

## VM-810 Receiver

### A. Typical Applications

Item	Parameter
Description	Single high frequency locator receiver
Uses	Locating & pinpointing the position of buried pipes and cables

### B. Receiver Assembly

Item	Parameter
Construction	<ul style="list-style-type: none"> <li>- Aluminum</li> <li>- High impact thermoplastic (ABS) injection molded housing</li> </ul>
Weight	3lbs ( 1.36kg)(with battery)
Dimensions	Collapsed: 22in(L) x 8.3in(W) x 11in(H) (560mm x 210mm x 280mm) Extended: 31.1in(L) x 8.3in(W) x 11in(H) (790mm x 210mm x 280mm)
Display Type	Black & white TFT 2.7" LCD WQVGA display (400 x 240 pixel)
Receiver Antennas	3 x Peak antennas, 1 x compass antenna
Batteries	2 x Standard D-Cell alkaline batteries
Battery Life	Alkaline – typically 65 hours continuous use at 70°F (21°C)
External Connectors	<ul style="list-style-type: none"> <li>- 1 x 3.5mm Headphone jack (Use headphone with volume control)</li> <li>- 1 x Mini USB socket for software update</li> <li>- 1 x 4 pin Accessories jack</li> </ul>
Compliance/Approvals	<ul style="list-style-type: none"> <li>- Complies with European standard CE (Directive 99/5/EC)               <ul style="list-style-type: none"> <li>• EN 55011</li> <li>• EN 61000-4-3</li> <li>• EN 61000-4-2</li> <li>• EN 61000-4-8</li> </ul> </li> <li>- Complies with FCC Rules Part 15               <ul style="list-style-type: none"> <li>• CFR 47 Part 15: 2006</li> </ul> </li> </ul>
Standard Accessories	<ul style="list-style-type: none"> <li>- Hard case</li> <li>- User handbook</li> </ul>
Optional Accessories	<ul style="list-style-type: none"> <li>- Headphone</li> <li>- Mini USB cable</li> <li>- Clamp</li> </ul>

### C. Operational

Item	Parameter
Information Displayed	<ul style="list-style-type: none"> <li>- Signal strength : Numeric value</li> <li>- Distance sensitive Left/Right Centerline offset needle indicator</li> <li>- Compass: +/- 90° line direction indicator</li> <li>- Battery indicator</li> <li>- Depth and current reading</li> </ul>
Sound Indication	<ul style="list-style-type: none"> <li>- Tones for Left or Right</li> <li>- Fading when close to centerline</li> <li>- Silence when centered or signal is too weak</li> </ul>
Configuration	Easy One button operation: <ul style="list-style-type: none"> <li>- Automatic back light control</li> <li>- Short press – On</li> <li>- Long press – Off</li> <li>- Short press when unit is switched On – Depth and Current reading</li> </ul>

<b>Operating Frequencies</b>	83.1kHz (83,077.5 Hz)
<b>Gain Control</b>	Automatic Gain control
<b>Performance Using Single Undistorted Signal Source</b>	Trace accuracy: - Distance Sensitive Left/Right Guidance™
	Current measurement accuracy: - 5% of actual current – up to 10ft (3m) - 10% of actual current – up to 20ft (6m)
	Depth measurement accuracy: - 10 feet (3m): +/-5% or 2" - 20 feet (10m): +/-10%
	Depth range: Dependent on strength of signal radiating to locator
<b>Compatible with Transmitter</b>	Loc-1Tx, Loc-5Tx, Loc-10Tx, 810, 810 classic, 810DX, VM-550 Tx

## D. Sensitivity

Item	Parameter
<b>Mode</b>	Sensitivity at 3.2ft (1m)
<b>83.1kHz</b>	2 µA with fully functional L/R
<b>Depth operational</b>	Minimum 20µA

## E. Environmental

Item	Parameter
<b>Temperature Range</b>	Operating: -4°F to 122°F (-20°C to 50°C)
<b>Weather Proof</b>	IP54 and NEMA 4
<b>Shipping Weight</b>	18.7lbs (8.5kg) (With transmitter) (estimation)
<b>Shipping Dimension</b>	22.7in(L) x 13.8in(W) x 4.3in(H) (577mm x 350mm x 109mm) (estimation)

## F. Warranty

Item	Parameter
<b>Warranty</b>	12 months

## G. Upgrade

Item	Parameter
<b>Software</b>	Software can be upgraded using a PC with USB port.

