

A. Typical Applications

Item	Parameter
Description	<ul style="list-style-type: none"> - Multi-purpose precision locator receiver - Electronic marker-ball detection
Uses	<ul style="list-style-type: none"> - Locating & pinpointing the position of buried pipes and cables - Frequency compatible marker types - Detection of any 1 of 9 marker balls types buried to a depth of 6ft (2m) - Detection of large flat markers to a depth of 9ft (3m)

B. Receiver Assembly

Item	Parameter
Construction	<ul style="list-style-type: none"> - Carbon fiber reinforced antenna tube - High impact thermoplastic (ABS) injection molded housing
Weight	5.7lbs (2.6kg)
Dimensions	10.3in(L) x 5.9in(W) x 28in(H) (262mm x 150mm x 714mm)
Display Type	Sharp TFT LCD VGA color display, 3.52in (89mm)
Receiver Antennas	2 x Peak antennas, 1 x null antenna, 1 x compass antenna, 1 x marker transmit antenna, 1 x marker receiver antenna.
Batteries	<ul style="list-style-type: none"> - Rechargeable Lithium-ion batteries with 100-240V AC mains charger. - Replaceable (6 x standard Alkaline AA batteries) batteries can be used when required
Battery Life	<ul style="list-style-type: none"> - Alkaline – typically 6 hours intermittent use at 70°F (21°C) - Lithium-ion – typically 20 hours intermittent use at 70°F (21°C) (with full backlight turned on). Re-charging cycles approx. 500 times life cycle. Battery life varies with temperature.
Bluetooth	- Plug and Play custom Bluetooth interface
External Connectors	<ul style="list-style-type: none"> - 1 x Socket for accessories port (analogue & digital) - 1 x Mini USB socket for data transfer/programming - 1 x Socket for battery charger - 1 x Standard USB (Memory stick) socket for data transfer
Approvals	<ul style="list-style-type: none"> - Complies with European standard CE (Directive 99/5/EC) <ul style="list-style-type: none"> • EN 55011 • EN 61000-4-2: A1 & A2 • EN 61000-4-3 • EN 61000-4-8: A1 • ETSI EN 300 330-2 • ETSI EN 301 489-1 • ETSI EN 301 489-3 - Complies with FCC Rules Part 15 <ul style="list-style-type: none"> • CFR 47 part 2 • CFR 47 Part 15
Standard Accessories	<ul style="list-style-type: none"> - USB data cable - 100-240V AC mains charger (Lithium-ion battery) - Soft carry bag (Roll around bag if purchased with transmitter) - User handbook

Optional Accessories	<ul style="list-style-type: none"> - Portable Transmitters: Loc-1Tx, Loc-5Tx, Loc-10Tx - Sondes (waterproof self-contained transmitters for use in pipes & ducts) <ul style="list-style-type: none"> • D18-33-SR44 - 0.75in(Dia.) x 3.1in(L) (18mm x 80mm), 33 kHz, range 15ft (4.5m), 2 x button cell batteries • D38-33-AA – 1.5in(Dia.) x 4.1in(L) (38mm x 105mm), 33 kHz, range 16.3ft (5m), 1 x AA battery • D38-09-AA – 1.5in(Dia.) x 4.1in(L) (38mm x 105mm), 9.82 kHz, range 16.3ft (5m), 1 x AA battery • D38-83-AA – 1.5in(Dia.) x 4.1in(L) (38mm x 105mm), 83 kHz, range 16.3ft (5m), 1 x AA battery • D64-33-6LR61 – 2.5in(Dia.) x 7.3in(L) (64mm x 186mm), 33 kHz, range 26ft (8m), 1 x 6LR61 battery • D64-09-6LR61 – 2.5in(Dia.) x 7.3in(L) (64mm x 186mm), 9.82 kHz, range 26ft (8m), 1 x 6LR61 battery • D64-83-6LR61 – 2.5in(Dia.) x 7.3in(L) (64mm x 186mm), 83 kHz, range 26ft (8m), 1 x 6LR61 battery • D23F-512-AA / D23F-640-AA – 1in(Dia.) x 18in(L) (23mm x 456mm), 512Hz or 640Hz, range 20ft (7m), flexible Sonde in 3 sections for use in cast iron pipes as well as non metallic pipes, 1 x AA battery - A-frame USB (for Sheath Fault Finding) - Remote Antenna USB - Custom Bluetooth Module (Easy Fit) - GPS Module (Requires custom Bluetooth module above) - Vehicle charging lead (Lithium-ion battery)
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C. Operational

