

Sonde User Guide V1.1

Sonde Introduction

A Sonde is a self-contained, battery powered transmitter. It is used to locate and trace non-conductive pipes and ducts such as sewers or empty cable ducts. The Sondes are fitted with a 10mm metric thread which can be used to attach the Sonde to a sewer push rod.

A full range of Sondes are available to suit all applications:

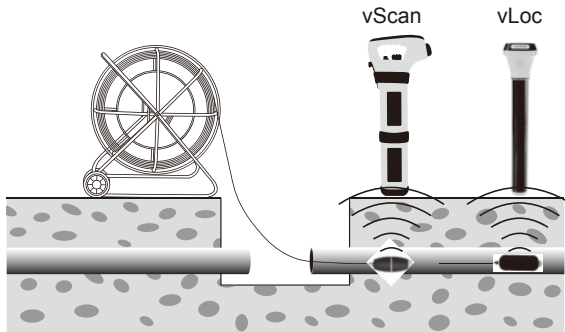
 D18-33-SR44 Sonde	7in (18mm) x 3.2in (81mm) long, 33 kHz, range 15ft (4.5m). 2 x button cell batteries (LR44 or SR44).
 D38-33-AA Sonde	1.5in (38mm) x 4.1in (105mm) long, 33 kHz, range 16.3ft (5m). 1 x AA battery.
 D38-09-AA Sonde	1.5in (38mm) x 4.1in (105mm) long, 9.8 kHz, range 16.3ft (5m). 1 x AA battery.
 D38-83-AA Sonde	1.5in (38mm) x 4.1in (105mm) long, 83 kHz, range 16.3ft (5m). 1 x AA battery.
 D64-33-LR61 Sonde	2.5in (64mm) x 7.3in (186mm) long, 33 kHz, range 26ft (8m). 1 x LR61 battery.
 D64-09-LR61 Sonde	2.5in (64mm) x 7.3in (186mm) long, 9.8 kHz, range 26ft (8m). 1 x LR61 battery.
 D64-83-LR61 Sonde	2.5in (64mm) x 7.3in (186mm) long, 83 kHz, range 26ft (8m). 1 x LR61 battery.
 D23F-512-AA / D23F-640-AA Sonde	1in (23mm) x 18in (456mm) long, range 20ft (7m). "Flexible (3 section) Sonde with optional 512Hz or 640Hz for use in cast iron pipes". 1 x AA battery.

Locating a Sonde

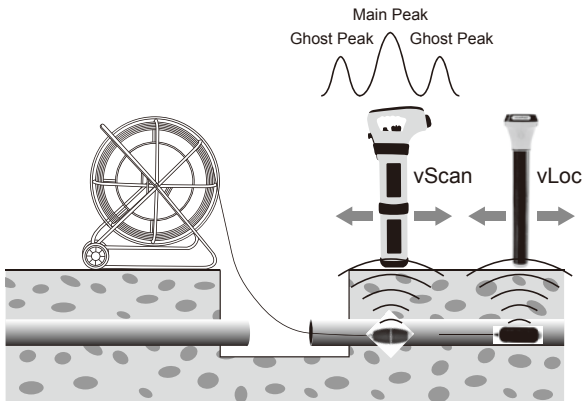
Activate the Sonde by connecting the battery. Connect it to the push rod and place it in the start of the pipe run.

Switch on the vLoc and select Sonde mode using the “return” Button. In the case of the vScan select Sonde Mode using the mode paddle. The sonde icon will now be visible on the screen. Position the vScan or vLoc above the sonde as indicated below.

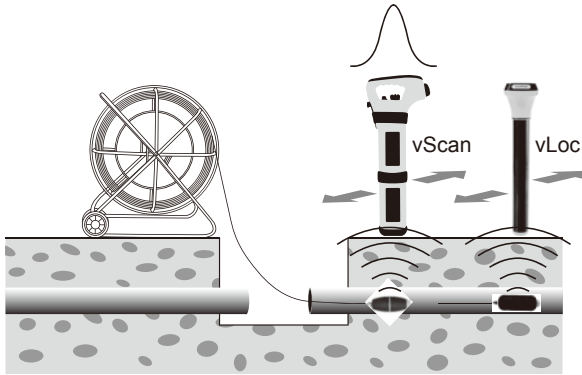
Note that this is 90 degrees to what would be used to detect a cable or pipe. Note that the Compass Line Indicator points across the line of the Sonde when directly over it.



