



**VIVAX**  
**METROTECH**

# VM-810

Technical Specifications V2.1



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## 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 Characteristics

Item	Parameter
Construction	<ul style="list-style-type: none"> <li>- High impact thermoplastic (ABS) injection molded housing</li> <li>- Retractable aluminum antenna tube</li> </ul>
Weight	3.1lbs (1.4kg)
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 D-Cell alkaline batteries
Battery Life	Typically 65 hours continuous use at 70°F (21°C)
Environmental	IP54 and NEMA 4
External Connectors	<ul style="list-style-type: none"> <li>- 1 x 3.5mm Headphone jack</li> <li>- 1 x Mini USB socket for software update</li> <li>- 1 x 4 pin Accessory jack</li> </ul>
Temperature Range	Operating: -4°F to 122°F (-20°C to 50°C)
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 (comes with receiver)	<ul style="list-style-type: none"> <li>- Hard case</li> <li>- Mini-USB cable</li> </ul>

	<ul style="list-style-type: none"> <li>- 2 x Alkaline D-Cell batteries</li> <li>- User handbook</li> </ul>
<b>Compatible Accessory Options</b>	<ul style="list-style-type: none"> <li>- D22 Sonde, 8ft/2.4m depth range – 83kHz</li> <li>- D38 Sonde, 16.3ft/5m depth range – 83kHz</li> <li>- D64 Sonde, 26ft/8m depth range – 83kHz</li> <li>- Headphones with 3.5mm jack</li> </ul>

## C. Operational

Item	Parameter	
<b>Information Displayed</b>	<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>	
<b>Audio Indication</b>	<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>	
<b>Configuration</b>	Easy One-button operation: <ul style="list-style-type: none"> <li>- Automatic backlight control</li> <li>- Short press – On</li> <li>- Long press – Off</li> <li>- Short press when the unit is switched On – Depth and Current reading</li> </ul>	
<b>Operating Frequencies</b>	83.1kHz (83,077.5 Hz)	
<b>Operating Modes</b>	<ul style="list-style-type: none"> <li>- Peak locate</li> <li>- Sonde</li> </ul>	
<b>Gain / Scaling 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 the strength of signal radiating to the locator		

Compatible with Transmitters	VM-810, 810 classic, 810DX
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## 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 Characteristics

Item	Parameter
Construction	High impact thermoplastic (ABS) injection molded housing
Weight	2.95 lbs (1.34kg)
Dimension	14.6in(L) x 4.5in(W) x 3.3in(H) (370mm x 115mm x 85 mm)
Power Options	Standard battery pack - using 6 x alkaline "D" cells
Battery Life	At 70°F (21°C) - continuous use <b>Output Power      Alkaline</b> 1 watt                      > 60 hours
Environmental	IP54 and NEMA 4
External Connectors	3-pin XLR connection socket
Temperature Range	Operating : -4°F to 122°F (-20°C to 50°C) Storage : -40°F to 140°F (-40°C to 60°C)
Compliance and 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 shaped ground stake</li> </ul>

	<ul style="list-style-type: none"> <li>- Transmitter shoulder strap</li> <li>- 4 x Alkaline D-Cell batteries</li> </ul>
<b>Compatible Accessories Options</b>	<ul style="list-style-type: none"> <li>- 2in (50mm) transmitter clamp</li> <li>- 4in (100mm) transmitter clamp</li> <li>- 5in (125mm) transmitter clamp</li> <li>- Live Plug Connector</li> <li>- Live Cable Connector</li> <li>- Ground Extension Spool</li> <li>- Telco Clip Connection Lead</li> </ul>

## C. Operational

Item	Parameter
<b>Location Modes</b>	<ul style="list-style-type: none"> <li>- Induction mode – applies signal inductively using the 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>
<b>Transmitting Frequency by Mode</b>	<ul style="list-style-type: none"> <li>- Induction mode / Direct connection mode / Clamp mode: 83.1kHz (83,077.5Hz)</li> </ul>
<b>Transmitting Mode</b>	In accordance with FCC part 15:
<b>Power output</b>	<ul style="list-style-type: none"> <li>- 1 watt – in High output level</li> <li>- 1/3 watt – in Low output level</li> </ul>
<b>Maximum Output Voltage</b>	Maximum output voltage = 60V RMS
<b>Maximum Output Current</b>	Maximum output current = 150mA RMS constant power
<b>Output Protection</b>	Output protected against accidental connection to up to 240V AC (50/60Hz)
<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>	<p>Use pushbuttons to select:</p> <ul style="list-style-type: none"> <li>- Power button: On / Off</li> <li>- Output level button: Low / High</li> </ul>

	- Audio button: Off / Low / High
<b>Compatible Receivers</b>	VM-810, 810DX, 810 classic

## D. Shipping and Packaging (Full Kit)

Item	Parameter
<b>Shipping Weight</b>	18.7lbs (8.5kg) <i>(Full Kit)</i>
<b>Shipping Dimension</b>	22.7in(L) x 13.8in(W) x 4.3in(H) <i>(577mm x 350mm x 109mm) (estimation)</i>

## E. Warranty

Item	Parameter
<b>Warranty</b>	Receiver and Transmitter -12 month (Limited warranty)

## F. Firmware Updates

Item	Parameter
<b>Firmware</b>	The VM-810 Receiver firmware can be updated with a PC and mini-USB cable. VM-810 Transmitter updates are done through an authorized repair center.

All products are designed and manufactured in accordance with ISO 9001:2015.

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