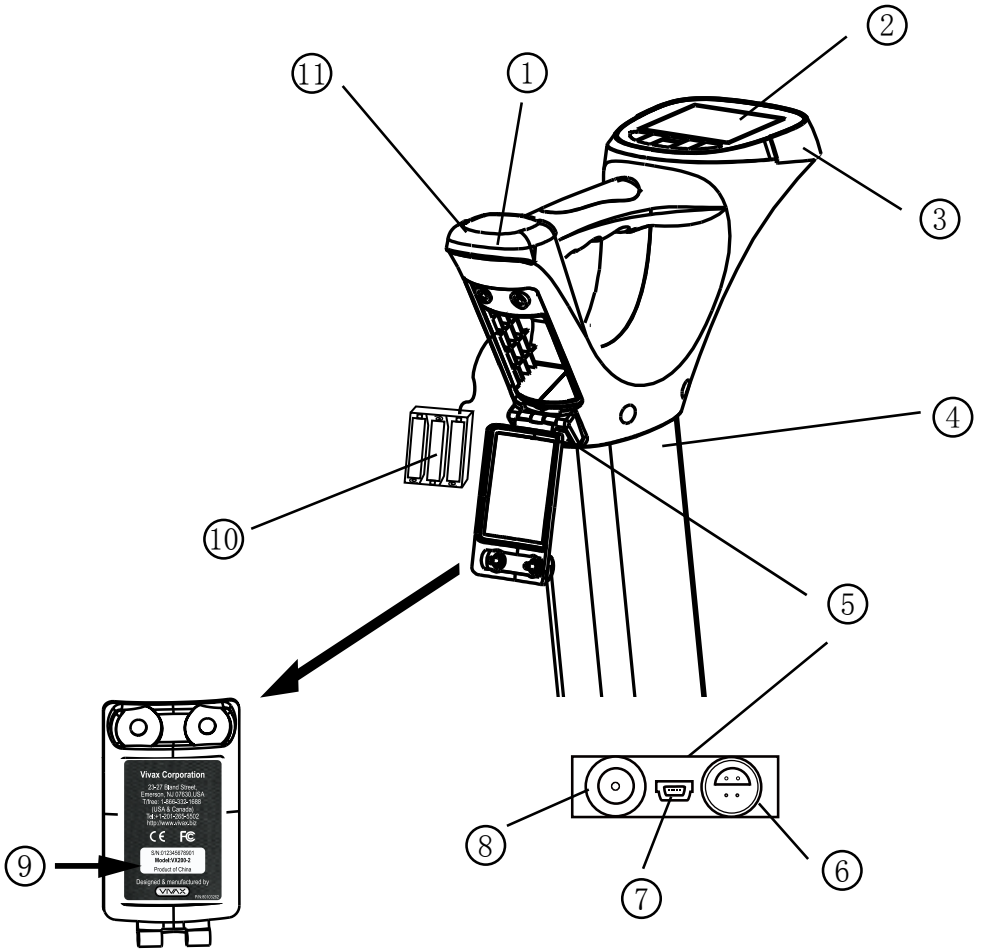
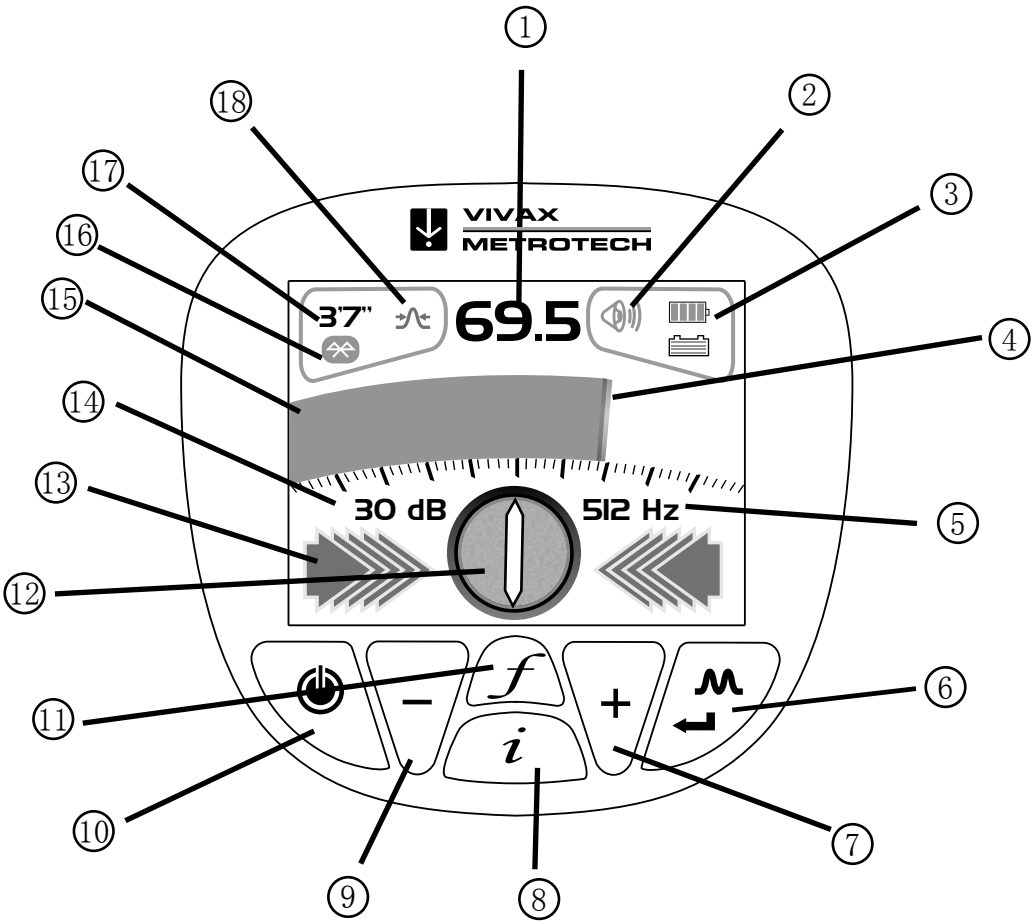
Receiver



