

A. Typical Applications

Radiodetection RD5000

Metrotech VM-810

Item	Parameter	Parameter
Description	Pipe & cable locator transmitter	Pipe & cable locator transmitter
Uses	Transmitting active signals for the location of buried pipes and cables	Transmitting active signals for the location of buried pipes and cables

B. Transmitter Assembly

Radiodetection RD5000

Metrotech VM-810

Item	Parameter	Parameter
Construction	High impact ABS	High impact ABS
Weight	3.5lbs (1.6kg) (including rechargeable batteries)	4.14 lbs (1.88kg) (Excluding battery)
Dimension	10.5in(L) x 7in(W) x 2.5in(H)	14.6in(L) x 4.5in(W) x 3.3in(H) (370mm x 115mm x 85 mm)
Power Supply	Internal rechargeable Lilon battery pack with charger & backup 4xD-Cells (LR-20)	- Standard battery pack - using 6 x alkaline "D" cells
Battery Life	Rechargeable: >20hours, 32°F to 122°F (0°C to +50°C)	At 70°F (21°C) - continuous use Output Power Alkaline 1 watt > 60 hours
External Connectors	- 1 Smart Plug Connection	- 1 x 3 pin connection socket – (XLR)
Standard Accessories (Supplied With Transmitter)	1 x smart connection lead with two cables each 10ft (3.5m) long with crocodile clips - 1 x ground lead (30ft (10m) long) - 1 x T type ground stake with threads	1 x direct connection lead (XLR plug with two cables each 10ft (3.5m) long with crocodile clips) - 1 x ground lead (30ft (10m) long) - 1 x T type ground stake
Optional Accessories	- Transmitter only "shoulder bag" - 2in (50mm) transmitter clamp - 4in (100mm) transmitter clamp - 5in (125mm) transmitter clamp	- Transmitter only "shoulder bag" - 2in (50mm) transmitter clamp - 4in (100mm) transmitter clamp - 5in (125mm) transmitter clamp

C. Operational

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Item	Parameter	Parameter
Location Modes	- Induction mode – applies signal inductively using internal antenna - Direct connection mode - applies signal directly to the cable by clipping one output lead to the cable, the other to an independent ground - Clamp mode – applies signal using an inductive clamp that is placed around the target cable * Modes are selected automatically when accessories are plugged in. * Default mode (no accessories) is induction.	- Induction mode – applies signal inductively using internal antenna - Direct connection mode - applies signal directly to the cable by clipping one output lead to the cable, the other to an independent ground - Clamp mode – applies signal using an inductive clamp that is placed around the target cable * Modes are selected automatically when accessories are plugged in. * Default mode (no accessories) is induction.C23
Transmitting Frequency by Mode	- Induction mode / Direct connection mode / Clamp mode: 83.1kHz	- Induction mode / Direct connection mode / Clamp mode: 83.1kHz (83,077.5Hz)
Transmitting Mode Power output	In accordance with FCC part 15: 1 watt – in High output level 1/2watt – in Low output level	In accordance with FCC part 15: 1 watt – in High output level 1/3watt – in Low output level
Output Voltage	Maximum output voltage = 30V RMS	Maximum output voltage = 60V RMS
Output Current	Maximum output current = 1000mA RMS constant current	Maximum output current = 150mA RMS constant current
Audio indication	- Connection quality – variable beep rate sound showing the better signal applied - Low battery warning	- Connection quality – variable beep rate sound showing the better signal applied - Low battery warning
Controls	Use push buttons to select: - Power button: On / Off - Output level button: Low / High - Audio button: Off / Low / High	Use push buttons to select: - Power button: On / Off - Output level button: Low / High - Audio button: Off / Low / High
Compatible With Receivers	RD400, RD4000, RD5000, RD7000, RD7100, RD8000, RD8100	vLocPro, vLocML, vLocPro2, vLocML2, VM-810, 810DX, 810 classic
Compatible Accessories	Signal Clamp, 2in Clamp, 4in Clamp, 5in Clamp	Signal Clamp, 2in Clamp, 4in Clamp, 5in Clamp, Flexible Clamp

D. Environmental**Radiodetection RD5000****Metrotech VM-810**

Item	Parameter	Parameter
Temperature Range	Operating : -4°F to 122°F (-20°C to +50°C)	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	IP54 and NEMA 4
Shipping Weight	12.5lbs (With Receiver) (estimation)	18.7lbs (8.5kg) (With Receiver) (estimation)
Shipping Dimension	29in(L) x 14in(W) x 10in(H) (estimation)	22.7in(L) x 13.8in(W) x 4.3in(H) (577mm x 350mm x 109mm) (estimation)
E. Warranty		
Item	Parameter	Parameter
Warranty	12 months parts & labor 3 Years Parts & Labor after registration	12 months(Limited warranty)

A. Typical Applications**Radiodetection RD5000****Metrotech VM-810**

Item	Parameter	Parameter
Description	Single high frequency locator receiver	Single high frequency locator receiver
Uses	Locating & pinpointing the position of buried pipes and cables	Locating & pinpointing the position of buried pipes and cables

