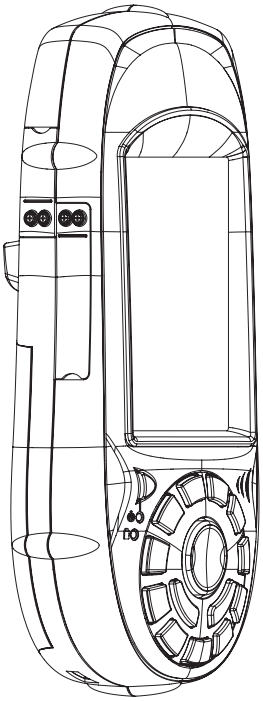
MM CE GS Guide.book Page 1 Monday, June 20, 2005 11:04 AM

English



MobileMapper CE
Getting Started Guide

English

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FCC Notice

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by Thales Navigation could void the user's authority to operate this equipment.

CAUTION: To comply with FCC RF exposure compliance requirements, a separation distance of at least 20 cm must be maintained between the antenna of this device and all persons.

CE

In the presence of RF field, the receiver's satellite signal strength may degrade. When removed from the RF field, the signal strength should return to normal.

This device has been found compliant with the Canadian RSS-210 specification, issue 5, November 2001 which stipulates that operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

English

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Introduction

Thank you for purchasing a MobileMapper CE from Thales Navigation. This Getting Started guide will give you useful information about your Windows CE GPS handheld computer. It will also guide you in your first steps using the system.

MobileMapper CE is a handheld device that integrates sub-meter GPS with Microsoft Windows CE .NET in a rugged design suitable for mobile mapping applications.

Being an open-platform Windows CE device, MobileMapper CE allows you to choose the GIS software that is right for you.

Key Features

- Integrated GPS with real-time, sub-meter accuracy using WAAS/EGNOS or external real-time RTCM differential corrections
- Integrated Bluetooth wireless technology
- Ready for RTCM real-time corrections
- Full color, daylight readable, transflective TFT display with 320 x 240 resolution and touch screen
- Integrated Secure Digital memory card slot
- Rugged and waterproof design
- Built-in alphanumeric keyboard
- Built-in speaker and microphone
- Advanced power management
- All-day rechargeable, removable Li-ion battery
- Embedded Microsoft Windows CE .NET operating system
- Off-the-shelf industry standard Mobile GIS software applications support

Software Provided as Standard

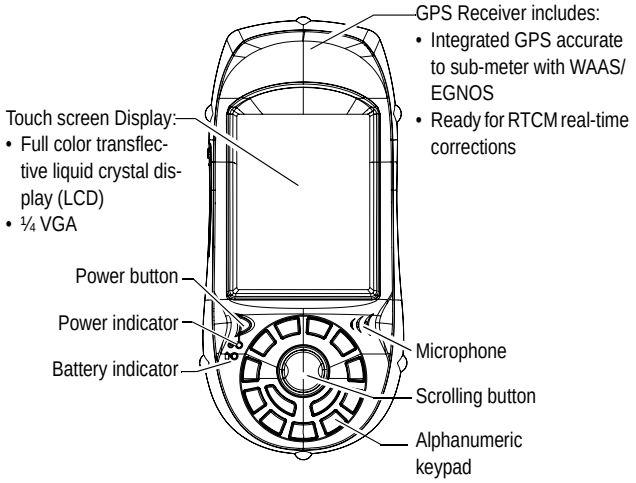
- GPS utilities - provide initialization and setup, current GPS status view, mission planning and configuration of optional beacon differential receiver
- Bluetooth Manager - full-featured Bluetooth connectivity configuration utility
- Microsoft WordPad, Internet Explorer®, Windows Explorer, Terminal, ActiveSync®, Windows Media Player and Inbox
- Microsoft File Viewers: Excel, Word and Image Viewers
- EZ Recorder - sound record and playback program
- Software Development Kit (SDK) and GPS Application Programming Interface (API) delivered free of charge when a Business Partner Agreement has been approved. Please contact Thales Navigation to discuss your software development project.

About Windows CE .NET

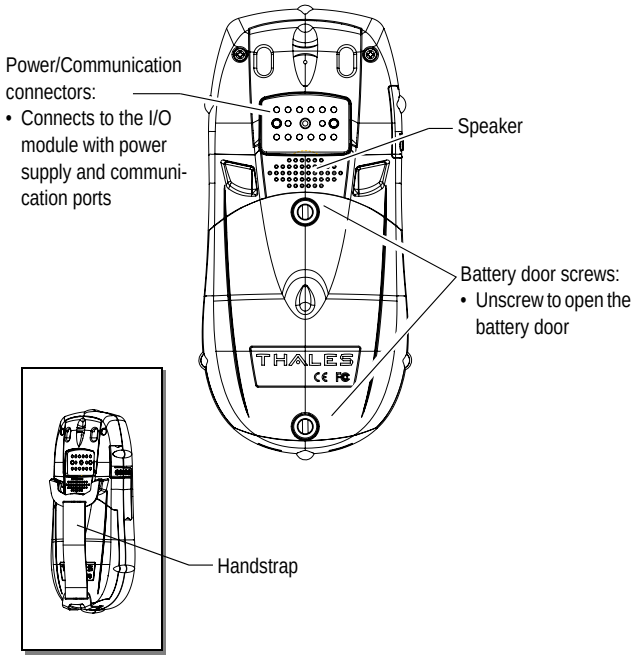
Windows CE is a version of the Windows operating system designed for small devices such as personal digital assistants (PDAs) or handheld PCs. The Windows CE graphical user interface (GUI) is very similar to desktop Windows operating systems. MobileMapper CE is embedded with the latest version: Windows CE .NET 4.2 Professional version. Like most Windows CE devices, the MobileMapper CE handheld has a touch screen. To interact with the MobileMapper CE, use the stylus to tap on the touch screen.

