



### www.vivax-metrotech.com

#### A. The vScan System

The vScan receiver, and (optional) transmitter, are used for locating buried utilities. The vScanM incorporates all the vScan features plus a metal cover locating mode.

The system is designed for use by those of all skill levels from the new user to those with extensive experience. A comprehensive range of optional accessories are available.

Using the vScan & vScanM is intuitive, the user interface and controls are in line with the industry standard, while a suite of new features assist the User in achieving an accurate locate in a productive manner, and provides proof of the locate and the data collected. Features can be turned off or configured using MyvScan, which also handles transfer and management of data.

#### **B.** Typical Applications

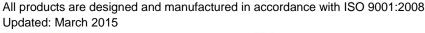
- Locating to avoid known or unknown buried pipes and cables
- Locating to find, trace and pinpoint buried pipes and cablesLocating buried non-metallic pipes and pinpointing blockages (requires the use of a Sonde transmitter)
- · Data logging:- captures and stores key information regarding the locate as proof of quality of locate
- Locating buried metal covers (vScanM only)

#### C. Typical Users

- Utility and communication companies and their contractors
- General contractors, building and plant maintenance companies
- Municipalities, councils, railways and local and state government agencies

#### D. Receiver Assembly

Item	Parameter	
Construction	High impact thermoplastic (ABS) injection molded housing	
Weight		
	With Metal detect option: 5.9lb (2.4kg)	
Dimensions	27in x 11in x 3in (69cm x 28cm x 7.5cm)	
Display	240 x 400 pixel, 2.7" (6.9cm) Monochrome, high resolution, WQVGA dot matrix screen.	
	TFT, Sunlight readable and with backlight.	
Receiver Antennas	2 x Peak antennas, 1 x compass antenna and metal detect antenna array (vScanM	
	only)	
Loudspeaker		
	health and safety output level requirements.	
Vibration Module	DC motor	
Battery Options	- Alkaline batteries ( 6 x AA's) are standard	
	- a custom Lithium ion rechargeable battery pack (7.2V, 5200mAh) with charger	
	(Input: 100-240V AC, 50/60Hz, 1.0A; Output: 8.4V, 2.0A) is optional	
Battery Life	- Alkaline – typically 12 hours intermittent use at 70°F (21°C)	
External Connectors	- 1 x Mini USB socket for data transfer / programming	
	- 1 x Socket for battery charger	
Controls	- 2 x Pushbuttons	
	- Rotary control	
	- Paddle Control	
Compliance/Approvals	- Complies with European standard CE (Directive 99/5/EC)	
	• EN 55011	
	• EN 61000-4-2: A1 & A2	
	• EN 61000-4-3	







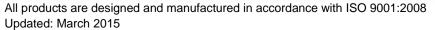


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	• EN 61000-4-8: A1
	• EN 61000-6-2
	• EN 61000-6-3
	• EN 61010-1
	• EN 61010-2-031
	• EN 61010-2-032
	• ETSI EN 300 330-2
	• ETSI EN 301 489-1
	• ETSI EN 301 489-3
-	Complies with FCC Rules Part 15
	CFR 47 Part 15

## E. Receiver Operational

Receiver Operational	
Item	Parameter
Information Displayed	- Signal strength - moving bar graph
	- Peak hold indicator. (indicates peak signal)
	- Mode indication (33kHz, 131kHz, Power, Radio, Sonde) (vScanM also includes
	metal cover location mode)
	- Compass (line direction indicator)
	- Line location - depth & current measurement
	- Sonde location - depth measurement
	- Battery condition
	- Speaker volume
	- Bluetooth and GPS status (if fitted)
	- Configuration menu & submenus
	- Customer definable start up screen
	- System self-test and calibration verification
	- Alert icons
	Swing alert
	Shallow line alert
	Overhead signal alert
	Signal overload alert
	Metal locating mode active (vScanM only)
	<ul> <li>Service reminder action required alert (other alerts, more)</li> </ul>
Alert Notification	- Visual alert:- on screen warning
Methods	- Audio
(all user configurable)	- "Vibe" Vibration in handle
	- Shutdown unit
Locating Frequencies	- 33kHz, 131kHz, Power, Radio, Sonde, Metal Detect (vScanM only)
Controls	- On/off
	- Info (depth/current - configurable)
	- Rotary Gain Control
	- Paddle (mode and menu navigation)
<b>Location Assist Tools</b>	- Orientation to line guidance in active mode
(configurable)	
Data Logging	- Integrated data logging (time based)
	Uses internal Real Time Clock
	4GB data storage (included)







