



**VIVAX**  
**METROTECH**

# VM-550 Service Drop Locator Kit

Technical Specifications V1.5



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### A. Description and Typical Applications

Item	Parameter	
Model Number	VM-550 Receiver	VM-550 Transmitter
	VX215-01	VX215-02
Description	VM-550 Three Frequency Locator Kit	
Uses	General-purpose locators used to detect buried pipe and cable services	

### B. Receiver Characteristics

Item	Parameter	
Construction	- High-impact ABS plastic housing with a carbon fiber reinforced antenna tube.	
Weight	1.41lbs (0.64kg)	
Dimensions	34.6in(L) x 3.1in(W) x 2.8in(H) (880mm x 80mm x 70mm)	
Display Type	Dot Matrix, 98 x 64 dots, COG LCD with backlight	
Controls	Four-button keypad	
Power Options	2 x AA (LR06) Alkaline batteries	
Battery Life	Typically 20 hours of continuous use at 70°F (21°C)	
Environmental	IP54 and NEMA 4	
Manufacturing	Designed and manufactured per ISO 9001:2015	
External Connectors	1 x Mini USB socket for programming	
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> </ul>	<ul style="list-style-type: none"> <li>- Complies with FCC Rules Part 15               <ul style="list-style-type: none"> <li>• CFR 47 Part 15: 2006</li> </ul> </li> </ul>
What's In the Box	<ul style="list-style-type: none"> <li>- VM-550 Receiver</li> <li>- Battery holder</li> <li>- Mini USB lead</li> </ul>	<ul style="list-style-type: none"> <li>- Kit carry bag</li> <li>- Manual</li> </ul>

### C. Receiver Operational

Item	Parameter
Information Displayed	<ul style="list-style-type: none"> <li>- Signal level</li> <li>- Battery condition</li> <li>- Power signal warning</li> <li>- Mode selected</li> </ul>
Operating Frequencies	<ul style="list-style-type: none"> <li>- Passive: 50Hz, 60Hz</li> <li>- Active: 512Hz or 640Hz, 8.192kHz, and 83.1kHz</li> </ul>
Operating Modes	Passive Power and active locate modes
Gain / Scaling Control	Manual gain using "+" or "-" with one touch to return to center (60% of FSD)
Sensitivity	Frequency: 50/60Hz 5mA for 20dB SNR and 10Hz bandwidth 512/640Hz 1.5mA for 20dB SNR and 10Hz bandwidth 8.192kHz 27uA for 20dB SNR and 10Hz bandwidth 83.1kHz 6uA for 20dB SNR and 10Hz bandwidth
Accuracy	Depth range 5m (16ft), accuracy +/-5% of depth (with a stable signal)
Compatible Transmitters	VM-550FF, All Loc series transmitters with the matching frequency range

### D. Transmitter Characteristics

Item	Parameter
Construction	High-impact ABS plastic
Weight	<ul style="list-style-type: none"> <li>- With Alkaline battery tray: 2.47 lbs. (1.12kg)</li> <li>- With Rechargeable battery tray: 2 lbs. (0.92 kg.)</li> </ul>
Dimensions	18.1in(L) x 3.5in(W) x 2.6in(H) (460mm x 90mm x 65mm)
Display	Flashing red LED lights show active transmit and output modes.
Power Options	<ul style="list-style-type: none"> <li>- 4 x Alkaline "D" cells</li> <li>- Optional Li-Ion rechargeable battery pack</li> </ul>
Battery Life	At 1 watt, i.e., full output setting. <ul style="list-style-type: none"> <li>- Alkaline – typically 12 hours</li> <li>- Li-ion – typically 36 hours</li> <li>- Based on maximum output into 300-ohm load and 50% duty cycle. At 70°F 21°C</li> </ul>
Environmental	IP54 and NEMA 4
External Connectors	1 x 3-pin XLR 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)

<b>Compliance/Approvals</b>	<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 61000-4-4</li> <li>• EN 61000-4-5</li> <li>• EN 61000-4-8</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Complies with FCC rules part 15               <ul style="list-style-type: none"> <li>• CFR 47 part 15</li> </ul> </li> </ul>
<b>Manufacturing</b>	Designed and manufactured per ISO 9001:2015	
<b>What's In the Box</b>	<ul style="list-style-type: none"> <li>- Direct Connection Leads (XLR plug with 10-foot (3.5m) red/black leads)</li> <li>- Ground stake</li> </ul>	<ul style="list-style-type: none"> <li>- Carry strap</li> </ul>
<b>Compatible Accessories Options</b>	<ul style="list-style-type: none"> <li>- 2-inch (50mm) transmitter clamp</li> <li>- 4-inch (100mm) transmitter clamp</li> <li>- 5-inch (125mm) transmitter clamp</li> <li>- 9-inch (230mm) transmitter clamp</li> <li>- 18-inch (450mm) flexible transmitter clamp</li> <li>- Ground Extension Spool</li> <li>- Live Plug Connector (LPC Separation Filter) - to connect and use the transmitter on lines carrying up to 240V AC</li> <li>- LCC Live Cable Connector - to connect and use the transmitter on lines carrying up to 480V AC</li> <li>- Rechargeable Battery Pack - custom Li-Ion battery pack and charger</li> <li>- 12V DC Vehicle Power Lead - for powering and charging the optional rechargeable battery from a vehicle</li> </ul>	