1	Rechargeable Batteries (internal)	7	Mini USB Programming
2	Pushbutton & Display	8	Charging Socket
3	Impact Protection	9	Model# & Serial#
4	Carbon Fiber Reinforced Antenna Assembly	10	AA Battery Pack (Removable)
5	Accessory & Charging Sockets	11	Impact Protection
6	Accessories Port		

3.1 vLocPro Receiver Main Display

The vLocPro has several display options – the display shown below is representative of the type of display and icons used



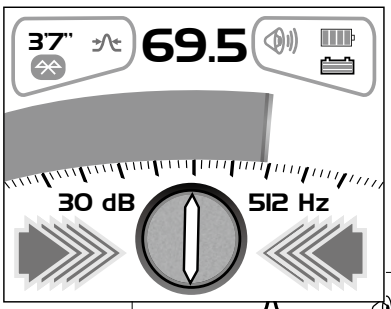
1	Digital Display of Signal Response	10	On/Off Control
2	Loudspeaker Status	11	Frequency Select
3	Alkaline & Rechargeable Battery Status	12	Compass Line Direction Indicator
4	Peak Signal Indication	13	Left vs Right Indication
5	Frequency	14	db Gain Setting
6	Location Mode Select	15	Analogue Display of Signal Response
7	Gain Control (increase gain)	16	Bluetooth Icon
8	Information Depth/Current Measurement	17	Continuous Depth
9	Gain Control (reduce gain)	18	Location Mode (Peak, Null, Sonde, Broad, Peak Arrows)

Note: Bluetooth function is available in vLocPro with Bluetooth module only.

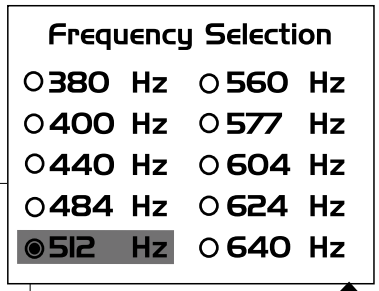
3.2 vLocPro Screen Shots

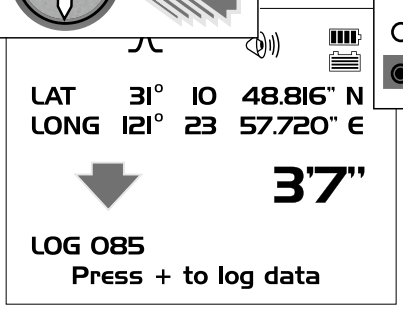
vLocPro Receiver Menus
(Actual menu may differ)