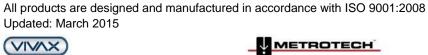


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	<ul> <li>High speed data tr</li> </ul>	ansfer (via USB cable)
	<ul> <li>Data management</li> </ul>	system (using MyvScan desktop application)
	- All locate, date and tin	ne parameters stored for each data point (one second).
		via Bluetooth), mapping data is also recorded with coordinates
	and date time.	, , , , , , , , , , , , , , , , , , , ,
	- Data transfer from vSc	can to MyvScan via the USB connection.
MyvScan	- MyvScan can be dowr	nload free from www.vivax-metrotech.com
(locator and data	- MyvScan (desktop app	plication) & vScan (locator) software update utility
management desktop	- Import log files from vs	Scan
application)	- Manage the locator co	onfiguration and personalization
	<ul> <li>Manage and export da</li> </ul>	
	- Export formats: .xls, .c	esv, .shp, .kml, .jpg, .pdf, .xlsx
	•	s or Google Earth™ (Requires data to be stored with optional
	GPS co-ordinates	
	- Full manipulation of da	ata for training identification or mapping purposes
	- Standard templates av	railable
	- Print latest receiver Ca	alibration check certificate
	- Personalize with Comp	pany/user name etc.
	- Install company specifi	ic start up screen
	- Lock out features/mod	es (require lock out dongle)
Performance	- Sensitivities	• •
	Mode	Sensitivity at 3.2ft (1m)
	50Hz/Power mode	5mA
	Radio mode	20μΑ
	33kHz mode	15µA
	131kHz mode	10μΑ
	Metal detect	150mm (6") cast iron cover detectable at 250mm (10")
	- Battery Life	
	<ul> <li>Alkaline batteries (</li> </ul>	(6 x AA cells) 12 hrs
Lateral Performance.	Lateral accuracy:	
(Using	- up to 9ft (3m) – 3% of	depth
Single, undistorted	- over 9ft (3m) – 5% of (	depth
signal source)		
Depth Performance	Depth measurement accu	· ·
(Using Single,	2.5% of depth. over 9ft (3m) – 5% of depth	
undistorted signal		ccuracy +/- 5% of detected signal, measured in mA rms.
source)		on strength of signal radiating to locator. Maximum practical line
	depth: 23ft (7m)	

# F. Transmitter Assembly

Item	Parameter
Construction	High impact ABS
Weight	3.3lbs (1.5kg) (with Li-ion batteries)
	3.7lbs (1.7kg) (with Alkaline Batteries)
Dimensions	18.1in x 3.5in x 2.6in (46cm x 9.0cm x 6.5cm)
Display	2 x LED interface
Audio	Internal Sounder
Controls	4 x pushbuttons
External Connectors	- 1 x 3 pin connection socket – (XLR)







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	- Charging socket on rechargeable battery
Batteries Options	- Standard battery pack – using 4 x alkaline "D" cells
	- a custom Lithium ion rechargeable battery pack (7.2V, 5200mAh) with charger
	(Input: 100-240V AC, 50/60Hz, 1.0A; Output: 8.4V, 2.0A) is optional
Battery Life	At 1 watt i.e. full output setting.
	- Alkaline – typically 30 hours continual use at 70°F (21°C)
Output Protection	Output protected against accidental connection to up to 240V AC
Approvals	- Complies with European standard CE (Directive 99/5/EC)
	• EN 55011
	• EN 61000-6-4: 2007
	• EN 61000-4-3: 2006
	• EN 61000-4-2: 1995 A1 & A2
	• EN 61000-4-8: 1994 A1
	ETSI EN 300 330-2 : 2006
	ETSI EN 301 489-1 : 2005
	ETSI EN 301 489-3 : 2002
	- Complies with FCC Rules Part 15
	CFR 47 part 2
	CFR 47 Part 15

