TerraSync™ software
Release Notes

Version 2.51
Revision A
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Trimble®

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Introduction

Welcome to version 2.51 of the TerraSync™ software. This release of the TerraSync software contains a number of important additions and changes. Please read these release notes carefully.

When you install version 2.51 of the TerraSync software, you must choose the language that the Setup program will use to run the installation of the software. To run version 2.51 of the TerraSync software in a language other than English, you must download and install the appropriate language files from the Trimble website. The TerraSync Updater utility will help you do this; it runs towards the end of the installation process.

Similarly, to run the TerraSync software Online Help in a language other than English, you must download and install the appropriate Help files from the Trimble website. The TerraSync Updater utility will display the available Help files.

The following sections contain introductory information for several languages. Further release notes in English follow these sections.

中文介绍 欢迎使用 TerraSync™ 2.51 软件。这次发行的 TerraSync 软件增加和变更了大量重要内容。请仔细阅读本发行说明。

当您安装 TerraSync 2.51 软件时，您必须选择安装软件使用的语言。要使用非英语运行 TerraSync 2.51 软件时，您必须从 Trimble 网站下载和应用相应的语言文件，新 TerraSync Updater 程序帮助您完成此全部安装工作。

同样，要运行使用非英语 TerraSync 2.51 帮助程序，您必须从 Trimble 网站下载和应用相应语言的帮助文件。TerraSync Updater 程序将显示可利用的帮助文件。可利用的帮助文件有英语和西班牙语。

Deutsch   Willkommen zur TerraSync™ 2.51-Software. Diese Ausgabe der TerraSync-Software enthält eine Anzahl wichtiger Ergänzungen und Änderungen. Bitte lesen Sie diese Ausgabehinweise sorgfältig.

Wenn Sie die TerraSync 2.51-Software installieren, müssen Sie die Sprache wählen, die das Setup-Programm verwenden soll, um die Installation der Software auszuführen. Um die TerraSync 2.51-Software in einer anderen Sprache als Englisch auszuführen, müssen Sie die entsprechenden Sprachdateien von der Trimble-Webseite herunterladen und installieren. Das Updater-Programm für TerraSync hilft Ihnen dabei; es wird am Ende des Installationsvorganges ausgeführt.

Um die Hilfe von TerraSync 2.51 in einer anderen Sprache als Englisch auszuführen, müssen Sie die entsprechenden Hilfedateien auf die gleiche Weise von der Trimble-Webseite herunterladen und installieren. Das Updater-Programm für TerraSync zeigt die verfügbaren Hilfedateien an.

Español   Bienvenidos al software TerraSync™ 2.51. Esta versión del software TerraSync contiene varias adiciones y modificaciones importantes. Se ruega que lea estas notas de lanzamiento del software con atención.

Cuando instale el software TerraSync 2.51, deberá elegir el idioma a utilizar por el programa de instalación para ejecutar la instalación del software. Para ejecutar el software TerraSync 2.51 en otro idioma distinto del inglés, deberá descargar del sitio web de Trimble los archivos de idioma pertinentes e instalarlos en su computadora. La utilidad TerraSync Updater le ayudará a hacerlo; ésta se ejecuta en la fase final del proceso de instalación.

De forma similar, para ejecutar la ayuda de TerraSync 2.51 en otro idioma que no sea el inglés, deberá descargar del sitio web de Trimble los archivos de ayuda pertinentes e instalarlos en su computadora. La utilidad TerraSync Updater mostrará los archivos de ayuda disponibles.

Français Bienvenue dans le logiciel TerraSync™ 2.51. Cette version du logiciel TerraSync comprend quelques additions et modifications importantes. Veuillez lire ces notes de version attentivement.

Lors de l'installation du logiciel TerraSync 2.51, il faut choisir quelle langue le programme d'installation utilisera pour exécuter l'installation du logiciel. Afin d'exécuter le logiciel TerraSync 2.51 dans une langue autre que l'anglais, vous devez télécharger et appliquer les fichiers de langue appropriés du site Web de Trimble. L'utilitaire Updater de TerraSync vous aidera à le faire; il s'exécute vers la fin du procédé d'installation.

Egalement, afin d'exécuter l'Aide de TerraSync 2.51 dans une langue autre que l'anglais, il faut télécharger et appliquer les fichiers d'aide appropriés du site Web de Trimble. L'utilitaire Updater de TerraSync affichera les fichiers d'aide disponibles.

ご案内 TerraSync™ 2.51 ソフトウェアをご利用いただきましてありがとうございます。TerraSync ソフトウェアの今回のリリースには、変更や追加事項が数多く含まれています。リリースノートをていねいにお読みください。

TerraSync 2.51 ソフトウェアのインストール時には、ソフトウェアのインストールを実行するのにセットアッププログラムが使用する言語が選択される必要があります。TerraSync 2.41 ソフトウェアを英語以外の言語で実行するには、トリンブル社のウェブサイトから適切な言語ファイルをダウンロードして適用してください。新しい TerraSync Updater ユーティリティを利用するとそれを簡単に行うことができます。それはインストールの後半に実行されます。

それと同様に、TerraSync 2.51 ヘルプを英語以外の言語で実行するには、トリンブル社のウェブサイトから適切なヘルプファイルをダウンロードして適用する必要があります。TerraSync Updater ユーティリティが利用可能なヘルプファイルを表示します。ヘルプが利用できるのは、英語とスペイン語だけです。

Português Bem-vindo ao software TerraSync™ 2.51. Este lançamento do software TerraSync contém uma série de importantes acréscimos e mudanças. Leia estas notas com cuidado.

Ao instalar o software TerraSync 2.51, deve-se escolher o idioma que o programa Configuração usará para executar a instalação do software. Para executar o software TerraSync 2.51 num idioma que não seja o inglês, deve-se fazer um download e aplicar os arquivos apropriados do idioma a partir do site de Internet da Trimble. A utilidade Updater do TerraSync o ajudará fazer isso quando é executada na parte final do processo da instalação.

Igualmente, para executar a Ajuda do TerraSync 2.51 num idioma que não seja o inglês, deve-se fazer um download e aplicar os arquivos de Ajuda apropriados a partir do site de Internet da Trimble. A utilidade Updater do TerraSync exibirá os arquivos de Ajuda disponíveis.

한국어 안내 TerraSync™ 2.51 소프트웨어를 이용해 주셔서 감사합니다. 이번에 출시된 버전에는 중요한 사항이 많이 추가/변경되었습니다. 이 릴리스 노트를 숙독하시기 바랍니다.

TerraSync 2.51 소프트웨어를 설치할 때, 이 설치 작업에 쓸 언어를 반드시 선택하여야 합니다. 영어 이외의 다른 언어로 TerraSync 2.51 소프트웨어를 실행하기 위해서는 해당 언어 파일을 Trimble 웹사이트에서 다운로드 받아 적용하여야만 합니다. 이 일은 설치 작업의 최종 단계에서 구동하게 되는 새 TerraSync Updater 유틸리티를 이용하여 처리하면 편리합니다.

마찬가지로, 영어 이외의 다른 언어로 TerraSync 2.51 도움말을 실행하려면 해당 도움말 파일을 Trimble 웹사이트에서 다운로드 받아 적용하여야만 합니다. 이용 가능한 도움말 파일은 TerraSync Updater 유틸리티에서 표시되게 됩니다. 이용 가능한 도움말 언어는 영어, 스페인어입니다.

Русская версия Добро пожаловать в наш программный продукт TerraSync™ 2.51. Эта реализация продукта TerraSync содержит несколько важных дополнений и изменений. Просим вас внимательно прочесть эти замечания.

Когда вы устанавливаете продукт TerraSync, вам следует выбрать язык, который будет использоваться при работе установочной программы. Для обеспечения работы продукта TerraSync на любом языке, кроме английского, вы должны загрузить соответствующие файлы языковой поддержки из веб-сайта Trimble. Новая утилита TerraSync Updater поможет вам это сделать; она работает до конца установочного процесса.

Подобным образом для работы TerraSync 2.51 Help на любом языке, кроме английского, вам следует загрузить и применить соответствующие файлы Help (Помощь) из веб-сайта Trimble. Утилита TerraSync Updater покажет имеющиеся файлы Help. Помощь доступна на английском и испанском языках.

What's New?

Version 2.51

Version 2.51 of the TerraSync software includes all of the changes in version 2.50, as well as the following new features:

- Support for the Trimble® Ranger™ handheld. The Ranger handheld runs the Microsoft® Windows Mobile™ 2003 Second Edition software for Pocket PCs.

 For more information, see the *Trimble Ranger Handheld Getting Started Guide*.

- In TerraSync software version 2.50 some Bluetooth® wireless technology connections were not enabled. TerraSync software version 2.51 adds support for the following Bluetooth connections:

    - from a field computer to a supported survey receiver

    - from a GIS TSCe™ field device with BlueCap™ module to a receiver

Version 2.50

Version 2.50 of the TerraSync software includes the following new features:

- Support for the GPS Pathfinder Pro series receivers:

    - GPS Pathfinder ProXT™ receiver

    - GPS Pathfinder ProXH™ receiver

- Support for the Trimble Recon GPS CF Card receiver, a CompactFlash GPS receiver that is part of the Recon GPS Card edition. For more information, see Recon GPS CF Card receiver, page 11.

- Support for logging of H-Star™ data from GPS receivers with H-Star technology, such as the GPS Pathfinder ProXH receiver. After H-Star postprocessing, point features and averaged vertices with H-Star data can achieve accuracies of 30 cm with a single-frequency antenna, or 20 cm with a dual-frequency antenna.

    When you are logging H-Star data in the TerraSync software, the Predicted Postprocessed Accuracy (PPA) value appears in the status bar. This indicates the accuracy that the data should achieve after postprocessing.

Note – H-Star postprocessing requires version 3.10 or later of the GPS Pathfinder Office software, or version 1.10 or later of the GPS Analyst™ extension for ESRI ArcGIS software.

- If you select a coordinate system that does not specify a datum, the TerraSync software no longer defaults to the WGS-84 datum. You must select the correct datum to use.

