

# Trimble® TerraSync™: New Features

June 17, 2016

This document describes the new features included in versions of TerraSync software since version 3.00. The new features are reported relative to the previous version. You will need to check compatibility between your version of TerraSync and version of Pathfinder Office from the [Product Compatibility Chart](#).

*Note – You cannot have two versions of the TerraSync installed at the same time. If you need more information please see the [TerraSync User Guide](#), [TerraSync Release Notes](#) or the [User Guide for your GPS device](#).*

## **[Version 5.86](#) (May 2016)**

### **Enhancements:**

- Base files can now be logged when connected to a Trimble R2 GNSS receiver.
- Resolved an issue which could cause current estimated accuracy to spike when starting a feature while connected to a Trimble R2 GNSS receiver receiving RTX corrections.

## **[Version 5.85](#) (February 2016)**

### **Enhancements:**

- Support for the Trimble FieldPoint RTX correction service when using a Trimble Geo 7X handheld or a Trimble R2 GNSS receiver.
- Support for 5 minute RTX convergence for users in Western and Central Europe .

## **[Version 5.81](#) (December 2015)**

### **Enhancements:**

- The Integrated RTK Radio option is now available in all editions of the software, when connected to a Trimble R2 GNSS receiver.
- An issue which caused the software to crash when collecting features with a data file loaded as a background has been fixed.

## **[Version 5.80](#) (September 2015)**

### **Enhancements:**

- Support for Trimble R2 GNSS receiver.

## **[Version 5.71](#) (August 2015)**

### **Enhancements:**

- Support for Trimble Nomad® 1050 receiver.

## **[Version 5.70](#) (February 2015)**

### **Enhancements:**

- Support for the Trimble R1 GNSS receiver, for use with SBAS, Trimble VRS™ technology, and Trimble RTX™ correction services (satellite and cellular).
- Ability to delete selected or all addresses of used Web Map Services (WMS).
- Ability to export a Laser Rangefinder offset value as an attribute.
- Option to incorporate the date and time into an image name.



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- Support for the following Survey receivers: R4 model 2 or later, R6 Model 3 or later, R8 Model 4 or later.
- New receiver firmware versions for the Land Survey receivers. You must update your receiver to the latest firmware to support the TerraSync software version 5.70:
  - 5800 Model II, firmware version 4.43
  - R8 GNSS, firmware version 4.70
  - R8 Model 3, firmware version 4.71
  - R6 Model 1 and Model 2, firmware version 4.64
  - R4, firmware version 4.64

### **Version 5.65 (January 2015)**

#### **Enhancements:**

- Support for Trimble RTX™ correction services on the Trimble Geo 7X handheld. You can now select RTX as the primary real-time source. When you select RTX as the correction source:
  - the *Correction Datum* field is automatically set to WGS 1984 and cannot be changed
  - The available secondary choices are SBAS or Uncorrected GNSS

*Note - The Trimble GPS Pathfinder® Office Configuration Manager also supports setting up RTX real-time configurations for the TerraSync software.*
- The option *Navigate To Start Point* has been added to the Navigation Options.
- An option to paste a clipboard value from the Trimble Geo 7 laser rangefinder in to any text or numeric field; in version 1.2 of the Rangefinder utility, the measurement value in a workflow automatically gets copied to the clipboard, and you can now tap and hold in a text or numeric field in the TerraSync software to display a pop-up menu with a *Paste* option.

### **Version 5.61 (April 2014)**

#### **Enhancements:**

- Support for the following devices:
  - Juno® 5 Enhanced GPS handhelds
  - Juno 5 RFID handhelds
  - Yuma® 2 rugged tablet computers with Enhanced GPS
  - Juno T41™ handhelds

Note – The Enhanced GPS versions of the Juno 5 handhelds and Yuma 2 rugged tablet computers use WAAS or EGNOS corrections (and only inside those networks) to provide 1–2 meter accuracy.

- Miscellaneous usability improvements.

