



Getting Started with the Earthmate® GPS BT-20

Overview

Thank you for purchasing the *Earthmate GPS BT-20*. This versatile device can be used in one of two ways:

- As a wireless Bluetooth device, when connected to a Bluetooth-enabled PDA or laptop.
- As a USB device, when connected to the USB port on a laptop.

Once connected to a compatible PDA or laptop, the Earthmate GPS BT-20 can be used to track your location while you are moving (compatible mapping application required).

Note: The *Earthmate GPS BT-20* will acquire satellites more quickly and generally perform best when used under normal climatic conditions. Do not store the device in extreme hot or cold temperatures when not in use. Doing so may impair the device's ability to acquire satellite data.

Hardware Features

- Power button
- 3 LED lights

Charge Status LED

- Solid green: external power available and battery fully charged
- Solid yellow: battery charging
- Solid red: low battery

Satellites LED

- Flashing green: 3-D fix
- Flashing yellow: 2-D fix
- Flashing red: no fix

Bluetooth LED

- Solid blue: Bluetooth connection
- Flashing blue: no Bluetooth connection

<insert graphic of the device here>

Using the *Earthmate GPS BT-20*

If you want to track your progress while you travel, you can connect the *Earthmate GPS BT-20* to a laptop (or PDA if using a Bluetooth connection) to display your location on any NMEA 2.0-compliant mapping application such as Street Atlas USA®, Topo USA®, or XMap®.

The steps for using the Earthmate GPS BT-20 vary depending on if you are using the device with the USB cable or a Bluetooth connection. See both sets of instructions below.

To Use the *Earthmate GPS BT-20* with a USB Connection

1. Verify your mapping application is installed.
2. Plug the *Earthmate GPS BT-20* device into a USB port on your laptop computer.
3. Configure the GPS device with the mapping application.

- a. Open the mapping application.
 - b. Open the GPS settings.
 - c. Select USB as the COM port.
 - d. Under the device settings, select **Earthmate** or **Generic NMEA**.
4. Click **Start GPS** to begin tracking with the device.

To Use the *Earthmate GPS BT-20* with a Bluetooth Connection

1. Charge the battery for eight hours while the *Earthmate GPS BT-20* device is powered on.
2. Turn on the GPS device.
3. Connect the device to a PDA or laptop. If you are connecting the device to a laptop, use your Bluetooth Manager (the Bluetooth software that came with your Bluetooth-enabled PDA/laptop or Bluetooth adapter) to search for and make a serial connection to the device. In PDAs, connect using Bluetooth Manager. If Bluetooth Manager is not available, connect using the GPS menu in the mapping application.
4. Configure the mapping application:
 - a) Open the mapping application.
 - b) Open the GPS settings.
 - c) Select the appropriate COM port.
 Palm OS users: Under the device settings, select Generic NMEA 2.0.
 Pocket PC users: Under the device settings, select **Earthmate**.
 Laptop users: Under the device settings, select **Earthmate** or **Generic NMEA 2.0**.
 - d) Connect to the GPS device. If you experience difficulty connecting the GPS device, turn the device off, turn it back on, and then try connecting the device again.
5. Perform GPS tracking according to the protocol of the mapping application.

Charging the Battery

The *Earthmate GPS BT-20* comes equipped with a rechargeable, Lithium-ion battery. Whenever the device is connected via USB or the cigarette adapter, the battery will charge.

Troubleshooting

First Things to Check:

- Does the *Earthmate GPS BT-20* have a clear view of the sky? (Buildings, mountains, and heavy foliage may block your satellite reception.)
- Is your mapping software running properly without the *Earthmate GPS BT-20*?
- Have you tried disconnecting and then reconnecting the device?

Why Won't the Device Acquire or Maintain a 3-D fix?

If the device cannot acquire or maintain a 3-D fix, it may be because the device's view of satellites is somewhat obstructed in its current location. This problem may be alleviated by repositioning the device to another location (such as in the middle or corner of the dashboard). You can check the signal strength at various locations in your vehicle using the steps below.

1. Click the **GPS** tab.
2. Click **Start GPS** (if the device has not already been started).
3. Click the **Status** subtab.

4. Under Satellite Listing, examine the values listed in the dB (decibel) column. In order to acquire a 3-D fix, at least one of the values should be greater than 40, some of the values might be in the 30s, and a few might be in the 20s. If your device is not receiving such values in its current position, move the device to another location (such as another place on the dashboard) until those values are reached.