- The GPS Pathfinder Pro series receivers can be configured to use or ignore specific Satellite Based Augmentation System (SBAS) satellites. Other receivers will continue to track SBAS satellites according to their geographical location:

    - Wide Area Augmentation System (WAAS) satellites between 40° W and 180° W

    - European Geostationary Navigation Overlay Service (EGNOS) satellites between 40° W and 60° E

    - MTSAT Satellite-based Augmentation System (MSAS) satellites between 120° E and 165° E

- Data files can now be stored on any drive or storage location on the field computer, including removable storage cards.

- The software now shows your current (real-time) estimated accuracy in the status bar whenever you are logging positions to a feature.

- New and updated features can now be extracted from an updated data file to a new data file. The new file can be transferred to the office computer for processing. The original file is modified so that you can append new GPS data after the current seven-day limit.

For detailed information about these features, refer to the *TerraSync Software Reference Manual*.

Product Information

This section provides general information about using the TerraSync software.

System requirements

Version 2.51 of the TerraSync software runs on the following platforms:

- A Pocket PC or Handheld PC 2000 running:
  - Microsoft Windows Mobile 2003 software for Pocket PCs
  - Microsoft Windows Mobile Version 5.0 software for Pocket PC
  - Microsoft Windows® CE . NET operating system
- Microsoft Windows 2000 operating system
- Microsoft Windows XP operating system (Home Edition, Professional Edition, or Tablet PC Edition)

The software supports the following receivers:

- GeoExplorer® series handhelds with integrated GPS receiver:
  - GeoXM™ handheld
  - GeoXT™ handheld
- GPS Pathfinder Pocket receiver
- GPS Pathfinder Power receiver
- GPS Pathfinder Pro XR receiver
- GPS Pathfinder Pro XRS receiver
- GPS Pathfinder Pro series receivers:
  - ProXT receiver
  - ProXH receiver
- Recon GPS CF Card receiver

- The following Trimble survey receivers:

    - 5700 receiver (firmware version 1.30)

    - 5800 receiver (firmware version 2.23)

    - R8 receiver (firmware version 2.23)

Recon GPS CF Card receiver

The Recon GPS CF Card receiver is a CompactFlash GPS receiver. It is part of the Recon GPS Card edition. The TerraSync software only supports connection to the Recon GPS CF Card receiver when it is inserted in a Trimble Recon handheld.

To connect to a Recon GPS CF Card receiver, insert the receiver card in the *front* CompactFlash slot of the Recon handheld and then connect to GPS on COM2.

When the TerraSync software is connected to a Recon GPS CF Card receiver, the following limitations apply:

- Data collected using this receiver cannot be differentially corrected, either in real time or by postprocessing.

- Velocity filtering, NMEA output, and SuperCorrect™ logging are not supported.

- You cannot use this receiver to log carrier data, or use it as a base receiver.

- No receiver battery status is reported in the status bar or the Status section. Both halves of the battery icon in the status bar show the battery status of the handheld.

- The Recon GPS CF Card receiver stores an almanac, but does not send the almanac to the TerraSync software. In the Receiver status screen, the *Almanac* field contains a "?". You can use the Plan screen only if you have downloaded a current almanac from another receiver.

- When you use Slider mode to configure GPS settings, the SNR values that correspond to each slider position differ from those for other receivers. The following SNR values are used:

Position on slider bar	Min SNR for Recon GPS CF Card	Min SNR for other receivers
1 (Max productivity - far left)	**14**	**33**
2	**14**	35
3	14	37
4	14	38
5 (Default)	14	**39**
6	17	40
7	20	41
8	23	42
9 (Max precision - far right)	**26**	**43**

TerraSync software documentation

The *TerraSync Software Getting Started Guide* and the *TerraSync Software Reference Manual* are both provided on the *TerraSync Software CD*. To view the manuals, select the appropriate link from the main menu of the *TerraSync Software CD*.

Note – *The TerraSync Software Getting Started Guide is also available in printed form.*

Transferring data

To transfer files between an office computer and the field computer, you must have one of the following installed on the office computer:

- The Trimble Data Transfer utility, which is available as a free download from the Trimble website at www.trimble.com/datatransfer.html

- Version 3.10 or later of the GPS Pathfinder Office software

To transfer files to or from a CE device, you must also have the Microsoft ActiveSync® technology installed on the office computer. You can download the ActiveSync technology from the Microsoft website at www.microsoft.com.

Ensure that all necessary software is installed before using the TerraSync software.

Note – *You cannot use the Data Transfer utility to transfer Shapefiles.*

Connecting a CE device to an office computer

When a CE device is physically connected to an office computer, the CE device usually initiates connection automatically. To force a CE device to re-initiate connection, lift it out of the cradle and then replace it. Alternatively, unplug its data cable and then plug it in again.

On some CE devices, you can manually initiate connection to the office computer. For example, on a GeoExplorer series handheld, tap 🎔 and then select *Programs /Connect to desktop*.

You can use the ActiveSync *Get Connected* command to initiate connection from the office computer. However, if the CE device is trying to connect at the same time, this can prevent successful connection.

Connection to the office computer can be affected by other applications or devices trying to use the same port. Make sure that the ActiveSync technology is monitoring the correct port, and that no other application or device is using that port on the computer.

If you have problems with an ActiveSync technology connection, try one of the following on the CE device:

- Configure one COM port for the ActiveSync technology connection and another COM port for connection to a GPS receiver or other device (for example, a laser rangefinder).

- Close the TerraSync software before attempting to connect to the office computer.

- If you use the same COM port for the ActiveSync technology connection as you do for communication with the GPS receiver, disconnect from the GPS receiver before connecting to the ActiveSync technology. In the TerraSync software, tap **Disconnect** in the Setup section. When you have finished using the ActiveSync technology, tap **Connect** in the Setup section to reconnect to the GPS receiver.

- If you use the same COM port for the ActiveSync technology connection as you do for communication with an external device, disconnect from the device before connecting to the ActiveSync technology. For example, if you use the same port to communicate with a laser rangefinder, in the Laser Properties form in the TerraSync software, set the *Port* field to None. When you have finished using the ActiveSync technology, reset this field to the required COM port to resume communication with the laser rangefinder.

For more information on configuring ports and using the ActiveSync technology, refer to the ActiveSync documentation.

Registering the TerraSync Software

When you register a copy of the TerraSync software, you receive the serial number that you need to install the software. Trimble recommends that you register before beginning installation. To register, you need:

- the proof-of-purchase number from the TerraSync software packaging

- Internet access (including a valid e-mail address)

Note – If you do not have Internet access, contact your local Trimble dealer for assistance.

To register your copy of the TerraSync software:

1. Insert the *TerraSync Software CD* in the CD drive of the office computer.

2. The Setup screen appears. If this screen does not appear, run setup.exe from the CD drive folder.

3. Select the Register option. The Registration page opens in the default Web browser.

4. Follow the instructions on the screen to register. You will need to enter the proof-of-purchase number from the TerraSync packaging.

   When you have successfully completed registration, your account summary appears. The Product Details section displays all the products that you have registered. Click the + beside the copy of the TerraSync software that you have just registered. The *Software Install Serial Number* field shows the installation serial number for your copy of the TerraSync software.

Tip – To view serial numbers for all your registered Trimble products, or to register a product, go to www.trimble.com/register.

Note – *If you are entitled to an upgrade from a previous version of the TerraSync software to version 2.51, you can install the TerraSync software version 2.51 using the serial number that is on the original TerraSync Software CD case. If the installation program does not accept this serial number, contact your local Trimble dealer to obtain a valid proof-of-purchase number. If you are* **not** *entitled to an upgrade, the installation program will not accept your serial number. Contact your local Trimble dealer to purchase an upgrade option.*

Installation on a CE Device

This section provides instructions for installing the TerraSync software on a supported Pocket PC or Handheld PC 2000 (a "CE device"). It includes the following:

- Installing the TerraSync software on a CE device, page 17
- Installing a translation of the TerraSync software on a CE device, page 22
- Installing fonts on a CE device, page 23

Tip – Before you install the TerraSync software or software upgrade on a CE device, you must first install the latest version of the Microsoft ActiveSync technology on the office computer. The ActiveSync technology may be supplied on a Microsoft CD with the CE device, or you can download it from the Microsoft website at www.microsoft.com. For more information on installing the ActiveSync technology, refer to the documentation for the CE device.

Tip – To ensure that all installation screens appear in the correct language, install the corresponding translation of the ActiveSync technology. You can download translated versions of the ActiveSync technology from the Microsoft website at www.microsoft.com.

Installing the TerraSync software on a CE device

Before beginning installation, ensure that you have enough free space on the CE device. The TerraSync software requires at least 10 MB of free space. If you are installing it to a secondary internal storage location, such as the GeoExplorer series handheld's Disk, the TerraSync software requires at least 10 MB of free space in that location, plus 5 MB of RAM.

⚠️ **CAUTION –** The installation program cannot determine how much memory is available in the secondary storage location. You must ensure that 10 MB is free before you begin the installation.

If there is not enough memory space on the CE device, this message appears during installation.

Click **Cancel**, remove any unwanted programs or data files from the CE device, and/or increase storage memory. Then start the installation again.

If memory space in the secondary internal storage location is insufficient, the installation may appear to complete successfully, but error messages may appear when you try to run the TerraSync software. If this happens, make more space available in the secondary storage location, then install the software again.

*Note – If you still cannot install the TerraSync software on a GIS TSCe field device, perform a **full** hard reset, then reinstall the TerraSync software. For information on performing a full hard reset, go to www.trimble.com/support.shtml. From the list of products, select* **TerraSync***. Click **Support Notes** / **Trouble Shooting** and then browse for the support document that describes how to perform a hard reset.*

Note – Trimble recommends that you uninstall any previously installed versions of the TerraSync software, and transfer any TerraSync software data files to the office computer, before installing the latest version.

To install the TerraSync software:

1. Make sure that you have registered the TerraSync software and have a valid installation serial number. For more information, see Registering the TerraSync Software, page 14.

2. Connect the CE device to the office computer. For information on connecting the CE device to another computer, refer to the documentation for the CE device.

3. Make sure that the CE device and computer are switched on.

   If an ActiveSync partnership for these two computers exists, ActiveSync technology starts and the office computer automatically connects to the CE device.