### **Version 5.60 (November 2013)**

#### **Enhancements:**

- Support for the Trimble GeoExplorer® Geo 7 series and the Geo 7 rangefinder module.
  - The Geo 7 series' orientation sensors are used to rotate the Skyplot, and to show the current heading in the Navigation section, even when stationary.
  - The Geo 7 rangefinder module, together with the orientation sensors, can be used to collect position offsets and record attribute information for distance and angle measurements.
  - Support for SBAS+ mode: non-GPS satellites remain in the position solution when using real-time SBAS corrections on GPS satellites.
- Updated Skyplot screen.
  - Each GNSS constellation being tracked and used is shown in a different color, with support for GPS, GLONASS, Galileo, Beidou, and QZSS.
  - The SNR graph on the Skyplot screen now also uses colors to represent each GNSS constellation, and only shows satellites that are being used to calculate positions.
- Under the SBAS Real-time Custom settings screen, there are now buttons for **Enable All** and **Disable All** for quicker editing of which satellites to use.
- The Plan screen has been removed from all TerraSync software editions.
- Under *Data / Update / Options / View*, you can now deselect and reselect all options (columns).
- Support for Windows® 8 and 8.1 operating systems.

### **Version 5.42 (June 2013)**

#### **Enhancements:**

- Support for the Trimble Yuma® 2 rugged tablet internal receiver, with no other functional improvements.  
*Note – To log data with the TerraSync software on the Yuma 2 tablet, you must install the GpsConfigSetupV2 patch to your Yuma 2 tablet. The patch is available from [Yuma 2 Downloads](#).*
- Available for Windows® desktop operating systems only.
- Requires GPS Pathfinder® Office software version 5.40 with update 001 and update 002.
- Requires GPS Pathfinder ProXRT receiver firmware version 4.44. Firmware version 4.15 is no longer supported.

### **Version 5.41 (December 2012)**

#### **Enhancements:**

- Support for Traditional Chinese.
- Improvement to the time taken to open and close the camera application (in portrait mode) from within the TerraSync software on a Trimble® Juno® 5 series handheld.

### **Version 5.40 (October 2012)**

#### **Enhancements:**

- Support for the following new devices:
  - Trimble Geo 5T
  - Juno® 3E
  - Juno 5 series
- When logging a base file in the TerraSync software, the Antenna Phase Center (APC) offset is now applied automatically; when you select the correct antenna and enter the height to the base of the antenna (or your choice of measurement point), the correct antenna height including the APC offset is calculated and written to the file.
- The Predicted Postprocessed Accuracy (PPA) has been improved in the TerraSync Centimeter Edition software; with baseline lengths of 10km, Horizontal PPA can now reach 1cm and Vertical PPA can now reach 2cm.
- Miscellaneous usability improvements

### **Version 5.30 (February 2012)**

#### **Enhancements:**

- Support for the following new devices:
  - Juno® series 3B and 3D handhelds
  - Trimble GeoXH™ Centimeter edition handheld
- High Resolution Mode map display.
- An updated SatDGPS.ini file to match changes in the frequencies of OmniSTAR L-Band corrections satellites.

### **Version 5.21 (October 2011)**

#### **Enhancements:**

- Resolves an issue where positions were not being produced with Trimble Juno® series handhelds, Trimble Nomad® G series handhelds, and Trimble Yuma® tablet computers when the internal receiver was configured to use Satellite Based Augmentation System (SBAS) corrections.

## **Version 5.20 (August 2011)**

### **Enhancements:**

- Installs and runs on all supported platforms, and connects to all supported receivers.
- The ability to collect point features using the new QuickPoint™ data collection mode.
- A new TerraSync Centimeter edition software, enabling you to connect to Land Survey R4, R6 Model 1, R6 Model 2, R8 Model 2, R8 Model 3, and 5800 Model 2 receivers.
- Land Survey support has been removed from the TerraSync Professional edition software.

*Note – An upgrade from TerraSync Professional edition software to TerraSync Centimeter edition software is available*

## **Version 5.10 (February 2011)**

### **Enhancements:**

- Support for the GeoExplorer® 6000 series handheld.

*Note – The TerraSync software version 5.10 installs and runs only on a GeoExplorer 6000 series.*

- The use of Smart Settings, to increase the precision of your data, and to minimize the effect of atmospheric interference and poor satellite geometry. Using Smart Settings, the receiver uses all available GNSS information to determine which combination of satellites to use to generate the best possible position for any given environment, without the need for you to adjust receiver settings to match the conditions. The GPS Slider has been removed. Custom settings can still be configured if Smart Settings are not used.
- The ability to select whether base station data used for postprocessing is GPS only, or GPS and GLONASS.
- The removal of the Use GLONASS option from the GNSS Settings form. The receiver will always log GLONASS data, if the Trimble Floodlight™ satellite shadow reduction technology option is enabled and active on the receiver (see the GeoExplorer 6000 series User Guide for more information.)
- The Plan view now shows GLONASS satellites as well as GPS satellites.
- The L2 SNR reported will be the L2C SNR if it is available, otherwise it will be the L2E SNR.
- The Velocity Filter settings have been removed.

