

Trimble Survey Controller™

Release Notes

Version 12.10

Revision A

June 2007



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Release Notes

Corporate Office

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Release Notice

This is the Trimble Survey Controller June 2007 release (Revision A) of the *Trimble Survey Controller Release Notes*. It applies to version 12.10 of the Trimble Survey Controller software.

Product Information

This section contains information about the Trimble Survey Controller software version 12.10 running on a Trimble® CU or TSC2® controller ("the controller"). For detailed information, refer to the *Trimble Survey Controller Getting Started Guide*.

The Trimble Survey Controller software version 12.10 does not run on an ACU or TSCe controller.



New user

In a new controller, the Trimble Survey Controller software version 12.10 and the Microsoft® Windows® operating system are already installed.

To use the software in a language other than English, you must transfer the language pack file from the Trimble Survey Controller Software CD to the controller.

Upgrading from a previous version of the software from Trimble.com

You can upgrade to the Trimble Survey Controller software 12.10 from www.trimble.com/tsc_ts.asp?Nav=Collection-46260 . Use the web install instructions available from there.

Is my warranty valid? How do I get an Upgrade Authorization Key?

To run Trimble Survey Controller software version 12.10 you must have a valid warranty agreement.

Software warranty expiry date	What to do...
6/2007 or later	You are entitled to an upgrade to version 12.10 at no charge. Download and install version 12.10.
5/2007 or earlier	You do not have a valid warranty agreement. Contact your Trimble distributor, provide your controller serial number and order an extended warranty. Download and install version 12.10.

When you upgrade to version 12.10, a version 12 key is automatically created if a valid version 11.xx key is present.

For more information about warranties and upgrades, refer to the Upgrade support note, which is available from www.trimble.com/tsc_ts.asp?Nav=Collection-46260.

Upgrading from a previous version of the software from the Trimble Survey Controller software CD

During the upgrade, complete all of the following steps. Follow the prompts in the installation wizard:

1. Check if you need to upgrade the operating system.

To use the Trimble Survey Controller software version 12.10, your controller must be running a Microsoft Windows operating system the same as or later than that shown below.

Controller	Microsoft Windows operating system	Firmware Version	First released with Trimble Survey Controller software version
Trimble CU		4.2.5.8	12.00

	Microsoft Windows CE .NET Version 4.2		
Trimble TSC2	Microsoft Windows Mobile® Version 5.0 Software for Pocket PC	5.0.3	11.30

- If you have a Trimble CU, the operating system is available on the CD. If required, it will be upgraded during step 4 below.
- If you have a TSC2 controller, you need to upgrade to the latest version of the operating system. You cannot reinstall the operating system on a TSC2 controller from the *Trimble Survey Controller Software Installation CD*.

The latest operating system for the TSC2 controller is available from the Trimble website (www.trimble.com).

2. Select *Update Office Software*.
3. Install Microsoft ActiveSync® technology version 4.2 from the *Trimble Survey Controller Software CD*.
4. Select *Trimble Survey Controller Installation* and then select *Install Survey Controller Software*.

Note – As you install the software, make sure that you select the option to download the contents of the Trimble Data folder. This safeguards the data in the folder. Unlike some earlier versions, the Trimble Survey Controller version 12.10 software installation does not back up the Trimble Data folder to Trimble Data V10.

Once you accept this step, the contents of the Trimble Data folder are removed, regardless of whether or not you accept the option to download the contents.

When you upgrade the operating system on the TSC2 controller, follow the installation instructions on the web to ensure that you make a backup of the files in the \Trimble Data folder.

4. Select *Install Language Pack*, to transfer a new language pack to the controller.
5. If applicable, use *Transfer downloaded Trimble data files* to transfer compatible files back onto the controller.
6. If applicable, use *Antenna and Receiver Configuration file update* to update the antenna and receiver files on your office computer.

Converting job and style files and transferring data after an upgrade

During an upgrade, you can choose to save all files in \Trimble Data on the controller to the office computer. Once you upgrade, you can transfer back onto the controller any files that are compatible with the Trimble Survey Controller software version 12.10.

To determine compatibility, the software inspects the files before transferring them to the controller. Job files from the Trimble Survey Controller software version 10.70 and later can be converted and transferred. A variety of other files (for example, .fal from version 10.7 and 10.8, .dc, .csv, .txt, .dtm, .ttm, .ggf, .cdg, .png, .sgf, .pgf, .dxf, .shp, .rxl, .crd, .inp, .mos, .xml, .jxl, and .csd) can also be transferred back onto the controller.