Note – The ActiveSync technology cannot connect to a CE device that is communicating with a GPS receiver on the same port. If you are upgrading or reinstalling the TerraSync software, make sure you disconnect from GPS and exit the software.

   If there is no partnership, or the computers do not connect, you may need to reinstall the ActiveSync technology on the office computer. For more information, refer to the documentation for the CE device.

Tip – If the ActiveSync technology is installed, but the two computers do not connect, check that the CE device is set up to establish a PC connection. For information on how to do this, refer to the documentation for the CE device.

Tip – Ensure that the CE device is configured to connect at the maximum baud rate available.

When the two computers are connected, the *Microsoft ActiveSync* window appears. The message Connected is displayed:
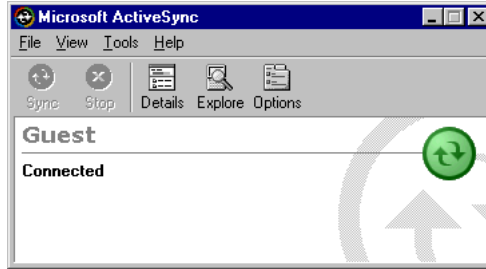
4. Make sure that the TerraSync software is not running on the CE device.

5. Insert the TerraSync Software CD in the CD drive of the office computer.

6. The Setup screen appears. If this screen does not appear, run setup.exe from the CD drive folder.

7. Select the Install option.

8. Select the Install on Pocket PC or CE device option.

9.	The TerraSync software installation wizard appears:
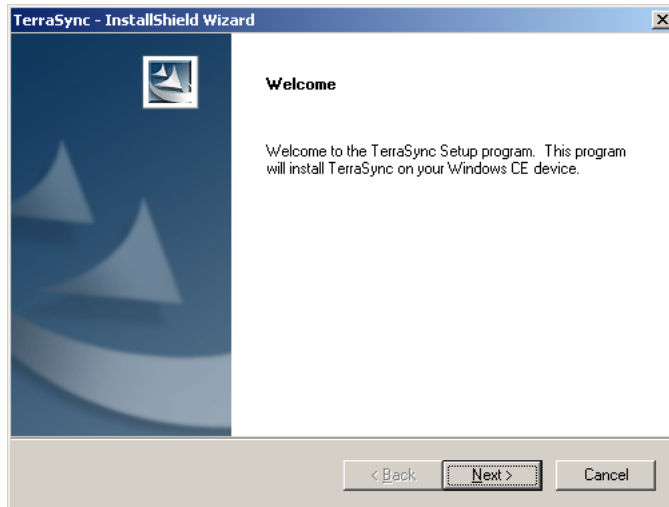
10.	Follow the instructions on the screen to install the TerraSync software. You will need to enter your installation serial number, which you can obtain by registering your copy of the software. For more information, see Registering the TerraSync Software, page 14.

11.	If the message Trimble TerraSync" is already installed. Do you want to proceed with the re-install/upgrade? appears, click **Yes**.

12.	When the message Install Trimble TerraSync" using the default application install directory? appears, click Yes to install the software to the default location.

	If the CE device has a non-volatile "internal" secondary storage location, this is used as the default installation location, even if you choose to install to main memory. Internal secondary storage locations include the Disk on a GeoExplorer series handheld and the Built-In Storage on a Trimble Recon handheld.

	If the device has no secondary storage, or only has removable secondary storage such as a CompactFlash card, the default installation location is the main memory (RAM).

13. If you clicked **No** in Step 12, the *Select Destination Media* dialog appears. Click **OK** to proceed with the installation.

14. Respond to any messages that appear:

    – If a message appears on the CE device stating that the TerraSync software is already installed, and asking if you want to reinstall the TerraSync software, tap **Yes**.

    – If the message Confirm ignore missing file appears on the CE device, tap **Yes to All**.

    – If the message Install "Trimble TerraSync" to \Disk\Trimble TerraSync\ ? appears on the CE device, tap **OK**.

    – If the message The program you have installed may not display properly because it was designed for a previous version of Windows Mobile software. appears on the CE device, tap **OK**. This warning appears on devices running Windows Mobile 2003 Second Edition or later when you install software that is designed to support previous versions of Windows CE.

Note – On some CE devices, such as the Trimble Recon handheld, the message Adding information for "Remove Programs" *may remain on the screen for several minutes. While this message is displayed, do not cancel the installation or reset the CE device.*

15. When the installation procedure is complete, perform a soft reset on the CE device.

Note – When you install the TerraSync software on a GeoExplorer series handheld, some settings are stored in the main memory (RAM), even though the software is always installed to the Disk. To avoid data loss, the installation program automatically backs up the main memory immediately after installing the TerraSync software.

Installing a translation of the TerraSync software on a CE device

The TerraSync software is available in several languages. Language files for translated installations are not supplied on the *TerraSync Software CD*; they must be downloaded from the Trimble website. The TerraSync software setup program uses the TerraSync Updater utility to automatically download and install language files.

Trimble recommends that you install a TerraSync software translation only on a CE device that has the corresponding language version of the operating system installed. For example, install the Japanese TerraSync software on a CE device that has the Japanese Windows CE operating system installed. System commands (such as the **OK** and **Cancel** buttons) are generated by the operating system, so they appear in the language of the operating system on the CE device.

If you use the TerraSync software on a CE device that does not have the corresponding translation of the operating system installed, system commands are not translated. Also, some characters may not be interpreted or displayed correctly. For best results, make sure that the languages used by the TerraSync software and the operating system match. If they do not, install any font that is supplied with the TerraSync software for that language. For more information, see Installing fonts on a CE device, page 23.

Tip – If you see squares or unusual characters instead of characters from the appropriate language, you need to install a font.

Note – The Regional Options applet in the Control Panel only changes the display of date, time, units, and currency information. It does not change the language of the field computer's operating system.

To install a translation of the TerraSync software on a CE device:

1. Install the English version of the TerraSync software (see page 17).

2. Use the TerraSync Updater utility to download and install the appropriate language file (see The TerraSync Updater utility, below).

3. If necessary, install the appropriate font (see page 23).

The TerraSync Updater utility

The TerraSync Updater utility is available:

- As part of the English TerraSync software installation. When the InstallShield Wizard Complete message appears, select the *Yes, check for program updates* option.

- On the version 2.51 *TerraSync Software CD*.

- As a free download from the Trimble website. Go to www.trimble.com/support.shtml and from the list of products, select TerraSync. Then click *Downloads / v2.51 Software / TerraSync Updater utility (English).*

Installing fonts on a CE device

You must install a TerraSync language font if both of the following are true:

- You have installed the TerraSync software in one of the following languages:

  – Chinese

  – Japanese

  – Korean

- The language version of the operating system does not match the language of the TerraSync software (for example, if you have installed the Japanese TerraSync software onto an English CE device)

⚠ **CAUTION –** *Do not* install the Japanese font on a CE device with the Japanese version of Windows CE installed. This can cause software errors on the CE device.

💡 **Tip –** The Trimble GPS Pathfinder font is installed automatically when you install the TerraSync software. This font includes symbols that you can use to represent point features on the map. If you want to use other symbol fonts for point features, install the additional fonts manually.

To install a TerraSync language font on a CE device:

1. Uninstall any previous versions of the font.

2. Make sure that you have enough free memory to install the font. TerraSync language fonts require 9 to 10 MB of free memory. For more information, see Installing the TerraSync software on a CE device, page 17.

3. Insert the *TerraSync Software CD* in the CD drive of the office computer. The Setup screen appears. (If the screen does not appear, run setup.exe from the CD drive folder.)

4. Select the *Install* option.

5. Select the *Install fonts* option.

6. Select the option for the language that you require.

7. Follow the instructions on the screen to install the font.

⚠ **CAUTION –** TerraSync fonts should always be installed to RAM (main memory). Do not install fonts to a secondary internal storage location (such as the Disk on a GeoExplorer series handheld), or to a removable storage device.

8. When the installation is complete, perform a ***soft*** reset of the CE device.

For information on how to perform a soft reset, refer to the documentation for the CE device.

⚠ **CAUTION –** On some CE devices, you cannot delete Asian language fonts in the usual way. To remove such fonts, you may need to perform a hard reset of the CE device. A hard reset removes ***all*** software that is not pre-installed on the CE device by the manufacturer.

Installation on a PC

This section includes the following:

- Installing the TerraSync software on a PC

- Installing a translation of the TerraSync software on a PC, page 27

If the PC that you want to install the TerraSync software on has a CD drive, or has network access to a CD drive, you can install the software directly onto the target PC. Otherwise, you need to transfer the necessary files to the target PC and then complete the installation on that PC.

Installing the TerraSync software on a PC

*Note – Before you install the latest version of the TerraSync software, Trimble recommends that you uninstall any previously installed versions (including evaluation software), and transfer any TerraSync data files to a safe storage location. If you do not uninstall any previous versions, you **must** install the TerraSync software to the same location.*

To install the TerraSync software:

1. Make sure that you have registered the TerraSync software and have a valid installation serial number. For more information, see Registering the TerraSync Software, page 14.

2. Make sure that the TerraSync software is not running on the computer.

3. Insert the *TerraSync Software CD* in the CD drive of the office computer.

4. The Setup screen appears. If this screen does not appear, run setup.exe from the CD drive folder.

5. Select the *Install* option.

6. Select the *Install on this PC* option.

   The TerraSync software installation wizard appears:
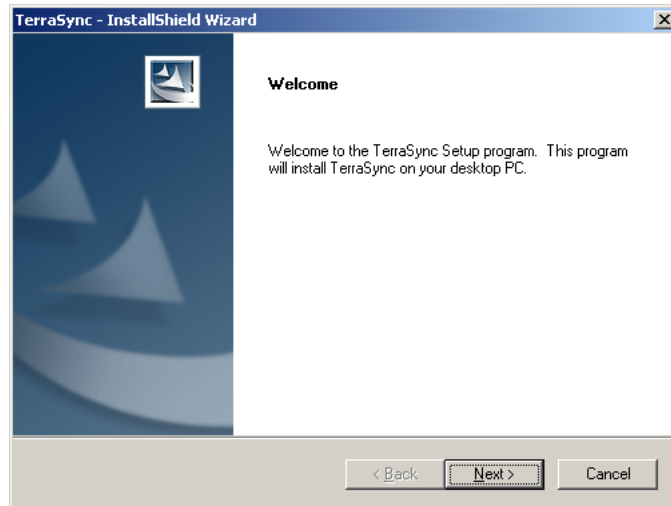
7. To install the TerraSync software, follow the instructions on the screen. You will need to enter your installation serial number, which you can obtain by registering your copy of the software. For more information, see Registering the TerraSync Software, page 14.

