

RADIODETECTION®

MRX SG

Advanced Precision
Locating, Mapping,
and Marker Ball
Detection



SPX
TECHNOLOGIES

A Smarter Way to Locate & Map

The **MRX SG** provides a powerful, integrated approach to underground utility locating. The MRX SG integrates three key functions: **high-accuracy mapping, precision line locating, and marker ball detection**. This unique combination allows users to efficiently create a comprehensive digital record of buried utilities, using a single device.

What are RF Markers?










RF (Radio Frequency) markers locate underground utilities like plastic pipes, fiber optic cables and critical points. Types include marker balls, near-surface, mid-range, and full-range markers. Buried near assets, they are essential for hard-to-find assets. Radiodetection's RF marker locators are engineered to locate the most widely used RF marker types effectively.

How They Work

Each RF marker is embedded with a unique radio frequency that identifies the utility it marks, such as telecoms, gas, or water. When buried during installation or maintenance, the marker ball stays in place, serving as a signal for future detection.

RF markers echo signals when activated by the Radiodetection MRX locator. Since they require no power source, they are durable and maintenance-free, making them a reliable solution for identifying critical infrastructure in dense utility networks.

With these tools, utility locating becomes easier and safer, providing confidence when locating utilities and RF markers.

Utility type	Color	Frequency
French Power	 Natural	40.0kHz
General Non-drinkable water	 Purple	66.35kHz
Cable TV	 Black / Orange	77.0kHz
Gas	 Yellow	83.0kHz
Telephone / Telecoms*	 Orange	101.4kHz
Sanitary	 Green	121.6kHz
Euro Power	 Blue / Red	134.0kHz
Water	 Blue	145.7kHz
Electrical Power*	 Red	169.8kHz

*Local regulations may limit the use of specific radio frequencies. Please verify compliance with local licensing rules.

Marker Types

Maximum depth



Near Surface:
60cm / 2'



Ball Marker:
1.5m / 4.9'



Mid-Range:
1.8m / 5.9'



Full-Range:
2.4m / 7.9'



The **MRX SG** offers triple functionality

- High-accuracy mapping
- Precision line locating
- Marker ball detection

MRX SG Overview

LED to indicate satellite connection status

Spirit level/bubble for optimum precision

Vibrating handle for warnings

Fully integrated,
high accuracy
GNSS antenna

Cold shoe mount for
mobile device bracket
(fitted on both sides)

Speaker with 5 volume
levels as well as high
and low pitch

	MRX SG
Combined marker ball, Utility and Survey Grade locating	✓
Mapping Accuracy	1-2cm /sub-inch*
Active locate frequencies	21
Antenna Modes	7
Sonde Frequencies	4
Passive modes	5
Advanced Noise Filtering (Power Filters™)	✓
Fault Find	✓
iLOC	✓
Usage Logging	✓
Current Direction	✓
4kHz	✓
Custom Frequencies	✓

*Subject to RTK correction service provider and local conditions.

Weight 2.6kg/5.7lb

Fold down antenna



- **Precision Built-In:** High-accuracy GNSS ensures reliable mapping and reduces rework.
- **Ready to Use:** Includes lithium-ion battery and charger.
- **Seamless Compatibility:** Works effortlessly with Tx5, Tx10, and Tx10B transmitters.
- **Remote Control Efficiency:** Adjust Tx10B frequencies via iLOC®, without walking back.
- **All-in-One Capability:**
 - Map assets with high accuracy
 - Locate and trace utilities
 - Detect buried marker balls
- **Device Versatility:** Use with both iOS® and Android™ platforms.
- **Reliable Support:** 3 year warranty ensures peace of mind.

Transmitters

Using a Transmitter is recommended to identify and trace buried utilities, as it puts the operator in control.

- **Adaptable Power Options:** Choose between 5W, 10W, or 10W with Bluetooth.
- **Finding faults:** Combine the MRX with an A-frame accessory to identify and pinpoint insulation sheath faults to within 4" (10cm).
- **Deeper, Long-Distance Detection:** The 90V output allows you to trace deeper and further, even on high-impedance lines.
- **Wide Frequency Range:** 256Hz to 200kHz* means more flexibility across various locating scenarios.
- **Quick Diagnostics On-the-Go:** Multimeter function lets you instantly measure line voltage, current, and impedance.
- **Greater Flexibility with Induction:** Use 8 induction frequencies to match different job conditions and improve signal coupling.

*Use of the 200kHz frequency is restricted in the EU and possibly other countries. Please check local regulations.



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