### E. Transmitter Operational

Item	Parameter
<b>Information Displayed</b>	Solid and blinking LED shows <ul style="list-style-type: none"> <li>- Frequency selected</li> <li>- Output power level</li> </ul>
<b>Transmitting Modes</b>	<ul style="list-style-type: none"> <li>- <b>Induction mode</b> – applies signal inductively using the internal antenna</li> <li>- <b>Direct connection mode</b> - applies signal directly to the cable by clipping one output lead to the cable, the other to an independent ground</li> <li>- <b>Clamp mode</b> – applies signal using an inductive clamp (aka toroid or coupler) that is placed around the target pipe or cable</li> </ul> <p>* Modes are automatically selected when accessories are plugged in. The default mode (no accessories) is Induction.</p>

#### Transmitting Frequency by Mode

<b>Induction Mode</b>	83.1kHz
<b>Direct Connection Mode</b>	512Hz or 640Hz, 8.192kHz, and 83.1kHz

<b>Clamp Mode</b>	8.192kHz, and 83.1kHz
<b>Fault Find Mode</b>	8kFF, Fault locating mode for use with vLoc accessory A-frame or VM-510FFL ground fault locator (8.192kHz amplitude modulated with 8Hz and phase-modulated with 2.66Hz)
<b>Transmitting Mode Power Output</b>	<ul style="list-style-type: none"> <li>- <b>Per FCC part 15:</b> <ul style="list-style-type: none"> <li>• 1 watt – in High output level</li> <li>• 0.1 watt – in Low output level</li> </ul> </li> </ul>
<b>Maximum Output Voltage</b>	60V RMS
<b>Maximum Output Current</b>	Maximum output current = 70mA RMS constant current
<b>Output Protection</b>	Output protected against accidental connection to up to 240V AC
<b>Audio Indication</b>	<ul style="list-style-type: none"> <li>- Connection quality – variable beep rate sound showing the better signal applied</li> <li>- Beep constantly – for high voltage detected</li> </ul>
<b>Controls</b>	Use pushbuttons to select: <ul style="list-style-type: none"> <li>- Power button: On / Off (Press and hold)</li> <li>- Low / High output (Short press)</li> <li>- Frequency</li> </ul>
<b>Compatible Receivers</b>	VM-550, VM-560, VM-585, VM-510FFL+, vLoc3-Cam

### F. Rechargeable Battery Tray (optional accessory)

Item	Parameter	
<b>Description</b>	<ul style="list-style-type: none"> <li>- Custom Lithium-Ion battery tray with charger</li> <li>- Li-Ion batteries will withstand 500 charging life cycles</li> </ul>	
<b>Input/output</b>	Input: 8.4V ~ 8.5V	Output: 6V ~ 8.4V
<b>Battery Type</b>	Li-Ion battery	
<b>Temperature Range</b>	Operating: 14°F to 140°F (-10°C to 60°C)	Storage : 14°F to 113°F (-10°C to 45°C)
<b>Storage humidity</b>	≤75% RH	
<b>Weight</b>	1.26lb (0.57kg)	
<b>Dimension</b>	8.3in(L) x 3.7in(W) x 2.5in(H) (210mm x 93mm x 63mm)	
<b>Shipping Weight</b>	1.38lb (0.63kg)	
<b>Shipping Dimension</b>	9in(L) x 3.7in(W) x 2.8in(H) (228mm x 95mm x 70mm)	

Warranty	One Year
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### G. Kit Shipping and Packaging

Item	Parameter
Shipping Weight	<ul style="list-style-type: none"> <li>- With alkaline batteries: 10.8lbs (4.9kg)</li> <li>- With Li-Ion batteries: 10.4lbs (4.7kg)</li> </ul>
Shipping Dimension	39in(L) x 7.7in(W) x 4.7in(H) (990mm x 195mm x 120mm)

### H. Warranty

Item	Parameter
Warranty	<ul style="list-style-type: none"> <li>- One Year</li> <li>- Extended warranty available</li> </ul>

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