

Dynatel Locators 1420X



3M™ Dynatel™ Locators 1420X Series determines exact location of underground 3M™ Electronic Marking System (EMS) Markers. This locator reads, writes, and locates 3M™ iD Markers. It locates 2 different marker frequencies simultaneously. It features a lightweight design, large display with easy-to use interface, enhanced connectivity, internal GPS module, and includes Li-Ion battery with built-in charger.

3M Dynatel 1420X Marker Locator can locate all models of passive markers that are properly installed. It detects industry standard electronic marker frequencies. This Dynatel locator has simplified integrated interfaces with precision locating capabilities. A GPS communication system is incorporated into this Dynatel locator to provide GIS mapping. The Dynatel locator operates at a temperature of 4 to 122 °F (20 to 50 °C).

Physical Specifications

Receiver	Size (L x W x H)	Weight with batteries
3M Dynatel 1420X	76.2cm x 11.9cm x 26.7cm	1.8 kg
Shipping Box	84cm x 43cm x 32cm	2.6 kg

Environmental Specifications

Operating Environment	Outdoor; Indoor for charging and configuring with a PC
Operating Temperature	-20°C to 50°C
Storage Temperature	-20°C to 70°C
Regulatory	3M™ Dynatel™ Locators1420X (FCC Part 15)
Environmental Standard	IP54
Maximum Altitude	6500 ft.

The 3M Dynatel 1420X locators are designed to equip a locate professional with the following technologies for underground locating and mapping:

- Receiver with Bluetooth wireless technology.
- Integrated USB port compatible with USB Type-C connector.
- Internal GPS data can be saved internally or directly to a memory stick compatible with a USB Type-C connector.
- Write/read/locate 3M™ iD Markers on iD capable units.
- Large LCD with an image-driven graphical interface.
- Locate 3M™ Electronic Marker System (EMS) on iD capable units.

Receiver Electrical Specifications

Power	Rechargeable battery pack (alkaline 8xAA size battery pack for backup)
Battery Life	8 hours typical
Charging Time	3 hours with 3A USB type-C™ connector AC adapter 15W *The unit will stop charging when unit temperature is 104° F (40° C) or higher and shuts off at 122° F (50° C)
Display	4.4" diagonal LCD (menu-driven GUI)
Speaker	0.25W
Headphone Jack	Standard mini phone jack (used along with USB type-C® adaptor)
Connectivity	Bluetooth® wireless technology - dual-mode Bluetooth 5.0. profiles support GAP, GATT, SPP USB port is compatible with USB Type-C connector
GPS Mapping	GPS Interface (internal, 3 m) CEP50 (autonomous position accuracy) External GPS Devices-Defer to Published specifications of the device
Gain Control	Manual and automatic

Please take note of the following information:

- It is recommended to use the rechargeable battery pack. However, a battery holder and adapter are provided for using 8-AA size alkaline batteries as a backup. which would have reduced battery life.
- The battery life specified for the 3M™ Rechargeable Battery Pack for the receiver is based on operation at 73° F / 23° C, with 10% backlight usage, and audio volume at a medium level.

Electronic Marker System (EMS) Specifications

Marker Depth Accuracy ³	+/- (10% + 5 cm) or +/- (10% + 2 in) up to specified depth of marker
Marker Locate Accuracy ⁴	Peak signal is found directly over the electronic marker.
Marker Frequencies ⁵	Telecom (TEL): 101.4 kHz Power US (PWR): 169.8 kHz ⁵ Gas (GAS): 83.0 kHz Water (WTR): 145.7 kHz Wastewater (WW): 121.6 kHz Communication (COM): 77.0 kHz General Purpose/Reclaimed Water (GP): 66.35 kHz European Power (CE PWR): 134 kHz FTTH (101.4 kHz)
Path Marker Frequencies (available on U model units)	Telecom (TEL): 48.8 kHz Power US (PWR): 34.9 kHz ⁴ Gas (GAS): 53.9 kHz Water (WTR): 73.5 kHz Wastewater (WW): 41.4 kHz Reclaimed Water (GP): 44.9 kHz
Marker Read/Locate Range	Near-Surface 3 ft (0.9 m) Ball Marker 5 ft (1.5 m) Mid-Range 6 ft (1.8 m) Full-Range 8 ft (2.4 m)
ID Marker Write Range	Near-Surface 6 in (15 cm) Ball Marker 12 in (30 cm) Full-Range 24 in (61 cm)
Data Storage ⁶	EMS-iD Read Records 512 EMS-iD Program Records 128 Cable Depth Records 512 Locate Records 512 Number of EMS-iD Templates: 75

³ Locators are tested in model field conditions with no adjacent signals. Actual operating conditions may result in decreased depth accuracy due to outside signal disruptions.

⁴ Marker Accuracy can be affected by several locator factors including angle or movement when measuring. Accuracy can also be affected by the marker buried on an angle or too close to metal objects.

⁵ US Power frequency is not available for E-Models.

⁶ External USB Type-C® flash drive is limited by flash drive size.

Available Kits															
3M Part # / Legacy Part #	Product Name	Cable/Pipe Locate	Fault Locate	Electronic Marker Locate	Path Marker Locate	Transmitter Output	Direct Connect Cable – small clips	Direct Connect Cable – large clips	Coupler Size (inches)	2200RB Rechargeable Battery	Receiver Rechargeable Battery	Cigarette Lighter Adapter Cable	Carrying Bag		
FCC Kit															
7100213431/ 80000219164	3M™ Dynatel™ Locator 1420X EMS/ID, Marker, 1/Case			●	●						●				
CE Kit															
7100213430 / 80000219172	3M™ Dynatel™ Locator 1420XE EMS/ID, Marker, 1/Case			●							●				
** Each kit contains battery and USB Type-C® accessories.															

Accessory List

3M Part #	Legacy Part #	Part Name
7000027975	26101606007	3M™ Ribbed Battery Compartment Cap With Liner For Dynatel™ M-Series Cable/Pipe Locators
7000058906	80630002535	3M™ 7000RB Rechargeable Battery Pack Dynatel™ Cable/Pipe/Fault/EMS Tape Locators 7000 Series, 1/Case
7100312883	80000237448	3M™ Dynatel™ Q65M6 USB-C Battery Charger 5vdc 3amp 30 watt minimum w/ international plug adapters
7100231120	80000225856	3M™ Soft Carrying Bag for 2200M, 2500 and 7000 Series, 1/Case
7100320323	80000237315	3M™ Assembly Harness Alkaline Battery Pack With Diode



Quality Testing

Our products undergo rigorous quality testing before shipment to ensure their excellence.



Packaging

We meticulously package our products to guarantee they arrive at their destination in pristine condition.



Transport

We prioritize swift transportation, minimizing your waiting time to receive your order promptly.



Delivery

Our delivery service is designed to bring the products you've ordered directly to your doorstep, tailored to your specific preferences.



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Please note that product specifications, size, and shape are subject to change without prior notice. As a result, the actual appearance of the product may vary from what is shown in the picture. However, we take pride in our ability to customize products to meet unique specifications, ensuring utmost customer satisfaction.

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