

# 3M™ Dynatel™

## Electronic Marker System Marker Locator 1420-iD Electronic Marker System Marker Locator 1420E-iD

3M™ Dynatel™ Electronic Marker System (EMS) Marker Locators 1420-iD/1420E-iD are microprocessor-based systems that quickly and efficiently locate underground markers—years after construction or maintenance.

Designed to be accurate, fast and integrated, the 1420-iD/1420E-iD EMS marker locators allow you to accurately and easily:

- Locate, read and write to 3M iD markers
- Pinpoint the depth and location of all existing models of properly installed underground passive EMS markers
- Conduct direct depth reading of markers
- Locate two different marker frequencies simultaneously

### Advanced features detect information about underground utilities

A feature exclusive to the 1420-iD/1420E-iD locators is the ability to read, write and lock programmed information into the 3M™ Electronic Marker System iD Markers. Information such as a pre-programmed unique identification number, facility data, owner information, application type, placement date and other details from up to 100 markers can all be stored with date/time stamp and transmitted back to your PC for enhanced resource management.

### Accurate even in congested areas

The 1420-iD/1420E-iD locators are unaffected by metal conduit or pipe, metallic conductors, fences, AC power or electronic markers for other utilities. Multiple markers located at close proximity can be read individually using this system.



3M™ Dynatel™ Electronic Marker System  
Locator 1420-iD



## A simple, easy-to-use system

Lightweight and compact, the locators are rugged, ergonomic and require very little operator training. A large bright backlit digital liquid crystal display screen and soft-key operation make them easy to understand and use for more precise locates. A “memory” feature remembers operator set-up from the previous use. A standard RS232/USB communications port allows interface to an external computer for uploading/downloading of data, unit configuration and remote software upgrades. The system is estimated to operate for more than 25 hours on eight AA alkaline batteries.

## Exclusive GPS system adds accuracy with ease

The 3M™ Dynatel™ Electronic Marker System Marker Locators 1420-iD/1420E-iD are now compatible with select GPS/GIS field mapping instruments for real-time mapping of marker placement. The customized Dynatel interface commands the GPS/GIS device allowing even a generalist field technician to perform real-time mapping. It’s a simple system for mapping marker placement and saving information directly into CAD and GIS systems. The electronic export of this information in GIS format creates an automated paperless system for records updating, making positive locates in the field easier than ever. Visit our website at <http://www.3m.com/dynatel> for more details.



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### Features

|  |   |
|--|---|
| Large backlit, high-resolution graphic display | Locator PC tools software                 |
| PC interface via standard RS232/USB            | iD marker read/write capability           |
| User-configurable features and interface       | Dual marker frequency search-simultaneous |
| Detects all seven EMS marker frequencies       | iD Marker depth estimation                |

### Physical Specifications

|                 | Size (H x W x D) CM (in.)                | Weight (including batteries) |
|-----------------|--|------------------------------|
| <b>Receiver</b> | 26,7 x 11,8 x 76,2<br>(10.25 x 4.7 x 30) | 1,9 kg (4 lb.)               |
| <b>Shipping</b> | N/A                                      | 5,3 kg (11.5 lb.)            |



telephone      gas      catv/communication      power      water      wastewater      general

## Environmental Specifications

|                       |                                   |
|-----------------------|-----------------------------------|
| Operating temperature | -20° C to 50° C (-4° F to 122° F) |
| Storage temperature   | -20° C to 70° C (-4° F to 158° F) |
| Regulatory            | CE (Export Models Only)           |
| Standard              | IP54                              |

## Electrical Specifications

|   |  |   |
|---|--|---|
| <b>Marker compatibility</b>                   | All 3M markers (telephone, gas, communication, power, water, wastewater and general purpose) |   |
| <b>Dual marker mode</b>                       | Any two marker frequencies simultaneously  |   |
| <b>Detection range</b>                        | Exceeds maximum marker depth specifications  |   |
| <b>Marker read range</b>                      | 1420<br>Near Surface 3 ft. (.9 m)<br>Ball 5 ft. (1.5 m)<br>Full Range 8 ft. (2.4 m)          | 1420E<br>Near Surface 0.6 m (2 ft.)<br>Ball 1.2 m (4 ft.) telephone, gas, CATV, wastewater<br>1.0 m (3.3 ft) water, power<br>Full Range 2 m (6 ft.) |
| <b>Marker write range</b>                     | 30 cm (1 ft.)  |   |
| <b>RFID Marker depth measurement accuracy</b> | +/- 10% +/- 5 cm (2 in.) up to marker depth specifications                                   |   |
| <b>Memory storage with date/time stamp</b>    | Read marker records  | 100   |
|   | Written marker records   | 100   |
|   | User defined iD templates  | 32  |
| <b>Marker depth memory storage</b>            | Five with date/time stamp  |   |
| <b>Power</b>                                  | Battery type: eight AA size, alkaline<br>Typical battery life: 25 hours                      |   |
| <b>Display</b>                                | Large graphic high-contrast LCD with backlight   |   |
| <b>Speaker</b>                                | 0.25W  |   |
| <b>Headphone jack</b>                         | Standard mini-jack   |   |
| <b>Serial port</b>                            | Standard RS232 serial with DB9 connector (USB adapter cable included)                        |   |

## Ordering Information

| Product Number | Description   |
|----------------|---|
| 1420           | EMS-iD marker locator with iD read/write                            |
| 1420E          | EMS-iD marker locator with iD read/write (CE Approved Export Model) |

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