Receiver Description

Front Panel



Back Panel



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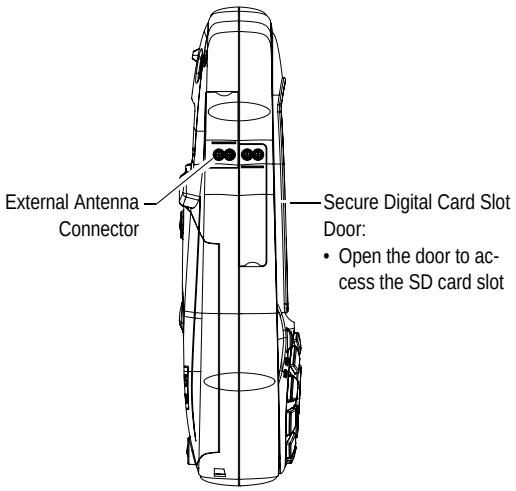
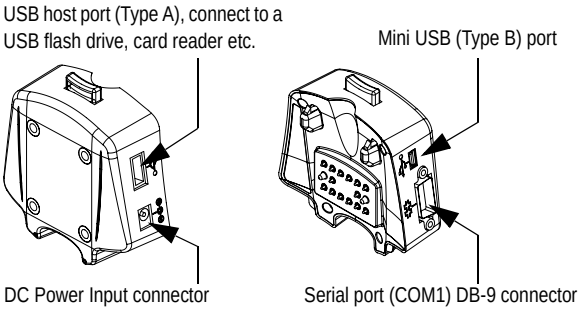
Side Panel



I/O Module



Resetting MobileMapper CE handheld

To reset MobileMapper CE, hold down the ESC, Enter and Power keys simultaneously until the screen goes blank. The MobileMapper CE switches off. You can then power on the device by pressing the power button.

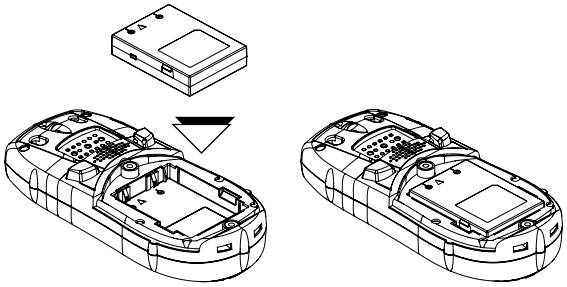
To reset only the GPS receiver, (see *Resetting GPS on page 22*).

Preparing for First-Time Use

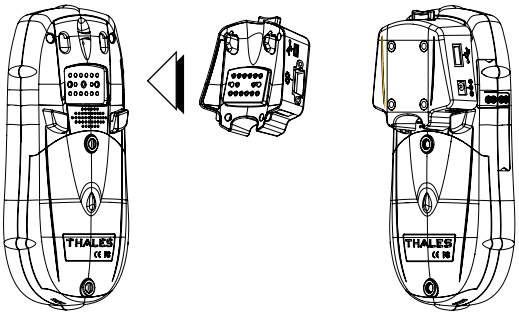
Charging the battery

Before using your MobileMapper CE handheld PC, you must first charge the battery:

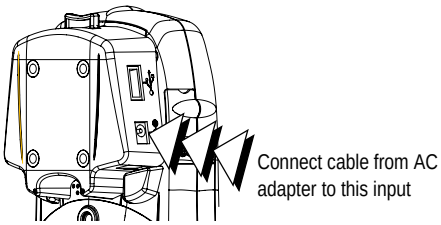
1. Locate the removable battery
2. Open the battery door
3. Insert the battery into the battery compartment in the back of the MobileMapper CE handheld as shown below:



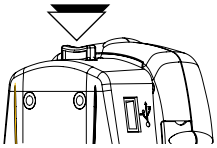
4. Close the battery door and tighten the screws
5. Attach the Clip-on I/O module to the MobileMapper CE handheld as shown below:



6. Connect the AC adapter (see below) and then let it charge the battery for up to six hours.

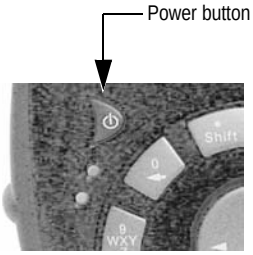


7. To detach the clip-on I/O module, press the release button on the module.



Turning the Receiver On

Once you have charged the battery in your MobileMapper CE, press the red power button to turn it on.



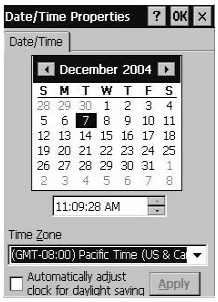
Calibrating the Screen

For the first-time use, you need to align your display screen so the cursor on the touch screen align with the tip of your stylus. Use the stylus pen to tap the center of each target that appears on the Calibration screen with the tip of the stylus. Tap anywhere on the display when finished.

To re-calibrate your screen at anytime, select the tab, then Settings>Control panel>Stylus>Calibration to launch the calibration screen.

