

# RELEASE NOTES

## TerraSync™ software

- Introduction
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Version 4.10  
Revision A  
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P/N 43161-37



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For a complete list of all relevant legal notices regarding this product, please refer to the *TerraSync Software Getting Started Guide*.

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This product is covered by the following patent: 6,377,891.

## Release Notice

This is the December 2009 release (Revision A) of the *TerraSync Software Release Notes*, P/N 43161-37. It applies to version 4.10 of the TerraSync software.

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## Introduction

Welcome to version 4.10 of the Trimble® 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 4.10 of the TerraSync software, you must choose the language that the Installation Wizard and the Activation Wizard use to install and activate the software.

Before running version 4.10 of the TerraSync software, it must be activated using the Activation Wizard.

To run version 4.10 of the TerraSync software in a language other than English, you must first download and install the appropriate language files, if available, from the Trimble website.

Similarly, to run the TerraSync Online Help in a language other than English, you must download and install the appropriate Help files, if available, from the Trimble website.

## 简介

欢迎使用 Trimble® TerraSync™ 软件 4.10 版本。TerraSync 软件的本次发行包含一些重要的改变和新增内容。请认真阅读发行说明。

当您安装 TerraSync 软件 4.10 版本时，必须为安装向导程序和激活向导程序选择一种您将使用的语言，使它们能够用所选语言运行软件的安装和激活。

在运行 TerraSync 软件 4.10 版本之前，您必须首先用激活向导程序激活软件。

如果您要用非英文的语言运行 TerraSync 软件 4.10 版本，并且 Trimble 网站提供了此语言，则必须首先从 Trimble 网站下载并安装该语言文件。

同样，如果要用非英文的语言运行 TerraSync 在线帮助，并且 Trimble 网站提供了此语言，则必须首先从 Trimble 网站下载并安装该语言的帮助文件。

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## Einführung

Willkommen zu Version 4.10 von Trimble® TerraSync™. Diese Version von TerraSync enthält mehrere wichtige Ergänzungen und Änderungen. Bitte lesen Sie diese Versionshinweise daher sorgfältig.

Wenn Sie TerraSync 4.10 installieren, müssen Sie die Sprache für den Installationsassistenten und den Aktivierungsassistenten auswählen.

Bevor Sie TerraSync 4.10 ausführen, muss die Software mithilfe des Aktivierungsassistenten aktiviert werden.

Wenn Sie TerraSync 4.10 nicht mit einer englischen Benutzeroberfläche ausführen möchten, müssen Sie zuerst die entsprechenden Sprachpakete von der Trimble-Website herunterladen.

Wenn Sie die TerraSync-Onlinehilfe 4.10 in einer anderen Sprache als Englisch verwenden möchten, müssen Sie die entsprechende Sprachversion der Hilfedateien von der Trimble-Website herunterladen.

## Introducción

Bienvenido a la versión 4.10 del software Trimble® TerraSync™. Esta versión del software TerraSync contiene varios cambios y agregados importantes. Por favor lea las presentes notas de lanzamiento con atención.

Al instalar la versión 4.10 del software TerraSync, deberá elegir el idioma que los programas Installation Wizard y Activation Wizard utilizarán para ejecutar la instalación y la activación del software.

Antes de ejecutar la versión 4.10 de TerraSync, primero deberá activarse el software utilizando el programa Activation Wizard.

Para ejecutar la versión 4.10 del software TerraSync en un idioma distinto del inglés, primero deberá descargar e instalar los archivos de idioma correspondientes, si están disponibles, del sitio web de Trimble.

De forma similar, para ejecutar la Ayuda en pantalla de TerraSync en un idioma distinto del inglés, deberá descargar e instalar los archivos de ayuda correspondientes, si están disponibles, del sitio web de Trimble.

## Introduction

Bienvenue sur la version 4.10 du logiciel Trimble® TerraSync™. Cette version du logiciel TerraSync comporte un nombre important d'ajouts et de changements. Veuillez lire attentivement ces notes de version.

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Lorsque vous installez la version 4.10 du logiciel TerraSync, vous devez choisir la langue que l'Assistant d'installation et que l'Assistant d'activation utiliseront pour procéder à l'installation et à l'activation du logiciel.

Avant d'utiliser la version 4.10 du logiciel TerraSync, celui-ci doit être activé à l'aide de l'Assistant d'activation.

Pour utiliser la version 4.10 du logiciel TerraSync dans une langue autre que l'anglais, vous devez d'abord télécharger et installer les fichiers de langues appropriés, si disponibles, depuis le site Web de Trimble.

De même, pour utiliser l'Aide en ligne de TerraSync dans une langue autre que l'anglais, vous devez télécharger et installer les fichiers d'Aide appropriés, si disponibles, depuis le site Web de Trimble.