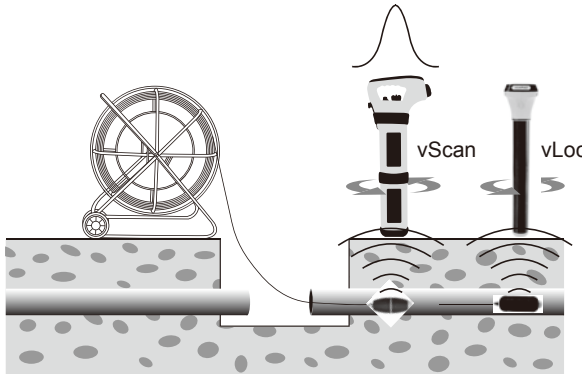
Adjust the sensitivity control so that the bar graph reads approximately 75%. Now move the locator forwards and back to detect the largest signal. You will also notice that there will be a “ghost signal” either side of the main signal. This is normal and characteristic of locating Sondes.



Now sweep left and right over the sonde to obtain a second peak. Note that there are no ghost signals when sweeping left to right over the sonde.



Finally check the locator is in line with the sonde by rotating it on its axis to obtain a peak signal. The Vscan is now over the sonde and in line with it. For the vLoc this indicates the sonde being across the line of the sonde. Note that it should not be necessary to adjust the gain again unless the depth of the pipe changes significantly.



If a depth estimation is required. Place the locator on the ground having pinpointed the sonde as above. Momentarily press the “I” button and the depth will be displayed. To exit the depth screen, either wait for the depth screen to “time out” or momentarily press the on/off key which will return the vScan to the locate screen. (For the vLoc press the “I” button to exit the depth screen)

Now push the sonde in a couple of meters and repeat the above to mark out the route of the pipe or duct.

Using the Compass Feature to Locate Sondes

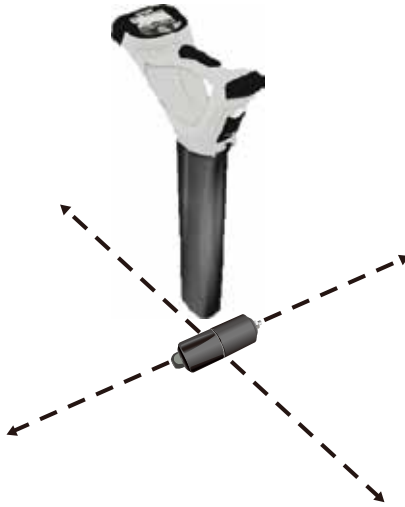
The following describes the use of the vLoc Compass feature to detect the position of a sonde. Note that this can also be done using the compass feature of the vScan but the vScan would be held at 90 degrees to shown.



Switch on the vLoc. Select the frequency to match the Sonde frequency. Use the mode pushbutton to select Sonde.

Stand in the approximate vicinity of the Sonde. Press the “+” pushbutton to increase the gain so that a steady bar graph reading is displayed. If no or very fluctuating bar graph is shown, it means that the Sonde is not in the expected vicinity. If this is the case pull back the Sonde to a known position, which may be the point the Sonde enters the pipe, and start the search here. Rotate the locator until the compass is pointing at 12 o'clock (3 and 9 o'clock for the vScan). Walk in the direction of the compass keeping the compass pointing at 12 o'clock. The locator will lead you in an arc that crosses over the Sonde. Press the gain pushbuttons to keep the bar graph on scale. The maximum bar graph indicates the position of the Sonde.

To pinpoint the Sonde, find the peak in both directions.



When over the peak position, the depth is automatically displayed. Press the “i” pushbutton to get a more precise depth reading.



TIP

Using the compass to locate the Sonde requires free space to walk to the side of the Sonde. If there is an obstacle such as a wall or vehicle that restricts walking in an arc, the following method can be used.

- Position the locator in the approximate vicinity of the Sonde as above.
- Rotate the locator so that the compass is now pointing at 3 o'clock.
- Now step to the side keeping the locator pointing in the same direction. The compass will rotate slightly.
- Keeps the locator pointing in the same direction and walk forward. The compass will slowly rotate. When it reaches 12 o'clock follow the compass keeping it at 12 o'clock.



Pinpoint the Sonde as in the first procedure

Disclaimer: Product and accessory specification and availability information is subject to change without prior notice.

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