







vLocML Receiver

4.1 Introduction




The vLocML is a variant of the vLoc locator. It can be identified by the loop antenna attached to the base of the locator tube. The purpose of the loop antenna is to energize passive markers buried above non metallic services or points of interest.



Markers can be supplied in many sizes or shapes but the most commonly used marker is the ball marker. This has a range of over 1.5m. Markers operate over a range of frequencies. Different frequency markers are used to identify different services and are identified by color. The industry standard colors are listed below:

 Telecom (Orange)	Cable paths, buried splices, buried service drops, load coils, conduit stubs, fiber optic facilities, all types of splices, bends, depth changes, manhole covers, road crossings Frequency: 101.4 kHz
 Power (Red)	Cable paths, service drops, conduit stubs, road crossings, all types of splices, buried transformers, service loops, street lighting, bends, man hole covers, distribution loops Frequency: 169.8 kHz
 CATV (Black & Red)	Cable paths, fiber optic facilities, buried service drops, road crossings, buried splices, bends Frequency: 77 kHz
 Non Potable Water (Purple)	Reclaimed water, private campuses, valve boxes, road crossings, path making, buried valves, tees, meter boxes, main stubs, service stubs Frequency: 66.35 kHz
 Water (Blue)	Pipeline paths, service stubs, PVC pipeline, all types of valves, road crossings, tees, clean-outs, casing ends Frequency: 145.7 kHz
 Sewage (Green)	Valves, all types of fittings, clean outs, service stubs, laterals, path marking of non-metallic facility Frequency: 121.6 kHz

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 Gas (Yellow)	Pipeline paths, main stubs, service stubs, tees, road crossings, all types of valves, meter boxes, stopping fittings, depth changes, transition fittings, squeeze points, pressure control fittings, electro fusion couplings, all types of fittings and joints Frequency: 83 kHz
 EDF Power (Grey Disk)	Gas and Electric Installations (EDF only) Frequency: 40 kHz
 Seba Energy (Red & Blue)	Cable paths, service drops, conduit stubs, road crossings, all types of splices, buried transformers, service loops, street lighting, bends, man hole covers, distribution loops Frequency: 134 kHz

4.2 Operating the vLocML

The vLocML can be operated in three configurations:

- Standard cable locator
- Dedicated marker locator
- Dual cable locator and marker locator

4.2.1 Switching Between Configuration

There are two ways of switching between configurations:

- Using the user menu
- Using the enter key

To use the user menu, press and hold the "i" pushbutton. Use the "+" pushbutton to scroll down to "Marker Locator". Press the enter key to scroll through the options. Exit the user menu by pressing the "i" pushbutton.



It is possible to hop between configurations using the enter key. To do this press and hold the enter key until the desired configuration is reached.

4.2.2 Standard

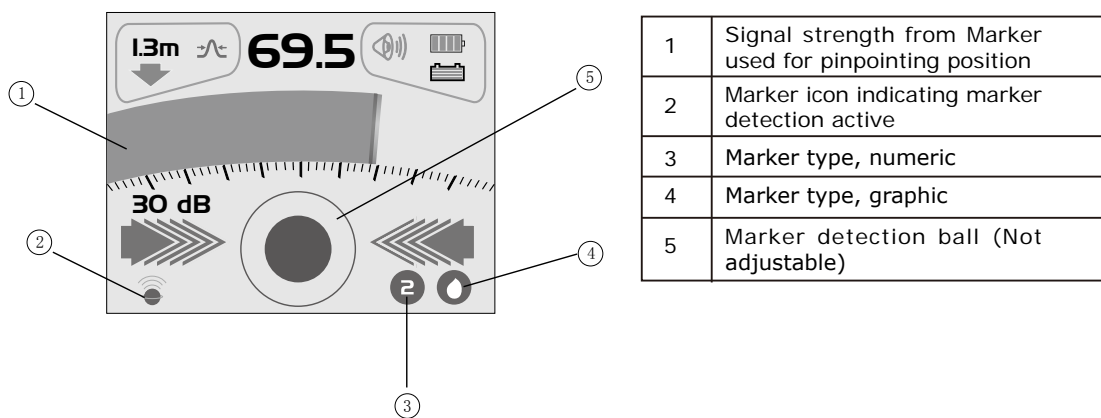
In this configuration the unit operates as a standard vLoc cable and pipe locator. For the operation of this see the standard vLoc user handbook sections.