Installing a translation of the TerraSync software on a PC

The TerraSync software is available in several languages. Language files for translated installations are not supplied on the *TerraSync Software CD* so the setup program uses the TerraSync Updater utility to automatically download the necessary files.

Trimble recommends that you install a translation of the TerraSync software only on a PC that has the corresponding language version of the operating system installed. For example, install Japanese TerraSync software on a PC with a Japanese Windows operating system installed. System commands (such as the **OK** and **Cancel** buttons) are generated by the operating system, so they appear in the language of the operating system on the PC. If you use the TerraSync software on a PC that does not have the corresponding translation of the operating system installed, system commands are not translated.

Note – The fonts that the TerraSync software uses are included with translated Windows desktop operating systems, so you do not need to install them to use the TerraSync software on a PC.

Note – The Regional Options applet in the Control Panel only changes the display of date, time, units, and currency information. It does not change the language of the PC's operating system.

To install a translation of the TerraSync software on a PC:

1. Install the English version of the TerraSync software (see page 25).

2. Use the TerraSync Updater utility to download and install the appropriate language file (see The TerraSync Updater utility, page 23).

Cabling

This section provides information and cabling diagrams for connecting a supported Trimble GPS receiver to a field computer that is running the TerraSync software.

Note – When the TerraSync software is installed on a GeoExplorer series handheld, no cabling is required because the handheld is a combined GPS receiver and CE device. To use GPS positions from the integrated GPS receiver, configure the TerraSync software to connect to GPS on COM3.

General information

Connect the GPS receiver to a serial port on the field computer.

CAUTION – Using COM port cabling that supplies power to the field computer can cause problems with, or even permanent damage to, the field computer. Some GPS receivers supply power, and some cables transfer power through one or more of their pins. Trimble **strongly recommends** that you protect the field computer by connecting either the null modem adaptor (P/N 43197) or the curly straight-through cable (P/N 45052) to the receiver cable. These two connectors do not supply power, so they will protect the field computer from power output by the receiver.

Port	Connection method
Standard RS-232 serial (COM) port	Connect the GPS receiver cable to the curly straight-through cable. Trimble recommends that you use the cable with P/N 45052 to protect the field computer from power supplied by the receiver. Connect the curly straight-through cable to the field computer.
Customized serial (COM) port	Connect the GPS receiver cable to the null modem adaptor (P/N 43197). The adaptor changes gender, and also protects the field computer from power supplied by the receiver. Connect the null modem adaptor to the data download cable that was supplied with the field computer. Connect the data download cable to the field computer. *Note – The null modem adaptor is not required with a GPS Pathfinder Pocket receiver.*
CompactFlash serial port	Connect a CompactFlash serial adaptor to the CompactFlash port. Then connect as for a standard COM port.

If a powered connection is acceptable or necessary, you can connect directly to the receiver, or you can use the curly straight-through cable P/N 30236 instead of cable P/N 45052. If you are unsure whether a powered connection will cause damage, refer to the user manual for the field computer or consult the manufacturer before using P/N 30236.

Tip – The GPS Pathfinder Pocket receiver does not output power and can be safely connected directly to a field computer.

A field computer uses more power when a GPS receiver is connected to its CompactFlash serial port. This type of connection will discharge the battery in the field computer more quickly.

Note – If you have a Compaq iPAQ, and you are using a CompactFlash serial adaptor to provide a serial connection to the GPS receiver, configure the receiver to connect to the serial port COM4.

Connection diagrams

The following connection diagrams are included:

- GPS Pathfinder Pro series receiver connections using Bluetooth wireless technology, page 31
- GPS Pathfinder Pro series receiver cabling, page 32
- GPS Pathfinder Pro XR receiver cabling, page 34
- GPS Pathfinder Pro XRS receiver cabling, page 35
- GPS Pathfinder Pocket receiver cabling, page 36
- GPS Pathfinder Power receiver cabling, page 37
- Trimble 5700 receiver cabling, page 39
- Trimble 5800 and R8 receiver cabling, page 40
- Base station setup using cabling, page 43

GPS Pathfinder Pro series receiver connections using Bluetooth wireless technology

To use a Bluetooth-enabled field computer with a GPS Pathfinder Pro series (ProXT or ProXH) receiver, connect the system as shown in Figure 1.

No.	Part No.	Description
1	52240-00	GPS Pathfinder ProXT receiver
		or
	52440-20	GPS Pathfinder ProXH receiver
2		Bluetooth-enabled field computer
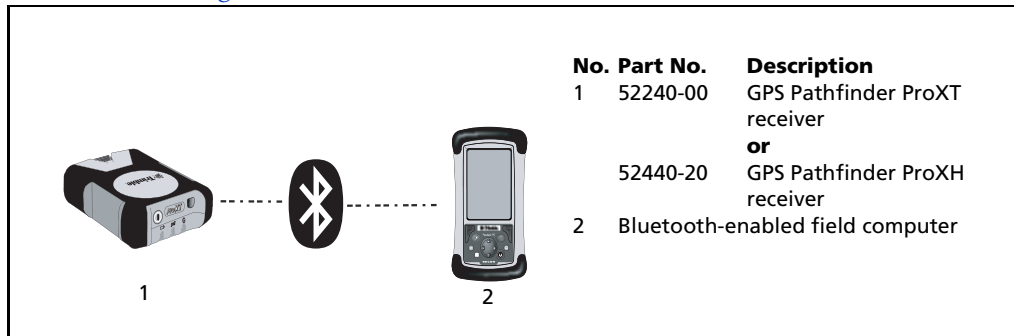
Figure 1   Connecting a GPS Pathfinder Pro series receiver to a field computer using Bluetooth technology

Note – In a setup that allows for the use of Bluetooth wireless technology, you can use only Bluetooth, or a combination of Bluetooth technology and cabling.

GPS Pathfinder Pro series receiver cabling

To connect a field computer with a GPS Pathfinder Pro series (ProXT or ProXH) receiver using cables, connect the system as shown in Figure 2 to Figure 4.

No.	Part No.	Description
1	52240-00	GPS Pathfinder ProXT receiver
		or
	52440-20	GPS Pathfinder ProXH receiver
2	18532	Null modem cable (DB9 F-F)
3		Field computer with standard serial port
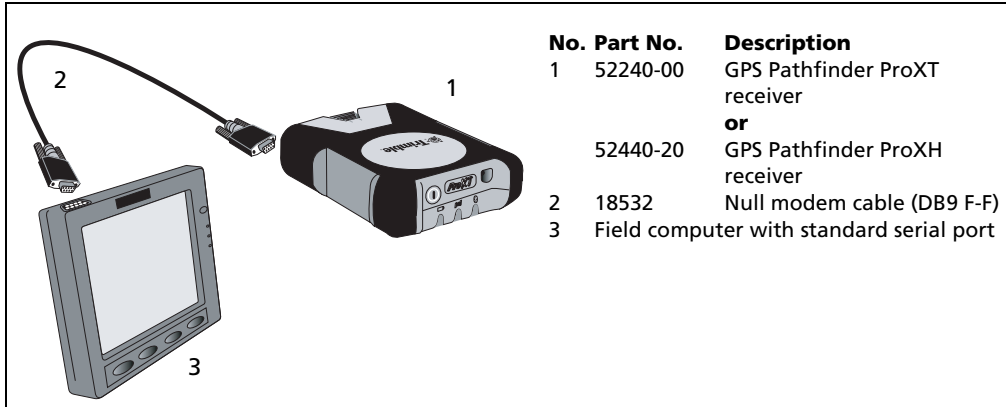
Figure 2   Connecting a GPS Pathfinder Pro series receiver to a field computer with a standard serial port

No.	Part No.	Description
1	52240-00	GPS Pathfinder ProXT receiver
		or
	52440-20	GPS Pathfinder ProXH receiver
2		Custom data cable supplied with field computer
3		Field computer with custom serial port

Figure 3   Connecting a GPS Pathfinder Pro series receiver to a field computer with a custom serial port

No.	Part No.	Description
1	52240-00	GPS Pathfinder ProXT receiver
		or
	52440-20	GPS Pathfinder ProXH receiver
2	55443-00	NMEA/RTCM splitter cable
3		Field computer with standard serial port
4	18532	Null modem cable (D89 F-F)

Figure 4   Connecting a GPS Pathfinder Pro series receiver to a field computer using a NMEA/RTCM splitter cable

GPS Pathfinder Pro XR receiver cabling

To use a field computer with a GPS Pathfinder Pro XR receiver, connect the system as shown in Figure 5 or Figure 6.

No.	Part No.	Description
1	29653-00	Integrated GPS/beacon antenna
2	22628	Antenna cable
3	38073-11 or 46090-11	12-channel GPS Pathfinder Pro XR receiver
4	17466	Camcorder batteries
5	30232-00	NMEA/RTCM cable
6	30231-00	Data/power cable
7	24333	Dual battery cable
8	45052	Field computer data cable
9		Field computer with standard serial port

Figure 5   Connecting a GPS Pathfinder Pro XR receiver to a field computer with a standard serial port

No.	Part No.	Description
1	29653-00	Integrated GPS/beacon antenna
2	22628	Antenna cable
3	38073-11 or 46090-11	12-channel GPS Pathfinder Pro XR receiver
4	17466	Camcorder batteries
5	30232-00	NMEA/RTCM cable
6	30231-00	Data/power cable
7	24333	Dual battery cable
8	43197	Null modem adaptor
9		Custom data cable (supplied with field computer)
10		Field computer with custom serial port

Figure 6   Connecting a GPS Pathfinder Pro XR receiver to a field computer with a custom serial port

GPS Pathfinder Pro XRS receiver cabling

To use a field computer with a GPS Pathfinder Pro XRS receiver, connect the system as shown in Figure 7 or Figure 8.