## H. Features

Item	Parameter
<b>Enhanced Features</b>	<ul style="list-style-type: none"> <li>- New look and ergonomic design</li> <li>- One button operation</li> <li>- Compass: +/- 90° line direction indicator</li> <li>- Automatic back light control</li> <li>- Excellent isolation from adjacent utilities</li> <li>- Efficient high power 1 watt transmitter facilitates long distance locating</li> <li>- Transmitter impedance matching maximizes battery life</li> <li>- Shows you the path – Left/right guidance system and audible tone pinpoints your utility and indicates strength of transmitted signal – digital signal strength</li> <li>- No manual gain adjustments – Fully automatic</li> <li>- Determines depth – Quick and easy push button depth lightweight, and all readouts are line-of-sight, reducing user fatigue</li> </ul>

## VM-810 Transmitter

### A. Typical Applications

Item	Parameter
Description	Pipe & cable locator transmitter
Uses	Transmitting active signals for the location of buried pipes and cables

### B. Transmitter Assembly

Item	Parameter
Construction	High impact ABS
Weight	2.95 lbs (1.34kg) (Excluding battery)
Dimension	14.6in(L) x 4.5in(W) x 3.3in(H) (370mm x 115mm x 85 mm)
Power Supply	- Standard battery pack - using 6 x alkaline "D" cells
Battery Life	At 70°F (21°C) - continuous use <div> <div>Output Power</div> <div>Alkaline</div> <div>1 watt</div> <div>&gt; 60 hours</div> </div>
External Connectors	- 1 x 3 pin connection socket – (XLR)
Output Protection	Output protected against accidental connection to up to 240V AC (50/60Hz)
Approvals	<ul style="list-style-type: none"> <li>- Complies with European standard CE (Directive 99/5/EC) <ul style="list-style-type: none"> <li>• EN 55011</li> <li>• EN 61000-4-2</li> <li>• EN 61000-4-3</li> <li>• EN 61000-4-8</li> </ul> </li> <li>- Complies with FCC Rules Part 15 <ul style="list-style-type: none"> <li>• CFR 47 Part 15</li> </ul> </li> </ul>
Standard Accessories (Supplied With Transmitter)	<ul style="list-style-type: none"> <li>- 1 x direct connection lead (XLR plug with two cables each 10ft (3.5m) long with crocodile clips)</li> <li>- 1 x T type ground stake</li> </ul>
Optional Accessories	<ul style="list-style-type: none"> <li>- Transmitter only "shoulder bag"</li> <li>- 2in (50mm) transmitter clamp</li> <li>- 4in (100mm) transmitter clamp</li> <li>- 5in (125mm) transmitter clamp</li> <li>- 1 x ground lead (30ft (10m) long)</li> </ul>

### C. Operational

Item	Parameter
Location Modes	<ul style="list-style-type: none"> <li>- Induction mode – applies signal inductively using internal antenna</li> <li>- Direct connection mode - applies signal directly to the cable by clipping one output lead to the cable, the other to an independent ground</li> <li>- Clamp mode – applies signal using an inductive clamp (toroid) that is placed around the target cable</li> </ul> <p>* Modes are selected automatically when accessories are plugged in.  * Default mode (no accessories) is induction.</p>
Transmitting Frequency by Mode	- <b>Induction mode / Direct connection mode / Clamp mode:</b> 83.1kHz (83,077.5Hz)
Transmitting Mode Power output	In accordance with FCC part 15: 1 watt – in High output level

	<i>1/3watt – in Low output level</i>
<b>Output Voltage</b>	Maximum output voltage = 60V RMS
<b>Output Current</b>	Maximum output current = 150mA RMS constant power
<b>Audio indication</b>	<ul style="list-style-type: none"> <li>- Connection quality – variable beep rate sound showing the better signal applied</li> <li>- Low battery warning</li> </ul>
<b>Controls</b>	Use pushbuttons to select: <ul style="list-style-type: none"> <li>- Power button: On / Off</li> <li>- Output level button: Low / High</li> <li>- Audio button: Off / Low / High</li> </ul>
<b>Compatible With Receivers</b>	vLocPro, vLocML, vLocPro2, vLocML2, VM-810, 810DX, 810 classic
<b>Compatible Accessories</b>	Signal Clamp, 2in Clamp, 4in Clamp, 5in Clamp, Flexible Clamp

## D. Environmental

Item	Parameter
<b>Temperature Range</b>	Operating : -4°F to 122°F (-20°C to 50°C)
	Storage : -40°F to 140°F (-40°C to 60°C)
<b>Weather Proof</b>	IP54 and NEMA 4
<b>Shipping Weight</b>	18.7lbs (8.5kg) (With Receiver) (estimation)
<b>Shipping Dimension</b>	22.7in(L) x 13.8in(W) x 4.3in(H) (577mm x 350mm x 109mm) (estimation)

## E. Warranty

Item	Parameter
<b>Warranty</b>	12 months(Limited warranty)

## F. Upgrade

Item	Parameter
<b>Software</b>	Software can be upgraded by using a PC with an internal USB port (just for factory or repair center, not accessible from outside).

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

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