vLoc3 Series Quick guide* V1.0
(vLoc3-Pro, vLoc3-5000, vLoc3-ML)

vLoc3 Series Receivers - Feature and Options

Receiver Keypad

1. On/Off key
2. Reduce sensitivity (scroll up when in the user menu)
3. Frequency selection
4. Increase sensitivity (scroll down when in the user menu)
5. Short press = Change between Peak, Null, Sonde, etc.
   Long press = Change operational screen
6. Short press = Enter information screen (Depth/Current/GPS)
   Long press = Enter user set-up menus

Transmitter Keypad (Loc3 series transmitters)

1. On/Off key
2. Frequency select
3. Info = Volume, Volts, Ohms, multi-frequencies, LCD contrast, frequency menu
4. Reduce output
5. Increase output

Warnings - Are audible sound with a vibration of the handle. Warnings can be activated or deactivated in the user menu.

Signal overload - When the receiver is too close to the inductive operated transmitter or a power transformer.

Shallow cable - When the cable is possibly less than 15cm deep. Proceed with caution!

Swing alert - When excessively swinging the receiver. This could result in misleading information.

Overhead cable - When the signal is mainly radiating from above distorting the below ground signal.

Locating cables and pipes**
Passive location 50Hz / Radio / CTV
(No compass available / Only peak and omni direction mode)

1. Switch on the vLoc3 series receiver.
2. Select the frequency with the "f"-button. (If the desired frequency is not preset, switch to the user menu by pressing and holding the "i"-button and choose it in the sub-menu "frequency". Press the "Enter" button to highlight it. Go back with a short press on the "i" button.)
3. Hold the receiver vertically and adjust the sensitivity by pressing the "+" / "-" buttons so that the bar graph shows a signal.
4. Continue locating in a grid across the area, see illustration (a) below.
5. Determine signal maximum by carefully moving the receiver back and forth. Adjust the sensitivity again with the "+" / "-" buttons.
6. Continue to locate the position of the line.
7. When locating in 50Hz or with a transmitter: Display depth / signal current with short pressure on the "i" button or permanently in the upper left display area.

Active locating
Direct connection**
Connect the transmitter with the supplied connection leads. Connect the red wire to the target conductor and the black wire to ground. The ground stake should be at a 90° angle to the target line if possible. To reduce signal interference, there should be no other lines (if possible) between the ground spike and the target line.

1. Switch on the transmitter and select the desired frequency with the "f" button (If the desired frequency is not preset, use the "i" key to access "frequency selection" in the menu and mark the desired frequency with the "f" key. Press the "i" key to return. Always select the lowest possible frequency to minimize coupling to other lines.
2. Set the output power accordingly. (less is more)
3. From this point on, follow points 1 through 6 of the Passive location 50Hz / Radio / CTV section of this document.

Signal clamp** (Frequencies above 8kHz):
Connect the signal clamp to the transmitter and place it around the corresponding target line. Then follow points 1 - 3 from the Direct connection section of this document.

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**Induction** *(Frequencies above 8kHz):*
Place the transmitter (without connection leads or clamp attached) on the ground with the handle in the direction of the cable. Do not place the transmitter on manhole covers, or other metallic objects as the signal will not be able to penetrate them. When locating, maintain a distance of at least 20m from the transmitter, otherwise the airborne signal from the transmitter will be located and not the target line. Now follow points 1 through 3 in the Direct Connection section of this document.

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**Locate Screens**

For all subsequent locating views, except Transverse Graph and Sonde Mode:
The distortion level is displayed on the bar graph. Green = low interference, Blue = some interference, and Red = high interference level, treat the locating results with caution.

**NOTE:**
Locating views (classic, vector, plan view, transverse graph, and sonde can be changed by a long press on the “Enter” key (approx. 2 seconds).

Classic locate modes *(vLoc3-Pro user manual page 10)*
Available modes: peak, peak with arrows, null, broad peak, delta null, omni direction. The individual modes within the classic view can be changed by a short press (<1 sec.) on the “Enter” button. If a mode is not visible or not desired, it can be switched on or off in the user menu (long press on the “i” key / classic display / selection with “Enter” key).

**Transverse Plot Screen** *(vLoc3-Pro user manual page 15)*
Analyze the field shape at a particular location.

The target line is below the receiver when both signal peaks are on the center line and the signal is not distorted. The center line does not indicate the target line, but serves as an orientation for the two signal peaks and the alignment to the cable! If the signal path is distorted, or the two signal peaks are not on the center line, there is interference in the electromagnetic field. To determine the exact position of the cable now, please refer to the user manual, section “Distorted fields”.

**Advantages:** Automatic gain adjustment; Optimal analysis of signal distortion.

**Sonde Location Mode** *(vLoc3-Pro user manual page 25)*
Locating non-metallic pipes with a sonde.

**Advantages:** Simple location guided by directional arrows. Much easier & faster handling.

**Marker detection** *(vLoc3-ML user handbook page 36)*
Pinpoint (EMS) Marker
Valid for vLoc3-ML or vLoc3 receiver with vLoc3-MLA attached.

**Advantages:** Simple marker location with immediate depth measurement at the push of a button. For more details on the dual mode with parallel line and marker location, please refer to the user manual.

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**Antenna configuration:**

- Peak
- Null
- Delta-Null
- Peak with arrows
- Broad peak
- Omni direction

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- Percentage signal strength
- Peak level indicator
- Gain setting
- Bar graph signal strength indicator
- Signal direction (3D) forward/backward arrows
- Compass line direction indicator
- Left/Right direction to target line indicators
- Frequency selection

**Vector Screen** *(vLoc3-Pro user manual page 12)*
Shows a cross sectional view through the ground.

**Advantages:** Automatic gain adjustment; easy finding/routing of lines with the 3D mode.

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- Frequency selected
- Vertical distance to target
- Horizontal distance to target
- Scaling (adjust with +/- keys)
- Shows plan view of target
- Cross section view that shows vectors to target

**Plan View** *(vLoc3-Pro user manual page 13)*
Shows a picture as if you were viewing the line from above the ground.

**Advantages:** Automatic gain adjustment; line depth is permanently measured, even when running offset to the line.

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