3M™ Dynatel™ 2500X and 2500XE Series Locator

Technical Data Sheet

2500X and 2500XE Locator

Product Description

3M™ Dynatel™ 2550X Series Locators
3M™ Dynatel™ 2573X Series Locators
3M™ Dynatel™ 2550X-ID Series Locators
3M™ Dynatel™ 2573X-ID Series Locators

3M™ Dynatel™ 2550XE Series Locators
3M™ Dynatel™ 2573XE Series Locators
3M™ Dynatel™ 2550XE-ID Series Locators
3M™ Dynatel™ 2573XE-ID Series Locators

The 3M Dynatel Pipe/Cable Locators 2500X and 2500XE Series are designed to equip a locate professional with the following technologies for underground locating and mapping:

- Receiver with Bluetooth® wireless technology
- Integrated USB port is compatible with USB Type-C® Connector
- Internal GPS that can be saved internally or directly to a memory stick that is compatible with USB Type-C® connector
- Write/read/locate 3M™ iD Markers
- Locate 3M™ Electronic Marker System (EMS)
- Multiple antennas for maximum locate capabilities
- Large LCD display with image driven graphical interface
- Integrated tone functions
- Sheath fault
- 12-Watt transmitter

Visit our website at 3m.co.uk/LocatingAndMarking for product information.

Agency Approvals and Self Certifications

For RoHS information, please visit www.3M.com/ROHS

Physical Specifications

Receiver	Size (L x W x H) inch (cm)	Weight with batteries
Dynatel™ 2500X/2500XE Locators	30 x 10.3 x 10.5 (76.2 x 26.1 x 26.7)	6.4 lbs (2.9 kg)
Transmitter	**Size (L x W x H) inch (cm)**	**Weight with batteries**
Dynatel™ 2500/2500E Series	7.8 x 11.3 x 6.8 (19.7 x 28.6 x 17.2)	5.29 lbs (2.4 kg) (Alkaline) Rechargeable battery (2200RB) and Alkaline batteries: 9.2 lbs (4.2 kg)
Shipping Box	**Size (L x W x H) inch (cm)**	**Weight with batteries**
Dynatel™ 2550X/2550XE Series Dynatel™ 2573X/2573XE Series	33 x 17 x 12.5 (84 x 43 x 32) 33 x 17 x 12.5 (84 x 43 x 32)	28 lbs (12.7 kg) 29 lbs (12.9 kg)

Environmental Specifications

Operating Environment	Outdoor; Indoor for charging and configuring with a PC
Operating Temperature	-4° F to 122° F (-20° C to 50° C)
Storage Temperature	-4° F to 158° F (-20° C to 70° C)
Regulatory	3M™ Dynatel™ Locators 2550X/2573X Series (FCC Part 15) 3M™ Dynatel™ Locators 2550XE/2573XE Series (CE)
Environmental Standard	IP54
Maximum Altitude	6500 ft. (2000 m)

Receiver Electrical Specifications

Power	3M™ Rechargeable Battery Pack (Alkaline 8xAA size battery pack for backup) [1]
Battery Life	8 hours typical[2]
Charging time	3 hours with 3A USB Type-C® Connector AC Adapter 15W[3]
Display	4.4" Diagonal LCD Display (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. Bluetooth 5.0 wireless module at 2.4 GHz. 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 Device
Gain Control	Manual and Automatic
Cable/Pipe Depth Accuracy	±2% ± 3 inch (7.6 cm) for 0–60 inch (0 - 1.5 m) ±6% ± 3 inch (7.6 cm) for 60–120 inch (1.5–3.0 m) ±10% ± 3 inch (7.6 cm) for 120–180 inch (3.0 m–4.5 m)
Cable/Pipe Depth Range	0–360 inch (0–914 cm)
Marker Depth Accuracy	± 10% ± 2 inch (5 cm) up to specified depth of marker[4]
Locate Modes	Trace View, Directional Peak, Null (Provides 360° locate), Special Peak, Dual Peak

Notes:

[1] It's recommended to use the rechargeable battery pack. However, a battery holder and adapter are provided for using 8-AA size Alkaline batteries for backup, which would have reduced battery life.

[2] The battery life is specified for the 3M™ Rechargeable Battery Pack for the receiver at 73° F / 23° C, with 10% usage of the backlight and audio volume at medium level.

[3] The unit will stop charging when unit temperature is 104° F (40° C) or higher and shuts off at 122° F (50° C)

[4] Depth accuracy susceptible to high ambient noise conditions

Locate Frequencies

3M™ Transmitter* 2500 Series	577 Hz, 1 kHz, 8 kHz, 33 kHz, 82 kHz, 200 kHz
3M™ Transmitter* 2500E Series	577 Hz, 1 kHz, 8 kHz, 33 kHz, 82 kHz, 133 kHz
Passive	31.5 kHz (CATV) 15 – 30 kHz (LF)
Power	50 Hz, 5th and 9th harmonic of 50 Hz 60 Hz, 5th and 9th harmonic of 60 Hz (100 / 120 Hz) rectified power
Auxiliary	512 Hz 560 Hz 640 Hz
User Defined Frequencies	Four (50 Hz to 999 Hz)

Frequencies outputted by the 3M™ Transmitter Unit. Receiver only receives them.

3M™ EMS Marker Frequencies

TEL: Telecommunications	101.4 kHz
PWR*: Power US	169.8 kHz
GAS: Gas	83.0 kHz
WTR: Water	145.7 kHz
WW: Wastewater/Sanitation	121.6 kHz
COM: CATV	77.0 kHz
GP: General Purpose/Reclaimed Water	66.35 kHz
CE PWR: European Power	134 kHz

Not available for XE-Models

3M™ EMS (iD) Marker - Writing & Reading Range

| 3M EMS (iD) Markers | EMS Markers | EMS iD Marker | |
	Max Read Range:	Max Write Range:	Max Read Range:
Near-Surface	3 ft (0.9 m)	6 inch (15 cm)	2 ft (0.6 m)
Ball Marker: *PWR: US Power* *WTR: Water*	5 ft (1.5 m)	12 inch (30 cm)	3.3 ft (1.0 m)
Ball Marker: *TEL: Telecommunications* *CE PWR: CE Power* *WW: Wastewater* *GAS: Gas* *CATV: Communication* *GP: General Purpose*	5 ft. (1.5 m)	12 inch (30 cm)	4 ft (1.2 m)
Mid-Range	6 ft (1.8 m)	Not Applicable	Not Applicable
Full-Range	8 ft (2.4 m)	24 inch (60 cm)	6.6 ft (2.0 m)

Receiver Data Storage

EMS-iD Read Records*	512
EMS-iD Program Records*	128
Locate Records*	512
Number of EMS-iD Templates:	80

* no record limit with External flash drive. (only limited by flash drive size)

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