Item	Parameter
Information Displayed	<ul style="list-style-type: none"> - Marker reference number and icon - Response to marker ball - Circular bar graph and variable pitch tone to indicate signal strength - Manual EMS (Electronic Marker System) gain control - Signal strength - moving bar graph & numeric value - Mode indication (“Peak”, “Null”, “Broad Peak”, “Sonde” and “Peak with proportional left/right arrows” location) - Proportional left/right indication - Compass: full 360° line direction indicator - Plug and Play automatic recognition of accessories - Measurement of depth and current on target line - Line location - depth & current measurement - Sonde location - depth measurement - Gain level (in dB) - Frequency selected - Battery condition - Speaker volume - Operating frequency - Bluetooth and GPS status

	<ul style="list-style-type: none"> - Configuration menu & submenus - Start up screen – product and USB accessories software revision - Customer definable start up screen 																														
Configuration	<p>Intuitive setup menu enables user to configure alternatively use Vivax-Metrotech configuration tool:</p> <ol style="list-style-type: none"> 1. Setup frequency selection to toggle by “F” pushbutton 2. Setup location mode selection to toggle by “M” pushbutton 3. Sonde / line location 4. Units of measure (feet/meter) 5. Power and radio modes – 50Hz or 60Hz environments 6. Sound (Pitch) – normal/modulated 7. Language 8. Continuous depth/current options 9. Loudspeaker level 10. Backlight 11. Bluetooth pairing if fitted 12. Auto shut down – 2 or 5 minutes or never 																														
Operating Frequencies	Frequency list defined below.																														
Pre-defined Marker Ball Frequencies	<table border="1"> <thead> <tr> <th>Ref #</th> <th>Utility</th> <th>Frequency (Hz)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Power (Red)</td> <td>169,800</td> </tr> <tr> <td>2</td> <td>Water (Blue)</td> <td>145,700</td> </tr> <tr> <td>3</td> <td>Sanitary (Green)</td> <td>121,600</td> </tr> <tr> <td>4</td> <td>Telephone (Orange)</td> <td>101,400</td> </tr> <tr> <td>5</td> <td>Gas (Yellow)</td> <td>83,000</td> </tr> <tr> <td>6</td> <td>CATV (Orange/Black)</td> <td>77,000</td> </tr> <tr> <td>7</td> <td>Non Potable Water (Purple)</td> <td>66,350</td> </tr> <tr> <td>8</td> <td>EDF (French Power) (natural)</td> <td>40,000</td> </tr> <tr> <td>9</td> <td>Energy (Seba) Power (Blue/Red)</td> <td>134,000</td> </tr> </tbody> </table> <p>***Note: #9 – some markets only***</p>	Ref #	Utility	Frequency (Hz)	1	Power (Red)	169,800	2	Water (Blue)	145,700	3	Sanitary (Green)	121,600	4	Telephone (Orange)	101,400	5	Gas (Yellow)	83,000	6	CATV (Orange/Black)	77,000	7	Non Potable Water (Purple)	66,350	8	EDF (French Power) (natural)	40,000	9	Energy (Seba) Power (Blue/Red)	134,000
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Pre-defined Frequencies for vLocML2 Receiver	<p>Configurable frequencies from 16Hz to 200 kHz.</p> <p>Signal Direction – Some specific models include a feature called SD (Signal Direction) in addition to the above the transmitter will have two combinations of SD frequency.</p> <table border="1"> <tbody> <tr> <td>SD-USA</td> <td>256Hz/512Hz</td> </tr> <tr> <td>SD-EUR</td> <td>320Hz/640Hz</td> </tr> </tbody> </table> <p>Vivax-Metrotech Corporation retains the right to make additions or deletions to this list at any time.</p>	SD-USA	256Hz/512Hz	SD-EUR	320Hz/640Hz																										
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Operating Modes	<ul style="list-style-type: none"> - vLocML2 Line Location Receiver - Marker Locator - Dual mode operation: Peak response combined with Marker-Ball Detection - Peak - Null - Sonde - Broad Peak - Peak with proportional left/right arrows 																														