Main Display



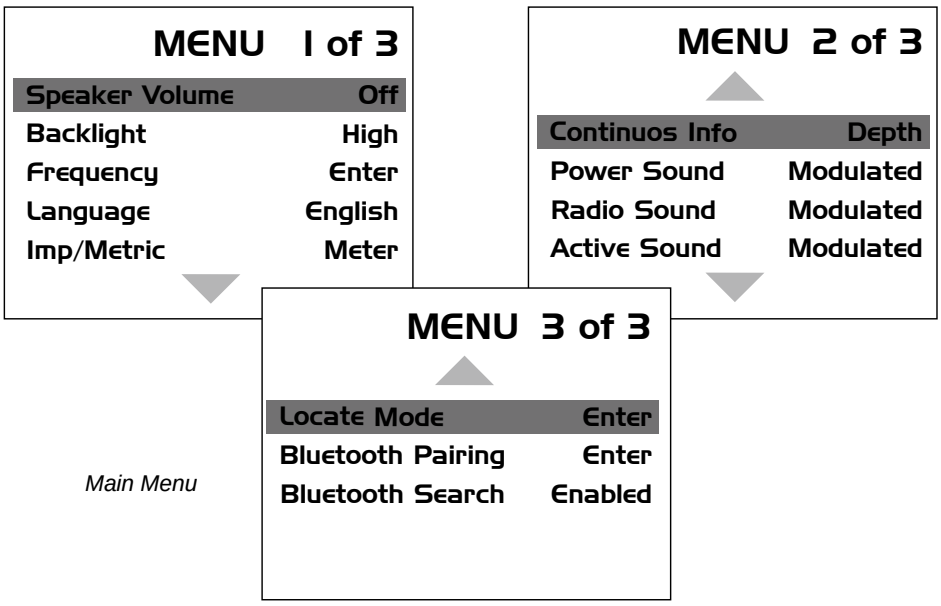
Setup Menu - frequencies





Depth & Current Measurement Display

Frequencies selected here are the only ones displayed in the frequency box on the Main Display



Main Menu

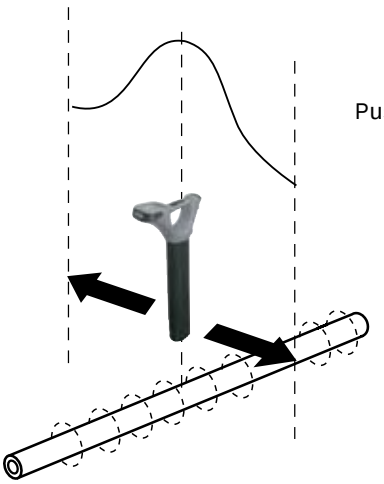
vLocPro Receiver

The vLocPro is a Precision Location System designed to meet the needs of Utility Companies and their contractors. The following describes the features and use of the Receiver:

3.3 Locating Mode (Response)

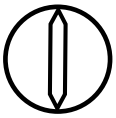
The vLocPro receiver has four antennas, and these can be toggled through different configurations (modes) to provide different responses to the signals radiating from the buried pipes and cables. The modes are:

3.3.1 Peak Response Mode



Pushbutton

Icon

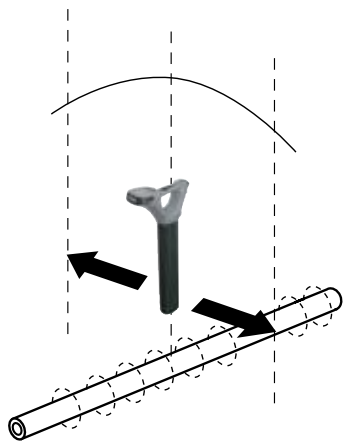


Compass Line Direction Indicator

This uses the two horizontal antennas and provides a "Peak" or maximum signal response over the center of the radiated signal from the buried line. The compass line direction indicator shows the direction of the cable (available in Active modes). The color of the compass changed from clear to blue when the receiver is in line with the buried line.

