



**VIVAX**

**METROTECH**

# VM-550FF / VM-560FF 1-Watt Transmitters

Technical Specifications V1.5



## Worldwide Locations

### World Headquarters, United States of America

#### Vivax-Metrotech Corporation

3251 Olcott Street, Santa Clara, CA 95054, USA

T/Free : 1-800-446-3392

Tel : +1-408-734-3880

Fax : +1-408-734-1415

Website : [www.vivax-metrotech.com](http://www.vivax-metrotech.com)

Email : [SalesUSA@vxmt.com](mailto:SalesUSA@vxmt.com)

### Central/South America and the Caribbean

#### Ventas para América Latina

3251 Olcott Street, Santa Clara, CA 95054, USA

T/Free : 1-800-446-3392

Tel : +1-408-734-3880

Fax : +1-408-743-5597

Website : [www.vivax-metrotech.com](http://www.vivax-metrotech.com)

Email : [LatinSales@vxmt.com](mailto:LatinSales@vxmt.com)

### Canada

#### Vivax Canada, Inc.

41 Courtland Ave Unit 8, Vaughan, ON L4K 3T3, Canada

Tel : +1-289-846-3010

Fax : +1-905-752-0214

Website : [www.vivax-metrotech.ca](http://www.vivax-metrotech.ca)

Email : [SalesCA@vxmt.com](mailto:SalesCA@vxmt.com)

### United Kingdom

#### Vivax-Metrotech Ltd.

Unit 1, B/C Polden Business Centre, Bristol Road, Bridgwater, Somerset, TA6 4AW, UK

Tel : +44(0)1793 822679

Website : [www.vivax-metrotech.co.uk](http://www.vivax-metrotech.co.uk)

Email : [SalesUK@vxmt.com](mailto:SalesUK@vxmt.com)

### France

#### Vivax-Metrotech SAS

Technoparc - 1 allée du Moulin Berger, 69130 Ecully, France

Tel : +33(0)4 72 53 03 03

Fax : +33(0)4 72 53 03 13

Website : [www.vivax-metrotech.fr](http://www.vivax-metrotech.fr)

Email : [SalesFR@vxmt.com](mailto:SalesFR@vxmt.com)

### Germany

#### Metrotech Vertriebs GmbH

Am steinernen Kreuz 10a  
96110 Schesslitz

Tel : +49 9542 77227-43

Website : [www.vivax-metrotech.de](http://www.vivax-metrotech.de)

Email : [SalesEU@vxmt.com](mailto:SalesEU@vxmt.com)

### China

#### Vivax-Metrotech (Shanghai) Ltd.

Building 10, Lane 1158 Zhongxin Rd.,  
Songjiang District, Shanghai, China, 201615

Tel : +86-21-5109-9980

Website : [www.vivax-metrotech.com](http://www.vivax-metrotech.com)

Email : [SalesCN@vxmt.com.cn](mailto:SalesCN@vxmt.com.cn)

### A. Description and Typical Applications

Item	Parameter	
Model Number	VM-550 Transmitter	VM-560 Transmitter
	VX215-02	VX215-04
Description	VM-550FF and VM-560FF 1-Watt Transmitters	
Uses	Transmitting active signals for the location of buried pipes and cables Transmitting a fault-find frequency for the detection of cable faults Transmitting active signals for the location of camera systems pushrod cable	

### B. Characteristics

Item	Parameter
Construction	High-impact ABS plastic
Weight	With Alkaline batteries: 2.47 lbs. (1.12kg) With Rechargeable Li-ion batteries: 2 lbs. (0.92 kg.)
Dimensions	18.1in(L) x 3.5in(W) x 2.6in(H) (460mm x 90mm x 65mm)
Display	None, flashing red LED lights show active transmit and output modes.
Power Supply	4 x Alkaline "D" cells 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
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)
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, EN 61000-4-3, EN 61000-4-2, EN 61000-4-4, EN 61000-4-5, EN 61000-4-8</li> </ul> </li> <li>- Complies with FCC Rules Part 15</li> <li>- CFR 47 Part 15</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>- VM-550 or VM-560 Transmitter</li> <li>- Direct Connection Leads (XLR plug with 10-foot (3.5m) red/black leads)</li> </ul>	<ul style="list-style-type: none"> <li>- Ground stake</li> <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>	
<b>Frequencies</b>	<ul style="list-style-type: none"> <li>- <b>Direct connection mode / Clamp mode:</b> VM-550FF: 512Hz or 640Hz, 8.192kHz, and 83.1kHz VM-560FF: 512Hz or 640Hz, 8.192kHz, and 480kHz</li> <li>- <b>Induction Mode:</b> VM-550FF: 83.1kHz VM-560FF: 480kHz</li> <li>- <b>Fault Find Mode:</b> VM-550FF, VM-560FF 8kFF, Fault locating mode for use with vLoc accessory A-frame or VM-510 ground fault locator (8.192kHz amplitude modulated with 8Hz and phase-modulated with 2.66Hz)</li> </ul> <p>* Modes are automatically selected when accessories are plugged in.</p>	

### C. 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>	<p><b>Induction mode</b> – applies signal inductively using the internal antenna -</p> <p><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 –</p>

	<p><b>Clamp mode</b> – applies signal using an inductive clamp (aka toroid or coupler) that is placed around the target pipe or cable</p> <p>* Modes are automatically selected when accessories are plugged in. The default mode (no accessories) is Induction.</p>
<b>Transmitting Frequency by Mode</b>	<ul style="list-style-type: none"> <li>- <b>Direct connection mode / Clamp mode:</b> VM-550FF: 512Hz or 640Hz, 8.192kHz, and 83.1kHz VM-560FF: 512Hz or 640Hz, 8.192kHz, and 480kHz</li> <li>- <b>Induction Mode:</b> VM-550FF: 83.1kHz VM-560FF: 480kHz</li> <li>- <b>Fault Find Mode:</b> VM-550FF, VM-560FF 8kFF, Fault locating mode for use with vLoc accessory A-frame or VM-510 ground fault locator (8.192kHz amplitude modulated with 8Hz and phase-modulated with 2.66Hz)</li> </ul> <p>* <b>Modes are selected automatically when accessories are plugged in.</b></p>
<b>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>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>	<p>Use pushbuttons to select:</p> <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

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

Item	Parameter
<b>Description</b>	<p>Custom Lithium-Ion battery pack and charger</p> <p>Li-Ion batteries will withstand 500 charging life cycles</p>

<b>Input/output</b>	Input: 8.4V ~ 8.5V Output: 6V~8.4V
<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>Dimensions</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 Dimensions</b>	9in(L) x 3.7in(W) x 2.8in(H) (228mm x 95mm x 70mm)
<b>Warranty</b>	One Year

### E. Shipping and Packaging

Item	Parameter		
<b>Shipping Weight</b>	<b>Transmitter</b>	<b>with Alkaline Batteries</b>	<b>with Li-ion and charger</b>
	VM-550FF	9.3lbs (4.2kg)	8.82lbs (4kg)
	VM-560FF	9.48lbs (4.3kg)	9lbs (4.1kg)
<b>Shipping Dimension</b>	39in(L) x 7.7in(W) x 4.7in(H) (990mm x 195mm x 120mm)		

### F. 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.