



**VIVAX**  
**METROTECH**

# VM-550 Service Drop Locator Kit

Technical Specifications V1.3



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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             | <ul style="list-style-type: none"> <li>- Carbon fiber reinforced antenna tube</li> <li>- High-impact ABS plastic</li> </ul>  |   |
| 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 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 and Transmitter</li> <li>- Padded 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   | Passive: 50Hz, 60Hz<br>Active: 512Hz or 640Hz, 8.192kHz, and 83.1kHz  |
| 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<br>512/640Hz 1.5mA for 20dB SNR and 10Hz bandwidth<br>8.192kHz 27uA for 20dB SNR and 10Hz bandwidth<br>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 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 | 4 x Alkaline "D" cells<br>Optional Li-Ion rechargeable battery pack  |
| 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  |

|                                       |  |   |
|---------------------------------------|--|---|
| <b>External Connectors</b>            | 1 x 3 pin XLR socket   |   |
| <b>Temperature Range</b>              | Operating: -4°F to 122°F (-20°C to 50°C)<br>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> </ul> </li> <li>• EN 61000-4-4</li> <li>• EN 61000-4-5</li> <li>• EN 61000-4-8</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>- Alkaline batteries</li> <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>- 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>                     | 512Hz or 640Hz, 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>      | <ul style="list-style-type: none"> <li>- Input: 8.4V ~ 8.5V</li> <li>- Output: 6V~8.4V</li> </ul>  |
| <b>Battery Type</b>      | Li-Ion battery   |
| <b>Temperature Range</b> | Operating: 14°F to 140°F (-10°C to 60°C)<br>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)   |
| <b>Warranty</b>           | One Year   |

## G. Kit Shipping and Packaging

| Item                      | Parameter  |
|---------------------------|--|
| <b>Shipping Weight</b>    | <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> |
| <b>Shipping Dimension</b> | 39in(L) x 7.7in(W) x 4.7in(H) (990mm x 195mm x 120mm)  |

## H. Warranty

| Item            | Parameter   |
|-----------------|---|
| <b>Warranty</b> | <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.