Automatic System Time Update

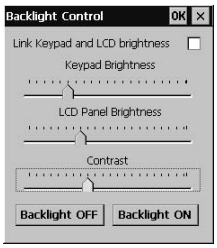
MobileMapper CE will automatically update the system date & time using the GPS time determined by the integrated GPS receiver and the time zone that you specify. To set the time zone:



- In the task bar, double tap the clock icon:

  This opens the Date/Time Properties screen.
- Set the time zone field (see opposite) and then select OK on top of the screen. Please note that you should wait for a while, after turning on MobileMapper CE, before system time can effectively be updated.

Adjusting the Backlight



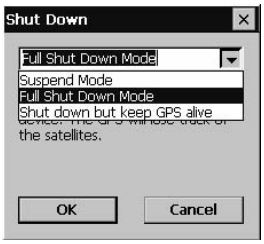
To switch the backlight on/off for both the keypad and display, or to adjust the brightness and screen contrast, double tap the Backlight Control icon in the control panel.

To conserve battery power, we recommend you to switch the backlight off whenever possible.

Regional Settings

MobileMapper CE supports code sets and languages supported by Windows CE operating system. These include European languages as well as multibyte languages such as simplified Chinese, Korean (in a subsequent release) and Japanese.

- From MobileMapper CE Companion CD, copy the appropriate language install files (.CAB) to your MobileMapper CE device. Use either an SD Card or download the files to the unit using ActiveSync.
- On the device, double tap on the .CAB file.
- The default location for installation is "\MyDevice\Intl\####\" (where #### is the language number). **You must install to this default location when the dialog box appears asking where to install**.
- Select the tab, then Settings>Control panel>Regional Settings.
- Select your preferred locale and user interface language as shown on the screen below (left).
- Once the language is installed, shutdown the unit by selecting successively the tab, then Suspend to open the Shut Down menu, then Full Shut Down Mode (see screen below, right) and then the OK button.

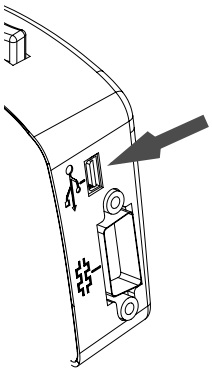


- Next time you boot the MobileMapper CE device, the selected language will be used.

Establishing a Connection with your PC

Using Microsoft ActiveSync, you can connect a desktop computer to your MobileMapper CE handheld via the USB data cable. This allows you to install software and transfer files to/from MobileMapper CE.

To connect to a PC:



1. Install ActiveSync on the desktop computer. (Microsoft ActiveSync is included on the MobileMapper CE Companion CD. You may also download it from the Microsoft website at www.microsoft.com/mobile/downloads/activesync.asp).
2. Attach the I/O module to the MobileMapper CE handheld. Connect the USB data cable to the USB port (the mini-connector) on the I/O module (see opposite).
3. Connect the other end of the USB data cable to a USB port on the desktop computer.
4. Follow the ActiveSync instructions to establish a connection.

Installing Software

Once the connection is established with a PC using ActiveSync, you may install any supported software you need. It is very important to make sure you install your program in the non-volatile memory, under “MyDevice” or on an SD card.

Installing off-the-shelf Windows CE software: Please refer to the software documentation for more information and detailed instructions.

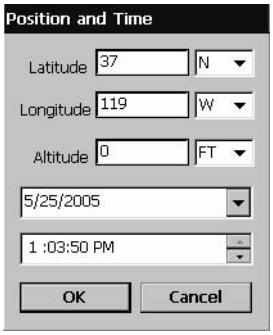
Initializing GPS

GPS satellites are 12,000 miles overhead. The first time a new GPS receiver is turned on, it might have difficulty calculating its position. To help the receiver calculate its first position, you should “initialize” it. You have to do this when:

- The receiver is brand new
- You have moved more than 500 miles from the last place you were using it
- GPS receiver has been reset
- Or the receiver has not been used for more than a few months.

Take the MobileMapper CE to a location where there is a clear view of the sky, then:

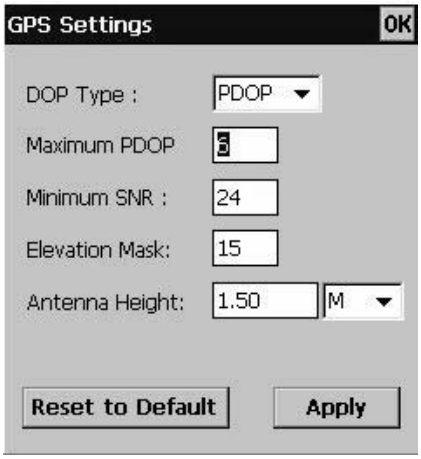
- Select the tab, then Programs>GPS Utilities>GPS Initialization
- Scroll down the list of continents and double-tap the continent where you are located. Similarly double-tap the country where you are located (see figure below, left.) Finally indicate the current time and date (see figure below, right.)



Setting Up GPS

The GPS Settings tool is used to control the desired level of precision in the computation of GPS positions. To check the current GPS settings, or to configure the integrated GPS receiver, select GPS Settings from the GPS Utilities folder.

The following parameters are displayed:



- DOP type: Choose the DOP type on which to set an upper limit (see next field).

  The position of GPS satellites in orbit determine the DOP values for a given site. The higher the DOP value, the less accurate the position solution. PDOP (Position Dilution of Precision) is the DOP value for the three dimensional position solution. HDOP (Horizontal Dilution of Precision) is the DOP value for the two dimensional horizontal position.
- Maximum DOP [PDOP or HDOP]: DOP values considered “good” are less than 3. Values greater than 7 are considered poor. Thus, small DOP is associated with widely separated satellites. No position will be computed when the selected DOP type exceeds this limit.