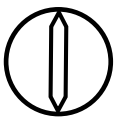
This is the most accurate of the locating modes as both antennas are used to provide a clearly identifiable "Peak". In the "Peak" mode, a "Peak" signal indicator helps to clarify the position of the "Peak". This shows the last "Peak" located for a few seconds, enabling the user to return to that position quickly.

3.3.2 Broad Peak Mode



Pushbutton

Icon

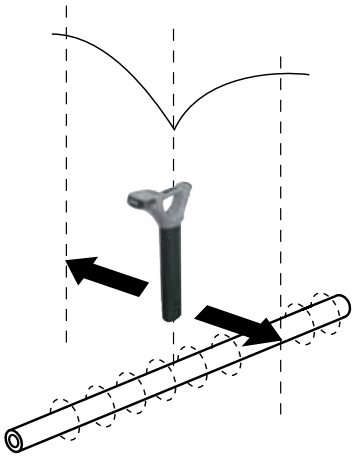


Compass Line Direction Indicator

This uses a single horizontal antenna and provides a "Peak" or maximum signal response over the center of the radiated signal from the buried line. The compass line direction indicator shows the direction of the cable (available in Active modes). The color of the compass changed from clear to blue when the receiver is in line with the buried line.

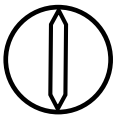
This is less accurate than the twin horizontal antenna "Peak" mode – but is useful if the buried line is particularly deep. For pinpointing the line, the "Peak" mode should be used.

3.3.3 Null Mode



Pushbutton

Icon



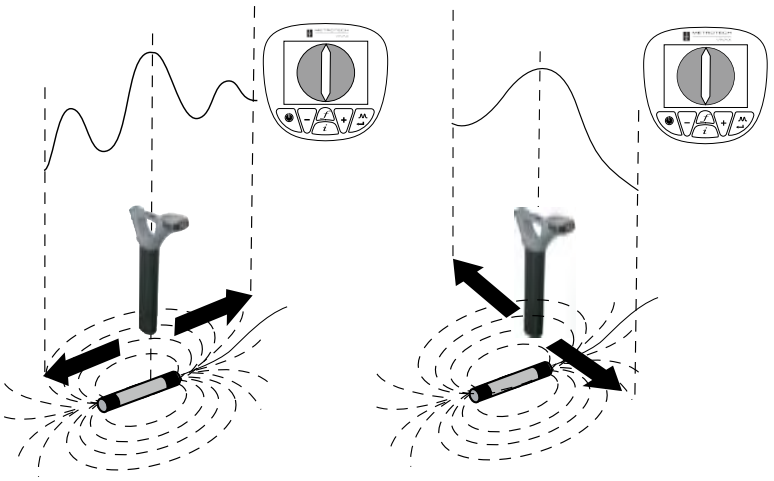
Compass Line Direction Indicator

This uses vertical antennas and provides a minimum or "Null" response over the center of the radiated signal from the buried line. The compass line direction indicator shows the direction of the cable (available in Active modes). The color of the compass changed from clear to blue when the receiver is in line with the buried line.

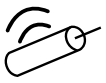
Some users prefer the null response; it works well in uncongested areas, but is more prone to inaccuracies due to distortion of the radiated signal in congested areas.

Left/right indication arrows are also displayed when in "Null" mode. The arrows indicate the direction to move the receiver to locate the position of the buried line.

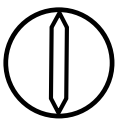
3.3.4 Sonde Mode



Pushbutton



Icon



Compass Line Direction Indicator

Sonde mode uses the antennas in a "Peak" configuration. An ICON on the display indicates if the receiver is in Sonde mode.

A Sonde is a small transmitting coil that is powered by its own internal battery, or by an external transmitter.

Due to its construction, a Sonde gives a different "Peak" pattern – when locating along the direction of the Sonde – instead of the usual single "Peak", the Sonde provides three distinct peaks – a small "Peak" – a large "Peak" – a small "Peak". The Sonde is located under the center of the large "Peak" when located across the direction of the Sonde and it gives the conventional peak response. Note that the Compass Line Indicator points across the line of the Sonde when directly over it and the color of the compass change from clear to blue.

