found clearly.

TO OPERATE THE LOCATOR. IN CONJUNCTION WITH A SIGNAL GENERATOR...

The ON/OFF control is also the power output level control, turn the dial fully clockwise to switch on the Generator, check that a single pulse tone is being emitted.

If a double pulse tone is heard, the batteries require replacing, (see EQUIPMENT CARE').

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

With the locator switched ON 'sweep' over the area to be excavated, listening for the high-pitched tone and checking the meter on the locator. When the meter peaks, this indicates the service is directly below the arrows on the locator unit.

EQUIPMENT CARE

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

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

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

Handle the equipment with care, avoid dropping or knocking it.

Replacing The Batteries

To replace the locators' batteries, switch the unit OFF, open the battery cover and unclip the batteries. Refit 8 new 1.5V LR6 (AA) alkaline batteries and close the cover.

To replace the transmitter batteries switch the unit OFF, unclip the cover using a coin to release the catches and remove the old batteries. Place 4 new 1.5V LR20 (D) alkaline batteries, refit the battery cover and ensure the catches are correctly locked.

Dispose of the used battery in a responsible manner.

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

FINISHING OFF

Switch the locator OFF and place in its carry case.

Switch the signal generator OFF and disconnect any cables, stakes or clamps, ready for return, to your local HSS Hire.



... 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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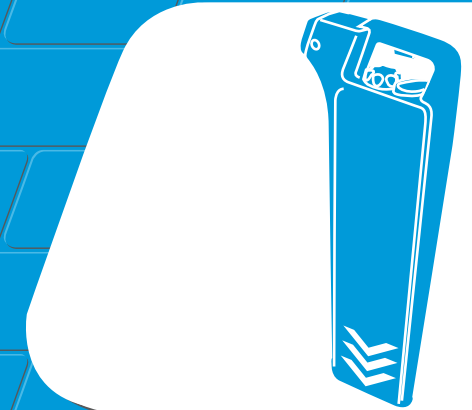
76 Talbot Road, Old Trafford, Manchester, M16 0PQ

www.hss.com

481/02

Operating & Safety Guide 481

HSS Hire



Cable and Pipe Locator

Locate and trace pipes and cables buried underground.



Code 49510 / 49519

GENERAL SAFETY

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



There is a serious risk of personal injury if you do not follow all instructions laid down in this guide.

The hirer has a responsibility to ensure that all necessary risk assessments have been completed prior to the use of this equipment.

This equipment should only be used by an operator who has been deemed competent to do so by his/her employer.

This equipment should be used by an able bodied, competent adult who has read and understood these instructions. Anyone with either a temporary or permanent disability, should seek expert advice before using it.

Keep children, animals and bystanders away from the work area. Cordon off a NO GO area using cones and either barriers or tape, available for hire from your local HSS Hire.

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

 Wear practical, protective clothing, gloves and footwear. Avoid loose garments and jewellery that could catch in moving parts, tie back long hair.

Take all necessary precautions to protect yourself and others against the possibility of contracting infectious diseases in your work environment.

Caution

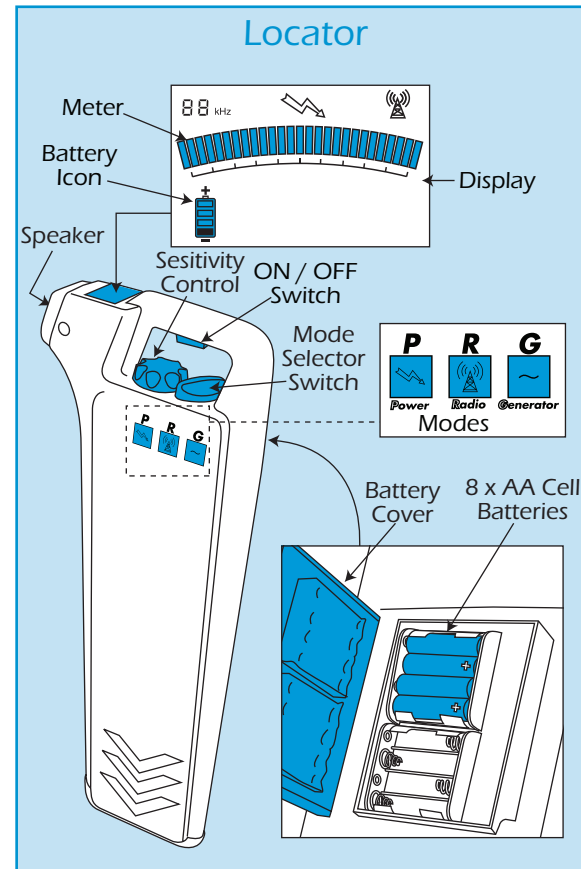
The cable and pipe locator will identify most underground services BUT the absence of a positive indication does not guarantee that a pipe, cable or service does not exist.

ALWAYS EXCAVATE WITH CARE.

Ensure the work area is well lit and ventilated, if in doubt, ask about lighting and ventilation equipment at your local HSS Hire.

Make sure that anyone in the immediate work area is warned of what you are doing.

Check the condition of the equipment before use. If it shows signs of damage or excessive wear, return it to your local HSS Hire.



GETTING STARTED

This guide has been produced to help you set up the Digital Locator and Transmitter and inform you of its various functions.