- Minimum SNR: Unless you are very familiar with this parameter, it is recommended to keep the default value. SNR stands for Signal-to-Noise Ratio. Ensure your SNR mask is not set too low (less than 20). GPS signals with lower SNRs will be very noisy and contribute to accuracy degradation.
- Elevation Mask: Angle that specifies that any satellite must be at least a specified number of degrees above the horizon before the signals from the satellite are to be used. Ensure that the elevation mask set in your receiver is high enough (15 degrees or more) to avoid using satellites near the horizon as they are often noisier than satellites higher overhead.
- Antenna Height: Enter the height of the MobileMapper CE unit from the ground when it is being used in the field so that the receiver can accurately project its computed positions to the ground.

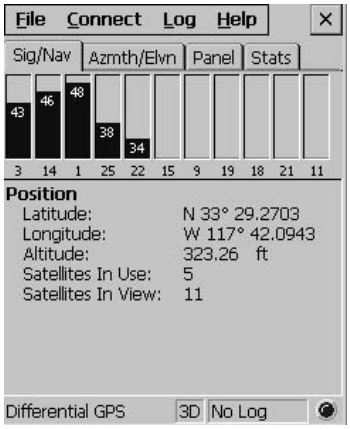
Tap Apply after making your changes. To return to the default settings, tap Reset to Default. Then tap OK to close the window. By default, the GPS is configured to track satellites in normal conditions of reception.

Viewing Current GPS Status

GPS Status is part of the GPS Utilities provided. It allows you to quickly check the current status of the GPS constellation. It can also be used to log and playback NMEA data.

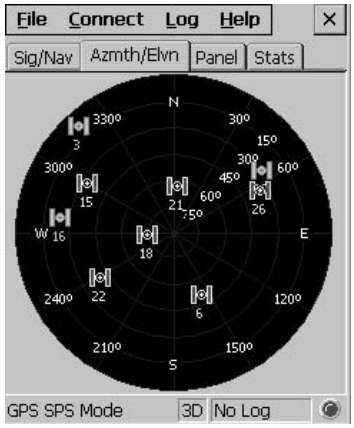
Select the tab, then Programs>GPS Utilities>GPS Status.

Signal Quality/Navigation Window (Sig/Nav)



This window allows you to monitor Signal/Noise ratios for received satellites. This information is shown in graphical form. The signal quality window will grow or shrink to accommodate the number of satellites in view. The Position pane provides the coordinates of the current GPS position, including elevation. The "GPS Mode" bar displays the type of position being calculated by the GPS receiver. There are three groups of GPS modes that can be displayed: NO-FIX, 2D/3D, and differential modes.

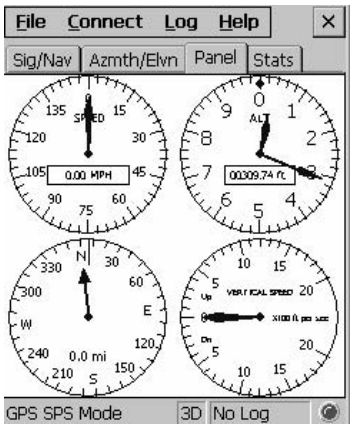
Azimuth and Elevation Graph (Azmth/Elvn)



This graph shows all the satellites currently in view. Each satellite is identified by its pseudo-random number (PRN), its azimuth and elevation angles.

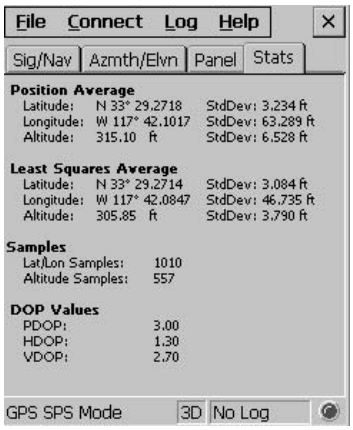
Panel Window (Panel)

This window displays the following parameters relevant to the MobileMapper CE unit: speed, altitude, heading and vertical speed.



Statistics Window (Stats)

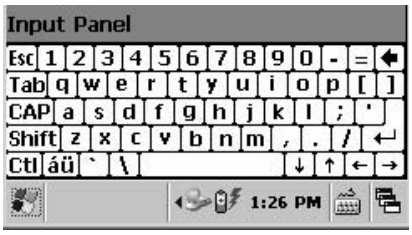
This window provides the averaged coordinates of the computed position and shows the accuracy figures corresponding to the GPS receiver used in static mode. The Dilution of Precision (DOP) values are also displayed.



Working in Windows CE .NET Environment

User Interface For Text Input

MobileMapper CE comes with an integrated physical keypad and like most Windows CE devices, you may also use an on-screen keyboard to enter text. To activate the on-screen keyboard, tap the keyboard icon in the taskbar.



Using the integrated alphanumeric keypad

MobileMapper CE uses a telephone-style alphanumeric keypad. The cursor keys are used to move the cursor left, right, up and down on the screen. Buttons 2-9 contain alphanumeric characters. By pressing the key continuously, all characters on that key will be scrolled. For example, the letters a, b, and c are associated with the “2” key. Tapping the key once enters an “a,” twice enters a “b,” three times enters a “c” and four times enters a “2.”

The keyboard default is lower-case alphanumeric letters.

Press the Shift key to toggle from numeric lock to caps lock and default mode.

Press the Shift key twice to lock the keypad in numeric mode.

The 1 icon appears in the system tray indicating that the numeric lock mode is enabled.

Press the Shift key three times to activate the upper-case lock.

The A icon appears in the system tray indicating that the caps lock mode is enabled.

Press the Shift key four times to bring it back to the default lower-case alphanumeric mode.