## **Version 5.02 (March 2011 Revised)**

### **Enhancements:**

- Correctly supports the 10-seat educator license
- Correctly saves edits made to generic points after a data file is re-opened.

## **Version 5.01 (January 2011)**

### **Enhancements:**

- Correct handling of the conditional attribute after selection of a graphical picklist attribute.
- Better handling of the file system 'low memory' condition on devices powered by the Windows Mobile® operating system.

## **Version 5.00 (October 2010)**

### **Enhancements:**

- Support for Model 2 of the GPS Pathfinder ProXRT receiver and the Trimble Land Survey Division R8 Model-III RTK receiver.
- Conditional attributes, a new method of designing data capture forms that will dynamically adapt how selected attributes are displayed in each form, dependent on previous attributes' values.
- New data capture controls, including graphical picklists, check boxes, and radio buttons.
- Attribute and feature name aliases, allowing the backend GIS attribute and feature names to be decoupled from the user prompts in the field.

- Enhanced group separator controls, allowing a page-like workflow through data capture.
- Extended code value lengths.

Moreover, in conjunction with the new TerraSync Studio utility in the GPS Pathfinder Office software version 5.00, the TerraSync software is now more intuitive to use, and easier to set up, deploy, and train. Enhancements include:

- Customization of the user interface, allowing specific or distracting functionality, controls, and sections to be hidden from the user.
- Ability for a GIS Manager to remove generic feature types from the data capture selection.
- Ability to specify a custom start-up splash screen image for the TerraSync software.

Other enhancements to the TerraSync software in version 5.00 include:

- Faster rendering of background maps, demonstrated up to 25 times faster on some images, with a typical increase of 10 times faster when compared to previous versions of the TerraSync software.
- The ability to display larger background files that other data capture applications simply can't load, or display poorly.

### **Version 4.15 (March 2011 Revised)**

#### **Enhancements:**

- The software correctly supports the 10-seat educator license.

### **Version 4.13 (August 2010)**

#### **Enhancements:**

- Support for the Trimble GPS Pathfinder® ProXRT receiver firmware version 4.15.
- When in distance interval mode, enables line and area vertices to be logged at a one-second rate.
- Addresses the issue of a selected coordinate system not being remembered between the TerraSync software sessions on a Windows Vista® or Windows® 7 operating system installation.
- Addresses an issue relating to non-availability of source tables from some VRS servers.
- Enhancements to how the real-time status of external sources is displayed.
- Support for the Microsoft® Pocket PC 2003 operating system has been discontinued. The TerraSync software version 4.12 is the last version to support Microsoft Pocket PC 2003.

### **Version 4.12 (May 2010)**

#### **Enhancements:**

- Reinstated support for the GPS Pathfinder® Pro XR receiver.
- Better yield whilst collecting points and vertices using the Trimble R8 and 5800 receivers.
- More robust handling of NTRIP tables.
- More reliable support for 5800, 5800 Model II, R8, and R8 Model II receivers with firmware versions 3.82 and 4.02.
- Better support for large digital photograph images transferred using the TrimPix™ Pro system.

### **Version 4.10 (December 2009)**

#### **Enhancements:**

- 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. TerraSync Software Release Notes 9
- 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 [here](#).
  - **IMPORTANT:** TerraSync software version 4.10 is the last major release to support Microsoft Pocket PC 2003 devices and support Survey RTK receivers

### **Version 4.02 (July 2009)**

#### **Enhancements:**

- A bug that did not allow real-time solutions to converge to 10 cm when using a GeoXH™ handheld running firmware version 2.11 has been fixed.

### **Version 4.01 (May 2009)**

#### **Enhancements:**

- Added support for the following GPS units:
  - Trimble Yuma™ rugged tablet computer.
  - Trimble GPS Pathfinder ProXRT receiver running firmware version 3.72.
  - Trimble R8 Model II receiver running firmware version 3.64. (Later versions are not currently supported.)
- Support for software activation on field computers powered by the Windows Mobile® version 5.0 software or version 6 operating system. For more information, refer to the TerraSync Software Getting Started Guide.
- Support for the Indian GAGAN satellites. The frequencies used by the Indian GAGAN SBAS system have been added to the SBAS.ini file; you can now manually select these frequencies for use with receivers that support them.
- Proper handling of waypoints stored in USNG (NAD83) coordinates. (USNG (NAD27) is not supported.)
- Support for OmniSTAR frequencies that have 500 Hz offsets.
- The heading display for SiRF-based receivers now correctly displays headings between 326° and 359°.
- A bug that caused the TerraSync software to export features with no attribute data to ESRI ShapeFile format has been corrected.