## はじめに

Trimble® TerraSync™ ソフトウェア・バージョン 4.10 をお買い上げくださいます。誠にありがとうございます。本バージョンには、幾つか重要な追加や変更がありますので、このリリースノートをよくお読みください。

**本製品をインストールする際には、Installation Wizard と Activation Wizard が使用する言語を選択してください。**

**本製品を起動する前に、Activation Wizard プログラムを使用してアクチベーションを行なって下さい。**

**日本語で使用する場合は、Trimble のウェブサイトから言語ファイルをダウンロードし、インストールしてください。**

TerraSync オンライン・ヘルプを日本語で使用する場合も同様に、Trimble のウェブサイトから日本語のヘルプファイルをダウンロードし、インストールしてください。

## Introdução

Bem-vindo à versão 4.10 do software TerraSync™ da Trimble®. Este release do software TerraSync contém diversas inclusões e alterações importantes. Leia estas notas de release cuidadosamente.

Quando você instala a versão 4.10 do software TerraSync, é preciso escolher o idioma que o programa Installation Wizard (Assistente de instalação) e o programa Activation Wizard (Assistente de ativação) utilizarão para executar a instalação e a ativação do software.

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Antes de executar a versão 4.10 do software TerraSync, ative-o primeiro usando o programa Activation Wizard (Assistente de ativação).

Para executar a versão 4.10 do software TerraSync em um idioma que não seja o inglês, é preciso baixar primeiro os arquivos de idioma apropriados, se estiverem disponíveis, do site da Trimble e, depois, instalá-los.

Da mesma forma, para executar a TerraSync Online Help (Ajuda on-line do TerraSync) em um idioma que não seja o inglês, é preciso baixar primeiro os arquivos de Ajuda apropriados, se estiverem disponíveis, do site da Trimble e, depois, instalá-los.

## 머리말

Trimble® TerraSync™ 소프트웨어 버전 4.10에는 중요한 추가기능 및 변경내용이 많이 담겨 있습니다. 이 릴리스 노트를 주의깊게 읽어 보시기 바랍니다.

TerraSync 소프트웨어 버전 4.10을 설치할 때에는 설치 마법사 프로그램과 정품 인증 마법사 프로그램에 쓰일 언어를 선택해야 합니다.

TerraSync 소프트웨어 버전 4.10을 실행하기 위해서는 먼저 정품 인증 마법사 프로그램으로 정품 인증을 받아야 합니다.

영어 이외의 다른 언어로 TerraSync 소프트웨어 버전 4.10을 실행하고자 하면 먼저 Trimble 웹사이트에서 해당 언어 파일이 있는지 확인한 뒤 내려받아 설치해야 합니다.

영어 이외의 다른 언어로 TerraSync 온라인 도움말을 실행하고자 할 경우에도 이와 마찬가지로 Trimble 웹사이트에서 해당 도움말 파일이 있는지 확인한 뒤 내려받아 설치해야 합니다.

## Введение

Приветствие! Программное обеспечение Trimble® TerraSync™ версии 4.10. В данном выпуске программного обеспечения TerraSync реализован ряд дополнений и изменений. Внимательно прочитайте эти примечания к выпуску.

При установке программного обеспечения TerraSync версии 4.10 необходимо выбрать язык, который программа Installation Wizard (Мастер установки) и программа Activation Wizard (Мастер активации) будут использовать во время установки и активации программного обеспечения.

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Перед запуском программного обеспечения TerraSync версии 4.10 его необходимо активировать при помощи программы Activation Wizard (Мастер активации).

Для запуска программного обеспечения TerraSync версии 4.10 на языке, отличном от английского, сначала необходимо загрузить и установить соответствующие языковые файлы, если таковые имеются, с веб-сайта Trimble.

Аналогичным образом, для запуска встроенной справки TerraSync на языке, отличном от английского, сначала необходимо загрузить и установить соответствующие файлы справки, если таковые имеются, с веб-сайта Trimble.

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## New features and changes

Version 4.10 is an exciting new version of the TerraSync software. It provides support for the new GNSS processing engine introduced in version 4.20 of the GPS Pathfinder® Office software and version 2.20 of the GPS Analyst™ extension for ESRI ArcGIS Desktop software. Data processed through this new engine shows considerable accuracy improvement. In particular, H-Star™ receivers achieve decimeter (10 cm / 4 inch) accuracy in more places than ever before, GeoXT™ and ProXT™ receivers achieve second-by-second accuracy of 50 cm, and the Juno™ series handhelds (Juno SB handhelds and Juno SC handhelds) achieve 1-3 meter accuracy. Users with other receiver types will typically also see increased accuracy as well as increased position yield with the new office and field software.