Using the Stylus

The stylus is used for menu selection or data input on the touch-screen.

- **Tap**: Touch the screen once with the stylus to select the item, tap twice to open the selected item.
- **Drag**: Hold the stylus on the screen and drag it across to select text and images. Drag in a list to select multiple items.
- **Tap and hold**: Tap and hold the stylus on an item to see a list of actions available for that item. On the pop-up menu that appears, tap the action you want to perform.

When you operate the touch screen of the MobileMapper CE, use the supplied stylus.

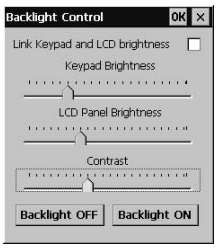
If the tip of the stylus is damaged, do not use it. If you operate the touch screen with a damaged stylus or a ballpoint pen, the touch screen may be damaged.

When the stylus is damaged, please use the extra stylus or buy a new one.

Power Management

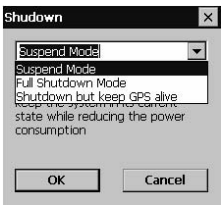
MobileMapper CE comes with a removable/rechargeable battery, which provides enough energy for a full working day –provided you start your day with a fully charged battery. In order to ensure a longer battery life, use the external power whenever possible. When used, the external power source also automatically recharges the internal battery.

The built-in advanced power saving features also help to optimize power consumption while the system is idle. The MobileMapper CE system has four power saving modes when the battery power is used:



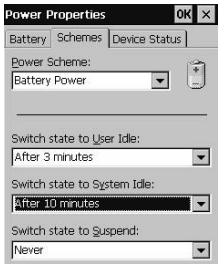
1. **User Idle** mode: Backlights for both the display and keypad are switched off. Press any key or tap on the screen to switch on the backlights again.

   To switch off the backlights, tap (backlight) in Control Panel. In the Backlight Control dialog that opens (see figure opposite), tap the Backlight OFF button.
2. **System Idle** mode: The display as well as the backlights are switched off, but all the processes are still running. The power LED is on. Press any key or tap on the screen to switch on the display again.
3. **Suspend Mode**: This is a low-power consumption mode. The system goes to a sleep mode and appears to be switched off. The power LED is blinking (long ON period). Press the Power key to switch the system back on again.
4. **Shut down but keep GPS alive** mode: The power LED blinks (short ON period). All receiver functions excluding the GPS module are shut down. Press the Power key for about 3 to 4 seconds to resume. Press the Power key for more than 3 to 4 seconds to fully shutdown the system.
5. **Full Shut Down Mode**: The system is shut down. The MobileMapper CE is switched off. The Power LED is off.



Tap >Suspend or press the Power key. In the dropdown list, select the appropriate mode (see figure opposite).

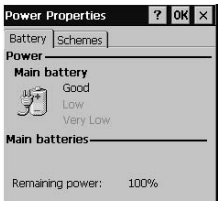
English



You can configure the MobileMapper CE handheld to automatically enter each mode when it has been idle for a specified time.

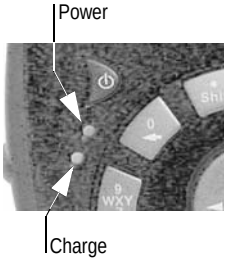
To change the idle time, tap Power in the Control Panel. Then make the necessary changes in the Schemes tab (see opposite.)

Checking Battery Status



To check the battery level, select the tab, then Settings>Control panel>Power.

LED Indicators



Power LED (Green)	Indicates:
Off	Device Switched Off
Solid Green	Power On
Blinking (long ON period), Green	Suspend Mode
Blinking (short ON period), Green	System is shut down with GPS alive

Charge LED (Amber)	Indicates:
Off	Not charging
Solid Amber	Battery is fully charged
Blinking Amber	Battery is charging

The charge LED will give charging information only if the receiver is on.

Memory Management

The MobileMapper CE has three types of memory:

- The Nand Flash memory (“MyDevice”), a non volatile memory
- The removable SD Card memory, a non-volatile memory
- The RAM (volatile memory), mainly used for running programs.

Programs or data that are saved in the RAM will be erased when the system is switched off!

We recommend that you install programs on “MyDevice” and store your data on SD card.

English

Using GPS

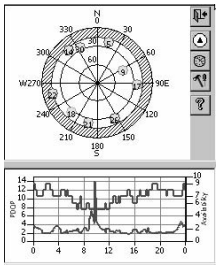
The GPS Utilities folder includes software for GPS initialization and setup, port configurations for applications to connect to GPS, mission planning and configuration of optional beacon differential receiver.

GPS initialization

See *Initializing GPS on page 10.*

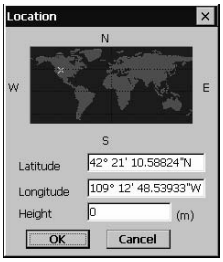
Mission Planning

The Mission Planning utility enables you to view the visibility and availability of the constellation of satellites and determine the dilution of precision (DOP) for the current location. It allows you to plan the best time of the day for data collection and maximize productivity.

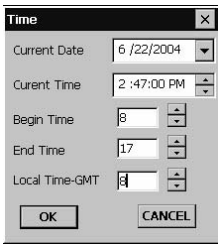


To be able to determine the configuration of satellites, an almanac file is used in Mission Planning. This file is generated and loaded automatically when you get the first GPS fix.

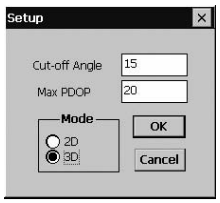
- From the GPS Utilities menu, select Mission Planning. The Mission Planning window appears (see opposite) with the animated sky plot and PDOP (satellite geometry) graph.