4.2.3 Dedicated

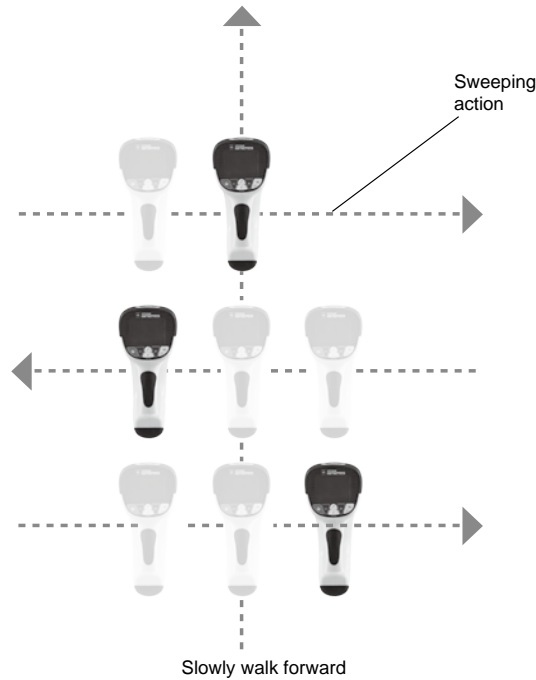
In this configuration the unit is dedicated to detecting markers. The screen of the vLocML will look similar to the picture below

Note that the ball icon  is illuminated indicating that the dedicated configuration is selected. If the line icon  is illuminated with the ball icon, this indicates that the Dual configuration is activated.

Use the "f" pushbutton to select the marker type that is to be located.



Sweep the area of where the marker is to be located. Use a slow, deliberate arm sweeping motion slowly moving forward making sure no area is missed.



When the locator is within range of the marker there will be a sound from the speaker and also the icon in the centre of the display (5) will start to fill up.

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Move the locator forward and back, left and right, until the largest signal is detected. Note the bar graph (1) will also respond. Use the "+" and "-" pushbuttons to keep the signal on scale. The bar graph should be used to pinpoint the position of the marker.



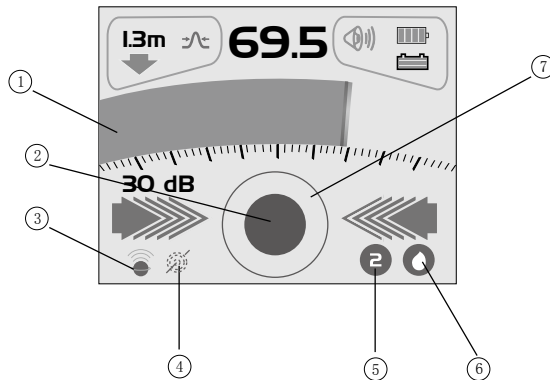
4.2.4 Dual Configuration

In this configuration the unit can be used to trace an energized cable or pipe whilst simultaneously looking for the presence of markers. For example if a cable has markers indicating the position of splices or T joints, the cable can be traced and when a marker is approached the unit will respond indicating the position of the marker.



Enter the Dual configuration as previously described. Select the marker type to be detected by pressing and holding the "i" pushbutton to enter the user menu. Use the "+" and "-" pushbuttons to scroll down to "Marker Type". Press the enter key and scroll down to the desired marker. Use the enter pushbutton to select the marker. Exit the user menu by pressing the "i" pushbutton twice.

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The locator screen will look similar to the picture below.



1	Bar graph showing signal strength from energized line
2	Marker detection ball (Not adjustable)
3	Marker icon indicating marker detection active
4	Line icon indicating line locate is active
5	Marker type, numeric
6	Marker type, graphic
7	Line locate frequency

Note that both icons   are now illuminated indicating that Dual Configuration is activated. Energize the cable with 512 Hz, 640 Hz or 8.192 kHz as instructed in the vLoc manual.

Select the antenna configuration by using the enter button. Note that the left/right arrows indicate the cable position and NOT the marker position.

Use the "f" pushbutton to match the transmitter frequency (only 512Hz, 640Hz or 8.19kHz frequencies are available in Dual configuration). Use the locator to identify the position of cable or pipe. Trace the line using the same technique as a standard vLoc locator. The bar graph indicates the signal strength from the cable. Note that in the Dual configuration mode the "+" and "-" pushbuttons alter the sensitivity of the cable locate bar graph. It is not necessary to alter the sensitivity to the marker locate function. The sound is from the line position. In Dual configuration the marker has no sound associated with it.

As a marker is approached the marker locate icon will start to fill up. Move the locator forward and back, left and right to obtain the largest signal. If pinpointing is required select Dedicated configuration and use the bar graph to pinpoint the exact position.

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