In addition to the new postprocessin engine, version 4.10 of the TerraSync software also includes the following new features:

- Support for the Trimble R8 Model II receiver running firmware version 4.10.
- Support for the Trimble Tornado™ and Tempest™ antennas
- Support for logging of GLONASS measurement from a GPS Pathfinder ProXRT receiver with GLONASS option enabled, to allow for GLONASS postprocessing in the GPS Pathfinder Office software version 4.20.
- Support for logging of the DeltaPhase™ information required by the new postprocessing engine (see GPS Pathfinder Office software version 4.20 for details).
- Maximum length of an attribute text field in SSF files has been increased to 230 characters.
- Better waypoint handling to allow visited waypoints to be checked off a list so the waypoint list can be used as a record of work completed and work yet to do.
- The option to display coordinates as Northing/Easting or Easting/Northing.
- When the TerraSync software starts, the splash screen now displays the license type, expiration date (if applicable), and the registrant of the software.
- The TerraSync software may be evaluated for free by using a Customer Evaluation license available from your local Trimble Mapping & GIS reseller.

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Other changes in version 4.10 of the TerraSync Software include:

- Velocity records are no longer recorded as they are not used by the new GPS Pathfinder Office software version 4.20 postprocessing engine.
- The Microsoft® PPC2003 device installation files for the TerraSync software version 4.10 are now only available as a download from [http://www.trimble.com/terrasync\\_ts.asp](http://www.trimble.com/terrasync_ts.asp).

IMPORTANT: TerraSync software version 4.10 is the last major release to support Microsoft Pocket PC 2003 devices.

IMPORTANT: TerraSync software version 4.10 will be the last major release to support Survey RTK receivers.

## Data collection tips

The new postprocessing engine in the GPS Pathfinder Office software version 4.20 or the GPS Analyst extension for ESRI ArcGIS Desktop software version 2.20 takes account of the RF characteristics of different GNSS antennas.

It is particularly important to correctly specify the antenna type in the TerraSync software when using a handheld GPS receiver with an optional external antenna. Failure to specify the correct antenna type will lead to sub-optimal accuracy after differential correction.

## New default GPS settings

Traditionally, GPS data collection software has used fixed “masks” to determine which GPS satellite signals to use, and which to ignore. Commonly used masks include a minimum satellite elevation level, a minimum SNR value, or a maximum PDOP. While using fixed masks can ensure that most “bad” GPS signals are rejected, they also cause a number of perfectly usable signals to be discarded at the same time.

The new Trimble postprocessing engine consistently achieves better results when it has more GPS measurements to work with, including signals from satellites which may be weaker or lower on the horizon. Fortunately, the new engine is also capable of making far better decisions about which GPS signals to use and which to discard.

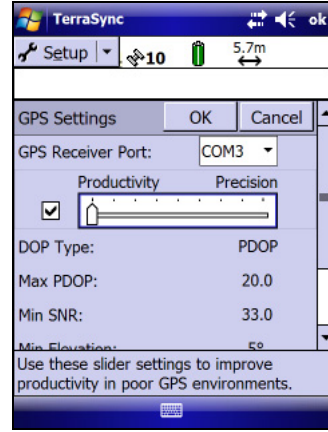
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For this reason, the default GPS settings have been changed in this version of the TerraSync software, with the GPS slider now set to *Productivity*, as illustrated:

For best postprocessing results, Trimble recommends that you use the new default values illustrated. Doing so has two clear benefits:

- Postprocessed accuracy will be optimal, due to the new postprocessing engine's ability to select and use the best GPS satellite measurements.
- Position yield potential will be significantly increased. If you work in an open environment, you may see little difference in yield. But if your operating environment includes tall buildings, trees, or other obstacles then the new *Productivity* settings will increase your position yield considerably. As a rule of thumb, yield in a suburban environment can increase by 20% on average; in a forested environment, yield may increase by 40% or more.

**Tip** – *If you are not planning to postprocess your GPS data, or if your organization has policies which require you to collect GPS data with one or more fixed mask values, you can still move the GPS slider to the right, or specify a particular set of mask values. Using GPS slider settings other than the new defaults may reduce both position yield and overall accuracy.*



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## Known issues

This section describes known issues with the TerraSync software.

### Installation

On some devices powered by the Windows Mobile® operating system, 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 device.

### Logging interval as a base station

When logging base station measurements, the TerraSync software ignores the logging interval set by the user and logs measurements at 1-second epochs.

### Email client on Windows Vista

When installed on a computer running the Windows Vista® operating system, the TerraSync software does not directly support the standard Windows email client when using the Data Transfer utility. Trimble recommends that you install Microsoft Outlook® 2003 or Microsoft Outlook 2007 as the email client.