- To select the location, tap . You can key in the exact coordinates of your sampling site or select it from the map (see opposite)



- Tap to indicate the exact time for which you would like the sky plot to view the constellation (see figure opposite). The time you indicate will be marked on the PDOP chart shown underneath.



- Tap to open the setup form, which allows the setting of max PDOP and satellite cut-off angle or whether or not to include elevation for the GPS position (2D or 3D).
- Tap to close the Mission Planning application.

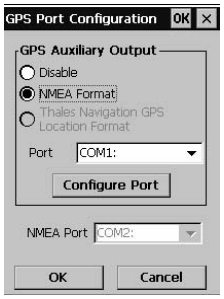
GPS Settings

See *Setting Up GPS on page 11*.

GPS Status

See *Viewing Current GPS Status on page 13*.

GPS Port Configuration



To output GPS positions from the MobileMapper CE integrated GPS to another device, you must configure the GPS output port and specify the GPS data protocol using GPS Port Configuration.

- From the GPS Utilities menu, select GPS Port Configuration.
- Tap Configure Port to configure port settings such as baud rate.

To output GPS to another device via Bluetooth, see *Outputting GPS Data to Another Device via Bluetooth on page 28*.

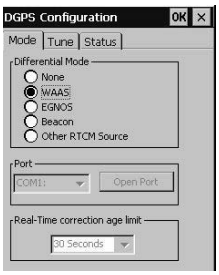
To output GPS from MobileMapper CE to another computing device via serial port (RS232), you must connect the two devices using a null modem cable.

Connecting to GPS in your application

The COM2 port -a virtual COM port- is setup at 57600 bauds, 8 data bits, 1 stop bit and no parity for off-the-shelf Windows CE mobile mapping applications to connect to GPS in NMEA format.

The following NMEA sentences are available through COM2: GSA, GSV, GGA, GLL, ZDA, and RMC.

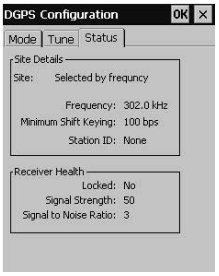
English



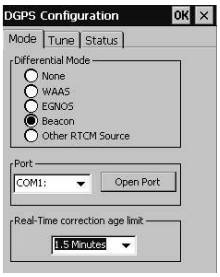
DGPS Real-Time Configuration

The MobileMapper CE GPS receiver integrates WAAS/EGNOS. WAAS is the functionality that the receiver uses by default. You can also use corrections from an external correction source, such as MobileMapper Beacon, a belt-mounted, Bluetooth-enabled beacon receiver connected to serial port COM1 or via a Bluetooth port (see figure opposite).

For more information on using MobileMapper CE with MobileMapper Beacon, see *page 30*.

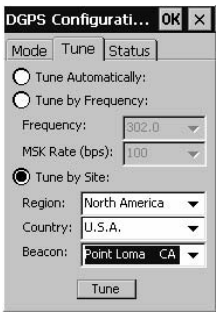


Beacon Receiver Configuration



You can use Programs>GPS Utilities>DGPS Configuration to set port and baud rate for the external beacon source (see opposite right), and to set automatic and manual tune modes for operational versatility.

The Status tab (see opposite left) gives the name (if available), station ID, frequency and MSK rate of the beacon station that is currently being used. It also displays the signal strength, the signal-to-noise ratio and the lock status (Yes or No).



The Tune tab (see opposite left) gives you the option of automatically tuning, manually tuning by frequency and MSK rate or by beacon name. Automatic tuning is set by default.

For the DGPS settings to take effect, tap OK on the DGPS Configuration window.

Resetting GPS

Tap Reset GPS in GPS Utilities to clear the GPS receiver's memory.

Using Bluetooth

The MobileMapper CE is equipped with built-in Bluetooth technology that allows short-range connections to other Bluetooth-enabled devices such as cellular phones, personal digital assistants (PDA), and desktop or notebook computers, and provides fast, reliable, and secure wireless communication.

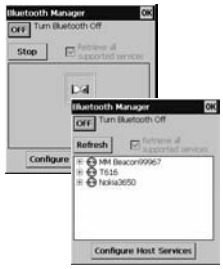
Working with Bluetooth Manager

Use the Bluetooth Manager to find, configure and establish connections to other Bluetooth devices. To start the Bluetooth Manager:

- Tap >Settings>Control Panel and double-tap BTManager.

  The icon now appears in the system tray.

Turning On/Off Bluetooth



- Tap the ON button on Bluetooth Manager. The MobileMapper CE starts to search for other available Bluetooth devices that are within range. The detected devices are then listed.
- To preserve battery power, we recommend that you enable (turn on) Bluetooth only when using it: Tap the OFF button on Bluetooth Manager to disable Bluetooth.

Supported Services

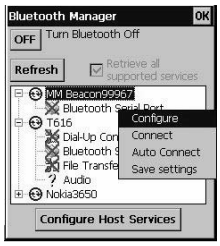
The functions that Bluetooth supports are called services. MobileMapper CE can communicate with Bluetooth devices that support the following services:

- Serial Port: A direct wireless connection to RS232 compatible devices.

English

- Dial-up Networking: Enables dial-up network to a cellular phone or modem via a Bluetooth-enabled modem.
- File Transfer: Supports the OBEX communication protocol which allows the MobileMapper CE to send and receive files from other connected Bluetooth devices.