Gain Control	Manual gain using "+" or "-" with one touch to return to center (60% of FSD)
Performance in Area of Undistorted Fields	Generally locatable to 6ft (2m) depth
Performance Using Single Undistorted Signal Source	Locate pinpointing accuracy:
	- up to 9ft (3m) – 3% of depth
	- over 9ft (3m) – 5% of depth
	Depth measurement accuracy:
- 3% of depth	
Current measurement accuracy:	
- 3% of actual current – up to 9ft (3m)	
- 5% of actual current – over 9ft (3m)	
Depth range :	
- Dependent on strength of signal radiating to locator – generally up to 15ft (5m)	

D. Sensitivity

Mode	Sensitivity at 3.2ft (1m)
50Hz/ Power Mode	7.5 mA
Radio Mode	20 µA
512Hz / 640Hz	400 µA
8 kHz	40 µA
32 kHz and Above	25 µA

E. Environmental

Item	Parameter
Temperature Range	Operating : - 4°F to 122°F (-20°C to 50°C)
	Storage : -40°F to 140°F (-40°C to 60°C)
Weather Proof	IP54 and NEMA 4
Shipping Weight	11lbs (5kg)
Shipping Dimension	13.0in(L) x 8.7in(W) x 32.7in(H) (330mm x 220mm x 830mm)

F. Warranty

Item	Parameter
Warranty	12 months

G. Upgrade

Item	Parameter
Software	Software can be upgraded using a PC with USB port. Programs & locator software will be available via MyLocator2. Additional frequencies will be available free of charge.

H. Holux Bluetooth GPS (Optional Accessory)

Item	Parameter
Overview	The M-1200 high performance Bluetooth™ GPS Receiver which featured with: <ul style="list-style-type: none"> - Built-in rechargeable Lithium-ion battery without external power supply

Weight	- 0.07lbs (30g)
Dimension	- 2.63in(L) x 0.9in(W) x 0.63in(H) (67mm x 23mm x 16mm)
Specification	<ul style="list-style-type: none"> - Tracks up to 32 satellites - Receiver: L1, 1575.42 MHz - C/A code: 1.023 MHz - Update rate: 1Hz - Antenna type: built-in patch antenna - Minimum signal tracked: -159dBm - On/Off switch: slide switcher - Lithium-ion battery lasts for 15 hours of use - Accuracy better than 3m when receiving SBAS correction signal
LED Indication	<ul style="list-style-type: none"> - Bluetooth - Navigation update - Battery/charger status indication
Temperature Range	<ul style="list-style-type: none"> - Storage Temperature : -4°F to 140°F (-20°C to 60°C) : -22°F to 176°F (-30°C to 80°C) (Without Lithium-ion battery) - Operation Temperature : 14°F to 140°F (-10°C to 60°C)

I. Features

Item	Parameter
Enhanced Features	<ul style="list-style-type: none"> - Reduced size and weight with enhanced ergonomic design - Improved power management and Lithium-ion rechargeable batteries provide longer battery life (250% more) - Auto detects batteries type (Lithium-ion/Alkaline) and displays appropriate status. - Non-reflective display - Enable / Disable auto shut off mode - USB Data logging (Future feature) - Analogue channel (Future feature)

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

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