

# 3M™ Dynatel™ Locators 7000 Series

## Marker Tape/Locator 7420

Based on existing Dynatel technology platform, the new 7420 locator will allow the user to locate EMS Caution Tape and existing electronic markers (balls, near-surface, full range, etc.). In addition, the locator will read/write to 3M iD markers. It is as easy as selecting “path” marker locating for EMS Caution Tape or “iD/EMS” for point marker locating. The push of one button will provide the depth to any of the underground marking solutions.

## Pipe/Cable/EMS Locators 7550-iD

## Pipe/Cable/Fault/EMS Locators 7573-iD

3M™ Dynatel™ locators 7500 series offer a broad feature set with advanced digital processing and simple interfaces with precision locating capabilities. The new 7500 series locators will allow the user to locate EMS Caution Tape and existing electronic markers (balls, near-surface, full range, etc.). In addition, all 7500 series locators will read/write to 3M iD markers. All 7500 series locators offer six active frequencies and transmitter output options in 3, 5 or 12 watts providing a solution for virtually all challenging applications encountered in the field.

As with all 3M Dynatel Cable/Pipe Locators, the 7500 series provides accurate pipe, cable, or Sonde depth measurements, giving a digital readout in feet and inches, or centimeters (user-selectable). All 7500 series locators and fault finders are also compatible with select GPS/GIS field mapping instruments for real time mapping of electronic markers or pipe and cable facilities. Other user friendly features include the ability to enable or disable receiver frequencies and the ability to select audio sounds in the simple menu driven interface.

## A Reputation of Excellence

When you choose a quality 3M™ Dynatel™ Locator, you get outstanding performance and reliability, along with toll-free technical phone support and a service center dedicated to excellence. Our service center provides calibration, repair, upgrades and modifications for safety, performance and reliability.



3M™ Dynatel™ Cable/Pipe/Fault/EMS Locator 7500 Series



3M™ Dynatel™ Cable/Pipe/Fault/EMS Locator 7500 Series

## Product Features

- 6 active frequencies for direct connect
- 4 induction frequencies with maximum allowed output power
- Trace view mapping display
- Push button depth to all underground markers (passive and iD)
- Receiver rechargeable battery kit
- All frequency mode in direct connect (4 simultaneously)
- Automatic impedance matching
- Ohm meter with high voltage detection
- Rugged, industrial temperature range
- 240VAC output protection

New features in the 3M™ Dynatel™ 7500 Series Locators include EMS Caution Tape Locating and EMS alert which allows the user to locate EMS Caution Tape and at the same time be alerted to electronic markers of the same utility.



## Optional/Replacement Accessories

Stock Number	Product Number	Product Description
80610074686	3001	Dyna-Coupler 3-Inch
80610764716	3019	Cable Locator Coupler Accessory Kit 3"
80611325830	4001	Dyna-Coupler 4.5 Inch
80611335201	4519	Locator Coupler Accessory Kit - 4.5"
80610411185	1196	6" Dyna-Coupler W/Pouch
80611312499	1196/C	6" Dyna-Coupler W/Pouch & 9011 Coupler Cable
80610598130	2876	Large Clip Direct-Connect Trnsmr Cable for Cable/Fault Locators
80610598668	2892	Small Clip Direct-Connect Trnsmr Cable for Cable/Fault Locators
80610074850	9012	Direct Connect, 5-Foot Transmitter Cable, Telephone
80610074843	9011	Coupler Cable
80610126833	9043	Ground Extension Cable 12'
80611330368	2200M-USB	USB To RS232 Converter For 2200M/1420 Locators
80610074777	3014	Earth Contact Frame
80610074942	9026	Earth Contact Frame Cable
80611146715	2200M/7000	Soft Carrying Bag For 2200M/2500/7000 Series
80611306517	2200/7000RB	Rechargeable Battery for 5W & 12W Units Non-Spillable
80630002535	7000RB	Rechargeable Battery Pack for 7000 Series Rcvr
80610126841	8006	Ground Rod
80610757785	3229	ADP 33 kHz Sonde for Use w/Cable/Fault Locators

# 3M™ Dynatel™ Pipe/Cable/Fault/EMS Locator 7500 Series Product Specifications

## Physical Specifications:

Locator	Size (H x W x D) IN (CM)	Weight (including batteries)
Shipping Box	30" x 6.5" x 10.5" (76 x 17 x 27)	6.4 lb. (2.90 kg)
	Size (L x W x H) IN (CM)	7 lb. (3.2 kg)
	33" x 17" x 12.5" (84 x 43 x 32)	