The vLocPro receiver must be used in a different orientation when locating a Sonde – due to the way the signal from the Sonde radiates. With the front of the receiver pointing across suspected direction of the Sonde – pinpoint forward and backward (across the Sonde) and then move along the line of the Sonde until the maximum peak is located (in other words rotate the receiver 90 degrees from the orientation normally used when locating pipes and cables).

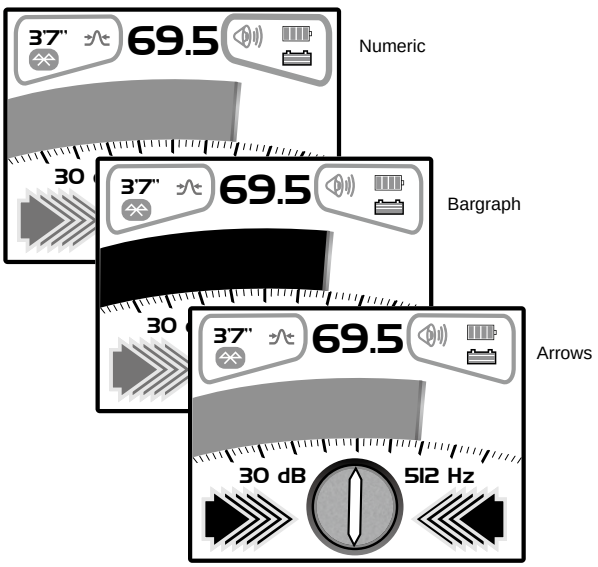
A Sonde is typically used for locating non metallic pipes or ducts, and the camera end of a sewer inspection camera. Low frequency versions (512 Hz/640 Hz) can transmit through some metallic pipes such as cast iron pipes – which are why they are frequently used with sewer inspection cameras.

For using the compass feature to locate Sondes, please refer to 7.1.3.

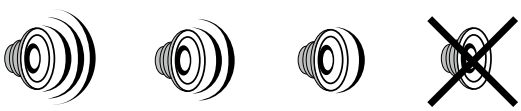
3.4 Display

These responses are shown on the display as

- Moving Bar graph
- Numeric value & db value
- Directional arrows (with 'Null' response)
- A range of different display modes will be available in 2009

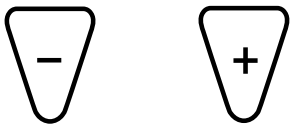


3.5 Audio



The visual display is also accompanied by an audio response. The output level (volume) of this response is set by entering the "Setup menu". Press and hold "i" pushbutton for two seconds to enter setup menu. The setup display defaults to volume. Use the "Mode" pushbutton to toggle through the available options (off – low – med – high). Press the "i" pushbutton again to exit the setup menu. As the loudspeaker uses a significant amount of power, using lower volume can make the battery life of the receiver last longer.

3.6 Sensitivity Control



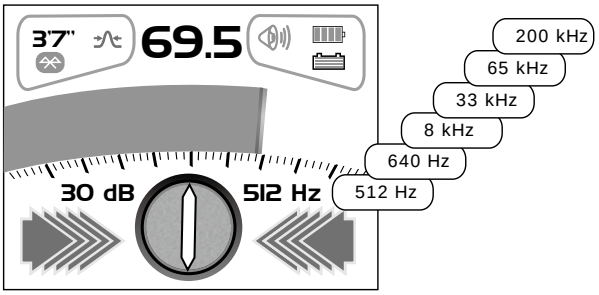
Pushbutton Pushbutton

Up & down pushbuttons are provided to increase or reduce the sensitivity of the receiver. If the bar graph moves towards the minimum or maximum a single touch of the opposite pushbutton returns it to approximately 60% deflection (i.e. if the bar graph goes towards the minimum – press the "+" pushbutton, to the maximum press the "-" pushbutton)

Holding down or repeated pushing of the "+" or "-" pushbuttons increments/decrements the gain.

