

3M Dynatel 2273/2250 M-iD Locator and Thales MobileMapper GPS Setup

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A. Setting up the 3M Dynatel Receiver

Confirm you have a Dynatel M-iD receiver with a hardware version of 5.0 or better, and a software version of 14.0 or better. To confirm which versions you have, press ON/OFF, press Menu, press More and then press Self-Test. The H/W (hardware), and S/W (software) versions will be shown on the screen. If you do not have the right hardware, the unit can be upgraded. Call 800-426-8688 and select option #2 for 3M Dynatel Service, and they will process your request. To upgrade software, follow the manual for easy over the Internet upgrades.

- 1) Activate the GPS mode:
 - a. Obtain the GPS activation code for your Dynatel Receiver. (This code is specific to your serial number. It does not work on any receiver but yours.)
 - b. Locate the serial number of your receiver by turning it on and doing a self-test.
 - c. Go to www.3m.com/dynatel, click on “Get GPS activation code.”
 - d. Write down the four-digit activation code.
 - e. Turn receiver on
 - f. Press Menu
 - g. Press Setup
 - h. Press MORE>> – 2 times
 - i. Press COM (PC) third yellow button
 - j. The screen will ask for the activation code.
 - k. Enter the code that you got from the web site.
 - l. Press OK/Locate to save the code.
- 2) Your receiver is now setup to communicate with a GPS unit.

Note: You will need a null modem adapter in order to communicate with a Thales MobileMapper GPS receiver.

B. Setting up the Thales MobileMapper

Confirm that you have a MobileMapper with receiver software version 6.52 or higher. To obtain the current version of MobileMapper receiver software, please go to ftp.thalesnavigation.com and look in the \Mobile Mapping\MM Pro\Firmware\ folder. You will need the USB/Serial cable included with the MobileMapper to connect to the Dynatel receiver. The null modem gender changer adapter provided with the Dynatel is also required.

- 1.) Turn the MobileMapper unit on by pressing “PWR” button.
- 2.) Press “ENTER” button three times in rapid succession to get past start up.
- 3.) Press “MENU.” You will see the “Menu” screen.

- 4.) Using the directional button in the middle of the unit scroll down to highlight "Setup."
- 5.) Press "ENTER." You will see the "Setup Menu" screen.
- 6.) Using the directional button in the middle of the unit scroll down to highlight "Initialize."
- 7.) Press "ENTER." You will see the "Region" screen.
- 8.) Using the directional button in the middle of the unit scroll down to highlight "USA."
- 9.) Press "ENTER." You will see the "Area" screen.
- 10.) Using the directional button in the middle of the unit scroll down to highlight 'The State that you are in'.
- 11.) Press "ENTER." You will see the "Date" screen.
- 12.) By pressing the "ENTER" key you will be able to move from Time to Date to Done points on the screen.
- 13.) By using the directional button in the middle of the unit you can change the Time and Date.
- 14.) Once the Time and Date have been corrected use the "ENTER" key to highlight "Done."
- 15.) Press "Done."
- 16.) You will be taken back to the "Setup Menu" screen.
- 17.) In order for communication between the Dynatel and the MobileMapper you'll need to verify two other Setup options.
- 18.) From the "Setup Menu" screen scroll down to "NMEA", press "ENTER."
- 19.) Scroll down to "V2.1GSA" and press "ENTER."
- 20.) Scroll down to "Baud Rate" and press "ENTER."
- 21.) Highlight "4800 Baud" and press "ENTER." This will ensure that the Dynatel and MobileMapper communicate at the same speed.
- 22.) Press "ESC."
- 23.) Plug a 'Null Modem' into the Serial Port on the bottom of the Dynatel unit. If you do not have one of these please call. One will be sent to you without delay. The devices cannot communicate without a 'Null Modem.' A simple gender changer will NOT suffice.
- 24.) Attach the serial cable to the back of the MobileMapper unit and to the null modem on the bottom of the Dynatel unit.
- 25.) Turn on the Dynatel by pressing the "On/Off" button.
- 26.) Press "Menu."
- 27.) Press "Setup."
- 28.) Press "More."
- 29.) Press "Marker Type" and select the type of iD marker that you are going to be using.
- 30.) Press "Enable."
- 31.) Press "Ok."
- 32.) Press "More."
- 33.) Press "More" again.
- 34.) The last option on the right side of the screen should display "GIS COM." If it does not press the yellow button below it to cycle through until you find it.
- 35.) Press "Ok" to save your settings and you are ready to locate.
- 36.) Press "Marker" to go into the 'Locate Marker' mode.
- 37.) If proper communication is occurring, the GPS coordinates of your location will be displayed on the Dynatel screen.