## Environmental Specifications:

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	7550 (FCC Part 15), 7550E (CE) 7573 (FCC Part 15), 7573E (CE)
Environmental Standard	IP54

## 7500 Series Receiver Specifications

Power	Rechargeable Li Ion battery pack (12V2R4A)1
Battery Life	8 hours typical2
Charging Time	2.5 hours typical, with 90~240V AC adapter
Display	Large graphic high-contrast LCD with backlight
Speaker	0.25W
Headphone jack	Standard mini phone jack
Serial Port	Standard RS232 serial with DB9 connector (RS232 to USB adapter cable included)
Display	LCD
Gain Control	Manual and Automatic
Weight w/batteries	5.0 - 6.4 lbs. (2.3 - 2.9 kg) (model dependent)
Cable/Pipe Depth Accuracy	±2% ± 3 in. (7.6 cm) for 0–60 in. (1.5 m) ±6% ± 3 in. (7.6 cm) for 60–120 in. (1.5–3.0 m) ±10% ± 3 in. (7.6 cm) for 120–180 in. (3.0 m–4.5 m)
Cable/Pipe Depth Range	0–360 in. (0–914 cm)

## Locate Modes:

Trace View  
Directional Peak  
Directional Null  
Special Peak  
Induction Peak

## Frequency Response:

Active 7550/7573	577 Hz 1 kHz 8 kHz 33 kHz 82 kHz 200 kHz
Active 7550E/7573E International	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

**Marker Compatibility:**

3M™ EMS/iD Markers 3M™ EMS 7600 Series Caution Tape	All 3M markers (telephone, gas, communication, power, water, wastewater and general purpose) All 3M path marking caution tape (telephone, gas, water, waste water)
Maximum Write Range 3M™ iD Markers:	(Telephone, Power*, Gas, Water, Wastewater, Communications (CATV), General Purpose)
Near-Surface	6 in (15 cm)
Ball Marker	12 in (30 cm)
Full-Range	24 in (61 cm)

\* The Power frequency is not supported for 7550E/7573E in write mode.

7550/7573 Maximum Read Range 3M™ iD Markers (with ID):	(Telephone, Power, Gas, Water, Wastewater, Communications (CATV), General Purpose)*
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Near-Surface	3 ft (0.9 m)
Ball Marker	5 ft (1.5 m)
Full-Range	8 ft (2.4 m)

7550E/7573E Maximum Read Range 3M™ iD Markers (with ID):	(Telephone, Water, Gas, Wastewater, Communications (CATV), General Purpose)*
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Near-Surface	90 cm (36 in)
Ball Marker	1.5 m (60 in)
Full-Range	2.4 m (96 in)

\* Some countries do not allow all marker operating frequencies. Refer to Configuration Section for 7550E/7573E (Section 4A).

**Maximum Detection Depth for Passive Markers (no ID):**

Near-Surface	3 ft (0.9 m)
Ball Marker	6 ft. (1.8 m)
Mid-Range	7 ft. (2.1 m)
Full-Range	9 ft. (2.75 m)

**Maximum Detection Depth**

7600 Series CT-3 Tape	2 ft (0.6 m)
Depth measurement accuracy	+/- (10% + 5 cm) or +/- (10% + 2 in) up to specified depth of marker or caution tape (Depth accuracy susceptible to high ambient noise conditions)

**iD Marker Memory Storage:**

Memory storage with date/time stamp	Read marker records 100
Written marker records	100
User defined iD templates	32
Marker depth memory storage	Five with date/time stamp

**Notes:**

1. It's recommended to use the rechargeable battery pack. However, a battery holder is provided for using 8-AA size Alkaline batteries for backup, which would have reduced battery life.
2. The battery life is specified for the 12V2R4 rechargeable battery pack at 73°F / 23°C, with 10% usage of the backlight and audio volume at medium level.