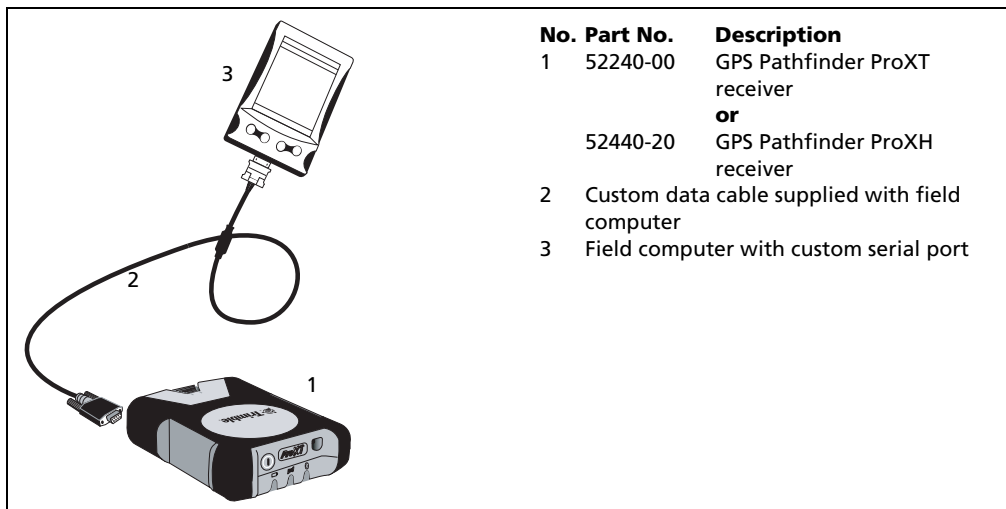| No.	Part No.	Description
1	33580-50	Combined L1 GPS/MSK beacon/satellite differential antenna
2	22628	Antenna cable
3	33302-51	12-channel GPS Pathfinder Pro XRS receiver
4	17466	Camcorder batteries
5	30232-00	NMEA/RTCM cable
6	30231-00	Data/power cable
7	24333	Dual battery cable
8	45052	Field computer data cable
9		Field computer with standard serial port

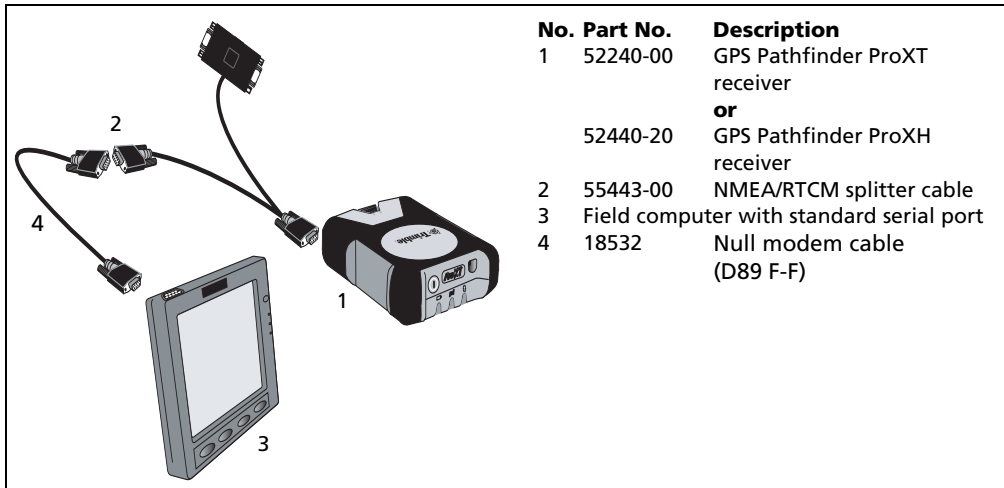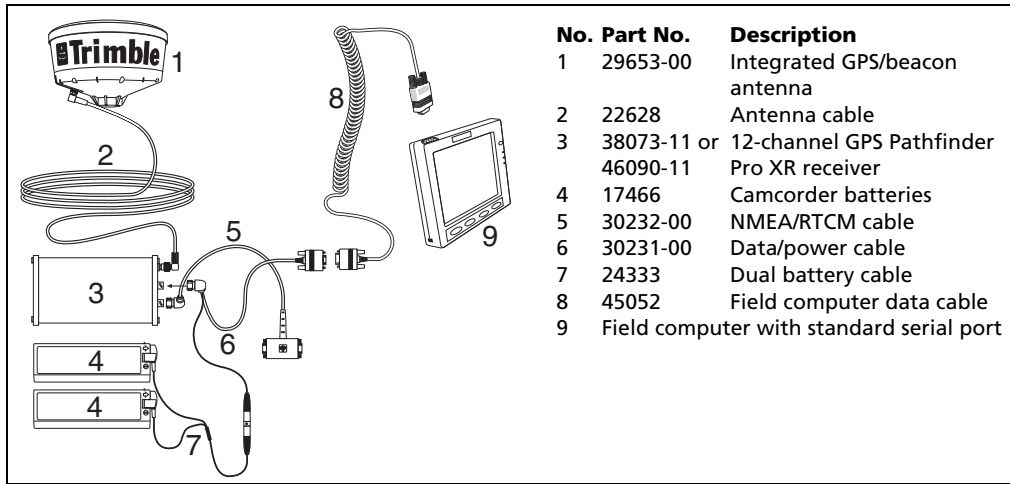Figure 7   Connecting a GPS Pathfinder Pro XRS receiver to a field computer with a standard serial port

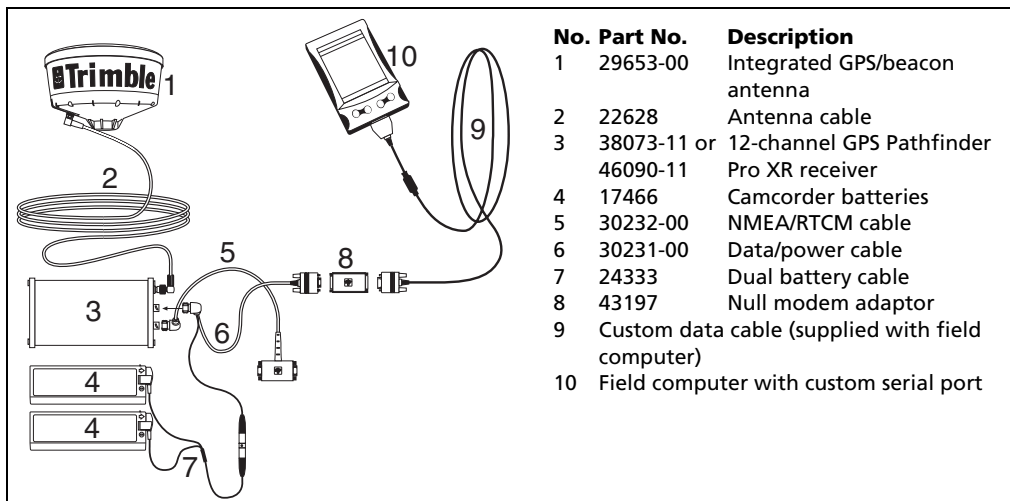| No.	Part No.	Description
1	33580-50	Combined L1 GPS/MSK beacon/satellite differential antenna
2	22628	Antenna cable
3	33302-51	12-channel GPS Pathfinder Pro XRS receiver
4	17466	Camcorder batteries
5	30232-00	NMEA/RTCM cable
6	30231-00	Data/power cable
7	24333	Dual battery cable
8	43197	Null modem adaptor
9		Custom data cable (supplied with field computer)
10		Field computer with custom serial port

Figure 8   Connecting a GPS Pathfinder Pro XRS receiver to a field computer with a custom serial port

GPS Pathfinder Pocket receiver cabling

To use a field computer with a GPS Pathfinder Pocket receiver, connect the system as shown in Figure 9 or Figure 10.

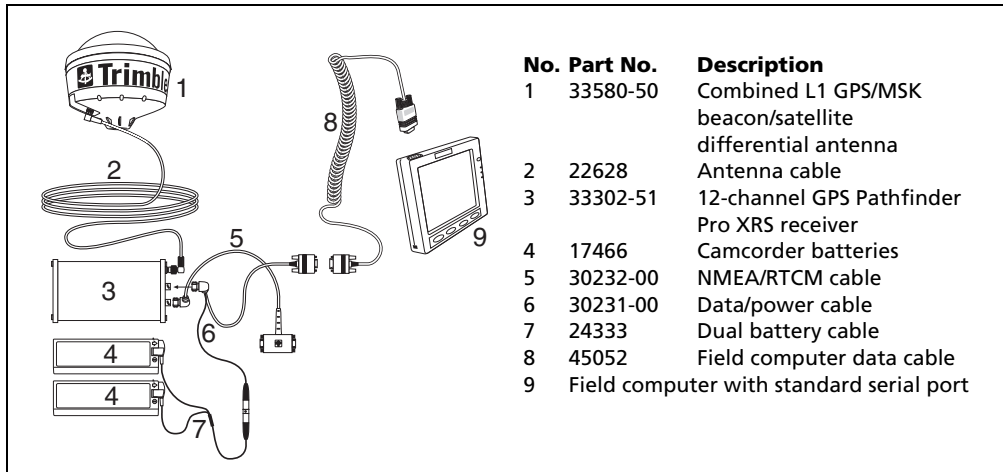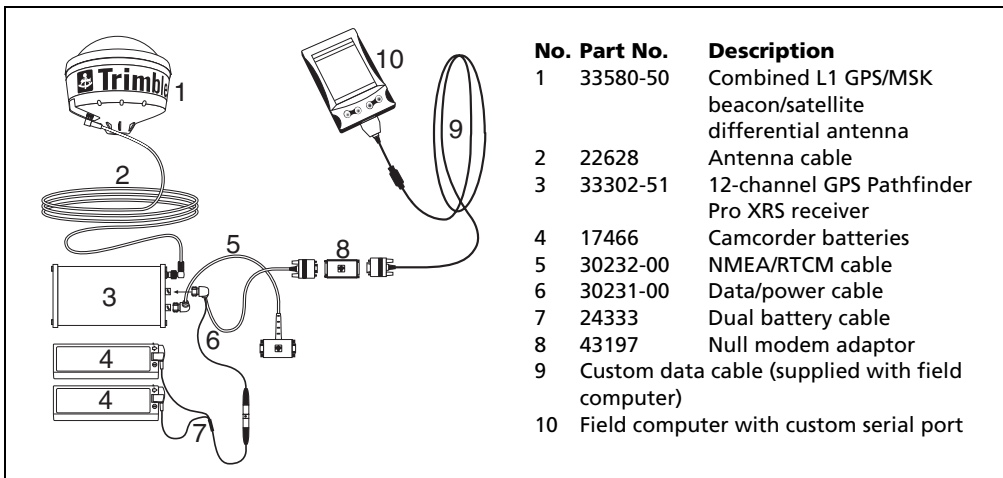| No.	Part No.	Description
1	43800-00	GPS Pathfinder Pocket receiver
2	40767-06	Miniature antenna
3		Custom data cable (supplied with field computer)
4		Field computer with standard serial port