Version 4.01 of the TerraSync software includes the following changes:

- Version 4.00 or later of the TerraSync software no longer ships with an Updater Utility. In order to find updates for the TerraSync software, go to [here](#).
- Support for the Trimble GPS Pathfinder ProXRT receiver running firmware version 3.60 has been discontinued. You will need to update your receiver's firmware to version 3.72. For the firmware version 3.72 and instructions on how to upgrade your existing receiver firmware, go to [here](#).

### **Version 4.00 (May 2009)**

#### **Enhancements:**

- Support for the Trimble Nomad™ G series handhelds (800GL, 800GLC, 800GLE, 800GX, 800GXC, and 800GXE).
- Support for software activation on field computers powered by the Windows Mobile® version 5.0 software or version 6 operating system.
- Version 4.00 or later of the TerraSync software no longer ships with an Updater Utility. In order to find updates for the TerraSync software, go to [here](#).
- The CD (Part Number 46805-35) containing the installation files for the TerraSync software version 4.00 no longer contains the installation files for Microsoft PPC2003 devices. The Microsoft PPC2003 device installation files are now only available as a download from [here](#).

### **Version 3.30 (December 2008)**

#### **Enhancements:**

- Support for Juno SB and SC handheld.
- Enhanced support for adding image files as attributes to features.
- Integration with CoPilot Live 7 Professional from Trimble TerraSync, and TomTom Navigator 6 turn-by-turn navigation software.
- Ability to change the order of raster images in Background Files form.
- Context menus in Map screen.
- Configurable Data Update screen.
- Updated SatDGPS.ini file for recent OmniSTAR frequency changes.
- Not Connected status for External real-time sources.
- Support for the 5800 Model 2 GPS receiver.

### **Version 3.21 (May 2008)**

#### **Enhancements:**

- The Magnetic Declination Calculation has been updated.
- For the Professional and Standard editions of the software:
  - Support for the GeoExplorer® 2008 series of handhelds.
  - If a Bluetooth® telephone connection to the Internet is lost, the TerraSync software now automatically attempts to reconnect.
  - When using real-time corrections, the TerraSync software reports if code or carrier phase corrections are being applied, rather than just reporting that GPS positions are being calculated.

### **Version 3.20 (March 2008)**

#### **Enhancements:**

- The default data dictionary logging interval values are now 1 second, and the default number of positions logged per point feature is now 1.
  - Devices running Windows® CE .Net are no longer supported.
- For the Professional and Standard editions of the software:
- Support for the GPS Pathfinder® ProXRT receiver.
  - Support for GLONASS satellites tracked and used by the
  - GPS Pathfinder ProXRT receiver to compute positions.
  - Accuracy-based logging, for better quality data.
  - R8 GNSS receiver to compute positions.
  - Real-time correction source datum transformations to WGS84, to avoid datum shifts within the same SSF file.

For the Professional edition only:

Support for GLONASS satellites tracked and used by the Trimble

### **Version 3.05 (November 2007)**

#### **Enhancements:**

- Support for the Trimble Nomad™ series handheld
- Support for the Trimble R8, R8 GNSS, and 5800 RTK receiver firmware version 2.32 and 3.50.  
*Note – The internal GPS receiver of the Trimble Nomad 800L, 800LC and 800LE series handhelds is not specified to provide real-time differential corrections. However, if you select the Integrated SBAS option, the receiver will attempt to track SBAS satellites and in some conditions may receive real-time SBAS corrections.*
- TerraSync version 3.01 language updates are compatible with the TerraSync version 3.05 software.

### **Version 3.01 (April 2007)**

#### **Enhancements:**

- Support for the Juno™ ST handheld

### **Version 3.00 (March 2007)**

#### **Enhancements:**

- Support for the Microsoft® Windows Vista™ operating system, and for 64-bit Windows XP and Vista operating systems.
- Support for the following types of background files:
  - ECW (.ecw) files
  - MrSID v3 (.sid) files
  - JPEG 2000 (.jp2, .j2c) files
- Supports the display of multiple background files in the Map window.
- Support for creating waypoint (.wpt) files.
- Support for simple point nesting during data collection.