To see a list of services offered by the detected device, click the ⊞ box next to the device name. If a check mark appears over the service icon, the service has been activated (see figure opposite).



Configuring Services

- Tap and hold the service that you want to connect to, and then tap Configure (see figure opposite)
- Tap Save settings to save the service configuration settings.

Transferring Files

You can exchange files with a connected device. You can use the File Transfer service to:

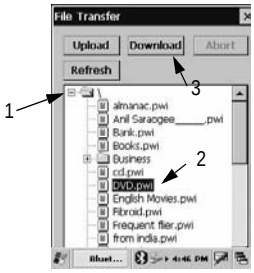
- Browse through the directories
- View files and folders
- Transfer files to / from a remote device.

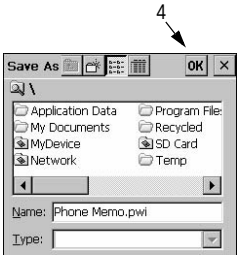
Follow the instructions below:

- Tap and hold a File Transfer service, then tap Configure.
- To authenticate the client, check the Authenticate check box and type in a password (see figure opposite). When the other device connects to this service, it must enter a passkey to establish the connection. Secured connection is an encrypted connection, which requires an authentication. This step is optional.
- Tap and hold File Transfer service, then tap Connect. A check mark now appears over the service icon.
- Tap and hold File Transfer service, then tap Browse.

Receiving a File from a Remote Device

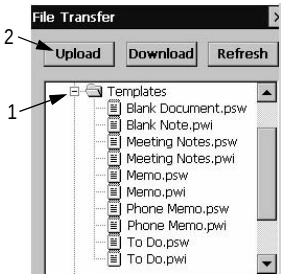
1. Navigate to the file location on the remote device
2. Tap the file
3. Tap Download
4. Tap OK to download the file (see also figures below).

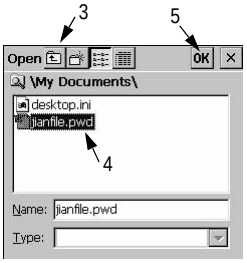




Sending a File to a Remote Device

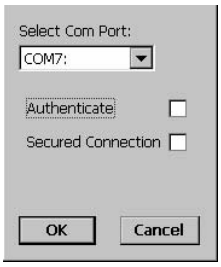
1. Select a directory on the remote device
2. Tap Upload
3. Navigate to the file location
4. Tap the file
5. Tap OK to send the file (see also figures below).





Establishing a Serial Connection

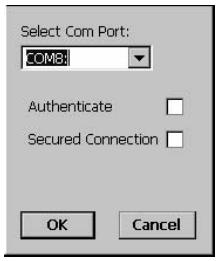
You can use the wireless Bluetooth serial port connection just like you would use a physical serial cable connection. You must configure the application that will use the connection to the correct serial port.



- Tap and hold a Bluetooth Serial Port service, then tap Configure
- Select an available virtual serial port from COM Port list (see figure opposite)
- To authenticate the client, check the Authenticate check box. When the other device connects to this service, it must enter a passkey to establish the connection. This step is optional.
- Tap OK to close the configuration dialog
- Tap and hold Bluetooth Serial Port service, then tap Connect
- Tap Auto Connect to allow devices to connect automatically when Bluetooth is on.

Using Dial-Up Networking

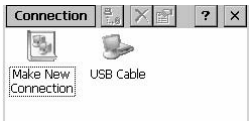
You can use dial-up networking to connect to remote devices that have telephone access. Such devices include cellular phones, desktop computers or modems.



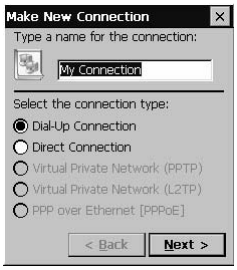
- Tap and hold a Dial-up Connection service, then tap Configure
- Select a virtual communication port from the COM Port list (see figure opposite)
- To authenticate the client, select the Authenticate check box. When the other device connects to this service, it must enter a passkey to establish the connection. This step is optional.
- Tap OK to close the configuration dialog
- Tap and hold Dial-up Connection service, then tap Connect
- Tap >Settings>Network and Dial-up Connections>Make New Connection.

Follow the connection wizard instructions.

1

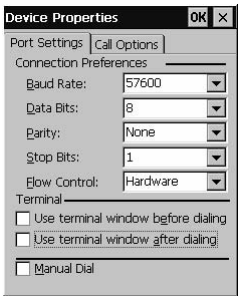


2

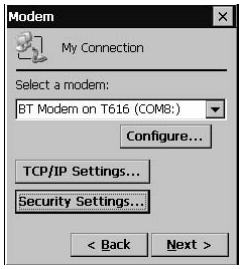


3

4



5

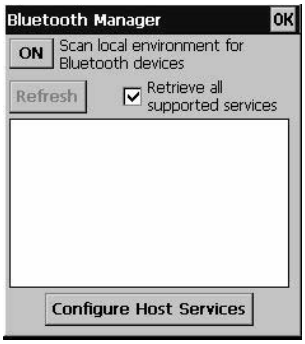


6

Outputting GPS Data to Another Device via Bluetooth

To output GPS data from the MobileMapper CE handheld to another device via Bluetooth, you must first create a virtual serial port on MobileMapper CE.