Style files from the Trimble Survey Controller software version 11.30 and later can be converted and

transferred.

A report of the transferred files is available at the end of this operation. The report details the files that were converted, the files that were transferred, and the files that were not transferred (for example, .xsl and .ixl files).

During installation, new versions of the predefined ASCII export formats are installed to the controller. New ASCII export definitions, or modifications made to existing formats are **not** reinstalled to the controller. Use the Trimble Data Transfer utility or Microsoft ActiveSync technology to transfer these files back onto the controller once the upgrade is complete.

The files that are backed up are stored on the office computer in *C:\Documents and Settings\[user name]\Local Settings\Temp\[controller serial number]*.

To change the download folder, select *Browse*.

Note – You **cannot** copy old jobs onto the controller for the Trimble Survey Controller software to convert on–the–fly. You must use the *Transfer Downloaded Trimble Files* option on the *Trimble Survey Controller Software CD*, which converts the previously downloaded files and transfers them back onto the controller.

Using Trimble Survey Controller software version 12.10 with other Trimble products

Trimble Survey Controller software version 12.10 communicates best with the software and hardware products shown in the following tables. The software can also communicate with any version later than that shown.

Trimble Software	Version
Trimble Geomatics Office	1.63
Trimble Business Center	1.11
Trimble Link (Autodesk Land Desktop)	3.00
Trimble Link (Autodesk Civil 3D 2007)	2.0.1
Data Transfer	1.32
Trimble Total Control	2.73
Terramodel®	10.43

Trimble Receiver	Version
Trimble R8 GNSS	3.30
Trimble R8	2.31
Trimble R7	2.30
Trimble R6	3.30
5800	2.31
5700	2.30
4800	1.30
4700	1.30

Trimble Conventional Instrument	Version
Trimble VX / Trimble S Series	R7.0.35
Trimble 5600 Series	696-03.08
Trimble ATS	696-03.08
Trimble 3600 Elta CP (with interpreter)	1.15
Trimble 3600	2.00
Trimble 3300 Series	5.65

Notes

- If you use a Trimble VX/S Series instrument with the Trimble Survey Controller software version 12.00 or later, you must upgrade the instrument to firmware version **R5.5.16** or later. The Trimble Survey Controller software version 12.00 is not compatible with earlier versions of the Trimble VX/S Series Total Station firmware.
- If you use a Trimble VX/S Series instrument with the Trimble MultiTrack target, you must upgrade the instrument to firmware version **R7.0.35** or later.
- If you use a Trimble R8 receiver with a TSC2 controller and GPRS, you must upgrade the receiver to firmware version 2.24 or later.
Trimble R8 receivers with firmware version 2.24 or later do not support GPRS with the Trimble Survey Controller software version 11.05 or earlier.
- Trimble instrument firmware is available on www.trimble.com.

Updating office software

Note – If you have GPS Pathfinder® Office software version 2.51 or later installed, make sure that the Connection Manager utility is closed before you update the office software.

Before using Trimble Survey Controller software with Trimble office software, update the office software. To do this, select *Update Office Software* from the main menu on the *Trimble Survey Controller Software CD*.

The Trimble Survey Controller software version 12.10 uses a version 10.7 DC file.

If you use Trimble Geomatics Office software, Trimble recommends that you update the Trimble Geomatics Office software from version 1.60 to 1.63. This option does not update versions of Trimble Geomatics Office that are earlier than version 1.60.

Trimble office software updates are available from www.trimble.com.

Although Trimble Survey Controller software version 12.10 can output a version 10.0 DC file to older versions of the office software, the process does not support all new records and some information may be lost.

If you have a new GNSS receiver or a new GNSS antenna, you may need to update some of the components in your office software for it to recognize the new equipment. To do this, select *Additional Utilities / Antenna and Receiver configuration file update* from the *Trimble Survey Controller software CD* and then follow the installation wizard instructions. Alternatively, you can update to the latest files using the *Trimble Office Configuration Files Update Utility* on the Trimble website.

Upgrading Trimble 3600 and 5600 instrument firmware

If you need to upgrade the Trimble 3600, 5600, or ATS instrument firmware, return the instrument to your Trimble service center.

New Features

This section summarizes the major changes in the Trimble Survey Controller software, for the **Trimble CU and TSC2 controllers**.

- [Spatial imaging](#)
- [Trimble MultiTrack Target](#)
- [Conventional enhancements](#)
- [GNSS enhancements](#)
- [General enhancements](#)
- [Known issues: Resolved](#)
- [Other changes](#)

For more information about the features, refer to the *Trimble Survey Controller Help* or the *Trimble Survey Controller Getting Started Guide*.