It is not, however, intended as a guide for the task you have to perform. It is presumed that the hirer/operator has the necessary knowledge, experience and/or qualifications to perform such tasks.

LOCATOR...

Switch the locator ON by squeezing the ON/OFF button, releasing the button will switch the unit OFF.

On the left hand side of the display is a battery status icon, at least one segment of the battery icon should be full, if not the batteries will require changing. To change the batteries see 'EQUIPMENT CARE'.

POWER MODE 'P'...

Detects the electromagnetic field radiated from live, loaded and imbalanced cables, which have a current flowing through them (50/60Hz only). 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.

If the electromagnetic field is very strong, it may induce onto other services and therefore give a false reading.

RADIO MODE 'R'...

Detects re-radiated long wave radio signals from metallic objects such as pipes and cables. The re-radiated signal range is approximately 15-20kHz. In this mode the locator will only detect electric cables and metallic pipes not plastic.

GENERATOR MODE 'G'...

Detects signals produced by the signal generator.

TO USE THE LOCATOR...

IN POWER MODE...

Select the 'P' mode and rotate the sensitivity control to maximum (clockwise). Lift the locator by the handle and apply pressure to the switch. Check the LCD display battery icon to confirm that the batteries are serviceable (see 'replacing the batteries' in 'EQUIPMENT CARE'). 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 locator by the handle and apply pressure to the switch. Check the LCD display battery icon to confirm that the batteries are serviceable (see 'replacing the batteries' in 'EQUIPMENT CARE'). The unit is ready to detect buried metal objects re-radiating a radio signal.

POWER, RADIO & SIGNAL GENERATOR MODE...

Sweep the area in a grid pattern until a signal is detected. On locating a signal the meter reading rises then falls as you pass over a service. Continue to sweep until the highest signal (maximum response) has been obtained.

If the reading on the meter goes off scale, turn the sensitivity control down as necessary to enable a clearer visual indication.

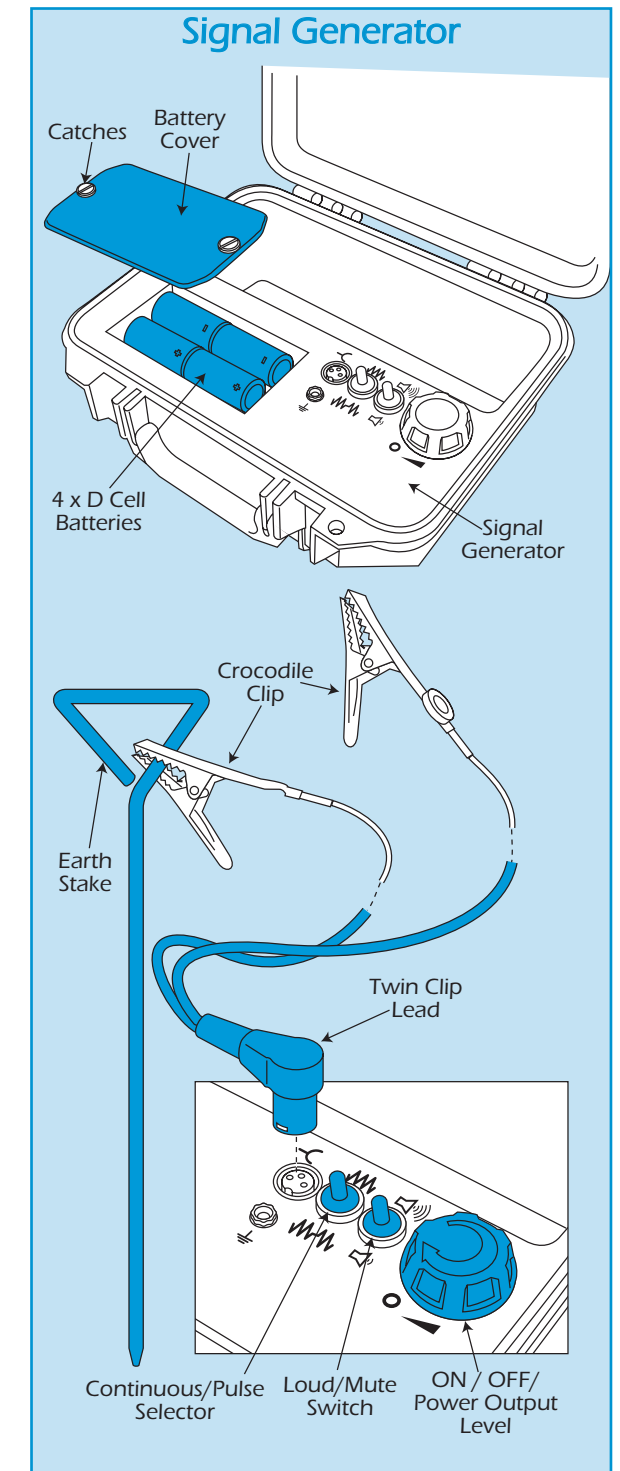
Now rotate the locator about its vertical axis, when you detect a null signal the locator is positioned in line with the path of the buried service.

SIGNAL GENERATOR...

The signal generator can be used to apply a distinct signal by induction or connection. To locate metal services, which either don't 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.

The signal generator is used to apply a direct signal to



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



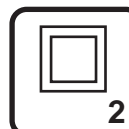
V
Check Power Voltage Data Plate

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