### Suspending a Windows Mobile powered device

Before you suspend a Windows Mobile powered device running 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.

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## Communications

- The turn-by-turn software or the device locks up when you exit while the TerraSync software is running.

If you close CoPilot® Live™ 7 Professional or TomTom Navigator 6 when the TerraSync software is still running and connected to GPS, the TerraSync software, the turn-by-turn software, or the device may stop working correctly and must be soft reset.

Before exiting the turn-by-turn software, disconnect from the GPS receiver in the TerraSync software.

- TomTom Navigator 6 turn-by-turn navigation software sometimes locks up when the legal notices screen appears during startup.

When the TomTom Navigator 6 software is started from within the TerraSync software by selecting a navigation target, TomTom Navigator 6 sometimes locks up when the legal notices screen appears and the device must be soft reset.

To prevent this from occurring, start TomTom Navigator 6 before starting the TerraSync software and selecting a navigation target.

- Destination is not set in CoPilot Live 7 Professional when no GPS positions are available.

If you do not have a current GPS position when the navigation target is set in the TerraSync software, the TerraSync software switches to the CoPilot Live 7 Professional navigation software, but the target is not displayed.

When GPS is reacquired, the target appears correctly in CoPilot Live 7 Professional.

- If you are using a GPS Pathfinder ProXRT receiver with a cabled external real-time source such as a GeoBeacon™ receiver, and you change the real-time setting in the TerraSync software to *Use Uncorrected GPS*, the ProXRT receiver continues to use the real-time corrections to generate positions.

To stop using corrections from a cabled external real-time source, select *Use Uncorrected GPS* in the TerraSync software and then disconnect the cable from the ProXRT receiver.

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- 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 when outputting NMEA positions. All positions generated by the receiver are output in the NMEA stream.

## Data collection

- Not all data can be postprocessed if more than one type of GPS receiver was used to collect the data.

To change the receiver you are using, close the current data file. After connecting the new receiver, start a new data file and then continue collecting data.

- When collecting data, Trimble recommends that you do not use the same file for more than seven days. If this is unavoidable, for instance when updating a file, Trimble recommends that you use the data extract tool in the *Data / File Manager* section. This will extract updated data into a separate file allowing you to continue to use the original file for further updating.

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## VRS


- The AT command set is a standard language for communicating with modems. To establish a dial-up connection with a VRS network 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 Mobile 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 server when the TerraSync software sends a disconnect command. To ensure that a dial-up connection is ended, disconnect from the server in the TerraSync software and then also end the call on the cellphone.

## Restoring fonts

- After you perform a hard reset on a Windows Mobile powered device that has a RAM backup feature (for example, a GeoExplorer® series handheld), fonts that you have installed may not be available. To make the fonts available, perform a soft reset.

## Survey receivers

**IMPORTANT:** Version 4.10 of the TerraSync software (Professional Edition) supports selected RTK receivers sold by the Trimble Land Survey Division. This will be the last version of the TerraSync software to support RTK receivers, and such support will be removed from the next major release of the TerraSync software.

- 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.

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- 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. To set this up correctly:
    - Use the GPS Connector software on the GeoExplorer series handheld to set the COM1 baud rate to 38400 (or TSIP High Speed on a GeoExplorer 2005 series handheld).
    - Use the COM port configuration control on your field computer to set the baud rate on its COM port to 38400.

### **OmniSTAR expiry date**

- When connected to a GPS Pathfinder ProXRT receiver, the OmniSTAR service expiry date may not display correctly after updating a subscription. This may occur after renewing a subscription, or activating an additional subscription ( for example, enabling VBS on a receiver that already has an HP subscription).


The correct expiry date should appear in the TerraSync software if you disconnect and reconnect to the receiver, or change the real-time settings in the TerraSync software to "Use Uncorrected GPS" and then reconfigure the receiver to use OmniSTAR corrections.

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## Technical assistance

If you have problems using the TerraSync software, the following documentation should be your first point of reference:

- The *TerraSync Software Getting Started Guide* contains an overview of the software functionality and a tutorial on using the software.
- The *TerraSync Software Quick Start Guide* contains a double-sided card that provides the proficient GPS user with an accelerated overview of the main TerraSync screens.
- The *TerraSync Software Help* contains reference information about each screen in the software.

If you cannot find a solution in these documents or in the Help, try restarting the TerraSync software. Close any open data file and then tap  in the upper right corner of the TerraSync 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 the 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 the problem, **contact your Trimble reseller**. Alternatively, go to [www.trimble.com/support.html](http://www.trimble.com/support.html) to request technical support.