Note – The help is also provided on the Trimble Survey Controller Software CD in a PDF document, which you can search or print.

Spatial imaging

The Trimble Survey Controller software now supports the new Trimble VX instrument with advanced imaging and scanning capabilities. For more information, go to www.trimble.com/trimblevx.shtml.

Trimble MultiTrack Target

Trimble Survey Controller version 12.10 supports the new Trimble MultiTrack Target, which features Trimble's unique MultiTrack technology. Together with the Trimble S Series or the Trimble VX Spatial Station, the target combines the advantages of both passive and active target tracking and the flexibility to instantly choose which method best fits the current task.

Conventional enhancements

Leica TPS 1100 and TPS1200

The following enhancements have been made to the Leica conventional support:

- Leica TPS1200 support
- ATR modes; Low Vis and S–Range
- Power search
- Configuration of Search window

- Shortcut access from Trimble functions for configuration of ATR modes, Search modes, and Search window.

GNSS enhancements

Configuring a Trimble HPB450 radio

You can now use the Trimble Survey Controller software to configure a Trimble HPB450 radio to be either a base or repeater radio.

General enhancements

Edit elevation during Stake out points

You can now view and edit a design elevation during Stake out points.

Note – The design elevation appears in the bottom right corner of the navigation window. To edit the elevation, tap the arrow. To reload an edited elevation, select Reload original elevation from the pop-up menu in the Design elevation field.

If the navigation window contains five rows of navigation information, the label for the Design elevation field is not shown.

Coordinate system updates

New or updated coordinate systems have been added for the following countries:

- Belgium
- Turkey
- Canada
- France
- USA (US State Plane 1983 – Maine 2000 zones)

New Custom ASCII export style sheets

The *Trimble Survey Controller Software CD* contains updated Custom ASCII export style sheets.

During installation, new versions of the predefined ASCII export formats are installed to the controller. User-defined ASCII export definitions, or modifications made to existing formats are **not** reinstalled to the controller. Use the Trimble Data Transfer utility or Microsoft ActiveSync technology to transfer these files back onto the controller once the upgrade is complete.

You can access updated Custom Export Style Sheets from:
www.trimble.com/tsc_ts.asp?Nav=Collection-32914

Style files

Style files from the Trimble Survey Controller software version 11.30 and later, are now upgraded as part of the "Upgrade Trimble Data files" process.

Installation improvements

Trimble Survey Controller version 12 upgrade keys are now automatically created during the controller upgrade. You no longer need to contact Trimble Support for upgrade keys.

Trimble Survey Controller software keys entered when the controller was upgraded are now saved to the controller.

Known issues: Resolved

This section summarizes known issues that have been resolved in the Trimble Survey Controller software for the **Trimble CU and TSC2 controllers**.

Template pickup using Measure codes

Template pickup now works when you use Tracking (TRK) measuring mode and when View before storage is not enabled.

Stringing in Measure codes

Using Find and stringing with + and – softkeys now operates correctly in Measure codes irrespective of the *Use attributes of base code* setting.

Note – When stringing codes, regardless of whether or not they have attributes, Trimble recommends that you enable the *Use attributes of base code* setting. This setting enables Measure codes to differentiate between the base code and string suffix.

Loading large Measure codes files

Large Measure codes files now load much faster.

Turn button in stakeout

The Turn button in stakeout now operates correctly when the Stakeout autoturn option is disabled in Options.

Trimble roads

When you use a Trimble road file with a null station interval, you no longer experience an application error.

Importing scan files to RealWorks

If the Trimble Survey Controller software did not complete a scan correctly, the process of importing the scan data into RealWorks now continues correctly.

Trimble CU connections

When you reconnect the Trimble CU to a GNSS receiver after suspending the Trimble CU, you no longer encounter difficulties.

Suspending Trimble CU

When a Trimble CU is suspended several times in quick succession, you no longer experience an application error.

Geo ++ NMEA positions

When connected to an RTK base data stream over the Internet, the Trimble Survey Controller software now sends the last known good position to the server along with a "Fix not available or invalid" quality indicator set in the GGA message.

This resolves a previous issue where the software sent an invalid position to the server in the NMEA GGA messages if the receiver was not producing positions, such as when tracking only 3 SVs.

Calibration with a Lambert Conformal Conic 2 Parallel

When you calibrate on a projection, for example a Lambert Conformal Conic 2 Parallel, without a scale factor, you no longer experience an application error.