C. Setting up your PC

Install the MobileMapper Office software on your PC. You will also need the serial cable to attach the GPS to the PC. To map and collect data with the 3M Dynatel you will need to create a Feature Library. Then, each time you go into the field you can create a job using your feature library.

- 1.) Open MobileMapper Office program on your PC. (Screen should display with map of the world on display and on the right side it should say GPS coordinates and Read Marker)
- 2.) Click on "Tools."
- 3.) Scroll down and click on "Feature Library Editor."
- 4.) A new window will pop up.
- 5.) In the new window click on "File."
- 6.) Then click on "Save As."
- 7.) Name the new file "DYNATEL.MMF."
- 8.) No need to assign features, attribute and values.
- 9.) It will be noted as a .mmf file.
- 10.) Don't close the Feature Library Editor window just yet.
- 11.) You can now upload your feature library to your MobileMapper.
- 12.) Connect your MobileMapper to the serial cable and plug into your COM1 port.
- 13.) Make sure to close all other applications, including internet browsers or other windows.
- 14.) Turn on your MobileMapper.
- 15.) In the Feature Library Editor Window click on "Upload to GPS."
- 16.) The feature library you just created will load itself onto your MobileMapper.
- 17.) You can now take the MobileMapper into the field, and create a job with your new Feature library.

D. Locating a 3M M-iD marker and recording a GPS location

- 1.) To demonstrate, drop 2-4 M-iD markers about 40-50 feet apart.
- 2.) Returning to the MobileMapper and open a 'Job'.
- 3.) To create a Job press "MENU."
- 4.) Using the directional button in the middle of the unit scroll down to highlight "New Job."
- 5.) Press "ENTER."
- 6.) You will see the "Job Name" screen.
- 7.) Using the directional button in the middle of the unit scroll up to the key with the arrow pointing to the left.
- 8.) Press "ENTER" as often as necessary to erase the pre-named New Job.
- 9.) Using the directional button in the middle of the unit scroll to the first letter of the name of the new Job you want to use.
- 10.) Press "ENTER."
- 11.) Repeat points 46 and 47 until you have given your new Job a name.
- 12.) Using the directional button in the middle of the unit scroll down to highlight "OK."
- 13.) Press "ENTER."
- 14.) The "Feature Library" screen will appear. Using the directional button in the middle of the unit scroll down to highlight "DYNATEL.MMF." If this feature library is NOT part of the files on your MobileMapper then stop, and refer to 'Dynatel Feature Library.doc' directions.

- 15.) If “DYNATEL.MMF” is included on your MobileMapper then press “ENTER.”
- 16.) You are now ready to begin locating iD markers and logging data into your new job.
- 17.) With the DYNATEL.MMF feature library it is not necessary to concern yourself with the proper logging of attributes and values of attributes. The communication between the two devices will do that for you.
- 18.) Walk to your first iD marker.
- 19.) Follow your normal procedure for locating the iD marker.
- 20.) Press “Read.”
- 21.) At this point the data within the iD marker will be loaded into the Dynatel and then immediately transferred to the MobileMapper with date/time/GPS location stamps, including ALL of the attribute data within the iD marker.
- 22.) Walk to your next iD Marker.
- 23.) Repeat Steps 1 and 2.
- 24.) When you are done locating the iD markers you will need to close your job.
- 25.) During this process you will notice at the bottom of the MobileMapper display two boxes.
- 26.) On the left under “Num Sat” you have a display of the number of satellites that the MobileMapper is tracking.
- 27.) Press the “Menu” button.
- 28.) Then scroll down to “Close Job.”
- 29.) Press ‘Enter’ and you are now ready to move your data.

E. Moving Data Recorded on the Marker and GPS to PC

- 1.) Turn on your PC and open the MobileMapper Office Software.
- 2.) Use the serial cable to attach the MobileMapper to your PC
- 3.) Click on “File.”
- 4.) Click on “Download from GPS...”
- 5.) A new window will open called ‘MobileMapper Transfer’.
- 6.) In that window click on “File.”
- 7.) Click on “Connect.”
- 8.) Click on “GPS Device via Cable...”
- 9.) It will search for jobs and other information on the MobileMapper.
- 10.) Once it finds the files on the MobileMapper it will display them on the left hand side of the window.
- 11.) Using the mouse pointer to the file/job that you created in the field.
- 12.) Click on the right button on the mouse.
- 13.) Click on the “Copy to F5.” Your job will be copied from the MobileMapper to your PC.
- 14.) Close the “MobileMapper Transfer” window.
- 15.) Your data will appear on the screen.
- 16.) Move your mouse pointer to one of the points on the screen and click on it.
- 17.) On the right hand side of the screen all the data you collected on that point will be displayed.
- 18.) You can then save the data under the file name you started with or save it under a new name.

Congratulations! You have now located and mapped several iD markers, collected data from them, uploaded the data and displayed it!