Figure 9   Connecting a GPS Pathfinder Pocket receiver to a field computer with a standard serial port

No.	Part No.	Description
1	43800-00	GPS Pathfinder Pocket receiver
2	40767-06	Miniature antenna
3		Custom data cable (supplied with field computer)
4		Field computer with custom serial port
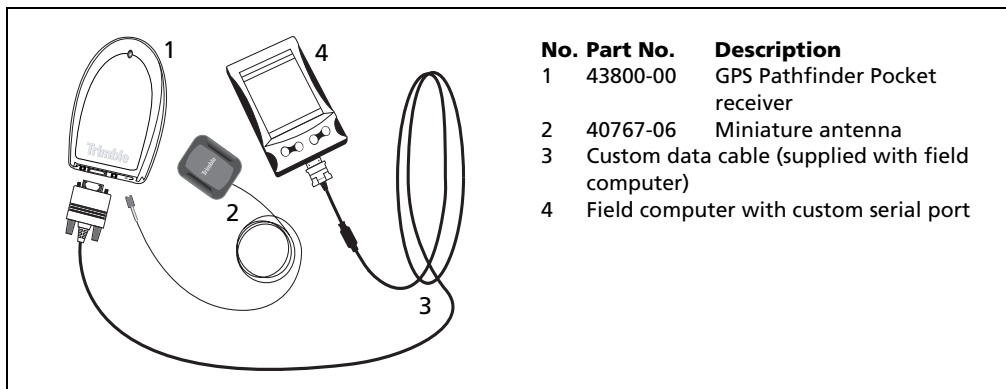
Figure 10   Connecting a GPS Pathfinder Pocket receiver to a field computer with a custom serial port

To use RTCM corrections with a field computer and a GPS Pathfinder Pocket receiver, connect the system as shown in Figure 11.

No.	Part No.	Description
1	43800-00	GPS Pathfinder Pocket receiver
2	44199	Pocket GPS RTCM cable
3		Custom data cable (supplied with field computer)

To field computer

Figure 11   Using RTCM corrections with a GPS Pathfinder Pocket receiver

GPS Pathfinder Power receiver cabling

To use a field computer with a GPS Pathfinder Power receiver, connect the system as shown in Figure 12 or Figure 13.

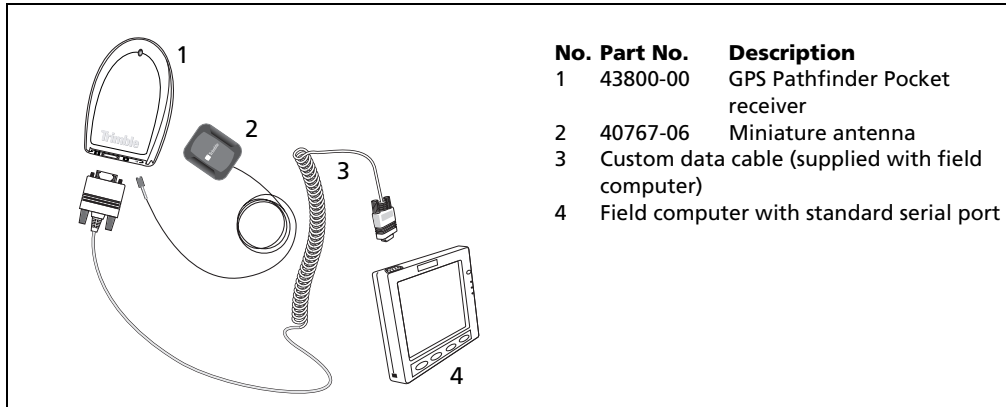| No.	Part No.	Description
1	38198-50	GPS Pathfinder Power receiver
2	40492-00	Power/data cable
3	17466	Camcorder batteries
4	24333	Dual battery cable
5	40887-00	NMEA/RTCM cable
6	45052	Field computer data cable
7		Field computer with standard serial port

Figure 12   Connecting a GPS Pathfinder Power receiver to a field computer with a standard serial port

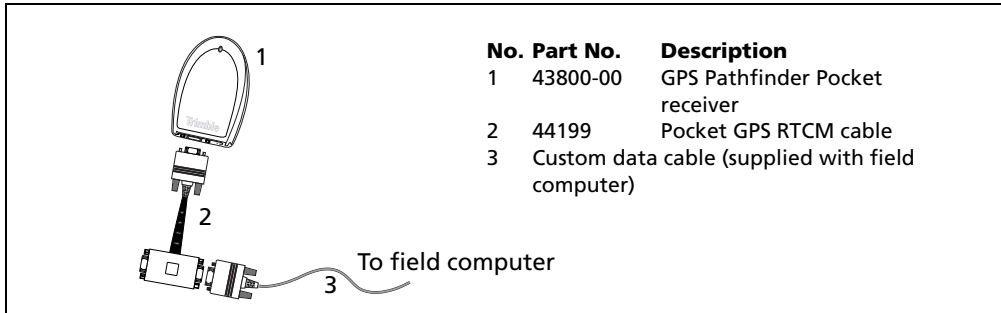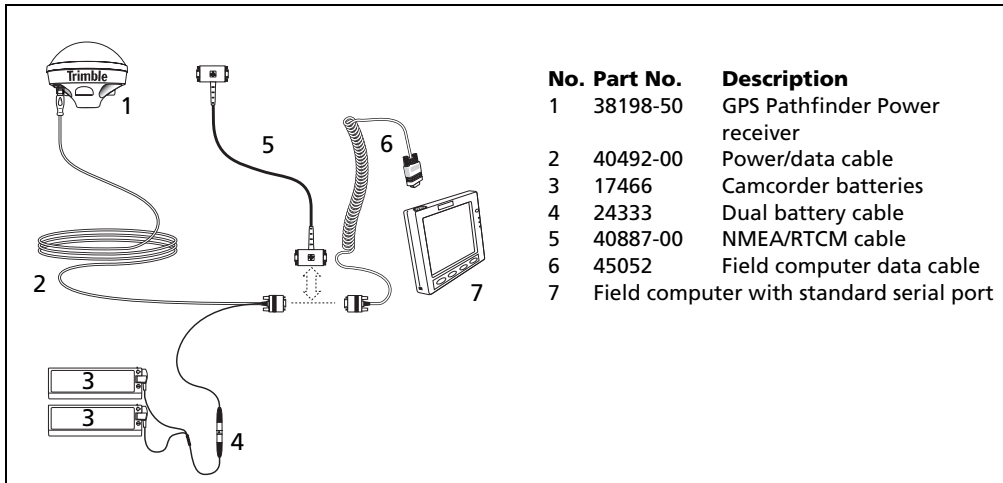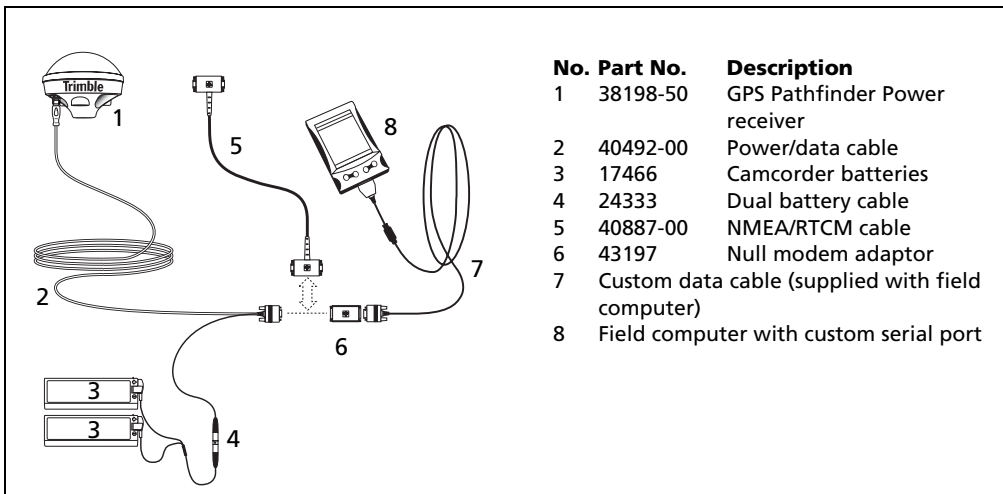| No.	Part No.	Description
1	38198-50	GPS Pathfinder Power receiver
2	40492-00	Power/data cable
3	17466	Camcorder batteries
4	24333	Dual battery cable
5	40887-00	NMEA/RTCM cable
6	43197	Null modem adaptor
7		Custom data cable (supplied with field computer)
8		Field computer with custom serial port

Figure 13   Connecting a GPS Pathfinder Power receiver to a field computer with a custom serial port

Trimble 5700 receiver cabling

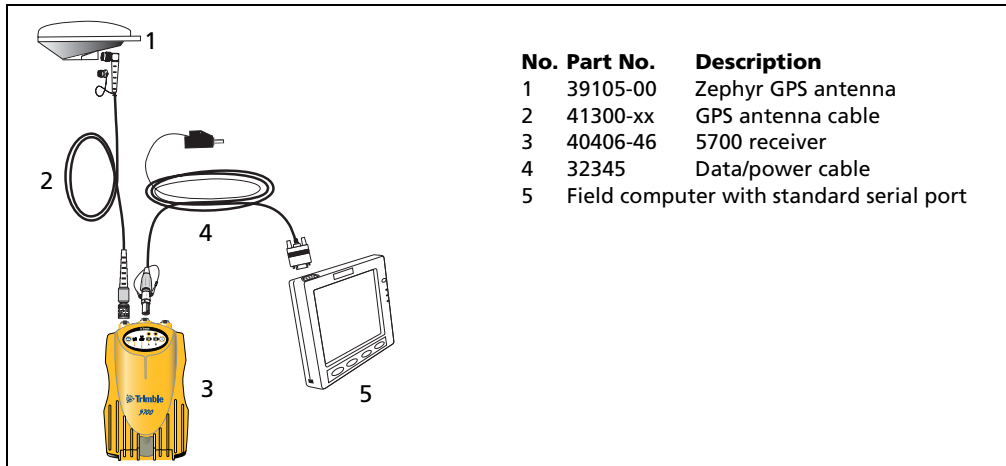To use a field computer with a Trimble 5700 receiver, connect the system as shown in Figure 14 or Figure 15.