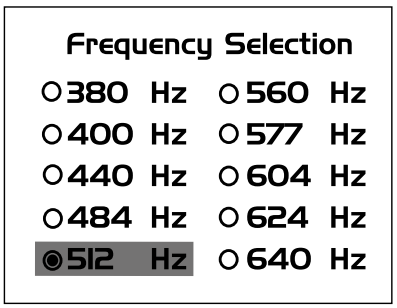
3.7 Frequency Selection

Pushbutton



The vLocPro receiver is capable of locating a large number of frequencies or frequency combinations. A list of these frequencies can be accessed using the setup menu. Most of these frequencies listed – you will never use – the setup menu allows you to select the frequencies you wish to use regularly. The frequency select pushbutton on the main receiver pad is used to toggle through the frequencies defined using the setup menu. The operating frequency will be shown at the lower right side of the display. You can change this selection at any time using the setup menu.

The initial frequencies set at the time the unit is supplied are "Power", "Radio" and the frequencies used by the transmitter purchased. See the transmitter section for suggestions of which frequency is best suited to specific applications.

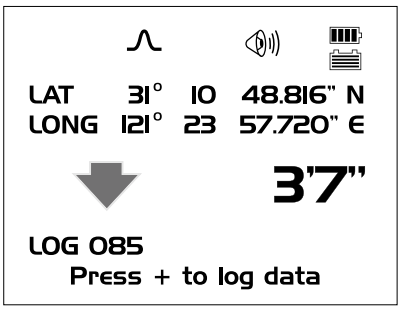


To select the frequencies you wish to use regularly – enter the setup menu by pressing and holding the "i" pushbutton for 2 seconds. Use the "+" and "-" to select the word "Frequency" – then press the "M" mode pushbutton to display the list of available frequencies.

The "+" and "-" pushbuttons are used to navigate the list of frequencies. To add a frequency to the "Frequently used list" press the "M" pushbutton and a dot will appear in the circle alongside the frequency. To deselect a frequency press the "M" pushbutton and the dot will disappear. Once your selection is completed press "i" pushbutton once to return to the setup menu, and again to exit the setup menu.

3.8 Information Pushbutton (Depth & Current)

Pushbutton



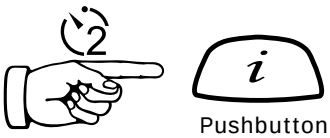
Pressing the (i) (information) pushbutton will display the depth to the center of the radiated signal and a measurement of the current (press the pushbutton briefly – remember if you press and hold – you enter the setup menu. If you do enter the setup menu – press the (i) pushbutton again to return to the locating screen – then try again)

IMPORTANT
When locating a cable or pipe ("Line") – the instrument should be in "Peak" mode and the depth and current measurements should only be taken with the bottom of the receiver standing on the ground and directly in line with the target line.

IMPORTANT
When locating a Sonde – set the mode to Sonde - then the instrument will automatically be in "Peak" configuration. Depth measurements should only be taken with the bottom of the receiver standing on the ground and at ninety degrees to the Sonde.

The accuracy of depth and current readings depends on the quality of the radiated signal being located. If the signal is symmetrical, the depth reading will be accurate to within 5% of the actual depth. If the signal is distorted, depth readings will be less accurate. When taking depth measurement, always hold the receiver at 90° to the ground.

3.9 Setup Menu

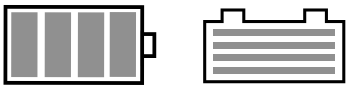


Pushbutton

As described previously, a second function performed by the (i) is to access the SETUP menu. Press and hold the Information Pushbutton for two seconds to display the SETUP menu. Use the +, - to navigate through the various options and use the "M" (Mode) pushbutton to select. To exit the setup menu, press the (i) pushbutton.

The setup menu allows the user to configure their personal preference, this menu can be accessed and changed at any time.

3.10 Battery Selection and Condition Indication



Icon A Icon B

The receiver has an internal rechargeable battery – this will provide the power to the unit unless you connect an alkaline battery pack. This allows the user to benefit from using rechargeable batteries, but enables the use of alkaline batteries if for any reason the rechargeable battery lacks charge.

The receiver has two battery packs.

- External alkaline battery pack. Icon A indicates the status of the external battery pack.
- Internal rechargeable batteries. Icon B indicates the status of the internal battery pack.

The unit will operate from the internal batteries until they have no charges left. The unit will then automatically switch over to the external alkaline batteries when this occurs.