Cancel download during Installation

The files on the controller are no longer deleted when you cancel the download of the Trimble Data files during a Trimble Survey Controller software upgrade.

Files not downloaded remain on the controller.

Downloaded files are saved to the destination folder on your computer, and no longer exist on the controller.

Sun azimuth

Calculations using COGO to compute points using the sun as the azimuth origin are improved.

Moving out of Bluetooth range

When the controller is shut down just before moving out of Bluetooth range, you no longer experience an application error.

Data export and Trimble 360° prism

When you export data using JobXML files, Custom ASCII export, or the Data Transfer GDM job files and M5 files, the Trimble 360° prism corrections are now applied to the raw data.

Resection elevation standard deviation and weighting

Standard deviation and weighting calculations on elevations in Resection are improved.

For more information, see Resection Computations in the Survey Controller.pdf on the CD.

Staked delta storage when using linked files

When you stake a point from a linked file and the as-staked name was set to design name, the grid deltas are now stored in the job file.

Other changes

This section summarizes other changes in the Trimble Survey Controller software for the **Trimble CU and TSC2 controllers**.

Connecting to a GNSS survey grade GNSS receiver for GPS Search

When using a Trimble survey grade GNSS receiver for GPS Search, you must now either establish a connection to the GNSS receiver **before** you start the conventional survey, or you must start an IS rover survey.

4000 Start Base

You now **cannot** start a Trimble 4000 SSE/SSi base receiver using the Trimble Survey Controller software version 12.0 or later.

You can start the Trimble 4000 SSE/SSi base using the front panel of the Trimble 4000 receiver, or with a controller running the Trimble Survey Controller software version 11.3x.

EGNOS PRN124

EGNOS PRN124 is currently broadcasting in test mode and is now temporarily disabled by the Trimble Survey Controller software. When PRN124 is operational again, it will be re-enabled in the following release of the Trimble Survey Controller software. You can also re-enable a satellite from the satellite plot screen in the Trimble Survey Controller software.

Other Information

Configuring the system options

The new Trimble Survey Controller systems are shipped unconfigured. They are configured automatically when you connect the controller to the instrument. Alternatively, select *Configuration/Options* and then select the option(s) appropriate for you:

- GPS users – select *GPS surveying*
- Conventional Total Station users – select *TS surveying*
- Integrated surveying users – select both options
- Helmert, Station Setup Scale factor users – select *Advanced Geodetic Support*

These options control the styles that are available and the relevant options that appear throughout the software. You can reconfigure the Trimble Survey Controller system at any time.

Connecting a Trimble CU controller to the office computer

The Trimble CU controller communicates through the docking station to the office computer using USB. The docking station must be connected to the office computer through the USB-to-Hirose cable.

You cannot connect the Hirose-to-7-pin lemo cable to a 7-pin lemo-to-DB9 cable (supplied with GNSS systems) and use this to connect the docking station to the serial port on the office computer.

Connecting a TSC2 controller to wireless devices

On the TSC2 controller, when you connect to a device using wireless technology, the icon on the status bar at the top of the screen should be animated, showing that the connection is being attempted. Once the controller is connected, the icon should appear as two large arrows. This functions correctly in the operating system version 5.0.2, but not in version 5.0.3. However, if you click the icon, the *Connectivity* dialog correctly shows the connection status.

Memory requirements

When you open a Trimble Survey Controller job, the entire job is loaded into memory, which results in a more robust job and faster software operations. As the job becomes larger, memory requirements increase. In addition, improvements to the operating system and the software mean that Trimble Survey Controller software version 11.1 or later needs more memory than earlier versions.

Microsoft ActiveSync technology issues

Microsoft Explorer and the Trimble Data Transfer utility may sometimes fail to find the folders and display files on the controller. This can occur if another Microsoft Explorer window had been left browsing to the controller from a previous connection, or if the controller had been reset and a new connection made. To avoid this problem, make sure that you close all Microsoft Explorer windows before you disconnect the controller.

Documentation

Trimble Survey Controller Help is "context-sensitive." To access the Help:

- On a Trimble CU controller, tap [?] at the top of the screen.
- On a TSC2 controller, tap [Start / Help] on the touch screen, or press [Fn + Space] on the keyboard.

A list of Help topics appears, with the relevant topic highlighted. To open the topic, tap its title.

The help is also provided on the *Trimble Survey Controller Software CD* as a single file in Adobe Portable Document Format (PDF). View this file on an office computer. You can use it to search for a particular topic or to print pages from the help.