No.	Part No.	Description
1	39105-00	Zephyr GPS antenna
2	41300-xx	GPS antenna cable
3	40406-46	5700 receiver
4	32345	Data/power cable
5		Field computer with standard serial port

Figure 14   Connecting a 5700 receiver to a field computer with a standard serial port

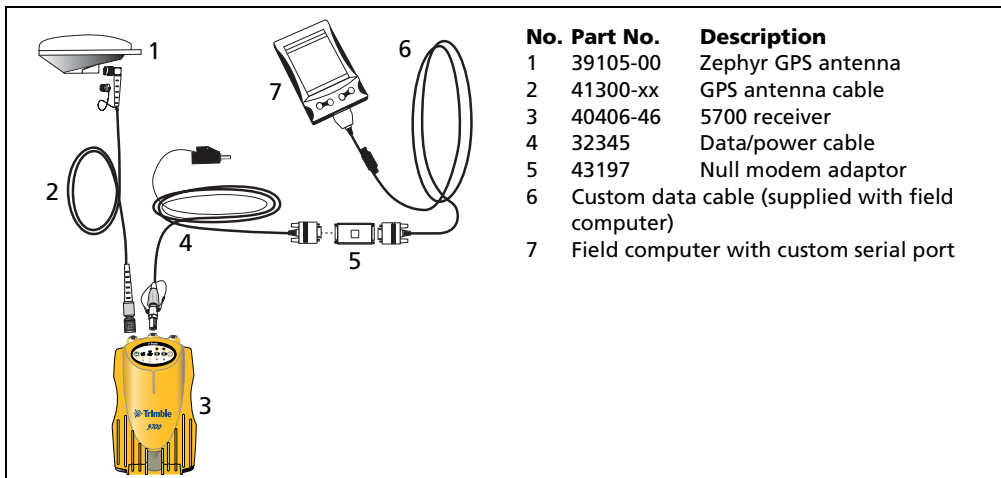| No.	Part No.	Description
1	39105-00	Zephyr GPS antenna
2	41300-xx	GPS antenna cable
3	40406-46	5700 receiver
4	32345	Data/power cable
5	43197	Null modem adaptor
6		Custom data cable (supplied with field computer)
7		Field computer with custom serial port

Figure 15   Connecting a 5700 receiver to a field computer with a custom serial port

Trimble 5800 and R8 receiver cabling

To use a field computer with a Trimble 5800 or R8 receiver, connect the system as shown in Figure 16 to Figure 19.

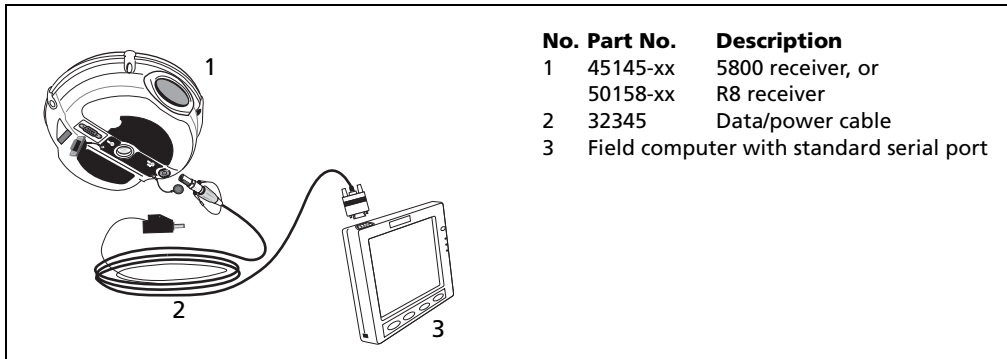| No.	Part No.	Description
1	45145-xx	5800 receiver, or
	50158-xx	R8 receiver
2	32345	Data/power cable
3		Field computer with standard serial port

Figure 16   Connecting the Lemo port on a 5800 or R8 receiver to a field computer with a standard serial port

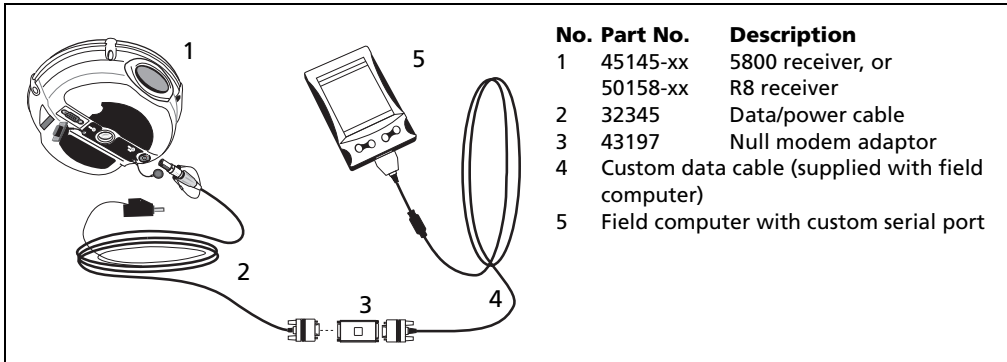| No.	Part No.	Description
1	45145-xx	5800 receiver, or
	50158-xx	R8 receiver
2	32345	Data/power cable
3	43197	Null modem adaptor
4		Custom data cable (supplied with field computer)
5		Field computer with custom serial port

Figure 17   Connecting the Lemo port on a 5800 or R8 receiver to a field computer with a custom serial port

No.	Part No.	Description
1	45145-xx	5800 receiver, or
	50158-xx	R8 receiver
2	18532	Null modem cable
3		Field computer with standard serial port

Figure 18   Connecting the serial port on a 5800 or R8 receiver to a field computer with a standard serial port
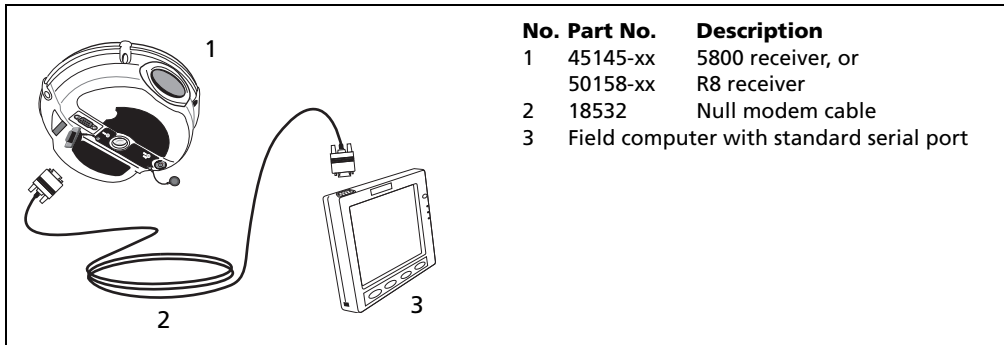

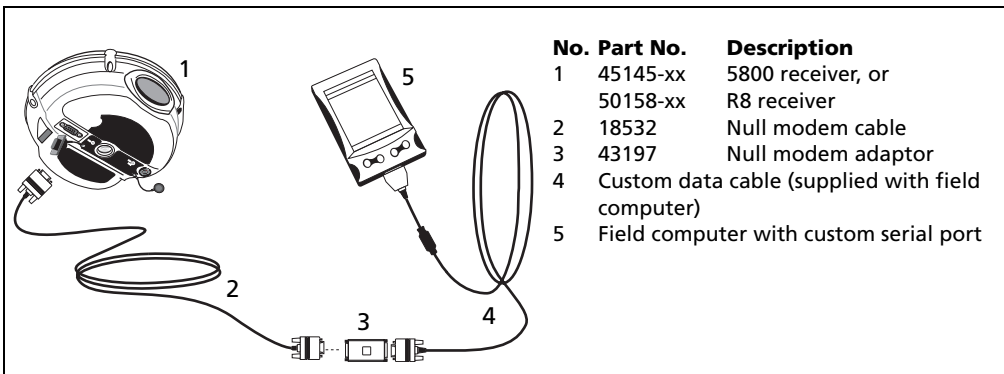| No.	Part No.	Description
1	45145-xx	5800 receiver, or
	50158-xx	R8 receiver
2	18532	Null modem cable
3	43197	Null modem adaptor
4		Custom data cable (supplied with field computer)
5		Field computer with custom serial port

Figure 19   Connecting the serial port on a 5800 or R8 receiver to a field computer with a custom serial port