## **G.** Transmitter Operational

transmitter Operational		
Item	Parameter	
Transmits	- Simultaneously transmits a frequency suitable for general locating and higher	
	frequency for small conductor locating	
	- Transmitted signal can be set to "pulse" or "continuous"	
Transmitting	- Induction mode	
Frequency by Mode	• 32.8kHz (32,768Hz)	
	- Connection mode	
	• 32.8kHz (32,768Hz)	
	• 131kHz (131,072Hz)	
	Both signals transmitted simultaneously	
	25 Signals stationing of the state of the	
	- Clamp mode	
	• 32.8kHz (32,768Hz)	
	• 131kHz (131,072Hz)	
	Both signals transmitted simultaneously	
Output Power Settings	- Battery saving - transmitter defaults to low output power when first switched on to	
	conserve battery life.	
	- High output – additional power can be selected when required	
Transmitting Mode	Combined power 1 watt	
Power output		
Output voltage	Maximum output voltage = 35V RMS	
Output current	Maximum output current = 200mA RMS	
Controls	- 4 x pushbuttons	
	• On/Off	
	Speaker volume	
	Signal output level	

All products are designed and manufactured in accordance with ISO 9001:2008 Updated: March 2015









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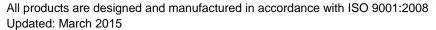
	Pulse/continuous output signal
Visual Indication	2 x LED indicating low and high output level
Audio indication	- A change in tone confirms a good connection
	- Tone pulsing or continuous to reflect Tx output
	- Slow pulse tone to indicate low battery
Compatible with	vScan Rx
Receivers	

## H. Environmental (both receiver and transmitter)

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
Maximum Humidity	80%
Shipping Weight	Rx: 7.83lbs (3.55kg) Tx: 6.11lbs (2.77kg)
Shipping Dimension	Rx: 28.7in(L) x 11.8in(W) x 3.4in(H) (73cm x 30cm x 8.6cm)
	Tx: 19.5in(L) x 5.4in(W) x 5.4in(H) (49.5cm x 13.8cm x 13.8cm)

## I. Accessories

i. Accessories		
Item	Parameter	
Standard Accessories	Receiver Accessories:	
	- USB data cable	
	- Carry bag (when both Rx & Tx are purchased together - otherwise an option)	
	- User handbook	
	- MyvScan configuration and data management utility download from www.vivax-	
	metrotech.com	
	Transmitter Accessories:	
	- Direct connection lead "dragon" on tangle-free carrier	
	(2 cable 10ft (3.5m) long with crocodile clips)	
	- 1 x T type ground stake	
	- 2 x connection magnets (UK market only)	
	- Tx foot stand	
	- Carry bag (when both Rx & Tx are purchased together - otherwise an option)	
Optional Accessories	Receiver Optional Accessories:	
	- Custom Lithium ion rechargeable pack with, 100-240V AC mains charger – typically 40 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.	
	- Sondes - D18, D38 and D64	
	- 12V DC charging lead	
	Transmitter Optional Accessories:	
	- Custom Lithium Ion battery pack and charger – typically 28 hours continual use at	
	70°F (21°C). Re-charging cycles approx. 500 times life cycle. Battery life varies with	
	temperature.	
	- 2" (50mm) transmitter clamp	
	- 4" (100mm) transmitter clamp	
	- 5" (125mm) transmitter clamp	
	- Clamp extension rod	











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Live plug connector (240V AC)     (to connect and use transmitter on lines carrying up to 240V AC)
- Live cable connector (480V AC)
- 10m extension ground cable

### J. Factory fitted options (not retrofit-able)

Item	Parameter
GPS Factory Fitted	- GPS module (internal) – enhances data logging and data management
Option	- Overview:-The GPS option is internal and powered from the receiver's battery.
	Accuracy is typically better than 5m (16ft) and is dependent on satellite availability.
	- Weight:-0.07lbs (30g) (May vary depending on manufacturers availability)
	- Indication:-Satellite lock indicated by icon on the display.
Blue tooth Factory Fitted	- Bluetooth module (for communicating to external devices such as high accuracy
Option	GPS)
Metal Cover locator	- Detects all metal types.
(vScanM)	- Sensitivity:- 150mm (6") cast iron cover detectable at 250mm (10")

### K. Warranty

Vivax-Metrotech vScan system (excluding batteries) are warrantied for a period of two years from date of invoice accordance to the Vivax-Metrotech warranty policy (available on our website vxmt.com). The vScan is a sophisticated unit and should only be repaired and service by your local VXMT office, distributor or authorized service center.

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

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