Note: If you cannot obtain a 3-D fix anywhere on your dashboard, but can obtain a 3-D fix outside of your vehicle, it may be because you have a heated/metallic-coated windshield which interferes with satellite signal. Heated/metallic-coated windshields are common in luxury vehicles. Try placing the *Earthmate GPS BT-20* behind the rear-view mirror or in the rear windshield of your vehicle.

What is the PIN Code?

When connecting to a Bluetooth adapter, you may be asked to type a PIN code. If this is the case, type four zeros (0000).

The LEDs Do Not Turn On

If the LEDs do not turn on, ensure the battery is fully charged. If the LEDs still will not turn on, make sure the battery is not inserted upside down. The contacts on the battery should line up with the contacts on the device.

The Battery Will Not Hold a Charge

The Li-ion battery is designed to last for 300-500 uses (depending on environmental conditions). Please visit www.delorme.com to purchase a replacement.

How Do I Know Which COM Port to Use?

Use the Bluetooth manager software (the Bluetooth software that came with your Bluetooth-enabled PDA/laptop or Bluetooth adapter) to check which COM port is associated with the *Earthmate GPS BT-20* device. If the Bluetooth Manager does not display the COM port, use the steps below to determine the correct port to use in the mapping application.

Note: Bluetooth-enabled Palm OS devices do not display a COM port number. DeLorme handheld application users can select **Bluetooth** from the Port drop-down list.

Windows XP and Windows 2000:

1. From the Start menu, (Windows 2000 users: click Settings and then) click Control Panel.
2. Double-click the System icon.
3. Click Hardware.
4. Click Device Manager.
5. Click the plus sign next to Ports (COM & LPT). The port number is listed next to the Bluetooth Communications Port.

Pocket PC 2003:

1. Tap the Bluetooth Manager icon on the Home screen.
2. Tap Bluetooth Settings.
3. Select the Serial Port tab.
4. Make a note of the available COM port.

Pocket PC 2002:

1. Tap Start.
2. Tap Bluetooth Manager.
3. Tap Tools.

4. Tap Settings for All Devices.
5. Tap the Serial Port tab.
6. Make a note of the available COM port.

Hardware Specifications

- NMEA 2.0-compliant 12-channel receiver
- STA2051 GPS chip set
- Cold Start: <90 seconds
- Warm start: <38 seconds
- Hot Start: < 1 second
- Power: ~90mA at 3.7V
- Power with a Bluetooth connection: ~118mA at 3.7V
- Maximum Velocity: 1000 knots
- Maximum Altitude: 60,000 feet
- Battery Life: 8 hours (charge up to 500 times)
- Operating Temperature Range: -20° Celsius to + 70° Celsius
- Operating Temperature Range (with battery) : -20° Celsius to + 60° Celsius

FCC Certification

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 the 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.

Caution

Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

FCC RF Radiation Exposure Statement

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.

Caution

**RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.
USE ONLY THE SUPPLIED BATTERY
DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS**

Limited Warranty

DeLorme warrants that your *Earthmate GPS BT-20* device will be free from defects in materials and workmanship for sixty days from the date of purchase. If your *Earthmate GPS BT-20* fails in normal use, DeLorme will, at its sole option, either repair or replace the unit. Such repairs or replacements will be made at no charge for labor or materials. This warranty does not cover failures due to abuse, misuse, accidents, or unauthorized disassembly or modification.

DELORME DISCLAIMS ANY LIABILITY FOR ANY SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING, BUT NOT LIMITED TO, LOSS OF REVENUES OR PROFITS, EVEN IF DELORME HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

THIS LIMITED WARRANTY CONTAINED HEREIN IS IN LIEU OF ALL OTHER EXPRESS WARRANTIES. ANY AND ALL IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, SHALL LAST FOR SIXTY DAYS.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state. Some states do not allow the exclusion or limitation of relief such as incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you.

DeLorme Contact Information

Technical Support

Visit www.delorme.com/support to access the DeLorme Technical Support Knowledge Base, get answers to frequently asked questions, or for additional support information. If you cannot find an answer to your problem on the site, please call 207-846-8900 to speak to a Technical Support representative.

Customer Service

For general questions about our products, returns, order status, or problems with shipments, call 800-511-2459; Monday-Friday (excluding holidays). For Customer Service hours, visit the DeLorme Web site at www.delorme.com.

Direct Sales

For sales questions and to order additional products, call 800-561-5105. To order online or for Direct Sales hours, visit the DeLorme Web site at www.delorme.com.

Federal Communications Commission (FCC) Statement

15.21

You are cautioned that changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

15.105(b)

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.

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.

FCC RF Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.