Figure 20 shows the components required to establish a Bluetooth connection between a 5800 or R8 receiver and a field computer. In the example below, a Trimble Ranger handheld with integrated Bluetooth technology is shown. However, any supported Bluetooth-enabled field computer (for example, a Trimble Recon handheld with a Socket Communications Bluetooth CompactFlash card) can be substituted for these two components.
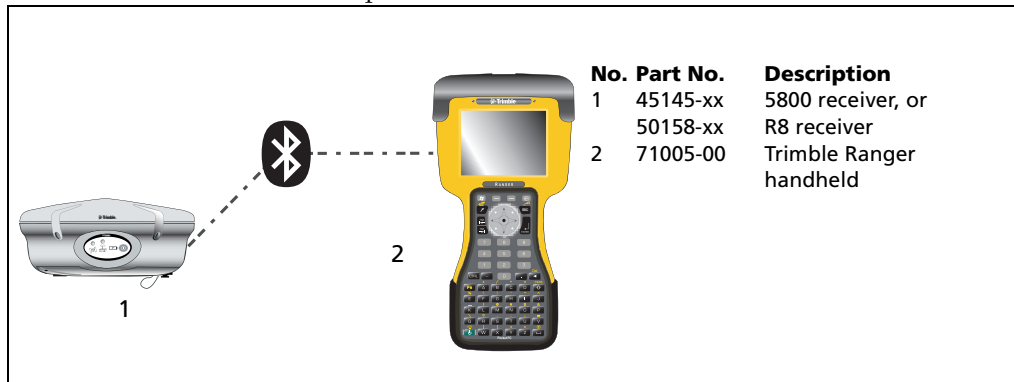

No.	Part No.	Description
1	45145-xx	5800 receiver, or
	50158-xx	R8 receiver
2	71005-00	Trimble Ranger handheld

Figure 20   Example of a 5800 or R8 receiver using Bluetooth wireless technology to connect to a field computer

Base station setup using cabling

Figure 21 shows the cabling required to set up a base station using the TerraSync software. Other GPS receivers or radios may be substituted for those shown.
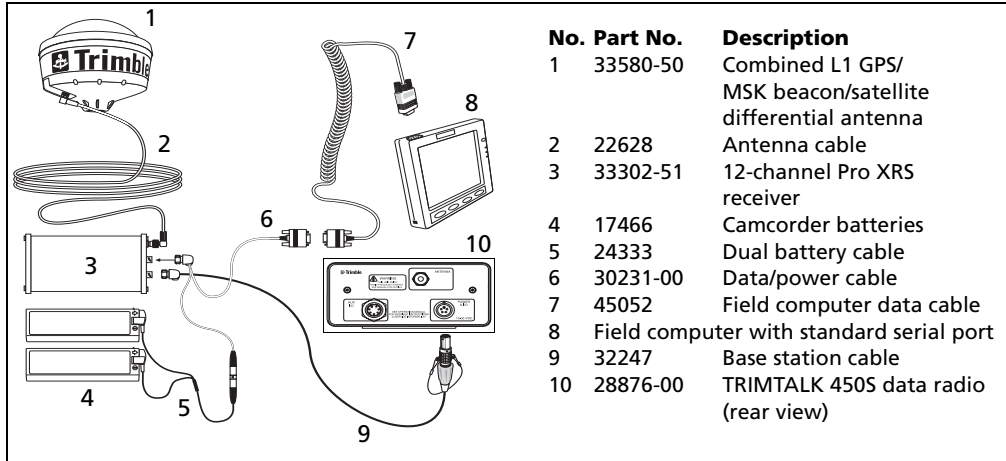

No.	Part No.	Description
1	33580-50	Combined L1 GPS/ MSK beacon/satellite differential antenna
2	22628	Antenna cable
3	33302-51	12-channel Pro XRS receiver
4	17466	Camcorder batteries
5	24333	Dual battery cable
6	30231-00	Data/power cable
7	45052	Field computer data cable
8		Field computer with standard serial port
9	32247	Base station cable
10	28876-00	TRIMTALK 450S data radio (rear view)

Figure 21   Example of base station setup using cabling

Known Issues

This section provides information about known issues with the TerraSync software.

Installation

- On some CE devices, such as the Trimble Recon handheld, the message Adding information for "Remove Programs" may remain on the screen for several minutes at the end of the installation process. While this message is displayed, do not cancel the installation or reset the CE device.

Communications

- The TerraSync software can forward RTCM corrections from a serial port on the field computer to the GPS receiver. However, it cannot forward CMR messages from a serial port to the receiver.

- You cannot use the TerraSync software to configure communication settings for an external data radio connected to a base receiver. You can only configure the receiver to use the same settings as the radio. To change the data radio's communication settings, use the configuration software that is provided with the radio.

- If you change the NMEA or RTCM output baud rate while the TerraSync software is outputting NMEA messages to an external device, communication problems can occur. The COM port may become locked, or the external device may misinterpret the data sent. Before changing communication settings in the NMEA Output Settings form, or in the Base Station Setup wizard, disconnect any external devices that are using NMEA data from the TerraSync software.

- If you accidentally select an infrared port on the field computer for connection to a GPS receiver, the TerraSync software may stop responding.

- The TerraSync software does not filter NMEA positions by PDOP, or obey the *Wait for Real-time* setting. All positions generated by the receiver are output in the NMEA stream.

Suspending a CE device

Before you suspend a CE device running the TerraSync software, you must:

- close all data files

- disconnect from the GPS receiver

⚠ **CAUTION –** Failure to close all data files or to disconnect from the GPS receiver may result in corrupted data.

Data collection

If you collect both SuperCorrect and carrier data, the first position logged after a loss of carrier lock cannot be differentially corrected in the GPS Pathfinder Office software. To ensure that you collect all the positions you need, remain stationary for two epochs after regaining carrier lock.

VRS

- Positions that have been corrected in real time using VRS may be less accurate after postprocessing in the GPS Pathfinder Office software. This is because the Differential Correction utility uses a single base station, which is usually farther from the rover than the VRS. Data that has had real-time VRS corrections applied may not require postprocessing.

- The AT command set is a standard language for communicating with modems. To establish a dial-up connection with a VRS provider using some cellphones (such as some Nokia models), you may need to send AT commands from the field computer to put the cellphone into ISDN mode. The Windows CE operating system cannot send these commands. To configure the cellphone, connect it to a computer that is running a desktop Windows operating system.

- Some cellphones do not disconnect the dial-up connection to a VRS server when the TerraSync software sends a disconnect command. To ensure that a dial-up connection is ended, disconnect from the VRS server in the TerraSync software, and then end the call on the cellphone as well.

- Positions collected using a receiver without H-Star technology that have been corrected in real time using VRS may be less accurate after postprocessing using the GPS Analyst extension. This is because the Differential Correction wizard uses a single base station, which is usually farther from the rover than the VRS. Data that has had real-time VRS corrections applied may not require postprocessing.

Restoring fonts

After you perform a hard reset on a CE device that has a RAM backup feature (for example, a GeoExplorer series handheld or a GIS TSCe field device), fonts that you have installed may not be available. To make the fonts available, perform a soft reset.

Survey receivers

- The TerraSync software may be unable to connect to a survey receiver that is configured to less than 38400 baud. If you have problems connecting the TerraSync software to the receiver, use the GPS Configurator software to check that the baud rate of the receiver port is set to 38400. GPS Configurator software is supplied with the GPS receiver.

- The TerraSync software cannot turn off a survey receiver. To turn off the receiver, use the Power button ⊙ on the receiver.

GeoExplorer series handheld

- If a GeoExplorer series handheld loses power, or you perform a hard reset, the main memory is cleared. Any unsaved data and any changes in the main memory since the last backup are lost. When you install the TerraSync software on a GeoExplorer series handheld, some settings are stored in the main memory, even though the TerraSync software is always installed to the Disk. To protect these settings, the TerraSync software installation program automatically backs up the main memory after installing the TerraSync software.

  To avoid data loss, Trimble recommends that you also back up the main memory immediately after making any changes to system settings. For information on backing up the main memory, refer to the *GeoExplorer Series Getting Started Guide*.

- When using a GeoExplorer series handheld as an external GPS receiver, with a cabled connection from your field computer to the serial clip on the GeoExplorer series handheld, the only baud rate that is supported is 38400. Use the GPS Connector software on the GeoExplorer series handheld to set the COM1 baud rate to 38400. Use the COM port configuration control on your field computer to set the baud rate on its COM port to 38400.

GPS Pathfinder Pocket receiver

- When you use the TerraSync software with an external beacon receiver and a GPS Pathfinder Pocket receiver, external beacon status information (such as the battery level) is not displayed.

- When you use the TerraSync software with a GPS Pathfinder Pocket receiver, the receiver's battery level is not displayed.

- After a reset, the GPS Pathfinder Pocket receiver uses its own default elevation mask instead of the elevation mask set in the TerraSync software. This problem is resolved when the receiver has collected a current and complete almanac. If you collect GPS positions without a complete almanac, you may not be able to postprocess them, because the receiver may track different satellites from the base.

  If you intend to postprocess GPS data, Trimble recommends that you enable the SuperCorrect option, or that after a reset you wait until an almanac has been collected before you log positions.

GPS Pathfinder Pro series receiver

Using a null modem cable to provide NMEA output from a GPS Pathfinder Pro series receiver can cause serial communications to jam on some field computers. The communications problem can cause the field computer to slow down or stop responding.

To provide NMEA output to another device, Trimble recommends that you use the NMEA/RTCM splitter cable (P/N 55443-00). Connect the splitter cable to the receiver. Then connect the receiver to the field computer and enable NMEA output in the TerraSync software.

Technical Assistance

The TerraSync documentation should be your first point of reference if you have problems using the TerraSync software.

The *TerraSync Software Getting Started Guide* contains:

- an overview of the software functionality
- a tutorial on using the software

The *TerraSync Software Reference Manual* contains:

- a detailed reference with information on all software screens and controls.
- a troubleshooting section that lists common problems, their causes, and possible solutions. If you have problems, refer to this section first.

If you cannot find a solution in the *TerraSync Software Reference Manual*, try restarting the TerraSync software. Close any open data file, and then tap the ✕ button in the upper right corner of the TerraSync software window to exit the software. Then start the TerraSync software again and resume working.

If you cannot restart the software, or restarting the software does not solve your problem, try resetting or restarting the field computer. For more information, refer to the field computer's documentation.

If you still cannot find a solution to your problem, ***contact your local dealer***. Alternatively, you can request technical support using the Trimble website (www.trimble.com/support.html).