B. Receiver Assembly**Radiodetection RD5000****Metrotech VM-810**

Item	Parameter	Parameter
Construction	- Aluminum - High impact thermoplastic (ABS) injection molded housing	- Aluminum - High impact thermoplastic (ABS) injection molded housing
Weight	3lbs (1.36kg)(with battery)	3lbs (1.36kg)(with battery)
Dimensions	26in(L) x 5in(W) x 11in(H)	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 4" LCD display	Black & white TFT 2.7" LCD WQVGA display (400 x 240 pixel)
Receiver Antennas	(5) Antennas 2 x Peak antennas, 2 x Null antennas, 1 x compass antenna	3 x Peak antennas, 1 x compass antenna
Batteries	Lilon Rechargeable Battery with charger Optional backup 2 X D Cell Alkaline Tray	2 x Standard D-Cell alkaline batteries
Battery Life	- 1 x 3.5mm Headphone jack - 1 x Mini USB socket for software update & calibration check - 1 x Accessories jack	- 1 x 3.5mm Headphone jack (Use headphone with volume control) - 1 x Mini USB socket for software update - 1 x 4 pin Accessories jack
Standard Accessories	- Soft carry bag - Hard case - User manual	- Soft carry bag (Roll around bag if purchased with transmitter) - User handbook
Optional Accessories	- Headphone - Mini USB cable (included) - Clamp	- Headphone - Mini USB cable - Clamp

C. Operational**Radiodetection RD5000****Metrotech VM-810**

Item	Parameter	Parameter
Information Displayed	- Signal strength : Numeric value - Distance sensitive Left/Right Centerline offset needle indicator - Compass: +/- 90° line direction indicator - Battery indicator - Depth and current reading (real time automatic)	- Signal strength : Numeric value - Distance sensitive Left/Right Centerline offset needle indicator - Compass: +/- 90° line direction indicator - Battery indicator - Depth and current reading
Sound Indication	- Tones for Left or Right - Fading when close to centerline - Silence when centered or signal is too weak	- Tones for Left or Right - Fading when close to centerline - Silence when centered or signal is too weak
Configuration	Easy One button operation: - Automatic back light control - Short press – Change modes - Long press – On / Off - Depth and Current reading (Always On display - Auto)	Easy One button operation: - Automatic back light control - Short press – On - Long press – Off - Short press when unit is switched On - Depth and Current reading
Operating Frequencies	83.1kHz (83,077Hz ±5Hz)	83.1kHz (83,077.5 Hz)
Gain Control	Automatic Gain control	Automatic Gain control
Performance Using Single Undistorted Signal Source	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 strength of signal radiating to locator	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 strength of signal radiating to locator
Compatible with Transmitter	T1, TX1, TX3, TX5, TX10, Classic RD400 & RD4000 TX's	Loc-1Tx, Loc-5Tx, Loc-10Tx, 810, 810 classic, 810DX

D. Sensitivity**Radiodetection RD5000****Metrotech VM-810**

Item	Parameter	Parameter
Mode	Sensitivity at 3.2ft (1m)	Sensitivity at 3.2ft (1m)
83.1kHz	2 µA with fully functional L/R	2 µA with fully functional L/R
Depth operational	Minimum 20µA	Minimum 20µA
Dynamic Overload Protection	30dB (automatic)	None
E. Environmental		
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Weather Proof	IP54	IP54 and NEMA 4
Shipping Weight	12.5lbs (With transmitter) (estimation)	18.7lbs (8.5kg) (With transmitter) (estimation)
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F. Warranty**Radiodetection RD5000****Metrotech VM-810**

Item	Parameter	Parameter
Warranty	3 Years Parts & Labor when registered 12 months parts and labor when not registered	12 months

G. Upgrade		Radiodetection RD5000	Metrotech VM-810
Item	Parameter	Parameter	Parameter
Software	Software can be upgraded using a PC with USB port.	Software can be upgraded using a PC with USB port.	Software can be upgraded using a PC with USB port.
Calibration	Calibration can be checked using USB port	must be sent back to factory	
H. Features			
Item	Parameter	Parameter	Parameter
Enhanced Features	<ul style="list-style-type: none"> - New look and ergonomic design - One button operation - Compass: +/- 90° line direction indicator - Automatic back light control - Excellent isolation from adjacent utilities - Efficient high power 1 watt transmitter facilitates long distance locating - Transmitter impedance matching maximizes battery life - Saves you time - Simultaneous peak/null - Shows you the path – Left/right guidance system and audible tone pinpoints your utility and indicates strength of transmitted signal – digital signal strength - No manual gain adjustments – Fully automated - Determines depth – Quick and easy push button depth lightweight, and all readouts are line-of-sight, reducing user fatigue	<ul style="list-style-type: none"> - New look and ergonomic design - One button operation - Compass: +/- 90° line direction indicator - Automatic back light control - Excellent isolation from adjacent utilities - Efficient high power 1 watt transmitter facilitates long distance locating - Transmitter impedance matching maximizes battery life - Saves you time - Simultaneous peak/null - Shows you the path – Left/right guidance system and audible tone pinpoints your utility and indicates strength of transmitted signal – digital signal strength - No manual gain adjustments – Fully automated - Determines depth – Quick and easy push button depth lightweight, and all readouts are line-of-sight, reducing user fatigue	