## 7500 Series U Version 12-Watt Transmitter Specifications

Item	Specification
Trace Mode	577 Hz 1 kHz 8 kHz 33 kHz 82 kHz 200 kHz
Fault Mode (7573 models only)	10/20 Hz -Fault signal 577 Hz / 33 kHz -Trace signal.
Tone Mode (7573 models only)	577 Hz and 200 kHz pulsing at 8 Hz
Induction Mode	8 kHz 33 kHz 82 kHz 200 kHz
Output Power (in Direct Connect mode)	Normal setting: 0.5 W High setting: 3 W @ 577 Hz, 1 kHz, 8 kHz, 33 kHz; 1 W @ 82 kHz, 200 kHz Maximum setting: 12 W @ 577 Hz, 1 kHz, 8 kHz; 10 W @ 33 kHz; 1 W @ 82 kHz, 200 kHz
Output Voltage (Maximum)	70 Vrms

Item	Specification
Output Protection	240 Vrms
Weight w/batteries	w/ alkaline batteries only: 5.2 lbs (2.4 kg) w/ rechargeable battery and alkaline batteries: 9.2 lbs (4.2 kg)
Battery Qty. and size	For Normal and High Output Power: 6 "C" size, Alkaline (LR14) For Maximum Output Power: Rechargeable Battery, 12V-6AH, Sealed Maintenance-Free Lead (Pb)-Acid Battery (See Safety Section)
Typical Battery Life	Normal Output Power level: 50 hours High Output Power level: 10 hours Typical transmitter specified battery life (listed above) is increased by 40% when using the 2200RB Rechargeable Battery (12 volt). Using the 2200RB bypasses the alkaline batteries. Maximum Output Power level: 4 hours (Maximum Output Power level achieved using 2200RB Rechargeable Battery.)
External DC Power	9–18 V DC
Standard	IP54
Regulatory	FCC compliant, FCC Part 15
Operating Temperature	4°F to 122°F (-20°C to 50°C)
Storage Temperature	-4°F to 158°F (-20°C to 70°C)
Rechargeable Battery Fuse	5 Amp / 32 Volt Littelfuse MINI® Blade # 0297005
Cigarette Lighter Adapter Cable Fuse	4 Amp/Fast Blow 250V

## 7500 Series E Version 12-Watt Transmitter Specifications

Item	Specification
Trace Mode	577 Hz 1 kHz 8 kHz 33 kHz 82 kHz 200 kHz
Fault Mode - (7573 models only)	10/20 Hz -Fault signal 577 Hz / 33 kHz -Trace signal <i>Note: The fault locating limit is 2.0MΩ, although the transmitter's ohm-meter mode can display a fault resistance up to 10MΩ.</i>
Tone Mode - (7573 models only)	577 Hz and 200 kHz pulsing at 8 Hz
Induction Mode	8 kHz 33 kHz 82 kHz 200 kHz
Output Power (in Direct Connect mode)	Normal setting: 0.5 W High setting: 3 W @ 577 Hz, 1 kHz, 8 kHz, 33 kHz; 1 W @ 82 kHz, 200 kHz Maximum setting: 12 W @ 577 Hz, 1 kHz, 8 kHz; 10 W @ 33 kHz; 1 W @ 82 kHz, 200 kHz (with external DC power source)
Output Voltage (Maximum)	70 Vrms
Output Protection	240 Vrms
Weight w/batteries	w/ alkaline batteries only: 5.2 lbs (2.4 kg) w/ rechargeable battery (2200RB) and alkaline batteries: 9.2 lbs (4.2 kg)
Battery Qty. and size	For Normal and High Output Power: 6 "C" size, Alkaline (LR14) For Maximum Output Power: Rechargeable Battery (2200RB), 12V-6AH, Sealed Maintenance-Free Lead (Pb)-Acid Battery (See safety information below.)
Typical Battery Life	Normal Output Power level: 50 hours High Output Power level: 10 hours Typical transmitter specified battery life (listed above) is increased by 40% when using the 2200RB Rechargeable Battery (12 volt). Using the 2200RB bypasses the alkaline batteries. Maximum Output Power level: 4 hours (Maximum Output Power level achieved using 2200RB Rechargeable Battery.)
External DC Power	9–18 V DC
Standard	IP54
Regulatory	FCC compliant, FCC Part 15
Operating Temperature	4°F to 122°F (-20°C to 50°C)
Rechargeable Battery Fuse	5 Amp / 32 Volt, Littelfuse MINI® Blade # 0297005
Cigarette Lighter Adapter Cable Fuse	4 Amp/Fast Blow 250V