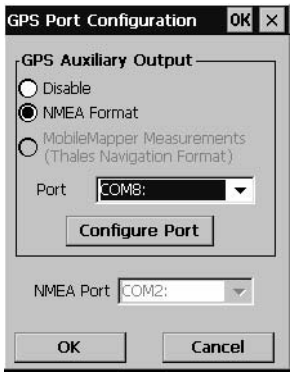
1. Open Bluetooth Manager by tapping >Settings>Control Panel>Bluetooth Manager



2. Tap Configure Host Services. In the dialog box that opens, select an available COM port and then tap the Activate button:

3. Tap OK to close the Local Services Settings dialog.

4. Tap OK on Bluetooth Manager to minimize the Bluetooth Manager window.
5. Tap >Programs>GPS Utilities>GPS Ports Configuration. This opens the GPS Ports Configuration window.
6. Select NMEA Format for the GPS Auxiliary Output, choose the Bluetooth virtual serial port that you set up in step 2. and then tap OK.



Now the MobileMapper CE handheld is set up to provide NMEA messages to a Bluetooth client.

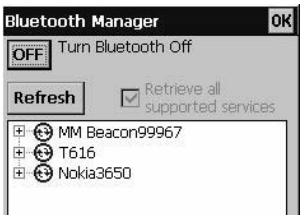
Using Bluetooth-Enabled MobileMapper Beacon

MobileMapper Beacon is a MobileMapper CE accessory providing real-time DGPS correction data from any beacon networks that exist worldwide.

Using MobileMapper CE's DGPS Configuration and Bluetooth Manager, tuning the beacon receiver and monitoring its performance through wireless communication is a simple process.

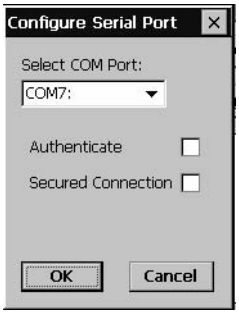
Establishing Communication Between the Two Units

- Power on MobileMapper Beacon and make sure your MobileMapper CE device is within range. (The distance between both units should be less than 10 meters.)
- On MobileMapper CE, open Bluetooth Manager, tap ON and wait for it to detect the MobileMapper Beacon device. (This step is not necessary when the MobileMapper Beacon is connected to MobileMapper CE via serial cable.)

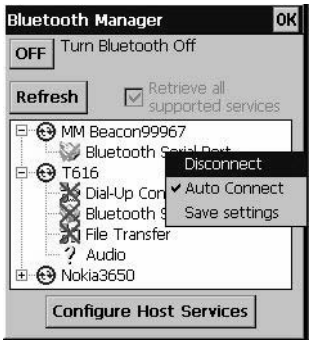


- Click the plus sign box next to the beacon device name. Select "Bluetooth Serial Port", hold the stylus to bring up the context menu and select Configure.

- Configure the Bluetooth Serial Port and tap OK:

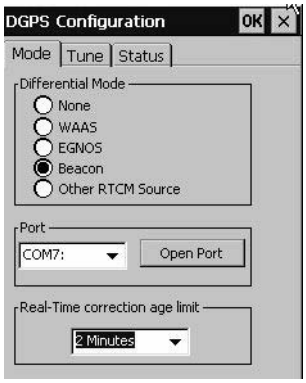


- To make sure that your MobileMapper CE handheld will automatically connect to the same MobileMapper Beacon device each time you turn on the Bluetooth Manager, in the context-sensitive menu tied to the chosen Bluetooth Serial Port, check Auto Connect and then select Save settings:

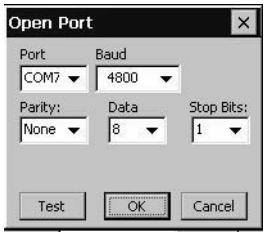


- Tap OK in the Bluetooth Manager window.

- Select DGPS Configuration from GPS Utilities, select Beacon and assign the Bluetooth port. (Select COM1 when the MobileMapper Beacon is connected via serial cable.):



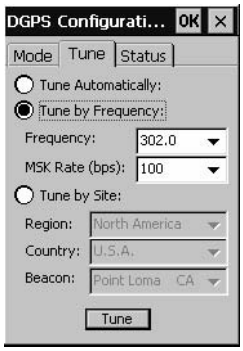
- Tap the Open Port button and make sure the baud rate is set to be 4800.



- Select OK in the Open Port window to open the port and to return to the DGPS configuration window. Note that the Open Port button has been renamed “Close Port”.

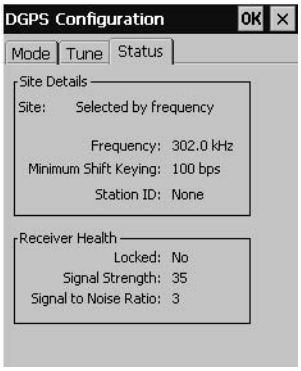
Tuning the MobileMapper Beacon Receiver

- Still in the DGPS Configuration window, select the Tune pane
- Choose one of the following two options to tune the MobileMapper Beacon receiver:
  - *Tune Automatically* (automatic method; default choice)
  - *Tune by frequency* (manual method: you have to specify the frequency to which you want the receiver to tune.)



- Then click the Tune button.
- While the Beacon is being tuned, you can check the current tuning settings, lock status, signal strength (SS) measured in dBµV, and signal-to-noise ratio (SNR) in dB.

To read this information, you just need to select the Status pane in the DGPS Configuration window:



- Finally, **click** OK **on top of the DGPS Configuration window for all the settings to take effect**.

Starting Using MobileMapper CE

Now that you know the fundamentals of MobileMapper CE, time has come for you to go out and experiment for a while. You will be delighted to discover how robust and lightweight the unit is. Associated with your favorite GIS application, MobileMapper CE will help to ease your everyday work and boost your productivity. Thales Navigation hopes you will enjoy working with MobileMapper CE.

English

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